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INCIPIENT ACTION

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ABSTRACT

We conceive of thinking as a process which occurs inside our heads and we assume some entity or organ in there responsible for this process — hence, ‘mind’. Thinking is a ‘mental’ process. Nowadays, most philosophers believe that the mental is explicable in terms of the neurophysiological, and that the entity or organ responsible for thinking is the brain. However, neither mind nor brain is responsible for thinking. No entity or organ is responsible for it. This is because thinking is not a ‘process’ in the first place. Thinking is an action we perform. Nor is there any specific body part associated with the act of thinking, as lungs are with breathing, say, or lips with smiling. Thinking is no more associated with a particular part of the body than mimicking or playing make-believe is, or being careful.

Part One argues that our conception of thinking as an inner process — operations in or of the mind (or brain) — stems from our habituation to certain figures of speech. Endemic in the colloquial vocabulary for talking about thinking is a particularly deceptive type of figurative expression, in which metaphor is used in conjunction with a nominalised verb. We unwittingly take these expressions too literally.

Part Two reviews action-based theories of thinking by Ryle, Vygotsky and Hampshire. Although none manages entirely without ‘mind’, all are precursors of the present work.

Part Three identifies the core action in thinking as ‘incepting’. Incepting is ‘making as if to’ do something. One readies oneself to perform a given action, and maintains this readiness, while stopping oneself overtly commencing the action. The incepting of an action can be deliberately ostentatious. However, the ‘thinking’ kind of incepting is usually an extremely subtle and covert performance. Covert incepting is a constantly useful skill. With adult help, we begin in infancy to learn how to covertly incept actions. After years of practice we get very good at it. It becomes second nature to us. Interestingly, the activity incepted during thinking is always social — and based on concerted, shared activity. Most often, thinking is incepted conversation.

PREFACE

This thesis equates the various ‘mental phenomena’ with incipient action of one kind or another. And the bringing about of incipient action, the ‘incepting’ of the actions in question, is identified as itself a species of action. This idea is a contribution to a larger project, namely, to establish actions as a legitimate philosophical ‘given’. The ‘actions as given’ claim is that the concept of something one *does* is self-sufficient and *sui generis*, and does not need cashing out in non-actional terms.. It is philosophical hard currency.

It is conventional wisdom that the concept of an action includes and presupposes concepts of mental phenomena — beliefs, desires, decisions, intentions, volitions — and that these are concepts of a fundamentally non-actional kind. If the present thesis is accepted, the latter assumption will be rebutted. ‘Mental’ concepts will be seen as actional concepts. And it will be apparent that in specifying the thinkings that lead to and/or accompany an action one is not specifying an action plus some other kind of phenomenon but, rather, specifying a more complex action, or specifying an action plus some ancillary actions. Consequently the ‘actions as given’ claim would not be vulnerable to the fact that actions involve mentation.

It is also often assumed that, in order to specify any but the simplest of actions, one must refer to the agent’s perceptions of things in the world — things to which the action is a response, or things which are necessary accessories (patient, venue, instrument, product, etc.) of the action. And it is assumed that these perceivings are impersonal events rather than actions. However, if it can be shown that perceivings are also actions of a kind, then the larger ‘actions as given’ thesis stays intact here too. Most, or even all, actions do have an essential perceptual component, but in my view this perceptual component is not a departure into anything non-actional, such as an impersonal event. The perceiving is part of the action, as the thinking is. My attempt in this thesis (in Appendix Two and elsewhere) to show that perceiving is a species of action is probably too brief to convince. However, indicating how the point could be argued is worth doing. I also suggest the possibility of defining the ‘thinghood’ of things in the world in terms of the sharing or ‘concerting’ of given perceptual behaviour.

Finally, it is widely assumed that if actions are real things in the world, then they must, like everything else in the world, be in-principle specifiable in objective scientific terms. In the case of actions, the scientific description would be primarily a description of

physiological events — although the description might well have to encompass a complex causal interaction (including feedback) between external physical objects and physiological events. And the physiological events might be thought to include perceptual and mental events as well as muscular ones.

From the other side, proponents of the ‘actions as given’ view could agree that, if actions are real things in the world, they must be scientifically describable. Only, while continuing to assert the reality of actions, they could deny that actions are ‘things in the world’ in the required sense. And they could deny that actions are explicable in physiological terms. I argue for both of these denials, albeit again too briefly, in the thesis. The question of the possibility of a scientific analysis of actions is as large and controversy-fraught as the above questions about action’s relation to mentation and to perceptions of things in the world. To show that actions are both real and *sui generis*, all three would need to be argued at length. I argue only one of them with anything like the required thoroughness.

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PART ONE

THE MIND METAPHORS

INTRODUCTION TO PART ONE

I begin in Chapter One by informally defining the lay concept of mind. I define it in terms of ability to employ, and respond appropriately to, what I call ‘the colloquial mentalist vocabulary’ — the everyday vocabulary which appears to have ‘mental phenomena’ as its subject matter. Part of our intellectual adjustment to this vocabulary is the assumption that there is in people’s heads something called ‘mind’, and that mind has the following four properties. It is located inside people’s heads and is the venue where mental phenomena (ideas, thinking, emotions, etc) occur. It is an agent, directly or instrumentally responsible for the occurrence of mental phenomena, and hence of much of our behaviour. It is related, in a ‘meaning’ or ‘cognising’ way, to things in the external world. And mind is in some sense non-physical or abstract.

I review the two currently accepted theories as to the nature of this concept and how it arises. Theory theory describes the lay concept of mind as an as-yet-inchoate theory about the internal causes of behaviour. Simulation theory describes it as the intellectual outcome of self-knowledge and empathy. I follow the colloquial mentalist vocabulary home to social contexts in which behaviour management is the focus of attention. In such contexts, the participants alternate between various objective and various empathic attitudes towards one another. Theory theory caters reasonably well for the objective-scrutiny approach to others, and simulation theory caters reasonably well for the empathy.

In order to clarify the nature of the lay concept, I attempt to get a little clearer about its subject matter. The colloquial vocabulary posits mental phenomena of a variety of logical types — entities, states, events, processes, qualities, etc. I take the nouns and the verbs as central, and ask which are primary, as far as the subject matter of the CMV is concerned. Is the category of mental phenomena to be explicated primarily in terms of static entities, such as the nouns refer to, or in terms of dynamic phenomena such as the processes and activities referred to by the verbs? Most of the key nouns in the CMV — *thought, concept, belief, desire, memory, consciousness, feeling, emotion*, etc.— are nominalisations of, and hence etymologically and logically derivative of, the corresponding verbs. Partly on this basis, I decide that the verbs are primary and that what the vocabulary is ultimately about is the processes and/or activities.

I make a list of the important verbs in the CMV — *think, conceive, believe, desire,*

remember, be conscious of, feel emotion, imagine, intend, etc.— and group them all together as ‘thinking’ verbs, which refer to various ‘thinkings’, or varieties of ‘thinking’. Thus, we need no longer talk in terms of ‘mind’ or ‘mental phenomena’. We can be more specific. What the CMV is ultimately about is thinking of the various kinds. This advance justifies changing the name of the colloquial vocabulary from the colloquial ‘mentalist’ vocabulary to the colloquial ‘thinking’ vocabulary, or CTV.

In the interests of discovering more about the nature of the CTV’s subject matter, what the lay concept is a concept of, I now ask what *kind* of dynamic phenomenon are we dealing with here. Is thinking an impersonal (and internal) process, or is it an action of the person? Do the verbs in the CTV refer ultimately to intracranial processes, or to things the person does? I decide on the latter. That is, I conclude that thinking is a species of learned, voluntary action.

If thinking is an action of the person, where does ‘the mind’ come in? How come we have this idea that thinking is an internal process, operations of or in the mind? Whence our concept of mind? I offer ‘the metaphorical origin theory’ as an answer to these questions. I argue that thinking is thought to be an internal process only because we tend to take too literally the numerous figurative expressions in the colloquial thinking vocabulary. In order to appreciate the metaphorical origin theory, it is necessary to know what a metaphor is. Because there is to my knowledge no simple, true, robust account of metaphor in the literature — and none which explains what happens when a metaphor gets together with a nominalised verb — I supply my own account in Chapter Two.

My Chapter Two account of metaphor rests on a definition of what I (and the Oxford English Dictionary) call ‘referring’. According to this definition, referring is an interpersonal transaction whereby, by means of speech or gesture, one person draws the attention of another to some thing. And there is a modification of referring wherein the referent is absent and, rather than being actually performed, the appropriate perceptual behaviour is merely imagined. Metaphor is a device (actually, also an interpersonal transaction) for referring to things that would be difficult or impossible to refer to using our ordinary stock of referring expressions.

Very briefly, a metaphor persuades a hearer to imagine something X as if it were something very different Y and, by doing so, causes the hearer to focus his or her

attention on some relatively subtle and difficult-otherwise-to-refer-to feature F of X. Metaphors thus have a general subject matter X and a specific subject matter F (the feature of X to be referred to). The general subject matter X has feature F, and only F, in common with the Y which is brought on in the metaphor for ‘seeing as’ purposes. The more far-fetched the metaphor is — that is, the more Y is unlike X — the easier and more precise can be the reference to F. But, of course, metaphors vary in quality.

Importantly, the Y brought on for X to be imagined ‘as’, is not referred to in the metaphor, nor even mentioned in passing. What happens, rather, is that the perceptual behaviour which it would be appropriate to imagine *were* a Y being referred to — which it is not (only X and F are) — is imagined by the hearer, in response to ‘the word being used metaphorically’ in the metaphor. The grammar of the metaphor as it were tricks the hearer into imagining X in accord with a ‘perception recipe’ learned specifically for Y. At any rate, no Y is referred to. This point is missed by other writers on metaphor, and it is important in understanding the *mind* metaphors.

Because the metaphors entrenched in the CTV all qualify as ‘dead’ ones, I must dispel two prevalent misconceptions about dead metaphor. The first is that, when a metaphor dies, the word used metaphorically in the (erstwhile) metaphor, becomes a new literal referring expression. This is the ‘polysemy’ view. The second misconception, often conflated with the polysemy notion, is that a metaphor which dies on that account ceases to be a metaphor and becomes literally true. I argue that, when metaphors become established in the vernacular, and second nature to us, rather than their ceasing to be metaphors, all that happens is that we rehearse them as it were ‘automatically’, and unawares. They don’t literally pack it in, or change sides.

In Chapter Three I advance the metaphorical origin theory as to the provenance of the lay concept of mind. This theory assumes that the subject matter of the colloquial thinking vocabulary (albeit it is still ‘mentalist’ in the things it *apparently* refers to) is people’s acts of thinking — and varieties and aspects of them, and logical constructions (such as states, abilities and dispositions) out of them. And the metaphorical origin theory makes three claims. The first is the ‘exclusive use’ claim, that the noun *mind* is only ever used, in everyday speech, in association with and as an adjunct to some or other metaphor, almost invariably a familiar one. Second is the ‘precedent-in-metaphor’ claim, that, for every property attributed to ‘mind’ in the lay concept, one can find in the CTV an established

metaphor or family of them which implies mind has just this property.

Before presenting the third, ‘nominalisation’, claim, I canvass the view which opposes it. I call the opposing view the ‘Berkeley’ assumption, because Bishop George displays it clearly. The Berkeley view makes a point of acknowledging that in everyday discourse the noun *mind* is constantly accompanied by metaphor. But the lesson it draws from this is that mind is something abstract and difficult to understand, which we have a concept of prior to and independently of the metaphors, but which we need the metaphors to help us elucidate. The Berkeley view about metaphors and mind is a case of a more general theory about our use of metaphor to clarify abstract subject matters, the most prominent recent proponents of which are Lakoff & Johnson. The idea is that we construe the unpicturable *abstracta* on the basis of the picturable *concreta*. I criticise the Lakoff & Johnson approach in general and the Berkeley assumption in particular, and then table my ‘nominalisation’ alternative.

I distinguish ‘act’ nominalisation of verbs — where the new noun refers to the action the original verb refers to, but under some formal aspect — from ‘accessory’ nominalisation, where the new noun is used as the name of some accessory (agent, patient, product, etc.) of the action in question. Three or four hundred years ago the English verb *to mind* was much more used, and labelled a much greater variety of thinkings (mental phenomena) than it does now. ‘Minding’ was more or less what I am calling ‘thinking’ in this thesis. I speculate that the noun *mind* is a special, figurative, accessory nominalisation of the verb *mind*. Acts of minding/thinking have no accessories of the required kind (impersonal agent, instrument, characteristic venue, etc.), but the metaphor, which the noun *mind* is used in association with, fancifully implies that they do. *Mind* appears in the metaphor as the ‘name’ of the putative accessory of minding, which the metaphor prescribes. It is only because of the metaphors that we have the idea there could be such a thing as ‘mind’. ‘Mind’ — *qua* agent, instrument, product or venue of minding/thinking — is solely their creature.

Finally in Chapter Three I try and explain why the *mind* metaphors have such an influence on the way both lay people and philosophers understand thinking. An important factor is the seductiveness of the combination of metaphor and ‘figuratively’ nominalised verb that the metaphorical origin theory focuses attention on.

CHAPTER ONE: *The lay concept of mind*

We have an extensive vocabulary of words and phrases for talking about things ‘mental’. This vocabulary includes numerous verbs (such as, *think, imagine, believe, desire, feel, intend, hope, care, mind, remember, anticipate, conceive*) and it includes noun forms of those verbs (*thought, image, belief, desire, feeling, intention, hope, care, mind, memory, anticipation, concept*). In addition to these core terms, it includes numerous familiar metaphors — such as, *it dawned on me that, it hasn’t sunk in yet, I wasn’t thinking straight, harbour a grudge, refresh my memory, lost in admiration, my mind wandered, see a mental picture, and I kept it in mind*. And, as well as verbs, nouns and metaphors, the vocabulary has its own adjectives and adverbs, mostly, like the nouns, cognates of the verbs. I call the vocabulary the ‘colloquial mentalist vocabulary’. I say *mentalist* because the rubric concept in the area, the concept within which or by reference to which all the others are defined, is that of ‘mind’. The vocabulary refers, surely, to ‘mental’ phenomena — to diverse entities, and goings-on, in the mind, and to things done by the mind.

1.1 *The colloquial mentalist vocabulary and the lay concept of mind*

In saying that the concept of mind is the rubric or parent concept in terms of which the other concepts are defined I have moved from talking about items in a vocabulary to talking about ‘concepts’. Certainly, all the terms in the colloquial mentalist vocabulary have meaning for us. They are associated with certain imaginings on our part — *believe* and *desire* are, and *feeling* and *memory*, and *dawning realisation*, and *slyly* and *thoughtful*. Because others use the words and phrases in just the ways we do, we have good reason to believe that they associate the same imaginings we do (or similar ones) with given words in the vocabulary. It is convenient, at least for now, to call the various imaginings we do in connection with a given word our ‘concept’ of the word — that is, our concept of the thing the word is the name of. Thus, we have concepts, for example, of belief, of remembering, of gratitude, and of mind. Instead of defining ‘concept’ in terms of our imaginings, one could equally define it in terms of one’s mastery of the standard use of the word. Thus, for example, one’s concept of mind would be just (a reflection of) one’s ability to use the word *mind* correctly. For now, I do not want to have to decide what a concept is, and to what extent we have ‘concepts’ of what the colloquial mentalist

terms label. Later on, I query whether they in fact label anything, and whether the word *concept* is at all appropriate.

Although it is unquestionable that we habitually imagine given things in response to given mentalist expressions, I would rather talk about concepts than about imaginings. Concepts seem more substantial, harder-edged, less ‘subjective’ than imaginings. To talk about ‘imaginings’ would be to set out over boggy ground. For the time being it would be nice to keep our boots dry, or at least feel that our boots are dry.

Anyway, what I am saying is that our concept of ‘mind’ is the important general one in the area; it covers the whole of the vocabulary’s subject matter. The *Oxford English Dictionary* definition of *mind* in this general sense (III, 17) is as follows.

Mental or psychical being or faculty. The seat of a person’s consciousness, thoughts, volitions and feelings: the system of cognitive and emotional phenomena and powers that constitutes the subjective being of a person; also the incorporeal subject of the psychical faculties, the spiritual part of a human being; the soul as distinguished from the body.

Less formally, but more fully, the important ingredients in what the layperson means by ‘the mind’ can be expressed in terms of the following four properties.

(i) Internality: the mind is a place inside a person, more particularly inside the head; the mind is an internal venue or arena, a place where the person thinks, feels, imagines, understands, etc. — to imagine something, for example, is to see it (or an image of it) in the mind; the mind is something each person ‘has’, in the same way he or she ‘has’ various internal body organs, i.e., mind is a proper part of the person; because a person’s mind is inside him or her, what is going on there is private to P, only P is directly privy to his or her own mind.

(ii) Agency: as well as being the venue for certain kinds of action by the person, the mind itself also actively does and causes things, to some extent independently of the person; it is an inner agent, a power or force operating from inside the person; as well as perceiving and interpreting information, it motivates, monitors and controls the person’s actions and demeanour — usually, but not always, in rational ways; the mind has some of the features of an autonomous mechanism, functioning in accordance with natural laws; mind may also have derivative agency, in the sense of being an instrument employed by the person — a repository for storing information, a calculator, problem-solver, etc.

(iii) Intentionality: the mind is linked in a special ‘cognising’ (knowing, or meaning) way with things in the outside world; mind is the aware, conscious part of the person — aware not only of external things but of the person’s actions and of itself; mind is the knowledge-centre in a person, the source of intelligent appreciation of the world; from its perceptions, the mind forms ideas, concepts and memories which are more or less accurate representations of how things are in the world; the mind is that part of us which is (usually) ‘in touch with’ reality.

(iv) Non-physicality: the mind is the non-bodily, non-physical part of a person; it is what more there is to a person other than the physical body; being non-physical, mind is not merely in practice unobservable (because of its internal location, say), it is in principle unobservable — nothing we could ever do or experience could count as directly observing another person’s mind; the mind is a real but ‘abstract’ phenomenon; although mind is a place, it is a non-physical place; or mind can be considered to be a whole ontological dimension or world.

In summary, the ordinary person’s concept of a mind is of a non-physical and yet intracranial place and/or agent, which has powers of awareness. Mind is something people have in them; it is a part of the person, almost an organ; it is the conscious, ‘human’ part. And I have said that this is the central organising concept with respect to the colloquial mentalist vocabulary. It is what enables us to grasp the subject matter of the vocabulary as a whole, and thus helps us master the use of the individual words and phrases in it. And it is this I am calling ‘the lay concept of mind’.

There are at least four questions, or sets of questions, that a philosopher might ask about the lay concept of mind. First: What kind of ‘concept’ is our concept of mind? Is it a ‘concept’, strictly speaking, at all? Could it not better be described as a theory, or perhaps a myth? Or is it that none of these are justified, and we have to fall back on saying simply that we use this ‘mentalist’ vocabulary, and we indulge such and such imaginings in association with it? Second: What is the subject matter of the colloquial mentalist vocabulary? What is the lay concept of mind a concept of? Assuming there really things called beliefs, desires, feelings, etc., which occur in people’s minds, what kinds of things are they? Is there any better way of identifying ‘mental’ phenomena? Must the lay concept be taken literally, and at face value? Third: What is the source of the lay concept of mind? How do we each, as individuals growing up in our culture, acquire

this concept? How do we each learn there are such things as minds (if indeed there are)? Fourth: What, if any, role does our lay concept of mind play in our everyday interpersonal lives? Does it help us to predict others' behaviour? Does it help us to explain other people's behaviour? Does it help us to understand their behaviour? Does it in any other way affect how we relate to other people?

1.2 'Folk psychology' and the theory theory

It is commonly assumed by philosophers of mind that the notions of mind and mental phenomena were arrived at by people engaged in trying to predict and/or explain the actions of other people. It is assumed that we lay folk believe in, and conduct our social lives in accordance with, a body of informal theory about minds which philosophers call 'folk psychology'. Stich and Ravenscroft (in Stich 1996, pp.124-125) set down what they call a 'fascinating cluster' of "capacities that normal adults display" and "in which talk of mental states looms large". Stich and Ravenscroft believe, along with most other contemporary philosophers of mind, that these capacities naturally go together, and that they are aptly called, collectively, 'folk psychology'. The cluster of capacities includes:

- (i) the capacity to use words like *believe*, *think*, *want*, *desire* — and, presumably, other words like *mind* and *mental* — to describe people's (our own and others') behaviour;
- (ii) to use this vocabulary to explain people's behaviour;
- (iii) to reliably predict people's behaviour;
- (iv) to anticipate people's behaviour, independently of any verbal prediction;
- (v) and the capacity to make inferences, from behaviour to mental states and back again, using certain principles. [These principles constitute the logic governing our use of mentalist terms. An example of such an inference is: "If a person sitting at a bar wants to order a beer, and if she has no stronger desire to do something that is incompatible with ordering a beer, then typically she will order a beer" (*ibid*, p.126). Lewis 1980 justifiably called such inferences 'platitudes'.]

For the purposes of my argument in Part One I would like to take capacities (i) and (ii) from the rest of the cluster, and treat them as together constituting a separate and simpler 'capacity'. Capacities (i) and (ii) are not necessarily accompanied by (iii), (iv) and (v). Our abilities to anticipate, predict and infer things about people's behaviour need not be connected with our abilities to describe and/or explain them. We might, for example,

make predictions on some unrelated basis, and then use the vocabulary just to rationalise the prediction *post hoc*. A tribesman might decide when to go fishing on the basis of where the tide is, and the moon, and say afterwards, and believe, that the sea god told him to go then. With reservations about the kind of ‘explaining’ that is in question, I agree that lay folk do have and exercise capacities (i) and (ii). That is, lay folk do, in Stich and Ravenscroft’s words, use ‘talk of mental states’ to describe and explain behaviour. But I suggest that, at least for the moment, we withhold the label ‘folk psychology’ from this much-reduced cluster. I suggest that we call it, instead, ‘the lay concept of mind’. In the previous sub-section, I defined the lay concept of mind as the ability to use the colloquial mentalist vocabulary and to associate four main properties with the noun *mind*. Plausibly, this is just what Stich and Ravenscroft mean to include in their capacities (i) and (ii).

To say that the lay concept of mind is necessarily associated with the other three abilities (to predict, anticipate and make inferences) — that is, to impute a ‘folk psychology’ to lay folk, is to impute rather more than just their possession of a concept of mind. We can agree that lay folk have a concept of mind (to the extent that they use mentalist terms to describe and ‘explain’ behaviour), without agreeing that they employ a folk psychological theory. Philosophers who do go on to contend, as Stich and Ravenscroft do, that the five capacities hang together — and constitute a ‘folk psychology’ — are thereby vouchsafing answers to all four of the questions I said might be asked about the lay concept of mind.

To the first question, What kind of concept is the lay concept of mind?, they answer that it is a theoretical concept, the central concept in a would-be scientific theory about what causes people’s behaviour. The colloquial mentalist vocabulary is the terminology of a tacit theory. The answer to the second question, as to what the mentalist vocabulary is really about, is approximately that the mentalist vocabulary is about what it appears to be about — namely beliefs and desires, and other mental phenomena — but that these are best further-specified as ‘propositional attitudes’ or ‘intentional states’. Thus our folk psychology is a theory whose subject matter is propositional attitudes and their influence on people’s behaviour. There are at least three answers or part-answers which may be given to the third question, as to how we as individuals acquire our concept of mind (or theory of mind). The theory is in-built in our brains at birth; and/or we arrive at it by dint of our own theorising, from observations of other’s behaviour; and/or we are taught it (explicitly and/or by example) by our peers and elders. The fourth question, as to the role

which the concept plays in our interactions with others is answered by saying that the theory's role is crucial. Inherent in the theory are the rules of inference mentioned in capacity (v) above. It is the operation of these rules on our raw observations of others' behaviour that produces our anticipations and predictions as to their future (including their imminent) behaviour. Basically, all we know about others comes from our observations of them, enriched by the folk theory.

Although the general form of the folk theory is that of a scientific theory, folk psychology is to be contrasted with scientific psychology and neuroscience. Compared with these scientific disciplines, our folk theory of mind is naive, vague and somewhat incoherent. But it is a useful theory, it works. Inferences made on the basis of it do provide us with accurate predictions and explanations of what people will do in given circumstances. Many philosophers, including Dennett, perhaps the most influential figure in contemporary philosophy of mind, believe that despite its naivety folk psychology is largely true. This makes it a suitable candidate for being one day completely refined into, or further-explicated in terms of, the concepts of scientific psychology and neurophysiology.

One early and enthusiastic proponent of the idea that there is such a thing as folk psychology is Churchland. According to him,

The fact is that the average person is able to explain, and even predict, the behaviour of other persons with a facility and success that is remarkable. Such explanations and predictions standardly make reference to the desires, beliefs, fears, intentions, perceptions, and so forth, to which the agents are presumed subject. But explanations presuppose laws — rough and ready ones, at least — that connect the explanatory conditions with the behaviour explained.... Reassuringly, a rich network of commonsense laws can indeed be reconstructed from this quotidian commerce of explanation and anticipation; its principles are familiar homilies; and their sundry functions are transparent. Each of us understands others, as well as we do, because we share a tacit command of an integrated body of lore concerning the lawlike relations holding among external circumstances, internal states and overt behaviour. Given its nature and functions, this body of lore may quite aptly be called 'folk psychology' (Churchland 1981, p.68).

The kinds of commonsense 'law' which Churchland has in mind (see *ibid.*, p.70) are such as: 'if P fears that x, then P desires that not-x'; 'if P hopes that x and subsequently perceives that x, then P is pleased'; 'if P desires that x, and believes that if y, then x, and

is able to bring it about that y, then P will, other things being equal, bring it about that y'. The idea of us lay folk possessing such an informal 'psychological theory' is now generally accepted as explaining why and how we understand others' behaviour. For example, Meltzoff and Gopnik begin a recent paper as follows.

Normal adults share a network of ideas about human psychology that are often described as 'common-sense' psychology. Although we directly observe other people's behaviour, we think of them as having internal mental states which are analogous to our own. We think that human beings want, think and feel, and that these states lead to their actions. Our ideas about these mental states play a crucial role in our interactions with others and in the regulation of our own behaviour" (Meltzoff & Gopnik 1993, p.335).

Dennett also puts his *imprimatur* on the basic idea.

Very roughly, folk psychology has it that *beliefs* are information-bearing states of people that arise from perceptions and that, together with appropriately related *desires*, lead to intelligent *action*. ...We use folk psychology all the time, to explain and predict each other's behavior; we attribute beliefs and desires to each other with confidence... (Dennett 1993, pp.124-5).

Folk psychology is sometimes referred to as 'belief-desire' psychology, as if these phenomena are the key postulates of folk theory. But the central concept is more probably that of 'mind'. Belief and desire are distinctively 'mental' phenomena — that is, they occur in, or are functions of, the mind. People's actions, as distinct from lower animal behaviours, are purposed and self-aware, they are 'minded' or 'mindful' actions. They involve mentation. To explain people's actions therefore, we need to identify and understand the source of this mentation.

...a coherent conception of the mind is the central and essential component of our everyday explanation and prediction of human behaviour, our naive psychology of human action and thought. This psychological theory is essentially mentalistic, not behaviouristic. We explain actions in terms of the wishes, hopes, beliefs, plans, and intentions of the actor, and we feel that our own behaviour is produced via related voluntary-mentalistic mediators. A shorthand description of this causal-explanatory system is that it is a belief-desire-intention framework for action. If John goes to the store to buy groceries, for example, this is explained, in essence, by appeal to something like John's *desire* to eat, his *belief* that he can buy food at the grocery store, and his forming an *intention* or plan to go to the store (Wellman 1988, pp.67-68).

To belief and desire, Churchland above added fears, intentions and perceptions, and

Wellman here adds hopes and plans, as ingredients in action explanations. But the mind must have other powers as well, if it is to play its full role in the production of actions. The mature performer of actions must have, courtesy of his or her mind, not only beliefs and desires, but abilities to: — acquire and retain practical abilities, perceive, analyse and store information about external reality, anticipate or ‘mentally rehearse’ actions, evaluate risks and probabilities, make decisions and form intentions, communicate these intentions via speech, understand requests to act and instructions as to how to act, monitor actions during performance in a ‘self-aware’ way, and so on. Wellman distinguishes two developmental levels in the child’s acquisition of the mind concept. The primary concept requires that the child be aware of two aspects of mind. First they must understand the mental as a distinct and distinctive ontological category, and second they must be aware of the intentionality of mental phenomena and the need to distinguish different contents. As Wellman puts it,

First, they must appreciate that mental entities and experiences are different from objective ones — that is, that the actor may be dreaming about *x* rather than seeing *x*. And second, they must consider the propositional content of a person’s mental states or attitudes — that is, that the actor believes *x* rather than *y*. These aspects of mind have direct and obvious implications for the actor’s action, what he or she will do, but they do not require an elaborated notion of the mind itself and its workings... (*ibid*, p.88).

Subsequently, at the mature level, the intentional or ‘cognitive’ functions multiply:

The mind not only ‘holds’ beliefs, it perceives, construes, and interprets information about the world, then hypothesises, conjectures, and reasons about this information. This results, at times, in decisions, beliefs and knowledge and at other times in confusion, wonder and misunderstandings. In this second sense the mind is an intermediary that interprets and directs all perception and action — it is, in current terms, a central information processor (*ibid*).

Arguably, it is the mind’s roles as information-processor and rational-action-enabler that are most important in our concept of mind. But the concept serves other valuable explanatory functions too — for example, the mind is thought of as the inner cause not only of voluntary rational actions but also of various involuntary behavioural phenomena. I mean the kind of behavioural demeanour, or facial expression or tone of voice, or bodily agitation (wincing, trembling, blushing, etc.) which expresses and evidences felt emotion. That is, as well as the cognitive functions, mind also houses emotions. And ‘desires’ does not do justice to the range. There are pleasures, triumph, enthusiasm, anger, grief,

compassion, love, remorse, contentment, etc. These are the kind of mental phenomena which explain outer agitations such as those I mention above. Delight is the unobservable internal cause of that whoop and grin. In short, to carry out its many and varied explanatory duties, the mind requires many and varied properties and powers.

As I say, the predominant contemporary philosophical view is that the folk concept of mind is a kind of tacit, somewhat incoherent, proto-scientific *theory*. Like the scientific theories it is an amateur version of, the folk theory is a product of empirical observation and hypothesis. In this case, the empirical observations are of people's overt behaviour, and the hypotheses are inferences to unobservable inner causes. Evidently, in order for rational action to be possible, certain ancillary mentation or 'cognition' is necessary — that is, cognitive activity is necessary before and during rational action. This ancillary cognition must be understood if people's overt behaviour is to be understood and predicted. Roughly, the strategy of folk psychology is to posit a special arena inside the person where cognition is performed, or to posit a special power inside the person which performs it. The analogy with scientific investigation is thought to be very real. Churchland's early opinion is a strong one.

Not only is folk psychology a theory, it is so *obviously* a theory that it must be held a major mystery why it has taken until the last half of the twentieth century for philosophers to realise it. The structural features of folk psychology parallel perfectly those of mathematical physics; the only difference lies in the respective domain of abstract entities they exploit — numbers in the case of physics and propositions in the case of psychology (Churchland 1981, p.70).

Churchland's reference here to 'propositions' as the main theoretical postulate of folk psychology, reflects his acceptance of Russell's description — designed to highlight the intentional properties of mental states — of mental states as primarily 'attitudes to propositions' or 'propositional attitudes'. More recent advocates of theory theory are not so wedded to the 'propositional attitude' terminology, or indeed to beliefs and desires as the sole paradigms of mental phenomena.

As Davies and Stone report, the influential view of Fodor 1987 is in the same vein. Folk psychology is to be regarded as a proto-scientific theory.

Fodor is saying, then, that folk psychology has the form of a theory because it has the following characteristics:

- (i) it includes nomological generalisations;

- (ii) it postulates unobservable entities;
- (iii) the unobservable entities play an explanatory role as bearers of causal powers.

In essence, Fodor holds that the structure of folk-psychological explanation is deductive-nomological, and that the generalisations employed are generalisations over unobservable bearers of causal powers” (Davies & Stone 1995A, p.11).

For Fodor, folk psychology is a ‘deep’ theory. It is “a deep fact about the world that the most powerful etiological generalisations hold of unobservable causes” (Fodor 1987, p.7).

Theory theory is not merely a theory about the nature of the folk concept of mind, it is also a theory about how children acquire the concept. Meltzoff and Gopnik report that,

...recent research has shown that by the age of five years, children operate with many of the elements of a common-sense psychology. By five years old, children seem to know that people have internal mental states such as beliefs desires, intentions and emotions”(Meltzoff & Gopnik 1993, p.335).

Astington summarises how theory theory looks in this developmental context.

According to this view, children’s concepts of mental states are abstract and unobservable theoretical postulates used to explain and predict observable human behaviour. The concepts are coherent and interdependent, and the theory can interpret a wide range of evidence using a few concepts and laws. The theory is not static, but is open to defeat by new evidence, that is, it is subject to replacement by a new theory... Or the theory is not replaced but extended, as scientific theories sometimes are, in order to cope with the new evidence... (Astington 1995, p.185).

Children are pictured as small amateur scientists, hypothesising and discarding hypotheses on the basis of accumulating empirical evidence. However, the idea of the child as a theoretician — exploiting for explanatory purposes such abstract entities as ‘propositional attitudes’ (as Churchland would have it) or ‘generalising over unobservable bearers of causal powers’, (as Fodor puts it) — is not obviously plausible.

More likely, children acquire the basic mental concepts from their elders, via their acquisition of ordinary language, in which these concepts are already registered. This ‘grasp of theory via acculturation’ theme is prominent in the writings of many theory theorists. Even Churchland — by mentioning ‘quotidian commerce’, ‘familiar homilies’ and ‘a shared body of lore’, in the 1981 quotation above — gives a nod in the direction of cultural mediation. Elsewhere in the same paper Churchland compares folk psychology to ‘popular myths’ such as underlie astrology and alchemy. Dennett is explicit in his

recognition of folk psychology as a cultural phenomenon.

...there are different reasons for being interested in the details of folk psychology. One reason is that it exists as a phenomenon, like a religion or a language or a dress code, to be studied with the techniques and attitudes of anthropology. It may be a myth, but it is a myth we live in, so it is an 'important' phenomenon in nature. ...The anthropological question (sic) should include in its account of folk psychology whatever folk actually include in their theory, however misguided, incoherent, gratuitous some of it may be (Dennett 1993, pp.124-5).

No-one claims that children invent the same cultural phenomenon anew each generation, and more or less everyone concedes at least some cultural influence on the child's developing concept of mind. Although the appeal to cultural influences is clearly realistic, and clearly makes it easier to explain the child's early grasp of folk theory, it merely postpones an answer the more important question of how folk theory originated in the first place. We can see how it is disseminated — via lessons from elders and via everyday language — but how and by whom was it originally thought up? Was it devised, presumably after long-term scrutiny of people's behaviour and some adventurous hypothesising, by some particularly clever adult or adults?

Fodor, for one, thinks not. He suggests — in Fodor 1987, pp.131-3, following Humphrey 1983, pp.53ff — that interpersonal cooperation is necessary for human survival, and that the possession of a viable theory of mind is necessary in its turn for enabling the coordination of one's actions with others' which cooperation requires. Fodor's point is, if the discovery of a viable theory of mind had to await the theoretical cogitations of some suitably intelligent adult, we all would have already perished through inability to cooperate. In fact, any delay at all in an individual's acquisition of the mind concept would count against his or her survival. Fodor concludes that, if he had been faced with this problem in designing *homo sapiens*, he "...would have made knowledge of commonsense *homo sapiens* psychology innate; that way nobody would have to spend time learning it" (Fodor 1987, p.132). P.S.Churchland had already speculated that "For all we can tell now, the mind-brain may have an innate disposition to favour and 'grow' the rudiments of certain folk theories, including folk psychology.." (Churchland 1986, p.302). The idea that at least the basic concepts of folk psychology are innate, that some in-built module corresponding to our folk theory has evolved in the human brain (in much the same way as the Chomskyan language facility is claimed to have) is now widely accepted in developmental psychology and in the philosophy of mind. Meltzoff and

Gopnik believe that such speculation is confirmed by recent research findings. They conclude that,

Infants are, apparently, never strict behaviourists: one fundamental assumption of mentalism — that external, visible behaviours are mapped on to phenomenologically mental states — is apparently given innately. Clearly infants have much to learn about the nature of mind, but apparently they need not learn that it, or something like it, exists, and perhaps not even that it is shared by themselves and others” (Meltzoff and Gopnik 1993, p.340).

For elaborations of the innate module view, see Levin 1984, Dennett 1987, pp.237-68, Graham 1987, Fodor 1992, Leslie 1992 and Segal 1996.

Besides ‘intelligent adults theorising from observed behaviour of others’ and ‘an innate theory-of-mind module’, there is a third possibility as to the ultimate origin of folk theory. This is that people, possibly including infants, are directly aware, via introspection, of their own minds and the states of them and goings-on in them. Seemingly, given first-hand acquaintance with mental phenomena, the child’s theorising task would be greatly diminished. To explain the behaviour of others in mentalist terms, all the child would have to do is apply laws about behaviour and mental states learned from his or her own case to the cases of others. The fact that mental states in others are unobservable would make this analogising process a little more difficult, but at least the child would already know what kind of phenomenon he or she was positing. A high degree of inventiveness and intellectual sophistication — which, for example, the from-scratch positing of Fodor’s ‘unobservable bearers of causal powers’ would seem to involve — would no longer be required of the child. However, as Gregory notes, introspection may not supply as much as assistance as it promises.

...concepts of mind must be invented or discovered, much as in physics, for we cannot see at all clearly into our own minds by introspection. ...If we could see ‘directly’ into our own minds by introspection, perhaps we would not need explanatory concepts for understanding at least our own psychologies. But as it is, introspection tells us virtually nothing about how our minds work or what they or we are. So we need ...concepts for psychological understanding. In this way concepts of mind are not so different from concepts of physics ...for both underlie appearances and are more-or-less helpful tools for thinking and understanding” (Gregory 1987, p.158).

Even given that introspection is a genuine form of observation, there are legitimate doubts as to whether it is possible to introspect a given mental state *as that mental state*

— that is, as something having such-and-such nomological connections with other mental states and with behavioural outcomes — without prior theoretical knowledge. A principled classification of mental states must have been accomplished *before* given mental states can be introspected as such. And this preliminary classifying is a theorising task comparable in intellectual difficulty to the positing of unobservables. So, nothing is gained. Unrealistically onerous intellectual tasks are still being allocated to the child. For these and other reasons, the appeal to introspection — as a means of giving the child's knowledge of mind an initial leg-up — should be disallowed.

In the meantime, there is another thing worth mentioning about our everyday concept of mind. I assume that the four-part spelling out I offer above is a reasonably fair summary of what most lay folk would say about mind, if asked — by a child say. Intuitively, the mind is all these things. However, although this probably is the concept we have, and although it undoubtedly relates to something very real and important in our lives, the lay concept does seem very incoherent. If it is an attempt at a scientific-type theory, then it is a surprisingly amateurish one. The four central features we attribute to 'mind' are to a large extent mutually incompatible. For example, if the mind is a place — inside a person's head, say — then it cannot be non-physical. Location requires physical presence. Again, if minds are non-physical then how can they be literally a 'part' of a person? If the mind is a repository for knowledge, then it cannot also be the 'knower' of that knowledge. The place where memories are stored cannot itself be the agent which/who remembers. The mind cannot be both a venue where we do things, and the doer of those things. Even the idea of intentionality, according to which mind is related to things in the physical world, but in a non-physical way, is difficult to comprehend.

Given that these do constitute genuine anomalies and incoherencies in the lay concept of mind — and it is hard to conclude otherwise — such phrases as the following (from passages I have quoted) seem misplaced. Churchland 1981 writes of “an integrated body oflore” and claims that “the structural features of folk psychology parallel perfectly those of mathematical physics”. Wellman 1988 refers to the folk concept as “a coherent conception of the mind” and Astington 1995 reports that, in folk theory, “the concepts are coherent and interdependent”. Use of the term *theory* implies a degree of articulation and systematicity, but the folk concept looks to be more piecemeal and *ad hoc* than systematic. I discuss the propriety of the terms *concept*, *theory*, and *myth* — as used in connection with the lay 'concept' of mind — in Chapter Three, section 3.4.

The hope of many contemporary philosophers of mind is that a logically tidy concept of mind can be laid at the brain scientist's door. Remaining deficiencies in the folk concept would then be remedied by scientific investigation. But there may be a problem with this program in that, the more precise and coherent is the philosopher's concept of mind, the less it looks like our everyday one. It is as if the lay concept is naturally vague and/or incoherent, so no tidied-up version could capture what we mean by *mind*. The situation is not improved if the philosopher goes the other way, and decides the lay concept is beyond salvation, fit only to be eliminated — before serious, scientific investigations can commence. The problem then is to define the subject matter of these serious investigations. If eliminativists abandon the words *mind* and *mental*, then the subject matter is no longer specifiable in these terms. Whatever new definitions eliminativists come up with, they will not be definitions of what lay folk call 'mental' phenomena.

1.3 *Simulation theory*

Simulation theory is the theory that, from observations of others' behaviour, we find out what mental states are occurring in them, and explain and predict their likely future behaviour, not by applying a theory, but rather by empathising or 'simulating' the relevant mental states. Although it is usually considered to be squarely opposed to the theory theory, it is only squarely opposed in one important respect — on the question of whether we need theory to predict behaviour. In other ways it is complementary to theory theory.

Simulation theorists do not deny the anthropological fact that we have a lay concept of mind — in my minimalist sense — that is, that we used the colloquial mentalist vocabulary to describe and explain people's behaviour. However, the term *explain* is ambiguous here. Simulation theory does deny that the lay concept is necessarily part of a theory. And, if *explain* is held to mean, by definition, 'explain by relating back to a theory', then simulation theorists would deny the lay concept is explanatory in this sense. What they would readily concede, however, is that, when understanding and anticipation of others' behaviour is derived by other, non-theoretical, means (such as simulation) it will be *couched in terms of* lay notions of minds and mental states. For the simulation theorist, the lay concept of mind helps us to talk about things mental, and it gives us words in which to couch our explanations and predictions of behaviour, but it does not help us arrive at the understanding and anticipations which underlie those explanations and predictions.

Unlike theory theory, simulation theory does not imply fixed answers to all of the four questions which I say philosophers might ask about the lay concept of mind. For example, it has no particular answer to the first question, regarding what kind of concept the lay mind concept is. Simulation does assume, however, that we do have mental states and that these are what the colloquial mentalist vocabulary refers to. After all, the mental states are what (as observers) we simulate. If they did not exist to be simulated, we could not simulate them. And this assumption about the ontological *bona fides* of mental states does commit simulation theorists to the view, at least, that the lay concept of mind is genuinely a concept *of* something, and that it is to be taken literally.

The second question, as to what the lay concept is really about, is not tackled head-on by simulation theory either. The only commitment of simulation theory as to what kinds of things mental states are is that they must be such as can be simulated, duplicated, in principle by anyone. Mental states must be ‘transferable’ from person to person. Presumably, ‘propositional attitudes’ are transferable in the required sense.

The third question is the one I am most interested in, for the purposes of Part One of this thesis. What is the source of the lay concept of mind? That is, how do we each, as individuals, arrive at the concept? How do we come by it? Stich and Nichols observe that simulation theory does “..seem to require that the person doing the simulating must already understand intentional notions like belief and desire” (Stich 1996, p.144). When simulation is employed to attribute intentional states to agents, the simulator must have a prior understanding of what state it is he she is attributing. Of the major protagonists in the literature, at least Gordon and Meltzoff & Gopnik believe that original knowledge of mental states may be acquired by a combination of simulation and introspection — without any theoretical knowledge. I will return to this topic shortly.

The fourth question is the only one to which simulation theory commits a definite answer, and an answer opposed to that of the theory theory. In the classic version of simulation theory — the ‘radical simulationism’ option espoused by Gordon 1995, 1996A and 1996B and Goldman 1995, 1996 — we do not need to make theory-mediated inferences from the other’s circumstances and behaviour to their inner mental states. Rather, our perception of the other’s circumstances and behaviour is from the beginning empathic, and cues a direct simulation on our part of the other’s mental state. All we do is imaginatively re-enact this mental state — from the basis of our own experience of

being in circumstances of that kind, and our own experience of what we would think and/or feel while producing behaviour of that kind. This leaves us experiencing directly (albeit also vicariously) the same mental state that the other is experiencing. From here, all we need to do to work out what the other person is going to do, is ask ourselves what we would do, if in this mental state in these external circumstances. If the simulation is good (and we do have a knack for simulation), then this prediction as to the target's behaviour will be reliable.

Now, how do simulation theorists explain children's acquisition of the lay concept of mind? The question is usually posed as, How does the child acquire knowledge of other minds? Or, How does the child acquire a theory of mind? We can assume that knowledge of the colloquial mentalist terminology and how to use it is part and parcel of these. What is more important is that simulation theorists all seem to assume that there is no such thing as my 'minimalist concept'. They assume that any 'knowledge of minds' must amount to a theory. And what they seek to explain is how simulation could enable knowledge of this theory. In a way, they take on more than they have to. All that really needs explaining is my minimalist 'concept' — that is, why we use this vocabulary, and why we imagine this and that in connection with it. However, first of all, we should look at what concept of 'simulation' is being assumed.

Simulation theory relies on the existence of natural human tendencies — with innate abilities being subsequently augmented and refined — to imitate and empathise the behaviour of others. There is substantial evidence, beginning with the Meltzoff & Moore 1983 findings on neonate imitation, for an innate basis for human imitation and empathy and so this presumption of simulation theory appears reasonable. As far as the relevance of imitation and empathy to simulation theory specifically is concerned, we cannot improve on Gordon's 1996A account. Gordon is applying a simulationist analysis to an example which Fodor analyses in theory terms — that is, how it is that, in *Midsummer Night's Dream*, Hermia comes to the conclusion, based on the circumstances and a certain demeanour and facial expression of Demetrius, that Demetrius has murdered her lover Lysander.

...the sight of Demetrius' facial expression would probably have produced a similar expression on Hermia's face — even if not a visually detectable expression, at least the corresponding pattern of muscular innervation. [In a footnote reference from this point, Gordon acknowledges borrowing this part of his account from Meltzoff & Gopnik 1993. See especially Meltzoff & Gopnik

1993, pp.356-7.] And these copy-cat innervation patterns, at least when they replicate another's expression of emotion, tend to produce an emotion in us, typically (where there are no relevant cultural differences), an emotion similar to the one that caused the other's original expression. Even the *voluntary* movement of facial muscles tends to produce felt emotion and the corresponding physiological changes. Thus, by replicating the facial expression of others, we would tend to 'catch' the emotion expressed. There are also mechanisms for catching the intentionality of another's emotion — for example, the gaze-tracking response that transfers one's attention from the other's facial expression to the 'cause' or 'object' of the emotion" (Gordon 1996A, p.13).

Simulation theorists appeal just as confidently as theory theorists do to 'innate mechanisms'. Hobson has it that "...there is a basic human capacity for 'direct perception' of feelings *in* the bodily expressions of others" (Hobson 1993, p.213) and he says, "There are innately determined sensibilities through which one individual can 'read' and respond affectively to another individual's affective attitudes, not only towards herself but also towards elements in the outside world" (*ibid*, p.222).

What kind of things do simulation and imitation theorists say about how children acquire their knowledge of other minds? Meltzoff and Gopnik speculate that the "aboriginal basis" of both the simulation process and the child's initial grasp of folk theory is the "capacity to map one's internal sensations on to the behaviour of others" (Meltzoff & Gopnik 1993, p.340). All normal children are precocious in this respect.

One-hour-old infants map behaviour on to internal phenomenological states; you certainly cannot get much more direct evidence of innate capacities than that. However, the more delicate problem is the question as to which particular aspects of common-sense psychology / theory of mind are innate, and the form that that innate knowledge may take" (*ibid*, pp.358-9).

At a very primitive level, normal children seem innately to map behaviours on to internal states; this is a starting point for the later elaboration of common-sense psychology in the normal case. Children who lack this primitive sense of mentalism may well develop along different paths than normals because their construal of interpersonal encounters will be so different" (*ibid*, p.359).

The new findings on imitation strongly imply that motor plans and intentions are mapped on to the behaviour of others from the start. It is as if children, in the case of simple desires, immediately recognise that the other person's behaviour implies desires similar to their own. This would be grounds for attributing a simple common-sense psychology capacity to the child. In the same way, in seeking the most primitive building-blocks of common-sense psychology, we see

it as relevant that the young child apprehends a similarity between a particular pattern of externally perceived behaviour, a particular internal proprioceptive sensation, and the motor plan that is necessary to produce both the sensation and the behaviour” (*ibid*, pp.339-40).

For a young child to be able to ‘apprehend a similarity’ between such apparent incommensurables as other’s behaviour and his or her own proprioceptions and motor plans (representations), would require more than precocity. What mode of apprehension is being speculated here? And on the basis of what criteria are the relevant ‘similarities’ identified? The argument at the end of the previous section about the limitations of introspection applies not only to knowledge of one’s own spontaneous mental states, but also to the mental states of others which one is experiencing (and introspecting) as a result of simulation. We still cannot be said to recognise, or know what these mental states *are*, without some prior and independent theoretical knowledge of those states. Simulation cannot give us new theoretical knowledge of mental states any more than introspection can. After the passage above in which Gordon describes the simulation process as akin to a ‘subliminal contagion’, he goes on to contend that “It is plausible that our capacity to *recognise* and *name* the emotion expressed on another’s face owes much to subliminal contagion of the sort described” (Gordon 1996A, p.13). My question is, how much is owed? And is the loan taken out at the beginning, or during the consolidation, of these recognising and naming abilities?

Many simulationists are content with a more modest role for simulation *vis-à-vis* theory acquisition. Their line is that, once we have acquired the necessary theory (by other means), simulation provides an important means of confirming and applying that theory. The role of imitation and empathy in our acquisition of knowledge about mental abilities, in our acquisition of those mental abilities themselves, and in our acquisition of action-abilities and knowledge of actions generally, comprise a cluster of topics to which I return several times in this thesis.

Despite the frequent use of the term *empathy* as a synonym for *simulation* in the literature, there is nothing inherently more ‘touchy-feely’ about the simulation model than there is about the theory model. The simulation concept borrows as much from the idea of computer simulation as it does from innate human abilities to imitate and empathise. Simulation is just as readily portrayed in mechanistic and/or computational terms, as theory application. Goldman explains.

The basic idea behind the simulation theory is that the naive ascriber of mental predicates does not have to represent and deploy a sophisticated commonsense psychological theory (set of causal laws) to describe mental states to himself or others successfully. Every normal agent has a set of mental mechanisms for generating new mental states from initial ones — for example, a decision-making system that takes desires and beliefs as inputs and churns out decisions as outputs. Such mechanisms or systems might be employed in a derivative fashion to simulate and ascribe mental states to oneself and others. To use the simulation heuristic, one would feed pretend initial states into such a mechanism — the initial states of the targeted agent — and see what further states the mechanism produces... If the ascriber, predictor or interpreter can feign the initial states of the target agent accurately (on the basis of prior information or simulations), and if the mental mechanism operates equivalently (or sufficiently close to equivalently) on both genuine and feigned states, there is opportunity for the output states generated by the system to mirror, or accurately reflect, the ensuing states of the target agent. There is *prima facie* evidence that (certain) mental mechanisms do have the capacity to run in this simulative fashion (Goldman 1996, p.189).

According to the radical simulationist, there is no need for us to have an objective theory about what the other is thinking and/or feeling — we can think and/or feel the same things directly, albeit vicariously. Our understanding and successful prediction of others' behaviour, and our ability to coordinate our behaviour with that of others (and so enable cooperation) can all be explained, on this view, in terms of abilities to imitate and empathise with others. The radical simulationist need not deny the existence of the folk concepts, he or she denies only that they are necessary for the behaviour-predicting and behaviour-explaining tasks which theory theorists say they are necessary for.

In milder versions of simulation theory, simulation is viewed as an adjunct or complement to theory application. Simulation functions either as means of arriving at hypotheses (about the other's mental state) which subsequent theoretical calculations will either confirm or disconfirm — or simulation merely provides corroboration, and perhaps a feeling of conviction, concerning inferences already made from objective observation and theory. In both mild and radical versions, the mechanics of the simulation process are the same. The 'simulation' concept borrows from both everyday 'empathy' and from 'computer simulation'. However, whereas in the radical version simulation was the only necessary heuristic strategy (and theory was *de trop*), in the milder versions it is theory that is primary, with simulation playing the role of an optional ancillary.

Clearly simulation theory and theory theory should reconcile rather than continue to slug it out. And clearly also, there is room for more accommodations than the ones I suggest above. One interesting conciliatory possibility is suggested by Millikan's 1996 concept of 'pushmi-pullyu' representations.

Suppose that my brain already harbours, for purposes of guiding my action, a [an 'imperative'] representation of what I am definitely going to do. And suppose there is need to take this settled future into account when making further decisions about what else I can compatibly do. It would surely waste space and introduce unnecessary mechanisms for evolution to duplicate the representation I already have. Better to just use it over again as a descriptive representation as well" (Millikan 1996, p.153, my insert).

Following the suggestion Millikan makes at the very end of this 1996 paper, we can apply her notion of descriptive and/or imperative representations to the relation between theory and simulation. Observer P's representation of another's mental process, while remaining numerically the same process in P, may be legitimately regarded — depending perhaps on the practical context and on the grammar of the sentences in which it is verbalised — as either a *meta-representation* (say, an estimate of what the other's mental process is) or as an actual *simulation* of that mental process, i.e., a re-creation in the observer of the representation which is occurring in the subject. According to theory theory, the observer, after making various theoretical computations, produces a mental representation of the other's mental representation. Simulation theory says the observer simply duplicates the other's representation. Millikan seems to be suggesting that one and the same 'pushmi-pullyu' representation could play both roles in the observer — that is, one and the same neural structure could realise both the meta-representation and the simulation.

However, there is a complicating factor, which could put a new spin on both theory theory and simulation theory. In support of the notion of an 'imperative' role for action-representations, Millikan mentions the work of Rizzolatti, Meltzoff & Moore 1983 and Jeannerod 1994. Rizzolatti is the one who has done most to identify the kind of neural mechanism that could underlie simulation (empathy). He has located (see di Pellegrino *et al.* 1992) groups of what he calls 'mirror neurons' in the rostral inferior premotor cortex of monkeys, neuron groups which discharge when and only when the monkey is either performing certain specific hand movements (grasping, holding and tearing) or *observing* another monkey making just those movements. Using transcranial magnetic stimulation techniques, Rizzolatti has also recorded patterns of motor-evoked potentials from hand

muscles while human subjects watched an experimenter perform certain manual actions. A similar pattern of evoked potentials was found when the subjects themselves executed those actions (See Fadiga *et al.* 1995). In more recent work, Rizzolatti & Arbib 1998 have speculated that in humans, simulation/empathy may be a form of deliberate communication between the ‘target’ person and the observer.

Taken together, human and monkey data indicate that, in primates, there is a fundamental mechanism for action recognition. We argue that individuals recognise actions made by others because the neural pattern elicited in their premotor areas during action observation is similar to that internally generated to produce that action...

There is obviously an enormous gap between recognising actions and sending messages with communicative intent. We offer now a hypothesis ... on how this gap might have been bridged. Whether an individual is about to perform an action or observes another individual performing an action, premotor areas are activated. Normally, a series of mechanisms prevents the observer from emitting a motor behavior that mimics the observed one, and the ‘actor’ from initiating the action prematurely. In the case of action observation, for example, there is a strong spinal cord inhibition that selectively blocks the motoneurons involved in the observed action execution... Sometimes, however, for example when the observed action is of particular interest, the premotor system will allow a brief prefix of the movement to be exhibited. This prefix will be recognised by the other individual. This fact will affect both the actor and the observer. The actor will recognise an intention in the observer, and the observer will notice that it’s involuntary response affects the behavior of the actor. The development of the capacity of the observer to control his or her mirror [empathy] system is crucial in order to emit (voluntarily) a signal. When this occurs, a primitive dialogue between the observer and the actor is established. This dialogue forms the core of language. The capacity to notice that one has emitted a signal and associating it with changes of the behavior of others might or might not have developed simultaneously. However, there is no doubt that, once established, this new association should have yielded enormous benefits of adaptive value for the group of individuals that started to make use of it, providing the selective pressure for the extension of communicative capacities to larger groups.

This new use of the mirror system, at both individual and species levels, marks the beginning of intentional communication (Rizzolatti & Arbib 1998, pp. 190-1).

Clearly, if, in the human case, the observer’s simulation response issues in behaviour which in turn has an effect on the actor’s behaviour, then we are talking about interpersonal communication, rather than any scientific-type theorising about a target person’s mental states. We cannot continue to talk about ‘objective science’ if the subject

matter is engaged in communication with the scientist. Fisher and Adams also emphasise a two-way, communicative role for simulation (their ‘motor mimicry’).

Motor mimicry has been traditionally conceptualised as only a reflexive nonverbal reaction appropriate to the circumstances of another. This behavior was considered a reflection of the empathic experience of an individual in response to a situation that someone else is experiencing. Examples of motor mimicry include wincing when you see someone stub a toe, leaning forward as you watch a runner cross the finish line, and smiling at another’s delight. This behaviour functions as an indication of an observer’s vicarious experience of another’s situation; the behavior functions to inform.

...Bavelas *et al.* 1988 have shown that motor mimicry has a function of its own and that while someone’s situation (e.g., stubbing a toe) may elicit both an internal experience in an observer and communicative behavior, these two functions are independent. Further, and most important, the communicative function is the reason for the non-verbal behavior (e.g., the wincing). ...Thus these expressions are not *of* an observer’s internal state, but subtle relational messages *to* another. Chovil 1991 has recently shown that facial mimicry occurs only when the behaviour can be seen (Fisher & Adams 1994, pp.159-160).

The observer’s empathic or simulation response may have an heuristic role, as simulation theory claims, but it is also important for cueing renewed (often subtle) body-language, on the target person’s part, which communicates that empathy right back to the observer. It is extremely common, if not the rule, for someone being observed to be aware that he or she is being observed and to ‘play to the camera’ in the first place — that is, deliberately exaggerate certain expressive behaviours so as to engineer or control the observer’s ‘simulation’ response. How is this kind of communicative interchange to be extricated from, or fitted into, the simulation theorist’s story? Or the theory theorist’s?

1.4 Mind talk in its home context — objectivity vs empathy

How ‘active’ is the lay concept? This is another aspect of the fourth question. Apart from its possible role in helping us explain and predict behaviour, how much does the idea of mind influence our attitudes to others? Usually, during interpersonal encounters, one is busy doing something *with* the other person, and/or one is empathising. When one is absorbed in activity with the other, the idea of a mind in there, behind the smiling eyes, is well in the background. At other times, often perhaps in face-to-face talking, it seems more to the fore. Jaynes believes that, “In talking with a friend, maintaining periodic eye-to-eye contact..., we are always assuming a space behind our companion’s eyes into which

we are talking, similar to the space we imagine inside our own heads where we are talking from” (Jaynes 1976, p.45). On the other hand, Wittgenstein is surely right when he remarks, “You look at a face and say ‘I wonder what’s going on behind that face?’— But you don’t have to say that. The external does not have to be seen as a façade behind which the mental powers are at work” (Wittgenstein 1982, p.127e). A variant of this note reads: “But you don’t have to think that way. And if someone talks to me quite obviously holding nothing back then I’m not even tempted to think that way” (*ibid*).

Ideas, like words, usually have a definable context of use, or ‘home context’. The ideas, and/or the words which express them, can best be understood by seeing the ideas and/or words at work in their home context. Thus, it helps us understand the folk notion of mind, and the colloquial mentalist vocabulary which serves it, if we can see them in their practical context. Although it is very common indeed, concern about minds and what is going on in them is not ubiquitous or continuous in our daily lives. In what broad practical contexts *is* such concern useful? Or, better, first, in what practical contexts is such concern *not* useful?

We might think in terms of three intermerging levels of ‘interpersonal uncertainty’. Consider situations where some cooperative undertaking is proceeding smoothly, where the participants know what to do and are doing it in an absorbed and intelligent way. A relatively small proportion, but some, of our lives is spent in this ‘trouble-free cooperation’ mode. In this sort of context, any concern about minds and their contents is inappropriate — at least as far as the prevailing cooperation is concerned. There may be a certain amount, or a lot, of empathising going on, but there is no need here to explain and predict others’ actions. That work has already been done. Everything is now going according to plan.

Outside this somewhat ideal situation is perhaps the most common circumstance, where, although there is an established background of cooperation or at least goodwill, there is uncertainty about specifics. For example, someone does the wrong thing. Here, P_1 may well need to effortfully strive to explain and/or predict the P_2 ’s behaviour, or just to find out what to do him or herself. Obviously and overwhelmingly, our primary heuristic recourse in such situations is not to psychology or any theory. We *ask* the other person — what he or she is doing, or going to do, and why. Plausibly, the initiating, expediting and renovating of cooperative activity is what speech is primarily for. This is

not the place for an account of the pragmatics of the verbal announcing of intentions to act, or of the pragmatics of hortation. It might be said, however, that, when P_2 explains to P_1 what she is going to do and why, P_1 is thus enabled (or at least greatly assisted) to empathise or ‘simulate’ P_2 ’s intention. That is, P_2 ’s speech enables P_1 to imagine the action which P_2 is contemplating. This looks like runs on the board for the simulation theory. Recourse to speech must be by far the most common means of ‘explaining and predicting’ others’ behaviour. And, the underlying mechanism, what the speech is aiding and abetting, is plausibly some kind of ‘simulation’ by the ‘explainer-predictor’.

In a third kind of interpersonal situation, also reasonably common, the verbal communication suffers some breakdown. Ancillary ‘repair and maintenance’ activity is convened. One of mind talk’s most important functions is, within communication-repair ancillaries, to express incomprehension, pinpoint misunderstandings, solicit instruction, incite cogitation, establish new shared understandings, and so on. It is primarily here that words like *know*, *believe*, *think*, *intend*, *remember*, *concept*, *idea*, *understand*, etc., are bandied about with useful practical effects. The participants are taking time out to clarify just what each is assuming, how well each understands the situation, and so on. Mind talk is here part of a meta-language, a language for communicating about communicating. And the aim of this ancillary meta-talk is to reconvene the side-by-side, cooperative, empathic attitude which has temporarily languished.

The communication-breakdown-repair context shades into a fourth kind of situation, much less common, where there is little or no background of cooperative intent, and perhaps no goodwill. Only here, when recourse to speech is unlikely to succeed, does the attempt to interact with the other on a side-by-side, empathic basis give way to a more detached, judging, measuring, ‘objective’ interpersonal attitude. In this kind of situation, it may become appropriate to adopt a ‘theoretical’ stance. Here one might well make inferences about the other’s mental state on the basis of observations of his or her behaviour. The stance is a little like that which one might adopt towards an unfamiliar animal. Or the other’s behaviour and/or bodily agitation (in a broad sense) might well be not so much threatening as just puzzling.

I am claiming that we are more likely to ascribe some ‘mental’ phenomenon to a person when his or her behaviour or bodily agitation is to some degree unusual. As with threatening behaviour, unusual behaviour would attract detached, or ‘objective’, scrutiny

rather than empathy. Jaynes suggests that the concept of mind originated in attempts to explain the “different and bewildering behaviour” (Jaynes 1976, p.217) of strangers, and it acquired wider currency only later. A feature of this fourth context is the participants’ retreat (for whatever reason) from verbal communication, the fact of reticence. Because words and/or expressive body-language (on the basis of which one could empathise) is unforthcoming, there is a vivid impression of something being held back, something being retained inside the person, kept private. The idea of internal goings-on in people, an idea which is foundational to the mind concept, is ‘in the air’ in the fourth context.

In general, one could say, the idea of mind is most at home in the third and fourth (and, to a much lesser extent, the second) of the contexts sketched above. It is at home when the choice between empathising with the other and viewing him or her objectively is a difficult one, where it could go either way. The mind concept may help reconcile the two interpersonal attitudes, or perhaps obfuscate, or distract from, the conflict between them. Attending to a person’s mind or mental state is one step away from empathising with them — that stance is temporarily on hold, while one speculates about the internal goings-on — but neither is it the same as viewing them purely objectively, as one would an unfamiliar animal, say.

One problem with the theory theory, especially with versions which liken folk psychology to scientific theory, is that it supposes that the objective, scrutinising mode of interpersonal perception is the rule — as if watching other people do things is always a kind of zoological investigation. Bruner and Feldman 1993 suggest that such a quasi-scientific, objective and ‘computational’ approach is in fact adopted by autism patients (albeit relatively high functioning ones). But autistic people are the very people who, according to mainstream theory theorists (beginning with Baron-Cohen, Leslie & Frith 1985), *lack* a theory of mind. Bruner and Feldman give us some idea what a theoretical approach to other minds, as adopted by a child *qua* solo amateur scientist, might produce. They announce,

...the Sigman-Feldman ‘computational surmise’ — that highly functioning autistic children convert the personal world of intention-regulated social experience into an impersonal world of causally-driven events. Part of the ‘strangeness’ of the high-functioning autistic person, those characterised as suffering from Asperger’s syndrome, is that their ‘adequate’ interpersonal functioning gives the impression of their doing arithmetic problems or figuring out cause-effect problems rather than operating intuitively with notions about

how people ordinarily feel, think, believe in standard situations. Given sufficient time to brood about it (the kind of time ordinary sociality will not accommodate), they will come up with ‘adequate’ but bizarre interpretations of personal matters — as is so notably the case with Asperger subjects... We think that this interesting and powerful compensatory manoeuvre on the part of high-level autistic subjects (a blessing though it may be for them) may have led to a strangeness of talking and of manner that gives normal interlocutors a disturbing sense that they are interacting with someone who is, as it were, outside the culture (Bruner & Feldman 1993, p.288).

Theory theorists could argue that the ‘theorising’ of these Asperger’s sufferers does not in fact discredit their claim that autistic people are incompetent theorists of mind. They could argue that the point about Asperger’s sufferers is not that they are theorists, but that they are *poor* theorists. Whereas the normal person is a whizz at the kind of theorising required, and does all the necessary computing instantly and effortlessly, and accurately, the Asperger’s patient is slow and clumsy at it, and often gets it wrong. With the Aspergers people, you can ‘see their minds ticking over’, as it were, or it is a case of “excuse me, your theory is showing”.

At any rate, what I am suggesting, with my distinction between the four kinds of social context (with four corresponding levels of interpersonal uncertainty) is that, more likely, simulation or empathy is the rule, in everyday life. But if it is our employment of the concept of mind that is in question, then we need to see this concept in its home context. And the home context of mind talk is a social context that is not the rule, or not quite. In this context, neither simulation nor theory-application holds sway. They vie. The epistemology of ‘mind’ is perhaps better reflected in current philosophical attempts to reconcile theory theory and simulation theory than it is in either theory on its own.

1.5 Is the vocabulary’s subject matter static or dynamic?

In the rest of Part One I will suggest some answers of my own to the four questions philosophers have asked about the lay concept of mind. Three of the questions — what kind of concept is it, how do we acquire it, and what role does it play in our predictions of others’ behaviour — I will leave for Chapter Three. In the two sections remaining in this chapter, I will attempt an answer to the question of what is the *subject matter* of the colloquial mentalist vocabulary. This is the question what the lay concept of mind is a concept *of*. Naturally, if we are to evaluate the lay concept of mind as a concept — that

is, see how good it is *qua* description and/or explanation — then we need to know at least what kind of thing it is an attempted description and/or explanation of.

In this section I will consider two views as to what is the subject matter of the lay concept. The first can be called the *naive* view

1.51 *The naive view*

Although ‘mind’ is the central reference point in the lay concept, and mind is a ‘thing’ or entity, what I am calling the naive view is the view that the colloquial vocabulary is about ‘mental phenomena’ generally. As well as containing a good number of distinctive adjectives and adverbs, which I shall for present purposes ignore, the colloquial mentalist vocabulary contains numerous nouns and verbs. These nouns and verbs apparently name phenomena of many logical categories — for example, they appear to name mental states and entities (such as representations and mechanisms), and also mental events, functions, processes and activities. I am assuming that, roughly speaking, the nouns (like *thought*, *belief*, *desire*, *image*, *intention*, *memory*, *mind*, etc.) name the ‘static’ mental phenomena, the states and entities, and the verbs (like *think*, *believe*, *desire*, *imagine*, *intend*, *remember* and *mind*) name the ‘dynamic’ phenomena, the mental events, processes, functions and activities. The ‘naive’ view is that mental phenomena of all these logical types exist and that the nouns and verbs in the colloquial vocabulary straightforwardly refer to them. This is certainly the first impression one gets of the colloquial vocabulary and, presumably, most lay users of the vocabulary hold this view.

Most philosophers of mind have a preference for one or other logical category of phenomenon as best representing all mental phenomena. One popular choice is mental ‘states’ — exemplified by belief and desire, and further defined as ‘intentional states’ or ‘propositional attitudes’. However, references to phenomena of the other logical types — such as mental representations, mechanisms, events, processes, etc. — are considered perfectly acceptable also, and are freely made. To this extent, to the extent that they appear to allow the existence of mental phenomena of all the different logical types, most contemporary philosophers of mind can be said to hold what I am calling the ‘naive’ view.

1.52 *A more sophisticated view*

The more sophisticated view I have in mind is the view that, despite the colloquial vocabulary’s being centred around the noun *mind* and despite its open-door policy

towards phenomena of other ontological kinds, and despite many philosophers' preference for 'static' mental phenomena as the most representative, the primary subject matter of the vocabulary is actually 'dynamic' phenomena of various kinds.

A matter of terminological convenience now. As I say, we can assume that the 'dynamic' mental phenomena — those in the event, process, function or activity categories — are those which are named by colloquial mentalist verbs such as *think*, *cogitate*, *imagine*, *visualise*, *fantasise*, *believe*, *desire*, *understand*, *dream*, *feel emotion*, *intend*, *hope*, *care*, *mind*, *be conscious of*, *attend to*, *recall*, *remember*, *recognise*, *anticipate*, *conceive*, *consider*, *doubt*, *mentally calculate*, *estimate*, *decide*, *learn*, etc. Intuitively, the most central and representative of these verbs is *thinking*, and I will call them 'thinking verbs'. I will also often refer to the various mental processes (which the verbs name) inclusively as 'thinkings', or just 'thinking'. Thus, I am grouping all the 'dynamic' mental phenomena — the mental events or processes or functions, or activities — together under the rubric 'thinking'.

One argument for the more sophisticated view proceeds as follows. Nearly every one of the important nouns in the colloquial mentalist vocabulary corresponds to, and is cognate with, one or other of the thinking verbs. Corresponding to *thinking* and *thought*, for example, is the verb *to think*. Corresponding to *imagination*, *image*, *imagining* there is *imagine*; corresponding to *belief* and *desire* are *believe* and *desire*; and so on. As I say, the nouns, with *mind* central among them, are presumably the names of the static, states-and-entities-type mental phenomena, which I am contrasting with the dynamic, process ones. Obviously, the verbs and nouns in question — *think* and *thought*, *hope* and *hope*, *imagine* and *image*, *believe* and *belief*, etc.— are not etymologically unrelated. That is, we can safely assume that either the verb comes from the noun or the noun comes from the verb. Either the noun or the verb must have come first. If the noun appeared in our lexicon first, then the likelihood is that we were first acquainted with the mental state or entity, and used the noun to name it, and then subsequently, when we encountered the process, we made a verb from the noun (by some morphological change) and used this new verb as a label for the process. The only other possibility, it seems to me, is that we encounter and label the process first, and come upon the associated entity, and label it, second. The question about which mental phenomena constitute the basic underlying subject matter of the colloquial vocabulary, can be asked in the form — which came first, the nouns or the verbs?

For many verb-noun pairs we would need to consult etymological dictionaries to decide this question. However, in the case of the colloquial mentalist verbs and nouns, we need not move from our chairs. For the great majority of the mentalist nouns, in their everyday usage, the noun refers to nothing other than the corresponding mental process — albeit it refers either to the process considered as a phenomenon in general (as in *thought is often difficult* or *he has no imagination*) or to a particular instance or episode of the process (as in *my sudden desire for sleep* or *she had some doubts*). Thus, in the great majority of cases, a statement that is apparently about a mental state or entity can be translated without loss of meaning into a statement about, or a statement prescribing a certain ‘take’ on, a mental process.

Admittedly, there are other cases, where the noun seems more to be referring to something which exists in its own right, distinct from the process. Thus it might be thought that mental images, say, have an existence distinct from any imagining that might or might not go on. Or it might be thought that beliefs and concepts can exist whether or not any corresponding believings or conceivings ever have occurred or will occur. My opinion, which I argue for in Chapter Three (in 3.5), is that the impression which one sometimes gets from the mentalist nouns, that something over and above the process is being referred to, is a false one. In all the problematic cases (including say, *thought*, *concept*, *mental image*, *emotion*, *belief*, etc., and *mind* itself) what is being referred by the noun is some purely notional entity, which is indefinable except in relation to the process. The ‘entity’ is cast as the putative product, agent, patient, venue, instrument or mechanism of the process. For example, a concept is the ‘product’ of an instance of conceiving, an image is the ‘patient’ of an episode of imagining, mind is the ‘venue’ for any number of mental processes or ‘thinkings’. As I argue in 3.6, the idea that mental processes have such entities associated with them is mere convenient fancy. Although the appearance is to the contrary, here again what is being referred to by the noun is really nothing other than what is referred to by the verb — namely, the process, albeit now with a certain fanciful gloss on it. Statements about such apparently static phenomena as thoughts, concepts, images, emotions and beliefs can still be translated without loss of literal meaning into statements about dynamic phenomena such as thinkings, conceivings, imaginings, feelings and believings.

It might well also be the case that most philosophers of mind, though they may prefer to talk in terms of mental states or entities, actually tend to a ‘process’ view of mental

phenomena. It is almost universally assumed by philosophers of mind that mental phenomena are realised, somehow, in the physical brain. This view favours the idea that the basic mental items are dynamic rather than static. That is, modern brain physicalism presupposes that the ultimate subject matter of mentalist talk is events, processes, functions or activities rather than states or entities. My reason for saying this is as follows. Suppose that anatomical structures and mechanisms ‘identical with’ (or ‘responsible for’, or whatever) mental phenomena are one day identified. Their relevance to the mental could not consist in their anatomical properties alone. The anatomical structures in question may well retain their integrity for some time after the host (presumably human) organism is dead — yet no-one is going to claim that mental phenomena survive death. The relevance of anatomical mechanisms to the mental can consist only in the *workings* of those mechanisms, that is, in the (dynamic) physiology rather than the (static) anatomy. If mind and mental phenomena are realised in the brain, they must be realised in brain *processes* (or events or activities or functions). On any plausible physicalism, mental (and/or brain-physiological) ‘states’ and ‘entities’ and other static mental phenomena, though real, will be indefinable except by reference to mental (and/or brain-neurophysiological) *processes*.

Simulation theorists would mostly agree that a variety of both static and dynamic mental phenomena exist, and that they constitute the subject matter of the colloquial mentalist vocabulary. However, simulation theory is probably even more biased than is modern philosophy of mind generally towards a basically ‘process’ view of mental phenomena. Clearly, one fundamental mental phenomenon — simulation itself — is a dynamic process. And although static phenomena such as representations can in theory be simulated, the dominant assumption in simulation theory is that what is simulated is also an active process of some kind. The work of Millikan mentioned in section 1.3 above, and of Jeannerod 1994 which she cites, is aimed at showing up the dynamic or ‘process’ aspects of mental representation.

For most of this section I have been outlining what I have called a ‘somewhat more sophisticated’ view as to what it is the lay concept of mind is a concept of. According to this view, the verbs in the colloquial mentalist vocabulary have precedence over the nouns. Any ontological clout the nouns have is borrowed from the verbs. It is the verbs and not the nouns that best express the vocabulary’s underlying subject matter. I christened the relevant verbs, collectively, ‘verbs of thinking’. The more sophisticated

view is that the thinking verbs name phenomena which are essentially dynamic — that is, processes and/or events, functions, workings of mechanisms, activities, etc.— but they nevertheless cater for all mental phenomena, all of our ‘cognitive abilities’.

1.6 Why thinking must be an action and not an impersonal process

The ‘more sophisticated’ view outlined in the last section is that the subject matter of the colloquial mentalist vocabulary is thinking, broadly conceived, and that thinking is a mental (and/or neurophysiological) process. Let us assume that the first proposition is true, and that the subject matter of the mentalist vocabulary, what the lay concept of mind is a concept of, is thinking (in the broad sense I sketched earlier). Let us call the second proposition, that thinking is a mental and/or neurophysiological process, the ‘process’ view of thinking.

A note on the term *process*. There are two important senses of the noun *process* in English. In one sense it is approximately synonymous with *procedure* and refers — in expressions like *legal process*, *verification process*, *manufacturing process* and *in the process of construction* — to a course of action, especially one with distinct stages and involving more than one person. In the other main sense — in expressions like *chemical process*, *natural process* and *inevitable process of decay* — a process is a series of changes brought about not by a person or persons but by impersonal (either natural or mechanical) causes. There are some uses that are intermediate between the actional and the natural senses — one may refer to the process of falling in love — but I will ignore these. In what follows I will mean by *process* only the ‘impersonal’ or ‘natural’ kind of process, the kind which involves no human intervention. Thus the process view of thinking is the view that thinking is not something done by a person, but is rather a series of events caused to happen by some impersonal agency or agencies — including, perhaps, information in the environment, perceptual processes, the mind, the brain, cognitive mechanisms and other neurophysiological processes in the brain, and so on.

My view is that the process view of thinking is false, and that thinking is not an impersonal process but a simple (though rather unusual) action of the person. I realise that this view is controversial, and controversial for several reasons. For example, many philosophers believe that people’s actions are fully explicable as macrophysiological events. I also realise that a huge and unsurveyable literature bears on this topic. All I can

do is to clearly state what line I am taking — and I am saying that thinking is a personal action and *therefore* not an impersonal process — and give reasons why I personally think this is the most reasonable position to adopt. I give my reasons shortly, and with arguments which I think tend to show also that the action *vs* process dichotomy is an exclusive either/or one. That is, they show both that thinking is an action of the person and that actions of the person cannot also be impersonal (e.g., natural) processes. However, it is first worth a brief look at what the lay concept of mind implies about the possibility that thinking is an action, and at what most philosophers of mind say about it.

Of course, if thinking is really an action of the person, and the lay concept of mind construes it as an impersonal process, this will be interesting. In fact, on the question of whether thinking is an action or a process, although it is heavily biased towards the process view, the lay concept seems to still leave some room for thinking to be an action. Thinking is basically a mental ‘process’ — that is, an impersonal process which either goes on *in* the mind, or is an operation, function or machination *of* the mind. But there are also expressions in the colloquial vocabulary which sanction the idea that thinking is, at least sometimes, something which people themselves do — albeit it is a ‘mental’ action or activity, which they perform in their minds. A person may, for example, do a calculation ‘in her head’, or picture something or even go to Carolina ‘in her mind’, or ‘make a mental note’ or curse ‘inwardly’ — and all these count as thinkings. On the other hand, it could be said that this lay concession to the ‘action’ view is only ironic. Thinking is spoken of as an action of the person, yes, but the action is one which the person is to perform inside his or her own head. Presumably, the class of actions which a person may perform as it were auto-intracranially is very small. Just getting oneself in there would be very taxing, let alone doing anything once there.

There are a few philosophers who believe, with me, that thinking is a species of action and my Part Two is devoted to examining the theories of three of them. However, the prevailing philosophical wisdom is that thinking is an impersonal process. Most contemporary philosophers of mind are theory theorists, and believe that the folk concept is a primitive theory which will one day be replaced by a scientific theory. Both the ‘theory’ idea, and the assumption that science can be brought to bear to improve the theory, favour the idea that thinking is an impersonal process. The initial assumption is that thinking and the other mental phenomena are just that — ‘phenomena’. A phenomenon, according to my dictionary is ‘a thing the cause of which is in question’.

This implies from the start that thinking is not something that the person is *doing* (so that, if you wanted to know about it, you would just ask them), but that it is something that *happens* in the world — in this case, in people's heads — and thus stands in need of scientific rather than personal explanation. Because the suggestion in the colloquial vocabulary that thinking goes on inside people's heads is taken at face value, and because it is known what kind of things go on inside people's heads (neurophysiological stuff), it is naturally inferred that thinking is a neurophysiological process of some kind.

My view is that thinking is not a natural process, and not even a natural phenomenon. And, if mental phenomena are something other than natural phenomena, nor is thinking a mental phenomenon. I say that thinking is not a 'phenomenon' at all. It is something which the person is doing.

My arguments below are in the form of examples of predicates which are meaningful when and only when applied to actions, and which are not meaningful when applied to impersonal processes, which are meaningful when applied to people's thinkings. That is, I list properties which can be meaningfully attributed to thinkings (as to actions generally) but which cannot be meaningfully attributed to natural or other impersonal processes. By this means I try to show that thinking must be an action of the person, and not a natural function or process, such as, for example, a brain function or some broader physiological process — and that the verbs of thinking are solely personal action verbs, which cannot double as impersonal function or process verbs. I conclude, accordingly, both that thinking is an action of the person and that it cannot (also) be an impersonal process. I employ 'imagining' as my main example of thinking-type actions and activities. I assume that analogous argument would apply to the other varieties of thinking.

1.61 One reason for regarding thinking as an action is that one may sensibly be told to do it. Thinking, imagining, conceiving, anticipating, remembering, even feeling emotion and (sometimes) believing are all subject to the imperative. As Wittgenstein remarks, "...it makes *sense* to order someone to 'Imagine that', or again: 'Don't imagine that'" (Wittgenstein 1980B, #83). On the other hand, natural processes or the impersonal workings of mechanisms are not subject to verbal control. One cannot sensibly ask a person to stop bleeding, or stop firing the neurons in his or her brain. Nor can one sensibly ask a light switch to operate. Causal sequences do not occur on request. But, if something does occur by request, then it is a fair bet that that something is an action.

Causal sequences just happen, but actions do not just happen, they are things people do. Thinking very often occurs on request. In fact, it is probably true that most of our thinking, imagining, remembering, feeling, etc., is done on request — as a cooperative response to others' speech.

1.62 In addition, thinking is frequently effortful, and effort is logically restricted to actions, to doings. Sometimes considerable effort is required. We need to knit brows to visualise just where on the bench the screwdriver is, or to remember Jean's husband's name. And sometimes very little effort is required. Someone says something and we 'automatically' do the appropriate imagining. And of course, this *automatically* here is metaphorical and literally false. The reality is a facility that is superficially reminiscent of automatism. All that is literally implied is long experience and ease, and a degree of ignore; there is no implication the imagining or whatever is not done by us. On the contrary, the success of the *automatically* as a metaphor depends on the assumption that the action is being performed by us.

1.63 There is such a thing as skill in thinking, and it may be due not only to experience but to natural ability. As I have said, thinking, conceiving, remembering and so on are sometimes complex or otherwise difficult to do — if we have to follow a long argument, say, or select an efficient metaphor or devise a training regimen for a particular orca. Some people are naturally better and quicker at these things than others equally experienced. Natural talent is a factor in thinking. And the concept of 'having a talent for' something presupposes prior concepts of trainability and proficiency, which in turn presuppose that it is the performance of actions that is in question. One does not talk of a talent for something, except figuratively perhaps, in connection with impersonal processes. As Ryle says,

...thinking is an art, like cricket, and not just a natural process, like digesting. Or, to put it less bluntly, the word *thinking* covers a wide variety of things, some, but not all of which embody, in differing degrees and respects, such things as drills, acquired knacks, techniques and flairs. It is just in so far as they do embody such things that we can describe someone's thinking as careless or careful, strenuous or lazy, rigorous or loose, efficient or inefficient, wooden or elastic, successful or unsuccessful. Epithets like these belong to the vocabularies of coaches and umpires, and are inapplicable to such natural processes as digesting. We cannot be clever or stupid at digesting... (Ryle 1971B, p.299).

1.64 There appear to be some quite good reasons for believing that thinking is a bodily

process. Thinking often happens involuntarily, automatically, or despite our best efforts. For this reason, it might be thought that thinking is, or very often is, a bodily (physiological) event. If it happens involuntarily or despite ourselves, it cannot be something which we do. It must be something which is happening *to* us, something going on in our bodies.

Certainly, it is true that thoughts may occur to one unbidden, that one may be gripped or even paralysed by an emotion or imagining, and that it is possible to have an idea such as a suspicion which one cannot get out of one's mind. Poets sometimes have the impression their lines are being dictated to them by an inner voice and all they have to do is write. Others hear inner voices they cannot switch off. And it is probably true that at least some of us sometimes have 'unconscious desires'. Facts like these do seem to suggest that thinking is sometimes not an action but rather an impersonally caused event, something which *happens to* the person rather than something he or she deliberately *does*.

However, much of the language we use to characterise these involuntary thinkings is figurative. We might say that the agent was as it were 'swept away', or that 'something came over' him or her, but we do not mean such expressions literally. Consider the figures of speech in this vivid description — from the mouth of a character in a novel by Murdoch — of another involuntary action.

Vomiting is a curious experience, entirely *sui generis*. It is involuntary in a particularly shocking way, the body suddenly doing something very unusual with great promptness and decision. One cannot argue. One is *seized*. And the fact that one's vomit moves with such remarkable drive contrary to the force of gravity adds to the sense of being taken and shaken by some alien power. I am told there are people who enjoy vomiting, and although I do not share their taste I can, I think, faintly imagine it. There is a certain sense of achievement. And if one does not fight against the stomach's decree, there is perhaps some satisfaction in being its helpless vehicle. The relief of having vomited is of course another thing (Murdoch 1975, p.261).

The sense of 'something happening to' the person is carried here largely by figurative expressions like *the body doing something*, *seized*, *being taken by an alien power*, *the stomach's decree*, and *helpless vehicle*. The literal paradigm of 'something happening to' a person is, by contrast, something more like being struck by lightning or being spotted by a talent scout. In many cases of so-called involuntary or compulsive action, there is no inclination to reclassify the action as, literally, something which happens to the person.

One may even be disinclined to free the person from responsibility. Someone unable to forego a cruel remark may be as much a victim of the remark as its target is, but no-one doubts, and all eyes are on him, that the remark is an action of his. The stutterer cannot help stuttering, and yet stuttering is still something he does. She who slips and falls on the wine-soaked floor justifiably wails “Look what I’ve done!” when she sees her skirt. And he or she who flirts unconsciously still flirts.

The point of continuing in these various scenarios to speak of ‘actions of the person’ is not that the person could in practice have done differently, but that what happens is still *in principle* subject to voluntary control. *Faux pas* like these are normally put down to disability, indisposition, incompetence, turpitude, bad luck or carelessness on the agent’s part. But, far from this being evidence that the events in question are not actions, it is evidence that they are. When we speak of ‘involuntary’ or ‘compulsive’ thinking, imagining, remembering, etc., we do not mean that these phenomena are literally natural processes, or literally the functioning of mechanisms. This is illustrated by the fact that it is always possible the person might manage to refrain from doing whatever it was. It would not be logically odd for the schizophrenic to on occasion succeed in ignoring and thus silencing the voices — any more than it would be for the alcoholic to *tai ho* once in a while. If what was in question were a natural process or the functioning of a mechanism, then the notion of a person successfully refraining from doing it would be logically odd.

1.65 There are other kinds of reasons why people might think that thinkings are not genuine actions. At one point in *Remarks on the Philosophy of Psychology*, Wittgenstein tries to classify ‘calculating in the head’. He first says that calculating in the head is not necessarily a kind of calculating. He says, “...one need not look at calculating in the head under the aspect of *calculating*, although it has an essential tie-up with calculating” (Wittgenstein 1980A, #655). Presumably, if by *calculating* we mean the performance (of saying or writing down numbers, adding up columns, staring and muttering, etc.), then calculating in the head is not calculating. It is rather a matter of deliberately refraining from calculating. But if by *calculating* we mean the achievement, getting the answer, then calculating in the head *is* one way of calculating.

Wittgenstein then goes on to doubt whether calculating in the head is even something a person *does*. The quotation resumes, “...Nor even under the aspect of ‘doing’. For doing is something that one can give someone an *exhibition* of” (*ibid*). The German of

this last sentence is “Denn Tun ist etwa, was man Einem *vormacht*”, which would seem to allow the simpler English “For an action is something one can *demonstrate*”. Wittgenstein seems to be saying here that, for something to be an action, it must be capable of being demonstrated. Suppose it is true that part of the concept of an action is that it be a demonstrable, in-principle-public, performance. Now, *prima facie* at least, one cannot ‘demonstrate’ or ‘give a public performance of’ calculating in the head. So it appears that calculating in the head cannot be an action.

However, in at least one sense, one *can* demonstrate calculating in the head. One can demonstrate ‘coming up with the right answer, without speaking or using pencil or paper, etc.’. This is ‘calculating in the head’ in one usage. One can also demonstrate or exhibit in the sense of ‘betray’ or ‘reveal’. For example, if one is calculating something difficult in one’s head, one may find it impossible not to frown, or mutter a number or two, or perhaps nod ponderously — and one would by these signs demonstrate that one was calculating in one’s head. One does not have to be utterly immobile to be calculating in one’s head, although one may be. Thirdly, there is a sense in which one can demonstrate the calculation one was performing in one’s head — by simply writing the details down on paper, doing a full written calculation in the normal way, and showing it to whoever’s interested. What goes onto the page is in a good sense exactly what one was doing in one’s head. It’s even got the same mistake in it. In just the same way, one can tell someone exactly what one was thinking. So someone says, “I was thinking, *that can’t be right*”. Speech could perhaps be thought of as an especially demonstrative or ostentatious form of thinking. And written calculations could be thought of as a more demonstrative rendition of the usual ‘in the head’ version.

What kind of *vormacht*, or demonstration, does Wittgenstein have in mind here? Perhaps the relevant sense of *demonstration* is the one in which one demonstrates an action with an educative intent. The spectator is a pupil, being shown how to perform the action so that he or she can better perform it him or herself. Thus, perhaps Wittgenstein is saying that it is part of the concept of an action that actions are always in-principle *teachable* — by some demonstration-and-imitation procedure. Accordingly, if thinking, in its various manifestations and varieties, is a kind of action, it too would have to be teachable by demonstration-and-imitation. Wittgenstein evidently believes thinking is not teachable in this way. However, I have exposed several senses in which thinking (*qua* calculating in the head) is demonstrable. And one or other these may fit the ‘demonstrable

for educative purposes' bill. In Part Two I describe theories (of Vygotsky and Hampshire) in which children do learn to think largely by imitating. Parents and others demonstrate imaginings, both fanciful and practical, with a view to the child's joining in. As to whether the applicability to thinking of learning by imitation distinguishes thinking from any natural process, it goes without saying that the notion of a person 'learning how to perform' a natural bodily function (like digestion or adrenalin secretion), by 'imitation' of someone else's 'demonstration' of the phenomenon, is incomprehensible.

1.66 People's actions, including their thinkings, are subject to evaluations which are inappropriate when applied to natural processes. Actions including thinkings may be subject to moral evaluation (*what a kind thought, a worthy sentiment, a disgusting idea*, etc.). Or they may be subject to aesthetic or practical evaluation (*a lovely idea, a magnificent conception, a useful notion, a clever solution*, etc.). The members of any society have an interest in the actions of their fellows. An institution wherein actions are evaluated — an 'action-evaluation' game wherein it is decided whether this or that action is something one should do — is more or less permanently in session. To perform an action therefore is to 'suggest something people should do' or to put what one is doing 'up for evaluation' by others. There is something inherently contentious about actions. Thinkings, though they might seem in themselves to have no tangible effects on others and thus not be legitimate objects of public interest are nevertheless subject to the evaluation game and thus acquire, or at least borrow, the contentiousness of other, more immediately physically affecting, actions. This is because, albeit they are actions in their own right, thinkings are incipient or would-be performances of other actions (which may be sayings or other doings of any kind) or thinkings are actual preparings to perform these other actions. As incipient actions or preparations to act, they have just the same (or only slightly reduced) moral, aesthetic or emotional significance as do the overt performances they foreshadow.

However, it is clear enough that natural processes cannot attract the kind of approval or condemnation, glee or bile, that people's thinkings and other actions do. The agents of natural processes (if natural processes can literally be said to have 'agents', or even 'causes' — see below) are not participants in the kinds of evaluative forum we continually convene with respect to our actions. They are not fellow-participants with us in our society, and the processes that issue from them are thus not at all amenable to epithets like *kind, worthy, disgusting, lovely, useful, clever* and so on.

1.67 Processes necessarily involve the operation^{of} more than one causal agent. A process is always an interaction between at least two variables, and each of the variables contributes to the process. For example, in the process consisting of the meeting, collision and parting of two billiard balls, the speed and mass of both balls is crucially relevant. Both contribute to the outcome. More typically, a paradigm natural process such as photosynthesis involves the systematic interaction of numerous causal factors. Furthermore, the contributing causes in a process are themselves caused, and these earlier causes can legitimately be described as also contributing to the process under investigation. Thus it is always appropriate, when considering a given causal factor in a process, to enquire after other causal factors. With people's actions on the other hand, and their thinking, although they are sometimes jointly accomplished — and thoughts may be shared — it is also perfectly normal for just one person to be fully and solely responsible for the performance of an action or the thinking of a thought.

1.68 The language in which natural processes are described is apparently very compatible with the language in which people's actions are described. Explanations of biological processes, for example, will typically include expressions such as *function, perform, system, operate, task, organised, structure, mechanism, organ, organism, means, role, purpose, law, behaviour, action, activity, act, interaction, effect, contribute, agent, enable, cope, adjust, adapt, survive, process, cause*, etc. However, the appearance of a commensurable terminology for describing actions and natural processes is illusory. As applied to natural phenomena such as sense organs or nerve cells, everyday action language must be figurative. Sense organs cannot literally 'pick up information' from the environment. Interneurons cannot literally 'transfer information into cortex'. Parcels of chemicals are not literally 'conveyed' across synapses. The brain is not literally an agent which processes information.

To prove that the language in which we describe natural processes, especially the language of 'causation', is necessarily derivative of everyday action talk, and necessarily metaphorical is a considerable task and I cannot address it here. However, the task has been begun — notably by Reid 1788/1977 (esp. pp.278 and 281-284), Macmurray 1938 (pp.81-83), Collingwood 1940 (pp.285-336), all of Gasking 1955, Austin 1961 (pp.150-151) and Strawson 1986 (pp.122-123 and 125).

The everyday attributions of agency to people on account of their thinkings and other

actions is, however, perfectly literal and not derivative of any epistemologically prior area of understanding — perhaps for the reason that there is no area of understanding that is prior. Thinking literally is an action performed by the person. On the other hand, to describe thinking as, for example, a cooperation of internal homunculi, or even as the coordinated functioning of various neurophysiological mechanisms, is to speak metaphorically.

Perhaps it is now beginning to seem more plausible that what we know at the everyday level as ‘thinking’ is an action and not a brain process. It has to be admitted, however, that thinking is an unusual kind of action. For one thing, unlike most actions, it does not necessarily involve making movements. At least, if it does involve movements, they are often very subtle ones. In addition, surprisingly often for a voluntary activity, we find ourselves engaged in thinking that we have not chosen to engage in. At least on these occasions, it is as if our thinking is ‘being done for us’. And there is a third way in which thinking is, as an action, unusual. Usually, when we are engaged in an action, we find it easy to describe what we are doing. This is not the case with thinking. I hope to explain all these features of thinking in Parts Two and Three, and show how they do not affect thinking’s status as an action. After all, the best way to demonstrate that thinking is an action is to show exactly what kind of action it is.

In the meantime, where are we? If what I am saying is true, thinking is really an action which the person performs, but the lay concept of mind, and the colloquial mentalist vocabulary which expresses this concept, construe it as an impersonal process of some kind, a process which occurs inside the person’s head. I suggest that the ‘construing’ in question, the construing of an action as a process, is achieved by metaphor.

CHAPTER TWO: Metaphor and dead metaphor

In Chapter Three, I am going to claim that the lay concept of mind is entirely the product of the numerous metaphors containing the noun *mind* in the colloquial mentalist vocabulary. And I will claim that the main subject matter of these metaphors (and of others in the vocabulary) is people's acts of thinking. In Part Two of the thesis I review existing action-based theories of thinking, in the process showing up places where they still rely on the conventional metaphors. Then, in Part Three, I attempt a fully literal description of thinking, that is, one that makes no use of the 'mind' metaphors. For all of these claimings, reviewings and theorisings, a clear and robust concept of metaphor is required. If it is to be clear why metaphors, or these particular mind metaphors, are inferior to literal descriptions for the purposes of an analysis of thinking, then it will have to be clear what metaphors are. I also need a concept of metaphor which will make it easy to describe the special rhetorical effects which are created when — as I believe to be the case with the mind metaphors — metaphor is used in conjunction with a nominalised verb.

I have not found in the literature any account of metaphor which is either generally robust, or which attempts to account for metaphor-plus-nominalised-verb combinations. This means I have had to devise one. Because this thesis is primarily about thinking rather than about metaphor, my account of metaphor will have to be briefer than such a complex and interesting topic deserves. I believe I offer some genuinely new suggestions in the field of philosophical analysis of metaphor. On the other hand, much of my account is in the form of either cut-and-paste from, or objections to, the writings on metaphor of Henle, Black, Searle, Davidson and Cooper. In the first and second sections of this chapter, I set out my account and cite passages from the above writers. In the third section I contrast my account with the established theories of metaphor — the 'object-comparison', 'seeing-as' and 'semantic-interaction' theories. In the final two sections, on dead metaphor, I argue — as I have to, if the mind metaphors are all to be regarded as still metaphors — that metaphors do not cease to be metaphors just by virtue of becoming stock and hackneyed. Here too I offer a mix of original suggestions and cullings from and objections to the above writers.

2.1 Metaphor as a referring technique

2.1.1 A note on 'referring'

In what follows, I shall take it that the primary meaning of the verb *to refer to* is 'to draw someone's attention to something'. This tallies with definition 8b of *refer* given in the Oxford English Dictionary — "To direct (a person) *to* a fact, event, or thing, by drawing attention to it or pointing it out" (O.E.D., Second Edition, 1989). The Dictionary also quotes Strawson (*Mind*, Vol.LIX, 1950, p.326) saying, "'Mentioning' or 'referring' is not something an expression does; it is something that one can use an expression to do" (*ibid*). The notion of referring I am adopting might be called an 'actional' or 'pragmatic', rather than a 'semantic' one. I am acutely aware that this notion of referring, or this sense of the word, is not the one usually intended by philosophers. They usually intend *refers to* to refer to a certain kind of relation that may hold between a linguistic item (a word or larger expression) and a thing. And/or, they regard referring as a property or power or function of (some) linguistic items. Presumably, it is this philosophical notion that the OED captures in its meaning 1d for *Reference*: "The act or state of referring through which one term or concept is related or connected to another or to objects in the world". This definition is backed up with one from Popper (*Language*, Vol. XLVIII, p.446): "Reference is the relation between singular term and bearer, as well as between general predicate and the entities of which the predicate is true".

Despite the fact that it is different from the way philosophers commonly use the word, the way I am using the verb *refer* is not unidiomatic. In fact, I believe that the standard everyday use of the word is in constructions such as *What are you referring to? I take it that he is referring to... I am going to refer you to three kinds of...* and so on. Here, referring is unequivocally an action of the person. If it seems odd, or worse, to employ this familiar everyday sense of *refer* in a philosophical context, then I can only reply by promising that my using the word in this way will justify itself, by the philosophical insights it makes possible. In particular, I believe that metaphor cannot be understood without an actional concept of referring such as mine.

Referring in my sense is a personal action. It is something a person does. In the paradigm case, referring is achieved by speaking, but it can also be done by speaking-and-pointing or, occasionally, by mute pointing, and even, sometimes, by a subtle swivelling of the gaze. Strictly speaking, referring is not a personal action but an interpersonal

transaction. The other person, the person whose attention is being directed to whatever it is, is required to cooperate. He or she has to listen and/or watch the person doing the referring, to attend in the right direction, perform (however cursorily) the appropriate perceivings, and so on. Although we may continue to speak of referring as an action of the speaker, it is also important to remember that, if the hearer does not cooperate in the above ways, no referring is accomplished. I also call it ‘referring’ in the case where the thing to which the hearer’s attention is being directed happens to be absent. In this case, instead of actually doing the appropriate perceivings, the hearer performs merely imagines doing them. (Referring *qua* interpersonal transaction is discussed in more detail in Appendix Two.)

In everyday discourse we sometimes speak as if — when a person utters a given word or phrase in order to direct someone’s attention to something — it is the word or phrase that refers the hearer to the thing. We take all the other things for granted: the speaker, and his or her act of uttering that word or phrase, the speaker’s intention to refer, the practical context of the speech, etc. We often take the hearer (and his or her cooperative response) for granted as well, and speak as if the word refers to the thing *simpliciter*. Part of the motivation for this way of speaking may be that, apart from what verbal expression is employed (and what thing is being referred to), nothing else changes all that much from one referring-transaction to another. There is always a speaker, an attentive hearer, some or other practical context, and so on. So, these factors can be ‘taken as read’ when we are talking about a particular piece of referring. Anyway, use of expressions like *the word refers to*. — which imply that referring is a property or function of the word on its own, or imply a ‘referring’ relation between the word and the referent thing — is familiar and acceptable in everyday English. Such expressions are ‘idiomatic phrases’. [It should be noted that I am talking about an everyday English usage of the verb *to refer to* here. I am not talking about any actual or possible philosophical usage of this verb.]

I suggest also that, as well as being an idiomatic phrase, the expression *the word refers to* is also an identifiable figure of speech, namely a synecdoche. According to Fowler, synecdoche is “The mention of a part when the whole is to be understood, as in *A fleet of fifty sail* (i.e., ships), or vice-versa as in *England* (i.e., the England cricket team) *won*” (Fowler 1983, p.611). The OED concurs, saying that synecdoche is “A figure by which a more comprehensive term is used for a less comprehensive, or vice-versa; as whole for part or part for whole, genus for species or species for genus, etc.” I suggest *the word*

refers is a part-for-whole synecdoche, a kind of ellipsis, whereby a whole referring transaction is referred to by the mention of just one element in the transaction, namely, the verbal utterance.

For the advantages in brevity it gives, this *the word refers* way of speaking is indispensable. However, we should not be tempted to take it literally. That would seem to involve an appeal to a form of credulity familiar to ethnologists, which the OED calls ‘synecdochism’, that is, “Belief or practice in which part of an object or person is taken as equivalent to the whole, so that anything done to, or by means of, the part is held to take effect upon, or have the effect of, the whole”. The person who believes that the word literally does the referring all on its own would have to believe that the effect of the whole referring transaction can be attributed to just one part (the verbal utterance part) of just one party’s contribution to the transaction. And taking the expression literally would invite at least two problems of explanation. First is the very difficult problem of defining what a ‘word’ is apart from people’s purposeful acts of speaking. The second problem is perhaps even more intractable. If there is to be a genuine relation between things A and B then, first of all, A and B must be two separate, and independently specifiable, things. ‘Independently specifiable’ means, approximately, that one can be uniquely specified without reference to the other. However, if this is true, then referring cannot be a relation, or, at least, not a relation between a word “A” and a thing in the world A. The word “A” may or may not be uniquely specifiable (*qua* act of speaking, or whatever) without reference to the thing (A) which it is used to refer to. However, what is clear is that the thing A cannot be uniquely specified other than by *actual use* of the expression “A”. As I say, we should not attempt to take *the word refers to* literally.

However, if we do not forget that what is being referred to by *the word “X” refers to X* is the fact that, when one says the word “X” to someone, in the right circumstances, the likely effect is that one will succeed in drawing that person’s attention to thing X, there is no reason why the expression should not be employed. Adopting this usage, as a convenient shorthand, does not commit us to any new concept of what referring is, or even to acknowledging any new ‘meaning’ for the term *refers*. This term still relates (at least, in this thesis) to one person’s directing of the attention of another by means of using (uttering or writing) some word or phrase. When I use the verb *to refer*, it is this kind of interpersonal transaction I am ultimately referring to. I will frequently speak as if the word refers, and use the expression *referring expression*, and speak as if words have referring

effects. I hope this will be understood as it is intended — as mere convenient shorthand, innocent synecdoche. I have gone on about this, because there are important analogies between referring and metaphor, in the respects I have been discussing. Like referring, metaphor is best understood as an interpersonal transaction, and to think of metaphor as the function of a form of words merely, is to risk misunderstanding it.

2.12 *Metaphor*

Metaphor is a special referring technique, slightly more complicated as a procedure than ordinary ‘literal’ referring. In situations where some feature or aspect or relevance of something is difficult or impossible to refer to using stock referring expressions, the speaker can often efficiently draw attention to the feature or aspect in question by a metaphor. Metaphor is an optional add-on to standard referring, with its finite stock of referring words; it constitutes a sort of extender kit. And, although it is good for gross referrals too, it comes into its own when it is set the more subtle and precise referring tasks. For example, Wisdom invites us to “...suppose now that someone is trying on a hat. She is studying it in a mirror. There’s a pause and then a friend says *My dear, the Taj Mahal*. Instantly the look of indecision leaves the face in the mirror” (Wisdom 1964, p.248). Saying *the Taj Mahal* enables the speaker to refer her hearer to a certain feature of the hat more efficiently than would have been possible using stock adjectives like, say, *monumental*, *elaborate*, *grand*, etc.

Like ordinary referring, metaphor is an interpersonal transaction. The main difference is that the metaphor transaction is a little more complicated, and the referring which is achieved is, correspondingly, more precise. And there are more stages to go through. There are four in metaphor, and I set these out in the next section. But ordinary referring and metaphor have the same basic goal, that is, to direct the attention of the hearer to something — or, in other words, to get him or her to perform or imagine performing certain ‘perceptual behaviour’ (see page 60 below, and Appendix Two). In the metaphor transaction as in simple referring, the speaker’s utterance of the relevant words has an effect on the actual behaviour, the perceptual behaviour or perceptual imagining, of the hearer. As Wisdom says, the words *Taj Mahal* “...alter her apprehension of the hat just as the words *A hare* makes what did look like a clump of earth *look* like an animal, a hare in fact; just as the words *A cobra* may change the look of something by the bed” (Wisdom 1965, p.4). Davidson agrees that metaphor has this referring, perception-inciting, effect.

He says it “makes us attend to” or “directs attention to” things and serves to “alert us to aspects of the world” — and he refers to “what the metaphor makes us notice” and “what it makes us see” (Davidson 1984, pp.247, 256, 261-3).

As when we speak colloquially of the word or phrase, or the referring expression, doing the referring, so with metaphor. We tend to speak (but hopefully not think) of the metaphor as being, or as being accomplished by, the verbal utterance alone, the form of words by itself. As with ordinary referring, this convenience of expression is fine — just as long as we don’t start believing that words (however these are conceived) really do have inherent ‘semantic properties’ and/or that a metaphor can be created (or effected or constituted) simply by a (certain kind of) combination of words. It is the use made of the form of words that accomplishes the metaphor, i.e., that subtle feat of attention-directing. And this use cannot be understood apart from the other features of the transaction — the speaker, the hearer, the ostensive gestures or tone of voice, the hearer’s attendings, the perceptual behaviour being elicited, etc.

I propose two referring uses of the word *metaphor*. That is, by writing this word, I will be doing either of two referring jobs: (1) directly referring to a four-stage attention-directing transaction — in which utterance of a certain form of words is the significant variable, but certainly not the only essential component — or (2) directly referring to the form of words itself (*qua* key component in the transaction). Putting this another way — I will use the word *metaphor* to refer either to the transaction, or to the form of words *as representative of* the transaction. And, as with saying *the word refers to the thing*, my second use of *metaphor* is a kind of synecdoche. This dual usage is a practical necessity, because, although a metaphor is *au fond* an interpersonal transaction, I need to be able to represent metaphors (list them, for example) on the page. Although I will not flag the separate uses with a subscript or anything, I promise that it will always be clear from the context which ‘metaphor’ I am referring to. And I promise not to say things like ‘this metaphor contains two words and its four stages are reduced to three’. Where I do use *metaphor* in the two different senses in the same sentence, and sometimes elsewhere, if I see a possibility of confusion, I will use the expressions *the metaphor transaction* and *the metaphor qua form of words* respectively. Otherwise, I will trust you to read my intentions rightly. It is important to bear the distinction in mind and to remember that the metaphor *qua* form of words does not by itself accomplish or constitute the metaphor transaction. We should not allow synecdoche to descend into synecdochism.

In the next section I discuss the four stages by which a metaphor is implemented. In order to explain the four stages in the transaction, it is sometimes necessary to refer separately to one or other of the component terms in the metaphor *qua* form of words. Roughly speaking, during implementation of a metaphor, sequential utterance of these component terms achieves subservient referring effects. The subservient effects of the component terms are instrumental in the metaphor-as-a-whole achieving a resultant overall referring effect. The function of a metaphor is to refer the hearer/reader to some relatively arcane feature of a subject matter. For example, the aim of *we were thrashed*, as a report of a sporting defeat, is to refer to the particular variety of humiliation felt by members of the losing team. This referring effect is achieved by the metaphor as a completed whole. It is the metaphor *qua* form of words as a whole, as a ‘semantically sealed unit’, or ‘lexicalised’, that refers to the subtle feature (of a sporting defeat, here).

Once they have become part of the metaphor, the component terms no longer serve the functions they did/do outside the metaphor. Their combining creates a compound from which the separate components are no longer extricable. If you take an ordinary sentence like *the cat is on the mat* and you extract *the cat* or *the mat* from the whole, the extracted expression on its own means pretty much what it does when it is part of the sentence. Standard sentences are in this respect more like temporary juxtapositions of component terms than meldings or compoundings of them. It is not as though any of the various terms in a finished metaphor ‘has a different meaning’ in the context of the metaphor — a ‘figurative’ meaning, say. The component terms in a metaphor no longer function as single terms. They have given up their respective separate meanings in order to be a part of the metaphor. The referral to, say, the humiliation of the defeat or the excessive grandeur of the hat, is the achievement of the completed metaphor. It is the fact that the metaphor as a whole is a lexical or semantic unit that makes it possible for some metaphors to over time become ‘idiomatic phrases’.

However, a connection between the standard meanings of the component terms (before they are employed in the metaphor), and the overall referring effect of the completed metaphor, can be traced. As I said, in order for overall referral to be consummated, the speaker must have first brought about certain preliminary and instrumental referring effects. If it is a written metaphor we are talking about, the wringings of these interim effects will leave corresponding traces on the page. The traces are some of the component terms in the metaphor. What is visible in the finished

metaphor is the ghostly husks of what were once independent referring expressions. But, *qua* husks, they are still visible and, with them representing stations, we can re-enact the four-stage progress via which speaker and hearer accomplish the metaphor. In reality, the four successive effects are wrought, and the metaphor is accomplished, all in the time it takes to utter the words. This is next to no time. In order for us to be aware of the stages, is necessary to imagine that we hear or read the metaphor not immediately-as-a-whole, which is really how it does affect us but, rather, drastically slowed down.

2.2 Stages in implementing a metaphor

2.21 Stage One

The first phase is the accomplishing of a ‘foundational’ referral, a specification of the general subject matter being talked about. This is what the metaphor is generally about, what the metaphor is a metaphorical description of, what it is a metaphor for. Richards 1936, pp.96-7, calls it the ‘tenor’ of the metaphor. Black 1962, p.39, calls it the ‘principal subject’. I will call it the ‘general subject matter’ or *general referent* of the metaphor. In *the hills moved in a vast herd across the horizon*, the general referent is some hills. In *the mouth of the river*, the general referent is a river. In *our team got thrashed*, the general referent is a sporting defeat.

In most cases, the general referent has been achieved by the utterance of a referring expression, the ‘empty husk’ of which remains in the finished metaphor. For example, in the first two metaphors above, the words or husks in question are *the hills* and *the river* respectively. In Black’s example *man is a wolf*, the general subject matter is registered by *man*, and in the insult *you swine* it is *you*. In the special case of the Taj Mahal metaphor, where the general referent, the hat, is actually present, the general referral to the hat does not occur as a phase in the production of the metaphor and nor is there any verbal relic of it in the finished product. It has already been achieved by the time the metaphor-making commences. The attention of both parties is already on the hat. So, in this case, the general referral is implicit, or tacit. This is frequently what happens. *Our team got thrashed* involves a tacit general referral too. In the context, it is a sporting defeat that is being talked about. Often, it is optional whether the general referral is explicit or left tacit. Face to face, *swine* will do the same job as *you swine*.

It is worth emphasising this, that the general referral is usually well-established prior

to the metaphor. It is what the parties are talking about in the build-up to the metaphor. To begin the metaphor process by nominating the general referent is not superfluous, however, but confirmatory. It is a reminder, or formal registering that this is the topic.

Of course, the initial general referral is to be distinguished from the *specific* referral which is the work of the finished metaphor. We have not got to the specific referral yet. The specific referral is to a specific feature, or aspect, or relevance, of the general referent. The specific referent is the particular look of those hills, a particular part of the river, the quality of the sporting defeat, the excess of the hat, the wolfish or piggish traits. At any rate, we are still at the stage of the general referral. What is required now is some means by which the specific feature the speaker wants to draw attention to can be isolated or picked out from, or highlighted against, the remainder of the general referent. The second phase in the production of the metaphor begins this picking-out process.

2.22 *Stage Two*

After the general referral comes another communicative ploy which looks very like a referral, but is not. One could call it a ‘quasi-referral’ perhaps. In normal referring, the speaker’s utterance of the word, or more complex referring expression, incites the hearer to rehearse, actually or imaginatively, a given piece of ‘perceptual behaviour’. I go into this in detail in Appendix Two. The line I take is roughly as follows. The hearer has in the past learned to perform, in association with the utterance of that expression, certain perceptual behaviour. To ‘perform certain perceptual behaviour’ is to carry out certain sensory investigation or inspection procedures, to entertain certain perceptual expectations, and to exercise various other investigative and perceptual abilities. Ryle’s 1949 (pp.218-219, 228-234) term *perception-recipe* is useful in this connection. This passage from Davidson can be taken as illustrating what Ryle calls ‘perception-recipes’.

You are entertaining a visitor from Saturn by trying to teach him to use the word *floor*. You go through the familiar dodges, leading him from floor to floor, pointing and stamping and repeating the word. You prompt him to make experiments, tapping objects tentatively with his tentacle while rewarding his right and wrong tries. You want him to come out knowing that these particular objects or surfaces are floors but also how to tell a floor when one is in sight or touch. The skit you are putting on doesn’t *tell* him what he needs to know, but with luck it helps him to learn it.

Should we call this process learning something about the world or learning something about language? (Davidson 1984, p.251).

Once I have learned *dog* and *lawn*, if someone says *there's a dog on the lawn*, I know what to look for, and I know how to inspect the thing once I have it in view. Or, if it is gone by the time I look up, I know what to imagine. I know what it would be like to have seen the sort of thing I just missed seeing.

In addition to the inciting of perception-recipe-rehearsals, normal referring includes an 'assertive' component. If the thing to be referred to is in the immediate vicinity, the speaker must convey, by ancillary referring expressions and/or by tone of voice and/or by gestures such as pointing, both that and how the evoked perceptual behaviour can be realised. The speaker is saying 'perform this perceptual behaviour' — and is giving a guarantee that it is performable here and now. If the referent happens to be absent, and actual perceiving is impossible — but the speaker would nevertheless like the hearer to imagine perceiving it — then there is a verbal format and a body-language for this too. If you say you want to buy a large dog, I don't start scanning the lawn for one, or start harking for the barking. But I would probably at least cursorily imagine seeing and hearing such a thing. Even in this latter case, of 'dog, sometime, maybe' the speaker is obliged to convey some 'location procedure' or 'perceivability guarantee' — call it a *location guarantee* — which asserts when and where the evoked perceptual behaviour may be performed. When referring to something, the speaker must say 'where' and 'when' as well as 'what'. The hearer needs to know what is the present practical relevance of the perceptual rehearsals he or she is being asked to undertake. I discuss this 'absent-referent' referring in more detail in Chapter Nine, 9.5.

In the second stage in the production of a metaphor, a referring expression is used — and the hearer embarks on appropriate actual or imagined perceptual behaviour — only, the customary location guarantee is withheld. The speaker says what, but not where. Thus, coming on top of the general referral is an apparent referral to something totally irrelevant to the general referent. [The referrer's customary provision of a location guarantee, to accompany the incitement to perceptual behaviour, is presumably an observance of one of Grice's 1975 inter-interlocutor cooperation maxims, namely, the principle of Relevance. Grice himself suggests that metaphors are primarily floutings of his maxim of Quality, but Levinson 1983, p.157, says, and I agree with him, that they are better described as floutings of the Relevance maxim.]

The part of the metaphor (*qua* form of words) we are talking about now is usually referred to as 'the metaphorical word' or 'the word used metaphorically'. Speaking this

way can be misleading (see Section 2.4), but it is too convenient to do without. I shall opt for the expression *the word used metaphorically*. Thus, in *the hills moved in a vast herd*, the words used metaphorically are *moved* and *herd*. In *river mouth*, it is *mouth*. In *our team got thrashed*, it is *thrashed*. In the other metaphors, *Taj Mahal*, *wolf* and *swine* are the words used metaphorically.

The line I am taking here — that to use a word metaphorically within a metaphor is not to use it in the normal referring way (because, among other things, the location guarantee is withheld) — is incompatible with the line Davidson takes. Davidson insists that “...metaphors mean what the words, in their most literal interpretation, mean, and nothing more” (Davidson 1984, p.245) and that “...an adequate account of metaphor must allow that the primary or original meanings of words remain active in their metaphorical setting” (*ibid*, p.249). But my line is compatible with that of Beardsley and Searle. They agree that the word being used metaphorically in a metaphor is not being used in its normal referring capacity. They agree that there is something incomplete or ‘quasi-referential’ about the way the word is being used. It is being used, somehow, to evoke but not refer. Beardsley makes the point in connection with the metaphor *the spiteful sun* — “...there is no question of *spiteful*, in a metaphorical context, denoting spiteful people and injecting them for purposes of comparison; the price it pays for admission to this context is that it function there to signify only its connoted characteristics” (Beardsley 1962, p.299). That is, the metaphor is not even partially or incidentally ‘about’ spiteful people or any instance of spite. *Spiteful* in the metaphor is not being used to ‘refer’ at all. It merely ‘connotes’ spite.

Searle has two attempts at saying what is lacking in the putative ‘referral’ effected by the word used metaphorically. He first says that, where the word *X* is being used metaphorically, what is missing is ontological commitment on the speaker’s part to *X* or *Xs*. He makes this point as follows: “When I say metaphorically ...*Sally is a block of ice*, I am not necessarily quantifying over blocks of ice at all. My utterance does not entail literally that ...(*Ex*)(*x* is a block of ice)” (Searle 1993, p.91). Searle’s withdrawn existential quantifier corresponds to my withdrawn ‘location guarantee’. Shortly thereafter, Searle tries again, but less successfully. He says that, “To put it crudely, *Richard is a gorilla* is just about Richard; it is not literally about gorillas at all. The word *gorilla* here serves to convey a semantic content other than its own meaning by a set of principles I have yet to state” (Searle 1993, p.92).

2.23 *Stage Three*

I will recap my analysis so far. The metaphor as a completed whole is a referring expression. It effects a referral to some special feature (or aspect or relevance) of something X, which is being talked about. Prior to, or at the beginning of, the implementing of the metaphor, a preliminary reference to X is effected. In many cases, the reference to X has already been effected, but is explicitly re-confirmed by a component term in the metaphor. This explicit or tacit reference to X is the first phase in the metaphor's production. Then there is a 'quasi-reference' to something else, say Y, where Y is ostensibly very different from X and has no relevance to X. The hearer is left imaginatively rehearsing the Y-perception-recipe, but with no clue as to where to apply it. It hovers, as it were, unable to alight. This is where we are up to. What happens next?

In fact, the hearer does get cues as to where to apply the Y-recipe. And there is a landing pad in view. The cues are grammatical ones. The grammatical structure of the metaphor mirrors that of an ordinary description or complex referring expression. What the grammar suggests is that *X is Y*. The Y-perception-recipe has to be applied to something, and — unless there has been a drastic and incomprehensible change of subject in mid-sentence — X is the only possibility in the offing. Therefore, bizarre though it may seem, the Y-perception-recipe is to be applied to X. I said earlier that, in order to see the metaphor *in statu nascendi*, one has to imagine it slowed down. What happens in fact is that, the conducive effect of the grammar is so powerful that the hearer is applying the Y-inspection to X before he or she knows what is happening. Normal response to grammar is so habitual as to be automatic and instantaneous. The hearer is as it were 'tricked' into seeing X as Y.

In explaining what happens at this third stage of the metaphor procedure, we should not appeal to any 'relation' between X and Y. Although there is definitely an X in the picture — X being the general referent — there is no Y in the picture at all. There is only a 'quasi-reference', not an actual reference, to a Y. There is only X, and a 'Y-perception-recipe'. Given the absence of any actual Y, we should try to improve on descriptions of Stage Three in terms of these two variables. I mean, we should try to do better than formulations such as 'seeing X as Y', 'viewing X as if it were Y', and 'doing a Y-inspection on X'. These are improvements on two-object accounts — such as the 'object-comparison theory I describe later — but we can perhaps do still better. In describing

Stage Three of the metaphor procedure, we can speak entirely in terms of what speaker and hearer are *doing*.

What speaker and hearer are doing is performing, or imagining performing, certain perception-recipes, or ‘inspections’. (I will opt for the briefer term *inspecting* for a while, rather than the Rylean term.) We do not need to mention the entity or entities which are subject to these actual or imagined inspectings. We need only refer to the inspectings or imagined inspectings themselves. Rather, we may need to refer to the entities, or at least utter their names, but only in order to individuate the relevant inspection rehearsals. I shall use the verb *entertain* to cover both the actual performance of a perception-recipe (with the object present) and the imaginative re-enacting of that inspection (when the object is absent). At Stage One of a metaphor, speaker and hearer are entertaining an X-inspection (with an attached location guarantee). At Stage Two, they in addition entertain a Y-inspection (without a location guarantee), that is, speaker and hearer are now doing two things at once — entertaining *both* inspections.

Let us consider the hearer only. At Stage Three, the two entertainings partially synthesise. Instead of doing two separate entertainings, the hearer is now entertaining a kind of Siamese twins. The two thing-inspections in a successful metaphor always have something in common. That is, doing an X-inspection has something — some perceptual or investigative-procedural feature — in common with doing a Y-inspection. As a result of the two inspections being entertained simultaneously, they somehow unify at the common point. At the common point, the same bit of entertaining will do for both recipes. Furthermore, the common portion of the inspections, by virtue of being done ‘twice’, is done, involuntarily, in an enhanced manner. Given that the hearer has been obliged — by the speaker’s more or less simultaneous general referral to X and quasi-referral to Y — to simultaneously entertain the two inspections, their subsequent partial melding is an inevitable consequence, over which the hearer has no control. Presumably, it is product of the way we perform and imaginatively rehearse and remember inspection-recipes. Presumably, simultaneous performances of two different inspections or perception-recipes, like simultaneous performances of any two actions, may affect each other in a variety of ways. They may more or less seriously interfere with and inhibit each other, or they might reach an accommodation such as a temporal accommodation (doing one first), or they may synthesise. I am suggesting that, as a result of the speaker’s choice of the two main terms in the metaphor, and because of the hearer’s imaginative response to

those two terms, the hearer ends up entertaining a strange cobbled perception-recipe, in which one aspect is entertained in an especially enhanced way, or ‘highlighted’.

The involuntary nature of the partial coalescing of the different inspections may be what prompted Aristotle (*Rhetoric* 1404b) to declare metaphor out of bounds for a slave in conversation with his or her master or mistress. A metaphor is to some extent an impertinence, a trick. In Cooper’s paraphrase of Aristotle, “...a slave must speak ‘plainly’ before his master; this is because metaphors serve to ‘strike’ people and slaves have no business striking their superiors” (Cooper 1986, p.153).

2.24 Stage Four

The overall effect of the metaphor is now achieved. The Y-inspection has now left its mark on the prevailing X-inspection, having enhanced or highlighted part of the latter. And the Y-inspection then languishes, leaving a portion of the X-inspection selectively enhanced. Reverting for convenience to talking in terms of relations between objects X and Y, whilst remembering there is in fact no Y in the picture, we might say that what the metaphor does is ‘draw attention to a feature F of X, which feature X has in common with Y’. For the most part, X and Y are very different. However, in the attempt to assimilate the two perception-recipes as the grammar prescribes, in the attempt to see X as Y, it is revealed that, despite the large differences, there is a feature common to X and Y, namely F. It is feature F of X that the speaker wants to draw the hearer’s attention to.

What the Y-inspection does, coming juxtaposed with the X-inspection, is ‘triangulate’ F in X. It defines F by exclusion. F is the only feature of X that can possibly be perceived in the ‘Y’ way. Where the X-inspection and the Y-inspection meet, there is the referent. It is clear why metaphors have to be pretty far-fetched in order to work. If the two perception-recipes have too much in common, if the X and the Y are alike in lots of ways, too much will be highlighted during the seeing-as. The hearer will not know which of the many features common to X and Y the speaker is referring to.

If we step back and consider the finished metaphor (*qua* form of words) as a referring expression, one which refers to F, it is possible — and useful, since we have to talk about dead metaphor soon — to think of the metaphor transaction as a ‘dubbing’ procedure. F is the thing being dubbed, and the metaphor is the name it is being dubbed with. And the name is one we may subsequently have time to become accustomed to using.

2.3 *Object-comparison, seeing-as and semantic-interaction theories*

My above account, at least in an ideal form, would specify the metaphor procedure solely in terms of the perceivings and imagined perceivings of the speaker and hearer. The ‘metaphorical twist’ is, in my account, the initial incompatibility of two perceptual behaviours, which the hearer has been asked to perform simultaneously, followed by an unexpected partial reconciliation or synthesis of the two behaviours. A sub-set of perceptual moves is found do-able in regard to both, and this sub-set is rehearsed with more energy than the remainders. Thus the speaker has highlighted some portion of the main ‘X’ perception-recipe being essayed. The speaker has referred the hearer to some special aspect, or feature or relevance of the general referent.

Comparison theories, such as those of Beardsley 1962 and Miller 1993, claim that metaphors are elliptical statements of comparisons between their respective Xs and Ys. The metaphor invites us to compare X and Y, and when we do so, our attention is drawn to a feature F that is common to X and Y. The difference between crude comparison theories and sophisticated ones is that the crude ones have it that the main aim of the metaphor is to uncover a likeness or common feature (of X and Y) *per se*. Whereas I say there is only one subject matter — the Y being at best a kind of mock-topic — crude comparison theories insist there are two, or three, if we include the common feature. Sophisticated comparison theories agree about the presence of a common feature F, but argue (as I do) that the aim of the metaphor is to draw attention to F *qua* feature of X (the general referent). The fact that some Y may also have the property is not relevant. The sophisticated theories thus see the comparison as a means rather than an end

I made the point above that the *Y* term (the word used metaphorically) in the metaphor has a non-referential, merely evocative, role. This means that the hearer responding to a metaphor never contemplates any specific Y entity. And this in turn means that recognition that Y has feature F cannot be part of the correct hearer response. My point about the non-referential role of the *Y* term is mirrored in remarks I quoted from Beardsley about ‘mere connotation’, and from Searle about the withholding of ontological commitment. As Searle also says, “At its *crudest*, the comparison theory is just muddled about the referential character of expressions used metaphorically” (Searle 1993, p.91). The kind of more sophisticated formulation Searle favours is exemplified by his own version of the comparison theory. He discusses, *inter alia*, two numbered

metaphors — (8) *the ship ploughed the sea*, and (31) *Washington is the father of his country*. For Searle,

...similarity ...functions as a strategy for interpretation. Thus, ...the way that similarity figures in the interpretation of (8) and (31) is given by ...‘The ship does something to the sea (to figure out what it is, find a relationship like ploughing)’ and ...‘Washington stands in a certain relationship to his country (to figure out what it is, find a relationship like that of being a father)’. But the hearer does not have to compute any respects in which these relations are similar, inasmuch as that is not what is being asserted. Rather, what is being asserted is that the ship is doing something to the sea and that Washington stands in a certain set of relations to his country, and the hearer is to figure out what it is that the ship does and what the relations are that Washington stands in by looking for relations similar to ploughing and being father of (Searle 1993, p.101).

This view is amenable to my ‘referring by exclusion’ account, with the quibble that, in my story, the hearer does not have to ‘work out’ the special feature (of what the ship does to the sea, or of Washington’s relation to his country). In my account, given the way people imagine things, the metaphor hands the hearer the special feature on a plate. That’s the virtue of metaphors.

Davidson is a little less cautious in his formulations than is Searle. For Davidson, “A metaphor makes us attend to some likeness, often a novel or surprising likeness, between two or more things” (Davidson 1984, p.247), and “...they bring surprising analogies and similarities to our attention” (*ibid*, p.261). Here it looks more as if Davidson thinks that the metaphor is inviting us to contemplate a likeness *per se* between X and Y. Davidson here appears to believe the main aim of the metaphor is to point up a similarity between *two* things. But I agree with Searle that what the metaphor is doing is pointing us to a subtle feature of just *one* thing, namely X. As Searle sees it and I see it, there is no comparing going on — as part of either the speaker’s or the hearer’s contribution to the metaphor. At none of my four stages is any glancing-from-X-to-Y undertaken.

Maybe, the idea of a comparison comes up only when you look at metaphor from the point of a third party trying to explain how the metaphor is transacted. Comparing is invoked as a hopefully useful analogy. I have to concede, going by the talk of ‘similarity’ and ‘likeness’ I retain in my account, that it is difficult to explain metaphor without the notion of comparing. But there is at least one good reason why comparing *cannot* be involved in the metaphor process. This is because comparing — that is, looking from one thing to another and noting common features — involves the same ‘seeing-as’ which

metaphor involves, but in a more laborious and complicated, less pared-down, form than in metaphor. Glancing back and forth might seem simple, but the glancing is only the half of it. To compare X and Y with respect to feature F, one must first succeed in doing an F-inspection on X (i.e., verify that X has feature F). Second, one must attempt an F-inspection on Y, to find out whether Y also has F. In metaphor, while actual or imagined glancing at X is required, no prior or subsequent glancing at Y is necessary. The Y-inspection is cued not by (actual or imagined) sight of an object but by a word. And it is cued effortlessly. In metaphor, no change in direction of gaze is required. At the moment the Y-inspection is elicited in the hearer, the hearer is already attending to X. The Y-inspection as it were ‘spills over’ on to X. Metaphor is simpler, less arduous and more efficient than comparison. Unfortunately, though, it is more difficult to describe, and perhaps this is what allows us to think that comparison is a simpler and more straightforward procedure.

An improvement on crude comparison theories is the kind of ‘seeing-as’ theory advanced notably by Henle 1958 and Black 1962. Black invites us to view metaphor as a matter of using something as a lens, lattice, template or screen to superimpose on the general referent and view the general referent through. That is, we respond to a metaphor by (imagining?) using an heuristic technique similar to viewing “...the night sky through a piece of heavily smoked glass on which certain lines have been left clear” (Black 1962, p.41). Black says, “...metaphor has the power to bring separate domains into cognitive and emotional relation by using language directly appropriate to the one as a lens for seeing the other” (*ibid*, p.236). In similar vein, Schon (1963, pp.58-64, 87-92) suggests that, in metaphor, the word used metaphorically refers to something which is to be taken as a ‘projective model’ of the primary referent. Davidson agrees here too. He says that metaphors “...do provide a kind of lens or lattice, as Black says, through which we view the relevant phenomena” (Davidson 1984, p.261).

Henle’s version of the seeing-as theory he calls the ‘iconic signification’ theory of metaphor. He relies on Pierce’s distinction between symbolic and iconic signs: “A sign is a ‘symbol’ insofar as it signifies according to an arbitrary rule, insofar as it is a conventional sign. A sign is an icon to the extent that it signifies in virtue of similarity” (Henle 1958, p.177). Henle cites three metaphors — *hateful thoughts enwrap my soul in gloom* (Keats), *he is an old fox* (said of a person) and *an obliging thrush hopped across the lawn; a coil of pinkish rubber twisted in its beak* (Woolf) — and he comments,

...there is clearly an iconic element in metaphor. ...metaphor, as distinct from the other tropes, depends on analogy, and in this analogy one side is used to present the other. Thus envelopment in a cloak is used to present the notion of gloom, the character of a man is presented through its likeness to that of a fox, and the appearance of a worm through its likeness to a piece of rubber. In each case we are led to think of something by consideration of something like it, and this is what constitutes the iconic mode of signifying (*ibid.*).

Henle emphasises that “there must be an initial similarity between them to make the metaphor possible” (*ibid.*, p.191). However, he has difficulty explaining how, in a metaphor, the icon — apparently something fairly solid and three-dimensional — gets into the picture.

But if there is an iconic element in metaphor it is equally clear that the icon is not presented but is merely described. In the sentence from Virginia Woolf we are not given a coil of rubber — a piece of rubber could not be part of a sentence — rather, we are given a description of such a coil (*ibid.*, p.177).

He suggests various alternative formulations:

...we are not given an icon but rather a description of what would be an icon. ...not the icon but its essence is brought before the reader. ...what is presented is a formula for the construction of icons. Thus Virginia Woolf may be understood as saying something like: ‘Take any coil of pinkish rubber of a size to be carried by a thrush and you have an icon of what I mean’ (*ibid.*, p.178).

The problem Henle tries to face up to here (a problem which neither Black, with his talk of lenses and smoked glass, nor Schon, with his talk of models, addresses) is the same as the one the crude comparison approach falls foul of — the problem of the extent to which the word used metaphorically ‘refers to something’. On the best interpretation, according to Henle’s iconic-signification theory, the word used metaphorically refers to an object which the hearer uses in imagination as an ‘icon’ of the primary (general) referent. But, although the Henle, Black and Schon idea of ‘seeing X as Y’ or ‘X being presented by or through Y’ is closer to the mark than the crude comparison view (with its implication of head-turning from X to Y, and back), it still requires one too many referents. The word used metaphorically does not refer to anything at all — neither an object of comparison nor any lens, icon or model, or other form of representation.

Certainly, viewing an icon, model or representation of something is one frequently useful way of stimulating and assisting us to imagine perceiving that something. But no such stimulus or assistance is required at Stage Two of a metaphor. We can perfectly well

imaginatively rehearse the Y-perception-recipe without the aid of a representation. The word *Y* has already got us going. Nor, in a metaphor, do we need any assistance from a representation of *Y*, actual or imagined, when it comes to ‘seeing *X* as *Y*’ or ‘applying a *Y*-inspection to *X*’. The evoking of the *Y*-inspection immediately on top of, or in the same breath as, the evoking of the *X*-inspection, accomplishes the seeing-as much more directly and efficiently than any ‘viewing through a representation’ could. Metaphor is a simpler procedure than representation-assisted seeing-as. To say that metaphor ‘gives us a picture’ of something, is itself metaphor.

I do not propose to discuss the third type of metaphor theory opposed to mine — i.e., such as Black’s 1962 ‘semantic interaction’ and Beardsley’s 1962 ‘verbal opposition’ theories — except to mention that these theories cater better for literary metaphors than does my ‘referring by exclusion’ theory, at least in the latter’s present form. My approach, and arguably the comparison approaches, make metaphor seem cut and dried. You either successfully interpret the metaphor or you don’t. There is ‘only one answer’ to the metaphor, just one *F* to be triangulated — and that is the *F* that the metaphor is referring you to. The metaphors my account is geared to explaining are the simple, common, modest, unobtrusive, workaday variety — like *a glaring error* and *hurt pride*. Really, I would like to restrict my account to metaphors that have become fixtures in the language — because they do such an efficient referring job, and are often amusing and memorable to boot. They can be called ‘common’ or ‘colloquial’ metaphors. Cooper 1986 calls them ‘established’ metaphors. The referent of such metaphors *is* cut and dried. Black’s talk of ‘interpenetrating semantic domains’, and ‘induced similarity’ does not apply to common metaphors. When Davidson says “I hold that the endless character of what we call the paraphrase of a metaphor springs from the fact that it attempts to spell out what the metaphor makes us notice, and to this there is no clear end” (Davidson 1984, p.263), he cannot have in mind such metaphors as *she held the fort*, *the mouth of the river*, *on the other hand* and *go back in time*. However, the question of whether common metaphors are always easily paraphrased is a difficult one. I return to it in Section 2.5 below.

With common metaphors, the overall referring function is paramount. Their whole *raison d’être* is to triangulate specific referents *F*. By contrast, most of the purpose of literary metaphors is pleasure and most of the pleasure is in our simultaneously entertaining diverse, initially incongruous, perceptual imaginings. With literary metaphors, the two (or more) perception-recipes evoked can get entangled, and interact, leaving no

fixed common ground or no set limits to their common ground. It can be extremely difficult or impossible to adequately paraphrase good literary metaphors. On the other hand, many literary metaphors are verbally economical and do refer neatly and efficiently — and sometimes to things we need often to refer to. Such metaphors, as with at least scores of the Bard's, eventually give up their literary pretensions and settle down to proper jobs in the vernacular.

My 'common' metaphors are more numerous than literary metaphors. And we hear each of them more frequently than we hear even the most bruited literary efforts. They are so familiar that we do not notice they are or were metaphors. After hearing them once or twice, we no longer even cursorily go through the four-stage interpretation procedure. We hardly bother with the 'Y' perception-recipe at all, at least not consciously. We already know what we are being referred to and we go straight there. They appear quite 'dead' as metaphors. Yet the common metaphors are philosophically the most interesting. It is these metaphors which may, by their unobtrusiveness and for other reasons, mislead both lay folk and philosophers. These are metaphors such as that of which Wittgenstein complained "A *picture* held us captive". See my Chapter Three, 3.6. In my view, most common metaphors, including the mind metaphors, are not dead but merely moribund.

2.4 Dead metaphors and literal referrals

I claim that in everyday discourse the noun *mind* is only used in conjunction with metaphors. Someone might argue that this claim is false, on the grounds that the expressions in which *mind* occurs are dead metaphors, and dead metaphors are not metaphors but literal expressions. I concede that the mind metaphors are dead metaphors, in the sense that they are so often used that we employ them without consciousness of metaphor. Being 'dead' in this sense is one of the criteria expressions must satisfy to get on the Appendix One list. In the literature, by far the dominant view is that dead metaphors are no longer metaphors — because they 'acquire a new literal meaning'. Henle speaks for the majority when he speaks of "...an idiom or a 'dead metaphor' which, properly, is no metaphor at all" (Henle 1958, p.183). He explains that "Metaphors of this type tend to vanish, not in the sense that they are no longer used, but in the sense that they become literal, so that no-one would think of saying that *plastron of a turtle* or *hood of a car* were metaphors" (*ibid*, p.187). According to Henle, after a person learns what the expression *hood of a car* refers to, the following happens.

Independent of the metaphor, one would have memories of how hoods had looked and expectations of how they should look. Then any meaning for *hood* except those memories and expectations became unimportant and the metaphorical element dropped out. We have seen that a metaphor requires a clash of terms. When the phrase was first used there would be such a clash — a wondering what a head-covering would do on an automobile. Once the required part was recognised, however, the clash may be forgotten and the phrase may be considered a single unit, designating something whose appearance is known. Thus the metaphor would disappear and a new literal sense would be born (*ibid*, p.188).

Davidson agrees: “Once upon a time, I suppose, rivers and bottles did not, as they do now, literally have mouths” (Davidson 1984, p.252). Rorty likens metaphors to platypuses in that both may, in Davidson’s words, “bring surprising analogies and similarities to our attention” (*ibid*, p.261). Rorty goes on,

As with platypuses, so with metaphors. The only important difference is that the platypus does not *itself* come to express a literal truth, whereas the very same string of words which once formed a metaphorical utterance may, if the metaphor dies into literalness, come to convey such a truth (Rorty 1991, p.167).

The common idea here is that what kills a metaphor is its developing a ‘new literal meaning’. Cooper 1986, pp.123-5, calls this the ‘polysemy’ view. As the metaphor in question gains popular currency and thus ‘dies’, the word used metaphorically (such as *mouth* or *hood*) becomes a ‘polyseme’. That is, it acquires a new literal meaning, distinct from its original (pre-metaphor) one. The idea that persistence into common usage causes a metaphor to ‘die’ reveals one of the limitations of *dead metaphor* as a metaphor. As Searle puts it, “to speak oxymoronically, dead metaphors have lived on. They have become dead through continual use” (Searle 1993, p.88). But the important question is — why is it that most contributors to the metaphor literature believe that the word used metaphorically, the *Y* word, ‘becomes literal’ or ‘acquires a new literal meaning’.

In my opinion, the polysemy theory arises from a confusion. Let us look at Henle’s example *hood of a car*. The original literal referring expression is *hood*, which refers to an item of millinery. The new expression, which refers to part of a car, is not *hood* by itself but the whole metaphor *hood of a car* or *car hood*. At this point, to speak as I and most writers do of ‘the word used metaphorically’ may be misleading. The word used metaphorically does not by itself constitute the metaphor. Certainly, we might often leave out the word *car*, when referring to a car’s hood. But we would only do this when the

initial general referral to cars (or ‘the car’, or whatever) was already established. Perhaps the general referral to the car has already been established verbally — for example, by prior use of the whole expression *car hood* — or the car might be actually present and already be the focus of attention, as with the hat in the *Taj Mahal* example. Even in this context, *hood* does not *on its own* refer to part of a car. It is merely a convenient, temporary abbreviation of the whole metaphor *hood of the car*. And it is the metaphor as a whole which refers to the car part. We do not have polysemy, because we have two quite different expressions, *hood* (which still refers to headgear) and *hood of the car* (which refers to a car part).

In the above passage, Henle seems not to distinguish the two. Without flagging any differences, he goes from talking about “the meaning for *hood*”, to “the phrase” (and the phrase “considered as a semantic unit, designating something”), to “the metaphor” and thence to “a new literal sense”. He clearly wants the ‘new literal sense’ to be a new literal sense of the word *hood* by itself. However, all he can justifiably claim is that the metaphor *hood of a car*, “considered as a semantic unit”, has come to function as a reliable referring expression. And the truth of *this* claim is unsurprising on the account of metaphor which I have offered. In my story, the metaphor already *is* a referring expression.

Davidson clearly favours the polysemy view.

Once upon a time, I suppose, rivers and bottles did not, as they do now, literally have mouths. Thinking of present usage, it doesn’t matter whether we take the word ‘mouth’ to be ambiguous because it applies to entrances to rivers and openings of bottles as well as to animal apertures, or we think there is a single wide field of application that embraces both. What does matter is that when ‘mouth’ applied only metaphorically to bottles, the application made the hearer *notice* a likeness between animal and bottle openings. ...Once one has the present use of the word, with literal application to bottles, there is nothing left to notice. There is no similarity to seek because it consists simply in being referred to by the same word (Davidson 1984, p.252).

As Davidson sees it, the referring career of the word *mouth* is as follows. First, it refers, and it refers ‘literally’, to (anterior) animal openings. Second, *mouth* refers ‘metaphorically’ to bottle openings. And third, it refers, now ‘literally’ again, to bottle openings. One could not quibble with the description of the first case, except to query the point of the adverb *literally*. In regard to the second case, we see Davidson asserting that at one time “*mouth* applied only metaphorically to bottles”. This appears to explicitly

contradict the tenor of the rest of this 1984 paper — i.e., “..that metaphors mean what the words, in their most literal interpretation, mean, and nothing more” (*ibid*, p.245). Near the beginning of the paper, Davidson announces: “The central mistake against which I shall be inveighing is the idea that metaphor has, in addition to its literal sense or meaning, another sense or meaning” (*ibid*, p.246). He says, “..a metaphor doesn’t say anything beyond its literal meaning (nor does its maker, in using the metaphor, say anything beyond the literal)” (*ibid*.). These quotations do not seem to leave room for *mouth*, or any word, to ‘apply only metaphorically’ to anything.

On my account, it is the metaphor *mouth of the bottle* as a whole that refers to the bottle opening. Whether one wants to say that the metaphor refers ‘metaphorically’ to the bottle opening — in contrast, say, to the expression *bottle opening*, which might be said to refer ‘literally’ to that part of the bottle — is unimportant. [There seems to be nothing misleading about leaving *refers to* unqualified, as long as it is intended in the sense of ‘the utterance of “E” in appropriate circumstances will reliably direct the hearer’s attention to E’, or similar.] On my account, the word used metaphorically — the word *mouth* as it occurs within the metaphor — does not refer to (or apply to or mean) anything at all. What I do say is that it ‘incites the hearer to entertain certain perceptual behaviour’, or some such. In particular, as it occurs within the metaphor, the word *mouth* does not refer to what it refers to when it is used outside the metaphor. In that case it refers to the familiar facial orifice.

As for the third phase in the career Davidson maps out for *mouth*, I can only reiterate the point I have just made, and made earlier in connection with Henle’s example of *hood* and *hood of a car*. The word *mouth* does not refer on its own — at least, not without a prior general referral to bottles or rivers — to bottle-parts or river-parts. Only the whole expressions *mouth of the bottle* or *mouth of the river* do that, and these expressions are by no means the same as that which refers to the part of a person’s face.

Searle’s contribution to the polysemy or ‘new literal meaning’ issue is more difficult to grasp. Searle avoids confusing the word used metaphorically with the whole metaphor, but at the cost of saying something rather odd. He says that, when a metaphor becomes hackneyed and dies, “The original sentence meaning is bypassed and the sentence acquires a new literal meaning identical with the former metaphorical utterance meaning” (Searle 1993, p.110). Even with an example clearly in view, an example like *hood of a car*, it is

difficult to see what the expression “original sentence meaning” could refer to. Searle later uses the phrase “the former metaphorical utterance meaning”. It could be that what Searle means by *metaphorical utterance meaning* is somehow related to the fact that metaphors (= ‘metaphorical utterances’?) refer to things (namely, features of X). The word *former* could be taken as suggesting that what Searle is calling the ‘former metaphorical utterance’ is the metaphor, such as *hood of a car*, when it is fresh — either ‘newly invented’ or ‘first encountered by a given hearer’. Possibly, the rest of Searle’s story is that, as the metaphor gains popular currency, it acquires a new literal meaning — which happens to be identical to the ‘former metaphorical utterance meaning’. One would expect the phrase *the sentence acquires a new literal meaning* to mean something like *instead of being used just to refer to thing A, the sentence starts getting used to refer to a different thing, B*. But this does not appear to be what Searle is saying. The only thing I can think of is that he is saying that, when a metaphor dies (metaphorically speaking) it continues to refer to what it referred to when it was fresh, only, now it refers in a different, somehow more direct and ‘literal’, way.

Perhaps at this point my actional concept of referring — as a transaction wherein speakers (and by figurative extension, words) direct hearers’ attention to things — fails to translate into Searle’s more conventional ‘meaning’ idiom. If this is so, any further attempts on my part at exegesis of Searle’s account would likely be fruitless. However, it does not seem premature or unreasonable to conclude that, as explanations of what the metaphor *dead metaphor* refers to, both the ‘polysemy’ idea (that the word used metaphorically acquires a new literal reference) and Searle’s idea (which I think is that the whole metaphor starts to refer, not to something different, but to the same thing, only, in a different and more ‘literal’ way) are inadequate. The polysemy idea clearly rests on a confusion of the word used metaphorically with the (whole) metaphor. And Searle’s idea, that whole metaphors, when they gain popular currency, thereby start to refer in a new literal way, is at best confusingly expressed.

2.5 *Galvanic stirrings*

So, what does happen when metaphors get used a lot? What does the expression *dead metaphor* refer to? One thing we can say is that the metaphors in question have become so familiar that we are no longer conscious of them as figurative expressions. The entertaining of the Y-inspection-recipe, and the seeing-as process, are performed, if they

are performed at all, so cursorily and unthinkingly, that we are unaware of anything other than being referred to F.

2.51 Two aspects of the metaphor qua form of words

I have been employing the term *metaphor* (in the sense of the form of words) in two slightly different ways. It will help in explaining what happens when metaphors ‘die’, if we can prise these two ways further apart, and in public. First, I have talked about the metaphor (form of words) as a key element in, or the ‘script’ for, the metaphor transaction. Seen under this aspect, the metaphor contains component terms — the *X* term, which refers the hearer to the general subject matter, and the *Y* term, which invokes the ‘Y’ inspection recipe. Second, I have talked about the metaphor (form of words), considered as a whole ‘semantic unit’, as being a referring expression — one which refers the hearer to some feature F of an X being talked about. In the normal production of a new metaphor (transaction), the metaphor (form of words) transits naturally from serving its (first) instrumental, cueing-of-the-metaphor-transaction function, to serving its (second) function as referrer-to-F. The second status is achieved when the metaphor transaction is successfully completed. The metaphor (form of words) then stands as referring directly to F. F has been successfully winkled out and dubbed. The pensive girl, Y has gone (though she was never there) and *the smoke curled wistfully up* refers, *qua* uttered whole-expression by itself, to that subtlety in the smoke’s mode of ascent.

We can best describe what happens when a metaphor ‘dies’ by saying that, after a number of playings, the metaphor transaction is no longer required in order to achieve the referring (to F) effect of the metaphor (*qua* form of words) as a whole. After one or two run-throughs of the metaphor (transaction), the metaphor (form of words) becomes an ‘idiomatic phrase’. One does not have to go through the four stages to find out what is being referred to. One remembers from last time and the time before, and goes straight to Stage Four, and to F. One need not now go to F *via* the metaphor transaction. It is possible to sympathise with Searle’s wanting to say that the metaphor now refers ‘in a different way’.

2.52 Are dead metaphors metaphors?

The circumventing of the metaphor transaction as described above does seem to be what the phrase *dead metaphor* refers to. One or two interesting questions now arise.

First, is a dead metaphor still a metaphor? Even if the confusion between ‘the metaphor’ and ‘the word used metaphorically’ were to be resolved, the pundits are mostly polysemy advocates and would probably still say — at least, Henle, Davidson, Rorty and Searle would say — that a dead metaphor is no longer a metaphor at all. The metaphorical character of the expression has lapsed; what was a metaphor has now become a literal referring expression. As we see below, Cooper equivocates on this issue. He thinks dead metaphors both are and are not metaphors.

My own view is that refusing to call dead metaphors metaphors is not a wise move. I think we should continue to call these idiomatic phrases metaphors. My reason is that, although in cases of dead metaphor the metaphor transaction is no longer needed to get us to F, and although the metaphor (form of words) is consequently not needed in its metaphor-transaction-cueing role, we do — at least sometimes and/or to some extent we do — rehearse the metaphor. We may not need to do the seeing-as the metaphor prescribes in order to get to F, but we do it anyway, for other reasons. Dead metaphors (forms of words) retain some influence as cuers of metaphors (transactions) and for this reason we should continue to call them metaphors.

Before I get on to specifying just what kind of life and influence dead metaphors retain, it is worth going over again what I am saying a dead metaphor is. A dead metaphor is a metaphor (form of words) in response to which we no longer need to go through the four-stage metaphor process in order to have our attention directed to the correct referent F. We have gone through that metaphor (transaction) enough times before to ensure that we just remember what this form of words refers to. What the *metaphor* component in the *dead metaphor* metaphor refers to is the metaphor transaction — the four-stage process, notably including the seeing-as — and not the metaphor *qua* form of words. The subject matter of *dead metaphor* is the metaphor transaction. The transaction is what dies, if anything does. It cannot be the metaphor *qua* form of words that is being referred-to (tongue-in-cheekily) as ‘dead’. The metaphor (form of words) does give up its metaphor-transaction-cueing job, but it acquires greatly increased currency, and it performs its overall referring function even more efficiently than before.

As a common metaphor gains currency and becomes familiar, the hearer’s comprehension response becomes more cursory and abbreviated. I discuss in a moment whether it ever disappears totally. The metaphor comes to function more like an ordinary

referring expression, or name. Earlier, I likened metaphor to a dubbing procedure. I don't want to press this analogy, but it can be noted that one's earliest uses of a term very often (even necessarily) involve at least minimal imaginative re-enactment of the scenario in which or by which one first learnt the word. *Mandible* may for weeks conjure images of a half-dissected rat's jaw and the Prof's droning voice. As one gets accustomed to hearing and using the word in a variety of contexts, one's re-enactment of the dubbing procedure — presumably, for mandibles, a matter of simple Augustinian or Quinean ostension and saying the name — gets progressively streamlined too. For one thing, when you hear the word again, you don't have to actually physically go back to the same lab, with the same person telling you, and the same rat. Just imagining will do, and then just cursory imagining, and you don't have to say the word out loud, and so on. Probably the metaphor transaction abbreviates by increments in much the same way, after initial undergoings of it. The transaction streamlines briefly before being circumvented entirely.

2.53 *Fossil metaphors*

But is the 'processing' chore in a metaphor, even in the most mundane and hackneyed ones, ever entirely circumvented? Does it ever get to the stage where the word used metaphorically does no evoking at all — where we do not, however cursorily, imaginatively entertain the 'Y' perception-recipe? In some cases, definitely yes. But these are cases where we would want to talk about 'fossil' metaphors rather than dead ones. I mean terms whose origin is now buried under several etymological layers — terms like *concept* (from *conceive*) and *comprehend* (from a root meaning 'to grasp, or hold together'), *truth* (from the Sanscrit *dhruva*, meaning 'of a firm, holding consistency' according to Muller 1871), Henle's *plastron* (of a turtle, from the Greek for 'breastplate'), and *metaphor* (from the Greek for 'to carry over, or import'). Jaynes adds an interesting example.

Even such an unmetaphorical-sounding word as the verb *to be* was generated from a metaphor. It comes from the Sanscrit *bhu*, 'to grow, or make grow', while the English forms *am* and *is* have evolved from the same root as the Sanscrit *asmi*, 'to breathe'. ...the irregular conjugation of our most nondescript verb is thus a record of a time when man had no independent word for 'existence' and could only say that something 'grows' or that it 'breathes'. Of course, we are not conscious that the concept of being is thus generated from a metaphor about growing and breathing. Abstract words are ancient coins whose concrete images in the busy give-and-take of talk have worn away with use (Jaynes 1976, p.51).

All these terms were certainly once metaphors, or parts of metaphors, but now they are only relics of metaphors, or fossils of them. There is no possibility of their cueing any ‘Y’ perceptual behaviour. They are just referring expressions. But, as I say, one wouldn’t want to call these dead metaphors, and it is dead metaphors we are talking about.

2.54 *Cooper’s equivocation*

Cooper’s 1986 account attempts a compromise with the polysemy theorists. He agrees with Davidson and others that there is a “semantic gulf between live and conventional metaphor” (Cooper 1986, p.210). [I have tried to show that this ‘semantic gulf’ is neither ‘semantic’ nor a ‘gulf’. I would characterise the difference between live and dead in terms of *difference in imaginative effort required*, or some such.] However, for two reasons, Cooper thinks that the polysemy, or ‘new literal meaning’, view is unjustified. He thinks dead metaphors are not quite dead. He sums up his compromise: “To mark the crucial difference, from the semantic point of view, between fresh metaphorical utterances and ones belonging to established practice, I recommended that we reserve the count-noun ‘metaphor’ for the former alone” (*ibid*, p.179). Thus, according to Cooper, only new metaphors are metaphors. Dead metaphors are no longer metaphors, but nevertheless they are not mere polysemes. Cooper says,

My view is that ‘knock-down’ [argument], ‘invest’ [time], [he is a] ‘pig’, and so on, although they now have established secondary meanings, are used metaphorically when occurring with those meanings. The alternative view is that such expressions are mere polysemes, shorn of all the metaphoricality they once enjoyed for a brief moment (*ibid*).

Thus, to use dead metaphors is still ‘to speak metaphorically’, only, the expression one utters is not a ‘metaphor’. However, Cooper soon abandons this self-imposed verbal convention and starts speaking instead of dead metaphors as ‘conventional’ or ‘established’ metaphors. His two reasons for eschewing the polysemy alternative are derived, respectively, from observations by Fowler about usage, and from Lakoff and Johnson’s systematicity thesis.

2.55 *The ‘galvanic stirrings’ argument for not signing the death certificate*

Fowler’s idea, which Cooper regards as coming a distant second to the systematicity thesis in importance on this issue, is that certain reasonably common infelicities of verbal style can quickly revivify dead metaphors. The fact that this can happen so readily shows

that the metaphors were never totally defunct as such in the first place. People are in fact, at some level, very sensitive to metaphor, and figurative speech generally. Fowler says,

...the line of distinction between the live and the dead is a shifting one, the dead being sometimes liable, under the stimulus of an affinity or a repulsion, to galvanic stirrings indistinguishable from life. Thus in *The men were sifting meal* we have a literal use of *sift*; in *Satan hath desired to have you, that he may sift you as wheat*, *sift* is a live metaphor; in *the sifting of evidence*, the metaphor is so familiar that it is about equal chances whether *sifting* or *examination* will be used, and that a sieve is not present to the thought — unless indeed someone conjures it up by saying *All the evidence must first be sifted with acid tests*, or *with the microscope*. Under such stimulus our metaphor turns out to have been not dead but dormant. The other word, *examine* will do well enough as an example of the real, stone-dead metaphor; the Latin *examino*, being from *examen*, the tongue of a balance, meant originally to weigh; but, though weighing is not done with acid tests or microscopes any more than sifting, *examine* gives no convulsive twitches, like *sift*, at finding itself in their company. *Examine*, then, is dead metaphor and *sift* only half dead, or three-quarters (Fowler 1983, p.359).

Here are some other examples. The affinity which occurs in *The decision to demolish the dam led to a torrent of criticism* is sufficient to revive the aquatic connotations of *torrent of criticism*. *The thought of chewing gum stuck in my mind* resuscitates the adhesive implications of *stuck*. Repulsions have a similar re-vivifying effect. “*I’m utterly soaked*”, *he said drily* — brings *drily* back to life, for example. *An image of him falling rose up in my mind* has an analogous effect on *rose up*. Fowler comments:

...dead metaphors will not lie quietly together if there was repugnance between them in life; e’en in their ashes live their wonted fires, and they get up and fight: *It is impossible to crush the Government’s aim to restore the means of living and working freely*. *Crush* for baffle, *aim* for purpose, are both dead metaphors so long as they are kept apart; but the juxtaposition forces on us the thought that you cannot crush an aim (*ibid*, p.360).

The heinous stylistic gaffe ‘mixed metaphor’ is particularly effective at eliciting galvanic stirrings. Here it is not specifically repulsions but, more generally, incommensurabilities that have the metaphor turning in its grave. Consider this monstrosity dreamed up by Orwell: “*The Fascist octopus has sung its swan-song, the jackboot is thrown into the melting pot*” (Orwell 1957, p.151). Consider also: *We were both in two minds. We had half a mind to leave*. The fact that such travesties are usually noticed and, when they are, are universally deplored is evidence that — even with these very hackneyed metaphors (and synecdoches, in the case of the jackboot) — we still go

through the motions of ‘doing’ them. We still attempt, albeit subconsciously, to rehearse the seeings-as which they prescribe. Affinities, repulsions and incommensurabilities disrupt, and hence make conscious, this back-of-the-mind-type processing. That it can be disrupted is evidence that it normally occurs. Thus, it is not that dead metaphors stop functioning (i.e., that we no longer ‘do’ them as metaphors) but that they have come to function (we now rehearse them) only minimally and subconsciously.

Another stimulus to galvanic stirrings is not mentioned by either Cooper or Fowler. There is another kind of situation — perhaps too close to be obvious — in which prime examples of dead metaphor have surprising effects, effects one would think only a live metaphor could have. The situation I mean is the kind of activity we are engaged in now — scrutinising old metaphors to see whether there is any life left in them. Our scrutiny can itself make some of them look up. All we need do is *draw attention to the dead* metaphor in question, *put it forward as a candidate* for live metaphor status, or *raise the possibility* that it is still alive. In such cases, we experience no difficulty in rehearsing the hackneyed metaphor anew, in an aware way. The metaphor is still good; it still works OK. Unless dead metaphors were recognisable as metaphors, and still do-able as metaphors in this way, we would not use the term *metaphor*. If we take the *dead* to mean ‘non-metaphorical’, as most authorities seem to, we run the risk of self-contradiction. I suggest we take the *dead* in much the same way as it is taken in *man, the party was dead*. It is still a party, but is hardly worth the name. But then Robin Williams arrives, with Tina Turner.

2.56 *The systematicity argument for not signing the certificate*

In Chapter Three, 3.4 I discuss Lakoff and Johnson’s ‘systematicity’ thesis regarding colloquial metaphors. The idea is that the metaphors surrounding a given subject matter tend to have a common theme. Argument is nearly always pictured metaphorically as combat. Emotions are almost invariably construed in terms of pressure and temperature. Interpersonal communication is pictured as transmission via a conduit, and so on. As I say in 3.4, my enthusiasm for the systematicity idea is muted. The number of everyday concepts (such as argument, emotion, verbal communication, time, reality, meaning) which are accessible to us mainly via metaphors — and where the metaphors are sufficiently numerous and consistent to have acquired a critical mass sufficient to control our thinking about that area, and to dictate the content of our novel metaphors in that area — is small. Most colloquial metaphors are in the language for our convenience only,

and they can be as unsystematic and idiosyncratic as you like. In the case of the mind metaphors, at least, systematicity is the exception rather than the rule.

Cooper is more impressed than I am with the systematicity claim. It underpins his main objection to the ‘polysemy’ account of dead metaphor. Cooper argues that most original metaphors in a given subject matter area will conform to, or be readily intelligible extensions of, the prevailing metaphorical theme for that area. He concludes that, for this to be so, for the new metaphors to so regularly conform to the old pattern, the underlying ‘theme-metaphor’ must be exerting some influence on individual metaphor-makers. For this to be true, the theme, and the individual metaphors which promulgate it, must be to some extent alive. He says,

...many fresh metaphors are generated from systems of established metaphor. ...this generative connection — the fact that a systematic established metaphor is continually giving rise to novel, more or less exotic extensions, of the practice itself constitutes a link between dead and live metaphor of just the kind that the polysemy view wishes to sever (Cooper 1986, p.135).

The facilitating and conforming influence is exerted not only on speakers inventing new metaphors but on the hearers who interpret them.

I doubt if anyone has previously encountered the utterance ‘The big guns in the audience were ready to shell Professor X’s position’. But I doubt, too, whether there would be much variety in how this gets interpreted. On the polysemy view, it ought to be open to a very wide range of interpretations indeed, for ‘gun’, ‘shell’, *etc.* have no conventional senses which could severely restrict possible interpretations. The point, of course, is that the utterance, however novel, is read as an intelligible extension of the familiar practice of talking about argument in terms of warfare (*ibid*, p.134).

A family of metaphors which can still maintain semantic control over a territory, or at least compel respect there, and which can still effectively reproduce itself, is still in some good sense alive. Cooper concludes as follows.

Now it is natural, if not inevitable, to regard systematic established metaphor as partially structuring our thought about one kind of thing in terms of another. If so, it is actually achieving, in its quiet way, what many fresh metaphors more stridently invite us to begin doing. We are blinded to this if we focus on an isolated example, like ‘waste time’, and are impressed by its failure to conjure up, any longer, images of rubbish dumps or squandered cash. Taken in isolation, that expression may be of little moment, but taken alongside a battery of related impressions — ‘invest time’, ‘giving time’, ‘save time’, *etc.* — it is hard to resist

the impression that something of importance in our thinking about, and attitude towards, time is marked. The idea of each dead metaphor as a polyseme with a new meaning more-or-less severed from a parent one prevents us from ever receiving, let alone assessing, that impression (*ibid*, p.135).

As I say, in my opinion, most colloquial metaphors *are* idiosyncratic, and so systematicity is not the convincing case against the polysemy view that Cooper seems to think it is. However, in the cases where there is what Lakoff and Johnson call ‘conceptual metaphor’ — where there is systematicity, where there is a significant body of like-minded metaphors controlling access to a given concept — in these cases, Cooper’s point holds. These metaphors are still to this extent alive. They do ‘in their quiet way’, ‘partially structure our thought about’ the conceptual area, or general subject matter, in question. For example, some of our metaphors for thinking, including those mind metaphors which cast the mind as internal place or agent, are systematic and so do, though ‘dead’, continue to exert the kind of influence Cooper talks about.

[Apart from the empirical issue as to how much systematicity there is in fact, it could be argued that systematicity is an illusion created by the fact that the prevailing theme metaphor in a given subject matter area just happens to be the *best* one for picturing that subject matter. The people who coin new metaphors invoke that kind of metaphor not because of precedents, or to be consistent, but because it is the best metaphor.]

2.57 *Are metaphors paraphraseable?*

In cases where the referring function of a metaphor could have relatively easily been served by a literal neologism (established with a bit of ostensive dubbing) and the metaphor is only a convenience or a pleasure, there is no practical reason why the metaphor should not die entirely. This is the case with metaphors like *eye of the needle*, *chair leg*, *a glaring error* and, probably, *a pig of a day*. The referring is the thing, and if it is not essential that we have a metaphor for that, then the metaphor can lexicalise, and function from then on like any arbitrary label. I suggest that, although in many cases there is no practical reason why this shouldn’t happen, it seldom does — except when the metaphor gets to the fossil stage. We retain metaphors even when they are superfluous, because they are amusing. Even *chair leg* is more interesting than the labels we have for other chair parts, such as *rail* and *lathe*. (In Chapter Three, 3.7, I look at other reasons for keeping metaphors alive.)

It is worth clearing up an ambiguity in the term *paraphrase* as applied to metaphors. ‘Paraphrasing’ can mean ‘finding an expression — a word or a non-figurative (standardly grammatically built-up) phrase — which refers to the same feature F of X that the metaphor refers to’. The paraphrase in this sense duplicates the referring function of the original metaphor. This is the only sense of the word *paraphrase* I will be employing. The other sense is a ‘paraphrase’ of the metaphor which would capture (that is, cue a duplicate of) what the hearer experiences during the imaginative exercise of working out the metaphor. This kind of paraphrase would reliably cue the same kind of imaginings that the metaphor cues — that is, the four stages, including seeing X as Y, and so on. This kind of paraphrase must be impossible. Nothing could duplicate the metaphor transaction without being the same metaphor. Perhaps this sense is what some people have in mind when they declare (truly but trivially) that no metaphors are paraphraseable. Maybe, it is not so trivially true. Literary metaphors created for the pleasure and poignance of the imaginings they prescribe are individually unique and irreplaceable, and this is worth knowing. Anyhow, I will not be employing *paraphrase* in this way.

It could be objected to what I have just said above that one cannot draw a distinction, at least not a cut-and-dried one, between a metaphor’s referring effect and the various imaginings it prescribes or cues. It could be said that the imaginative seeing of X as Y is the means by which the referring effect is achieved, and that in at least some cases there is no way of disentangling the imaginings and the referrings. Apart from pointing out the means-end distinction, I can hardly object to this, since it is just what I said in 2.1 and 2.2. However, this objection only applies to new metaphors, not to dead ones. In line with the distinction I made at the beginning of this section, the referring effect of a dead metaphor has been by repeated usage freed from its metaphor (transaction) scaffolding — and the instrumental-imagining aspect *can* be clearly distinguished from the referring effect. And the objection applies only to quite complicated literary-type metaphors. With new common metaphors, the referent F is quite obvious once you get to it, and you can discard the metaphor when you do. But one does tend to linger over the good literary ones. They ‘resonate’, or whatever. And it is probably good new literary metaphors that Davidson has in mind when he says, as already quoted in 2.3, “I hold that the endless character of what we call the paraphrase of a metaphor springs from the fact that it attempts to spell out what the metaphor makes us notice, and to this there is no clear end” (Davidson 1984, p.263). If it is good literary metaphors Davidson is thinking of, then I

think he has a point. My above distinction between the imaginative exercise and the referring is not really applicable, or not neatly, in these cases. And he is right that attempting to duplicate even the referring effect of such metaphors is difficult and that the task would often have no clear end. However, all this said, what I am primarily interested in, in this thesis, is metaphors that are both common and dead.

In principle, there is no barrier to duplicating the referring function of any metaphor. How difficult it is in practice will be determined by the perceptual and verbal abilities, the general knowledge, of speaker and hearer, and how patient they are. Literary metaphors such as *the last smoke from the campfire curled wistfully upwards* or *the hills moved in a vast herd across the horizon* are difficult to paraphrase because they refer to something which is both subtle and of little practical importance (at least in our culture). In everyday English we have two or three names for different kinds of smoke or different kinds of hill, and if we need to distinguish any other, for some one-off circumstance, we can use a metaphor. The metaphor might be unwieldy, but it can be as accurate as needs be.

2.58 *Philosophical disregard of metaphor*

One or two of the ‘ordinary language’ philosophers seemed to realise — although nobody spelled out the details — that naivety about the effects of metaphor is an important source of philosophical confusion. In Chapter Three, 3.7, I quote Wittgenstein and Strawson on this topic. But in the thirty years since the heyday of ordinary language philosophy, despite the growth of an extensive literature on metaphor *per se*, there has been little philosophical interest in the relevance of metaphor to philosophical problems. Possibly, some of the reasons for this are as follows.

- (1) To take an interest in metaphor, especially colloquial metaphor, is to take an interest in an aspect of ordinary language and this might be thought to be a reversion to the now universally abjured ordinary language approach to philosophy.
- (2) It is assumed that *metaphorical* means ‘poetic, vague, naive, fanciful, unscientific, primitive, etc.’ — so metaphorical language can be disregarded as merely that.
- (3) It is thought that the concept of metaphor is too naturally vague, and too difficult to clearly define, to be a useful concept in the philosopher’s toolkit.
- (4) It is thought either that no metaphors can be fully paraphrased in literal terms or, alternatively, that all of them can — and that in either case the philosopher has no good reason to extend his or her interest beyond the literal.

(5) In spite of Wittgenstein's terse warnings about 'pictures in our language', it is not appreciated how metaphors can mislead serious thinkers.

(6) The somewhat wacky idea that all language is metaphorical still has a vogue. People who believe that all speech is metaphor might infer that no attention is due to metaphor that is not due to language in general and/or that, once the metaphorical aspect of (all) language has been remarked, it can be ignored.

(7) It is widely believed that people read almost whatever they like into metaphors, and that metaphors are thus for aesthetic stimulation or amusement only, and not for referring or other 'serious' communicative purpose. Thus Sharpe says that

...philosophers have become acutely aware of the way in which different hearers or readers pick out different common features between the terms of a metaphor. Metaphors are interpreted and they are interpreted differently by different readers and hearers. Consequently, the idea that there can be a literal paraphrase of a metaphor which preserves its sense is no longer widely held, for such a literal paraphrase would have to command common agreement as expressing what the metaphor means (Sharpe 1995, p.555).

(8) The metaphors in colloquial speech are, by definition almost, all 'dead metaphors' and, as I reported earlier, it is usually assumed that dead metaphors have become literal expressions. If this were so — and I have tried to show it is not — then, for one thing, the theory I am about to offer about the origin of the lay concept of mind would be a non-starter. In Sharpe's words again, "A cursory glance shows just how much of the language of mind is metaphorical in origin. These metaphors die, of course, and lose their metaphorical force though their origins may still be visible" (*ibid*).

Any or all of these various conceptions and preconceptions could be contributing to the impression, which I believe is widespread among philosophers, that metaphors — and the mind metaphors in particular — are worth no more than the 'cursory glance' Sharpe affords them. I hope that what I have said in this chapter, combined with what I am about to say in the next, will go some way toward dispelling this impression.

CHAPTER THREE: The metaphorical origin theory

3.1 The metaphorical origin theory

The metaphorical origin theory is the theory that our idea of what ‘the mind’ is comes from the metaphors in everyday speech in which the noun *mind* occurs. To clarify the relations between theory theory, simulation theory and the metaphorical origin theory, I will list the answers each provides to the four questions I set out at the end of Section 1.1.

1. *What kind of concept is our lay concept of mind?* Theory theory answers that the lay concept of mind is a theoretical construct, a proto-scientific (but more or less crude and incoherent) postulate about unobservable intracranial causes of behaviour. Most simulation theorists would agree, although some would follow Millikan in thinking that our concepts of the different mental states are ‘descriptivised’ versions of actual simulations. According to the metaphorical origin theory, we do not have any ‘concept’ or ‘theory’ of mind, properly so called. All we have is imaginings associated with terms in the colloquial mentalist vocabulary — and everything we imagine in connection with the noun *mind* is determined by the metaphors which come with it.

2. *What is the real subject matter of the colloquial mentalist vocabulary?* Most theory theorists assume there are various kinds of mental phenomena — to which terms in the mentalist vocabulary straightforwardly refer — but that these may all be reducible to mental ‘states’, which may in turn be defined as ‘propositional attitudes’. Simulationists agree that there are mental states, and that the vocabulary refers to them but many would favour mental ‘processes’ as the basic kind. The metaphorical origin theory suggests that the subject matter of the metaphors in which *mind* occurs, and of the vocabulary generally, is (despite appearances) nothing ‘mental’. Nor is it ‘internal processes’. It is, rather a certain class of subtle actions which people perform — to be grouped under the heading ‘thinking’. The core referring expressions in the CMV are the verbs of thinking.

3. *How do we acquire the concept?* For theory theorists, we acquire it by some mix of innate endowment, personal observation and theorising, and enculturation. Simulation theory suggests we derive the concept by a combination of introspection, simulation, and theoretical knowledge (the latter as per theory theory). The metaphorical origin theory claims that we acquire the ‘concept’ — or, at least, we learn to associate certain imaginings with the noun *mind* — by becoming accustomed, from early childhood, to the

mind metaphors as a way of describing (albeit figuratively) our various thinkings and aspects thereof. This is an acculturation view.

4. *What role does the concept play in our predictions of others' behaviour?* For theory theorists, our concept of mind, and the formal and causal logic underlying mentalist terminology, are solely responsible for our ability to compute predictions about future behaviour (from observations of current behaviour). Simulationists say our predictions are the result of our simulating the other's mental state (on the basis of current behaviour, etc.), then 'reading off' the prognosis for future behaviour. The metaphorical origin theory does not have a lot to contribute here. My own view, unrelated to the origin theory, is that, most of the time we are with others, we are engaged in cooperative interaction with them and do not need to predict their behaviour. The nature of the activity we are jointly engaged in predicts it for us. When we are outside this basic cooperative context, and prediction is called for, then we empathise (much as simulation theory says), and we verbalise our predictions in the usual (figurative) mentalist terms.

Although I will often speak of it simply as a theory, the metaphorical origin theory is my theory — both in the sense that I believe it to be true, and in the sense that, so far as I know, it has not been formally advanced by anyone else. And I am now advancing it. The metaphorical origin theory is built on the fact that the noun *mind* is only ever used, in colloquial speech, in association with, and as an adjunct to, some or other metaphor, almost always a familiar one. It would be as well to provide a generous sample of these, what I call 'mind metaphors'. I mean expressions like *going over it in my mind*, *she withdrew into her own mind*, *tossing up in my mind whether*, *my mind was in a turmoil*, *keep it in mind*, *his mind was playing tricks on him*, *her mind seized on the idea that*, *his mind's grasp on reality*, *my mind wandered*, *that's how his mind works*, *the mysterious workings of her mind*, *you could see his mind ticking over*, *my mind was racing*, *her mind is still sharp*, *get my mind around it*, *set my mind to work*, *his mind turned to thoughts of*, *his mind snapped under the strain*, *it focuses the mind wonderfully*, *keep one's mind on the job*, and so on. I have listed two hundred or so of these 'mind metaphors' — all, like those above, familiar English — in Appendix One.

In this chapter, I argue for the metaphorical origin theory. In what remains of this section I will re-introduce the main players — the vocabulary, its subject matter, and that part of the vocabulary I call 'the mind metaphors'. There are three main claims to the

theory. The first is that, in everyday speech, the noun *mind* is only ever used with metaphor. I argue for this ‘exclusive use’ claim in the section following this one. The second claim is that everything in the lay concept of mind, including the four defining properties — that is, everything the lay person attributes to mind — is preceded in one or other of these mind metaphors, or in a whole group of them. This second claim is the ‘precedent-in-metaphor’ claim, argued in section 3.3. Section 3.4 is devoted to clarifying my contention, which is a corollary of metaphorical origin, that we have no real ‘concept’ (let alone ‘theory’) of mind — all we have is the metaphors. In Section 3.5, I make the third, ‘nominalisation’ claim. This explains the role which the noun *mind* plays within the mind metaphors. I decide that the noun is itself a kind of figurative expression, a ‘metaphor-assisted accessory nominalisation’ of the verb *to mind*. In 3.6, I quote from three philosophers who in some respects anticipate my nominalisation account. In 3.7, I try to explain our addiction to the mind metaphors as a means of describing thinking. Finally, in 3.8 I mention some merits of the metaphorical origin theory.

The first main player in the metaphorical origin theory is the colloquial mentalist vocabulary. As I say, the core referring expressions in the vocabulary are the thinking verbs already mentioned — such as *remember, think, imagine, visualise, mind, conceive, be conscious of, believe, know, understand, desire, dream, hope, anticipate, intend, feel emotion, consider, decide, doubt, estimate*. These verbs name actions people perform.

The fact that the colloquial vocabulary’s core subject matter is not ‘mind’ and ‘mental phenomena’ but people’s acts of thinking necessitates a change in the vocabulary’s title. From now on, instead of calling it ‘the colloquial mentalist vocabulary’, I shall call it ‘the colloquial thinking vocabulary’, or CTV. It is the everyday vocabulary we have for talking about thinking — and varieties, episodes, aspects and states of, and abilities and dispositions concerning, and other circumstantial and logical ‘takes’ on, thinking.

The second main player in the theory is the range of ‘thinking’ actions themselves. Parts Two and Three of the thesis are devoted to elucidating what kind of action or activity thinking is. I will just say now that, apart from one or two unusual features, thinking is an ordinary, learned, voluntary action of the person — and not at all to be equated with either supernatural or neurophysiological goings-on inside people’s heads. One unusual feature is how extremely commonplace it is. We engage in thinking of the various kinds practically all our waking hours. We even do it intermittently in our sleep.

A second unusual feature is the (often extreme) physical subtlety of acts of thinking. The movements involved are usually (although not always) so attenuated and inconspicuous as to be difficult or impossible for an observer to detect. Rather than the adjective *subtle*, one could use *covert*, but the latter should not be taken to imply that there is anything literally hidden about thinking. Sometimes there is an element of concealment — where the thinker is deliberately refraining from some tell-tale verbal or behavioural display — but more often it is just that, unlike their ‘gross’ or ‘overt’ counterparts, these actions do not require their agent to make large-scale bodily movements.

As well as the basic verbs, there are numerous stock nouns in the CTV. Most of the most-used of these are not nouns ‘in their own right’, but are noun forms, or ‘nominalisations’, of the basic verbs. I mean here words like *memory*, *thought*, *image*, *visual image*, *concept*, *consciousness*, *belief*, *desire*, *feeling*, *intention*, etc. I leave full discussion of nominalisation until section 3.5. What I say there is that there are good grounds for thinking that the nouns just italicised are not names of real things in the world — as octopi, Presidents of foreign countries and postgraduate scholarships are real things in the world. The italicised nouns are not the names, for example, of either physical or non-physical things inside people’s heads. Such as memories, thoughts, images, concepts, consciousnesses, beliefs and desires are, I suggest, only grammatical and/or rhetorical fictions. Certainly, the nouns in question refer to real things, only, what they actually refer to — and it is indirectly, *via* an apparent reference to an entity — is the same, very real and non-fictional, thinking-actions that the verbs they are derived from refer directly to.

In addition to the stock verbs and nouns in the CTV, there are adjectives. And many of these, like most of the nouns, are derived from the verbs. For example, there is *remembered*, *thinking*, *thoughtful*, *imaginary*, *conceptual*, *believed*, etc. Again, using these adjectives does not (though at first glance it may appear to) involve us in referring to anything other than what the original verbs refer to — that is, the basic thinking-actions, albeit distorted in various ways by rhetoric and grammar. When specifying the underlying subject matters of the CTV, we do not need to include, over and above the various thinkings, and aspects of them and logical constructions out of them, any *per se* substantives. Nor do we need to include any *per se* ‘qualities’ of substantives. There are also distinctive adverbs in the CTV, and these too are used for qualifying the basic verbs, or setting them in some formal perspective. In condoning the use of adverbs, we do not thereby increase our ontological commitments beyond the actions which those adverbs

qualify. Actions performed in a certain manner are still only actions.

As well as the individual terms (verbs, nouns, adjectives and adverbs) distinctive to the CTV, there are numerous ‘idiomatic phrases’, that is, familiar *façons de parler* in which a whole phrase is the minimum meaningful unit. Almost all of the idioms in the CTV are metaphors. Metaphors are endemic in the CTV. Here are some examples: *it dawned on me (struck me) that, it hasn’t sunk in yet, I can see clearly now that, use your head, couldn’t follow what he was saying, my heart sank, had a change of heart, had a special place in his heart for, I gradually pieced it all together, he wasn’t thinking straight, she came to believe that, grounds for thinking that, out of touch with reality, her attitude hardened, a brilliant idea*, and so on.

However, the dominant type of metaphor in the CTV is not as straightforward as those above. Most commonly, in the CTV, metaphor is used in association with a nominalised verb. Examples of this metaphor-plus-nominalised-verb combination include such as the following: *filled with admiration, tickled my fancy, to nurse (harbour) a grudge (suspicion), satisfy her desires, aroused my curiosity, food for thought, put my thoughts into words, his thoughts were confused, form a concept of, grasp the meaning of, see what you mean, reach an understanding, hold a belief, express your feelings, dim memory, slipped in and out of consciousness, a sinking feeling, don’t get your hopes up, he hasn’t got a hope, don’t hold out any hope, let me refresh your memory, acquire knowledge, a piece of reasoning, store the information away, sowing seeds of doubt*.

The leading players in the metaphorical origin drama are the colloquial metaphors containing the noun *mind* — that is, the ‘mind metaphors’ I gave a generous sample of on page 82. Despite the sometimes compelling impression that a special intracranial agent, venue or repository is being referred to in these metaphors, their ultimate — as of every other expression in the CTV — is still the various thinking-type actions, and specific features of them and constructions on them. The mind metaphors are merely periphrases, embellishments and refinements, of the basic verbs.

Apart from theory theory, simulation theory and the metaphorical origin theory, there is another kind of story as to the origin of the lay concept of mind which many would find appealing. This can be called the ‘specialist origin’ theory. It is the idea that the noun *mind* originated as a specialist psychological or philosophical term, and refers to

something which only philosophers (and psychologists, psychiatrists, and brain scientists) really know about. That is, mind is very real, only, like the brain — or because it is the brain — it is extremely difficult to observe in operation and to understand the machinations of. You need to be an expert to know about mind, and to properly understand mind talk. This impression is in fact fostered in many book titles, and in book and magazine publicity. Reading the blurbs, we are persuaded that the human mind is the last frontier to be broached by science, that scientists are at last exploring the mysteries of consciousness, finally gaining access to the mind's secrets, tracing the neural pathways which lead into the mind, mapping the mind, etc. On this specialist origin theory, our diverse lay uses of the word *mind* would result from trickle-down and garbling of the specialist knowledge. It may well be that this is the story most lay folk would come up with, if they were asked to explain where their idea of mind comes from.

The metaphorical origin theory opposes the specialist origin idea. The exclusive use claim — that the noun *mind* is only ever used within a metaphor — would predict that the descriptions of mind as an unexplored area, a bafflingly complex mechanism, or the object of scientific scrutiny, are all themselves metaphors. And, although these metaphors are relatively new ones, they are in the same boat as *my mind wandered*, etc. The fancy of men in white coats studying the mind has no special priority. The alternative to the 'specialist origin' theory is that the term *mind*, or its etymological ancestor, and our concept of mind, like most other words and concepts, are *faits* of lay culture. In Hampshire's opinion,

...so far from being imposed on the plain man by philosophical theorists, and even less by seventeenth century theorists, the myth of the mind as a ghost within the body is one of the most primitive and natural of all the innumerable myths which are deeply embedded in the vocabulary and structure of our languages (Hampshire 1970, p.20).

Certainly the vast majority of the term's users are not philosophers. What is perhaps most likely is that the philosophical use of the term is derived from the lay use and is an attempt to refine and discipline that lay use.

In summary, the claim of my 'metaphorical origin' theory is that we derive our concept of mind not from amateur theorising about the causes of behaviour, nor from combining empathy and introspection, and nor from knowledge filtered down (garbled) from experts, but from the mind metaphors in everyday language. Along with other

metaphors, these mind metaphors form part of a larger vocabulary which I call the CTV, and which has as its subject matter acts of thinking and their relata. The metaphorical origin theory has three planks. The first is that, in everyday discourse, the noun *mind* is always used as part of a metaphor — and almost always a hackneyed metaphor. The second is that, corresponding to each of the four properties (internality, agency, intentionality and non-physicality) which define the lay concept of mind — there are familiar mind metaphors in which ‘mind’ is pictured as having just that property. Thus, the story told when the lay concept is spelled out is the story the metaphors tell, only, they tell it in snippets. The third plank is that the noun *mind* does not actually refer to anything, nor was ever meant to, but is a figurative noun form of the verb *to mind*.

3.2 The ‘exclusive use’ claim

Acquiring a concept of something is largely a matter of learning how to use the word which names that something. And learning how to use a word is largely a matter of seeing how that word is used by others, and copying. Thus, the chief means by which a child acquires the concept of mind is by her coming to appreciate how the noun *mind* is commonly used, and learning to herself use the word that way. She may ask an elder what the word *mind* means, or what ‘the mind’ is, but the answer she receives will do little more than summarise the colloquial uses, emphasising some at the expense of others.

How is the noun *mind* in fact used, in everyday English? The most noteworthy fact about the noun *mind* is that it is only ever used in association with some or other metaphor. Almost always, the metaphor is a very hackneyed one. As I have said, I call the metaphors in question ‘the mind metaphors’, and there is a list of them in Appendix One. Here is a repeat of the sample I provided on page 82 — *going over it in my mind, she withdrew into her own mind, tossing up in my mind whether, my mind was in a turmoil, keep it in mind, his mind was playing tricks on him, her mind seized on the idea that, his mind's grasp on reality, my mind wandered, that's how his mind works, the mysterious workings of her mind, you could see his mind ticking over, my mind was racing, her mind is still sharp, get my mind around it, set my mind to work, his mind turned to thoughts of, his mind snapped under the strain, it focuses the mind wonderfully and keep one's mind on the job*. I am saying that, apart from it's being used from time to time in association with a newly coined metaphor, everyday English usage of the noun *mind* is exclusively within dead metaphors such as those above.

3.21 *Two claims from which my exclusive use claim should be distinguished*

There are two other claims with which my exclusive use claim could easily be confused. Philosophers who make these claims acknowledge the fact that the noun *mind* is always or almost always used in association with metaphor, but they assume an explanation of this fact which is false, and incorporate this false explanation into their description of the initial fact. The first claim — which can be called for now ‘the Berkeley claim’ (see section 3.4) — is that we can only speak about the mind metaphorically. Because it is an abstract thing, we can only comprehend it if we picture it in concrete terms, and for this we use metaphor. The mind’s being comprehensible only via metaphor is regarded as a special case of a more general phenomenon whereby we picture abstract things in concrete terms. For our purposes, the key assumption these philosophers make is that the noun *mind* is the name of something which the metaphors are picturesque characterisations of — that is, their assumption is that there is something called the mind which is the subject matter of the metaphors. This assumption, and the Berkeley variant of the exclusive use claim are interesting for several reasons and I discuss them in Section 3.4 below. The Berkeley claim is different from my exclusive use claim. My exclusive use claim in itself involves no assumption about what is the subject matter of the metaphors with which *mind* is associated. My claim is a limited factual claim about English usage — namely, that in everyday non-philosophical speech we only ever use the noun *mind* in association with a metaphor, almost always a familiar one.

The second claim with which my exclusive use claim could be confused is the claim that all everyday uses of the noun *mind* ‘are metaphorical’. Someone claiming this is apparently agreeing with my exclusive use claim — that all colloquial uses of *mind* are in association with metaphors — but incorporating the further claim that, in these metaphors, the noun *mind* is being used metaphorically. It is important to realise that this claim is not my exclusive use claim either. My exclusive use claim in itself entails nothing about what kind of relationship the noun *mind* has with the metaphor it is ‘associated with’. The exact nature of (the rhetoric of) the relationship between the noun *mind* and the accompanying metaphor is fascinating — but I leave discussion of it until Section 3.5 below. At any rate, it is immaterial to my exclusive use claim. In fact, in my account the use of the noun *mind* is more of an add-on or adjunct to the metaphor, rather than a part of it. Certainly, I do not say that *mind* is being used metaphorically in the mind metaphors.

In fact, the claim that *mind* is used metaphorically in the mind metaphors must be false. As will be clear from Chapter Two, a word may be ‘used metaphorically’ only if that word already has a prior stand-alone use as a referring expression. *Mouth of the cave* can work as a metaphor only if the noun *mouth* is already used, on its own, as the name of something else. Accordingly, the noun *mind* could be used metaphorically only if it had an established stand-alone use as the name of something. But the exclusive use claim denies that *mind* has a stand-alone use of any kind. Thus, despite first appearances, the claim that *mind* is being used metaphorically in the mind metaphors is not compatible with the exclusive use claim.

3.22 Possible counter-examples to the exclusive use claim.

To defeat the exclusive-use claim, one would have to come up with an intelligible and potentially useful employment of the word *mind*, as a noun, in a sentence in which it is not associated with a metaphor. I have conceded that *mind* is often used in newly coined, *ad hoc* metaphors — ones not useful, efficient, decorative or memorable enough to deserve a vogue in the vernacular. I was recently asked whether I met any ‘really big minds’ at a certain philosophy conference. In fact, the occasional coining of novel metaphors is a necessity — to keep our stock of hackneyed ones up to date.

Apart from useless concoctions such as *the number of minds in this room is the same as the number of people in this room*, the most common candidate counter-examples with which I have been confronted, when I have aired the exclusive-use claim, are expressions of the form *P has a ... mind*. I mean things like *P has a good (fine, clear, logical, scientific, analytical, etc.) mind*. The expressions *to have a good mind to*, and *of a similar mind* are sometimes cited too. These are to be contrasted with expressions of the same ilk, that is, expressions which ostensibly characterise a person’s mind, but which are obviously metaphorical — such as *he has a brilliant (twisted, dirty, sick, suspicious) mind*, and such as *small- (high-, bloody-, closed-, civic-, petty-, feeble-, fair-, strong-, etc.) minded*.

However, I believe that the notion of a person ‘having’ or ‘possessing’ a mind, or having or possessing a mind of a certain kind, *is* metaphorical. The use of *have* and *possess* here is almost certainly modelled on an original literal use of *have* and *possess* in connection with body parts. (At least, the use in connection with body parts is probably literal. If a connotation of rightful property is necessary in literal having and possessing,

then the body-parts usage may itself be metaphorical.) That is, *P has a ... mind* is based on the likes of *P has a good pair of eyes*, *P has a barrel chest* and *P has short legs* — not to mention *a sharp tongue*, *a cold heart*, *a thick hide* and *the cheek of the devil*. It is one component of the lay concept of mind, which I squeezed in with the ‘internality’ property, that the mind is considered to be a ‘part’ of the person. Everyone ‘has’ a mind — by fanciful analogy with the way that everyone has a body, and the various body parts. And one cannot literally ‘have’ a mind in this sense. There is nothing that is literally a body part that has the name ‘mind’.

Another possible counter-example to the exclusive use claim is the frequent use of *mind* as, apparently, the name of a ‘faculty’. This ‘faculty’ usage may well be indistinguishable from the above ‘having a mind of a certain type’ phrases — that is, it could be that the person’s ‘mind’, which is being characterised, is to be construed in these cases not so much on the model of a body-part but as a faculty of the person. Here again (see my page 7) is meaning III, 17 the Oxford English Dictionary gives for the noun *mind*.

Mental or psychical being or faculty. The seat of a person’s consciousness, thoughts, volitions and feelings: the system of cognitive and emotional phenomena and powers that constitutes the subjective being of a person; also the incorporeal subject of the psychical faculties, the spiritual part of a human being; the soul as distinguished from the body.

What is a ‘faculty’? As far as I can see, a faculty in the required sense is a person’s faculty for producing actions of a certain kind. A faculty is an impersonal agent which performs, or enables the performance of, actions of the X type. And/or a faculty is the venue, the place or organ where actions of type X are performed. Or the X-ing faculty is some would-be conflation of agent and venue — an ‘agency’. The OED implies above that the actions in question in the case of ‘mind’ (the ‘mental’ or ‘cognitive’ faculty) are such actions as being-conscious-of, thinking, willing, feeling, etc. — in other words, what I am calling ‘thinkings’. However, as I may have mentioned, there is no special agent or agency inside a person which is responsible for his or her thinking, and there is no special venue in there where thinking is performed. For this reason, neither is there any conflated agent-place for thinking. There is no thinking ‘faculty’. It is the prerogative simply of the person. I conclude that the many colloquial expressions in English which cast ‘mind’ as a faculty of the person are examples of, or simple derivatives of, core mind metaphors in which ‘mind’ is cast as the dedicated agent and/or venue for acts of thinking.

There are other kinds of counterexample to the exclusive-use claim. The claim as stated specifies metaphors and yet *she has a mind like a steel trap* and *he has a mind like a sewer* are familiar expressions, and they are similes. However, this is not too devastating for the exclusive use claim. Chapter Two provided good reasons for thinking that, in cases where the comparison being prescribed by a simile is obviously far-fetched — poetic rather than prosaic — Aristotle's (*Rhetoric* 1406b) opinion that metaphor and simile “really are the same thing” is the right one. A far-fetched simile is just a more laboured metaphor. A simile is a metaphor *plus* a comparison, if you like.

Yet dubious cases remain. There are several expressions in my Appendix One list which may be metaphors, but one is at a loss to say what is being construed as what. In *his mind was unhinged* (by seeing them together), is the mind being portrayed as a door? A gate? A lid? And why? Would *unlatched* (and flailing in the wind) have done as well? The reference is clear enough — seeing them together crazed him — but the metaphor is obscure. What of *the mind boggles*? What is boggling? The nature of the metaphor in *frame of mind* for ‘mood’ escapes me too. How do *mind-games*, *time out of mind* and *not in his right mind* work as metaphors? But these few loose ends don't really dampen the spirit of the exclusive use claim. Their inscrutability does not tempt us to classify these expressions as literal uses of the noun *mind*. The expressions, though arguably not metaphors (or not now metaphors) are nevertheless still ‘idioms’, and idioms are by definition semantically idiosyncratic. You cannot work out the meaning of an idiomatic phrase just by taking the usual meaning of the component words and combining them according to the grammar of the phrase. Nor can you compute the standard meaning of a given component term by working back from the grammar plus the meaning of the whole. Sometimes — as with, say, *namby* in *namby pamby* or *sake* in *for goodness' sake!* and *do it for my sake* — the term has no use or meaning outside the idiomatic phrases. I am saying this is also true of the noun *mind*, even though there is a large number of idiomatic phrases (most of which are metaphors) in which the word is used.

3.23 *The significance of the exclusive use claim*

In the case of the mind metaphors, there is an even stronger reason — that is, stronger than the metaphors' idiomatic status — why one cannot infer, from the metaphors alone, anything about what, if anything, *mind* ‘normally’ refers to. This is the fact, which I make much of in the remainder of this chapter, that the various mind metaphors cast ‘mind’ in

a great variety of (mostly mutually incompatible) roles. Or, they call different things ‘mind’. Mind metaphors cast ‘mind’ alternately as, among other things, the agent, venue, instrument or patient of acts of thinking.

In the following passage, Rundle is querying philosophical usage of the noun *mind*, and commenting that philosophical usage of the term — which one would assume is somehow derivative of (or at least related to) the everyday usage — does seem to presuppose that a single entity is being referred to.

In philosophical discussions the term ‘mind’ tends to stray away from its natural habitat, which is in such specific expressions as ‘have a sharp mind’, ‘make up one’s mind’, ‘bear in mind’, ‘keep one’s mind on what one is doing’, ‘be in two minds how to act’, ‘have half a mind to do something’, ‘change one’s mind’, ‘speak one’s mind’ and so forth. That a coherent use goes with its [philosophical] occurrences in isolation, as when the nature of mind is the issue, is not assured by these diverse idioms, which do not require us to think in terms of a recurrent allusion to a single entity — as if, when a person is said to have a good mind, to have changed his mind, and to be bearing something in mind, the same thing is being held to be good, to have changed, and to be where something is borne. ...The idea of a single item discernible in the various uses of ‘mind’, and such that we can ask about its relation to matter, appears to rest on a simplistic construal of the grammar.. (Rundle 1997, pp.25-6).

[Whereas Rundle speaks of these ‘specific expressions’ or ‘idioms’ (which he does not further identify as metaphors) as the ‘natural’ habitat of the term *mind*, my exclusive use contention is that, in non-philosophical discourse, such expressions are its sole habitat.] The point is that we cannot infer, from any number of mind metaphors, that there is any viable use of *mind* as a noun outside such expressions. All we have is the metaphors.

Although we cannot infer from the metaphors that *mind* independently refers to anything, and certainly not any one thing, it could still be true that the various uses of the noun — within the metaphors — do all have some semantic property in common. And it could still be true that such a common semantic property is the reason why *mind* is chosen as an ancillary or term in these metaphors for thinking, and not some other word. I believe that the noun *mind* does in fact have a semantic property by virtue of which it is employed in metaphors for thinking — both the established metaphors and the occasional *ad hoc* coinings — namely, the property of being a noun form of the verb. However, this property cannot be inferred from the mind metaphors alone and strictly, it is irrelevant to the exclusive use claim as such.

3.3 *The precedent-in-metaphor claim*

If the exclusive use claim is true, then *mind* is not colloquially employed, on its own, as the name of anything. However, to make the exclusive use claim is not to deny that people who use the word (within the idiomatic metaphors) in fact *have the impression* that they are thereby referring to something called ‘mind’. *Ceteris paribus*, all that is needed to found a ‘concept’ of any X, is for the conceiver to have the impression there is such a thing as X. Granted that people do have this impression, do believe there is such a thing as mind, and granted that there is a lay ‘concept’ of mind, the question arises — how does our concept of mind acquire its content? Assuming that my description of the concept in terms of the four properties — of internality, agency, intentionality and non-physicality — is basically correct, where do we get the idea that mind has these properties? This is, in effect, the third question that I said philosophers might ask about the lay concept of mind — that is, where does it come from? The answer the metaphorical origin theory provides is the ‘precedent-in-metaphor’ claim. This is the claim that, for every property which common sense attributes to mind, there is, among the stock mind metaphors, a metaphor or set of them which pictures mind as having just that property.

Of course, even if the precedent claim is shown to be justified, this is not proof that a given metaphor is where such-and-such an aspect of the concept comes from. It is only circumstantial evidence. To find a corresponding metaphor in the vernacular only shows that that aspect of the concept might well have come from that metaphor. However, given a clear metaphorical precedent, the onus of proof then shifts to the sceptic. It is up to him or her to show that the metaphor in question could not have been the source of that feature of the concept, or to bring to our attention a more likely source for it. My tactic in the present section will be to go through the four properties, and in each case point to some likely metaphors. After that, the metaphorical origin theory rests its case — at least, as far as sourcing the lay concept goes.

I have said several times already that ‘mind’ is not the subject matter of the mind metaphors and that thinkings (and features and constructions of them) are. It might seem puzzling how metaphors can be precedents for property-attributions regarding mind, when mind is not part of the subject matter of the metaphors. How can the mind metaphors say anything about what the mind is, if mind is not what those metaphors are about? The short answer (more in 3.5 below) is that the metaphors *imply* that ‘mind’ has

the properties in question. Despite the fact that it is the various thinking activities and not ‘mind’ that is the subject matter of the mind metaphors, each mind metaphor does nevertheless by implication prescribe some kind of thing for ‘mind’ to be. For example, the metaphor *keep it in mind* enjoins an act of remembering and, in order to do this vividly, the metaphor construes remembering as the storing-away of the ‘it’ in question. In this small drama, ‘mind’ is cast as the repository in which the ‘it’ is to be stored. Analogously, the phrase *my mind wandered* assimilates a failure-to-heed to a wandering-off, and it casts mind as the agent who does the wandering. *That is how his mind works* casts mind as a mechanism. *I went over the alternatives in my mind* makes mind a venue where I do things. And so on.

In citing examples of metaphors in what follows, I will not stick entirely to items in the list in Appendix One. I will sometimes quote larger chunks of ordinary discourse, in which the metaphor in question is contained. I will also sometimes quote colloquial metaphors which do not contain the word *mind*. The epithet *in the mind* is often merely implicit. And I will cite some mind metaphors more than once, where they happen to simultaneously contribute to more than one important facet of the mind concept. However, mostly, I will simply be showing where some or other feature of the lay mind concept is clearly preceded in the role prescribed for ‘mind’ by some or other familiar mind metaphor.

3.31 Internality

Two main ideas contribute to the **internality** or ‘internal place’ assumption. First is the idea of mind as a private venue. The mind is pictured as a internal, sequestered venue or arena where the person can do things without being observed. The second strand of the internal place assumption is the idea of mind as an internal organ or internal ‘part’ of the person, in which various distinctive processes occur. In the case of the latter, this the internal organ may function as a mechanism or as a repository or receptacle. Metaphors which contribute to the ‘private venue’ idea include such as the following. First, contributing to the privacy theme are such as — *revealed what she had in mind, what do you have in mind?, tell me what’s on your mind, I could see into her mind, she mentally undressed him, he withdrew into his own mind, but in her mind she was privately thinking that, her mind was a closed book, kept his thoughts to himself, he opened up to her, you could see what was going on in his mind*. The second theme, that of a ‘venue for doing things’ (including the idea that thinking is done in the mind) is implicit in the

following — *in her mind she was counting the minutes, she knew in her mind that, I went over the proposal in my mind, she mentally rehearsed the procedure, in my mind I could see him there, I returned to the scene in my mind, mental activity, she re-lived the episode in her mind, mentally calculating, in my mind I'm going to Carolina, too many things are going on in my mind.*

The other strand of the internality assumption is the idea of mind as a part of the person, comparable to an internal organ. This is reinforced by the frequent use of a possessive pronoun in connection with 'mind' — his mind, my mind, etc. — and the employment of the relevant metaphors in a context of assessment of a person. Here the relevant metaphors are such as — *a mind of his own, she has a sound (dirty, sick, trained, logical, twisted) mind, he has a disease of the mind, mental condition.* The expression *mental hospital* also helps purvey the idea of mind as a body organ, that is, an organ which is repaired in the same building, and by roughly the same people, as those who repair the more tangible body parts. Other metaphors build on the 'mind as internal organ' theme and further-characterise the organ in question as a mechanism — *that's how her mind works, you could see his mind ticking over, put my mind to work, the mysterious workings of his mind, his mind raced, mental block, one-track mind, mental process, it blew my mind.* Or, the internal organ is a repository (or container or receptacle) — *kept it at the back of his mind, keep it in mind, mind filled with notions of, thoughts crowded into her mind, broad-minded, open-minded, small-minded, couldn't get it out of my mind, it slipped my mind, empty your mind of all hope of, it lodged in my mind.*

3.32 Agency

The **agency** theme is established in metaphors such as — *his mind was playing tricks on him, her mind wandered, my mind ran on ahead, her mind seized on the idea that, her mind turned to thoughts of, his mind couldn't cope, his mind couldn't grasp that, a meeting of minds, his mind was burdened with thoughts of..* The more specific idea of the mind as a controller of actions and demeanour is expressed in — *mental control, mind over matter, his mind urged him on, his mind said yes but his body said no, mind power, mental attitude, bloody-minded, keep your mind on the job, her mind was elsewhere, she had too much on her mind, showed great presence of mind, strength of mind, mentally rehearse, my mind was prepared for.* Metaphors which construe the mind's agency mechanistically, i.e., as the workings of a mechanism, have already been cited above, in

the ‘internal organ’ connection. Another kind or aspect of agency that is metaphorically attributed to mind is instrumentality. Mind is cast as an instrument which is used by the person in such expressions as — *apply my mind to, use your head (brains), put your mind to work on the problem, get my mind around it, I kept my mind focussed on the goal.*

3.33 Intentionality

The **intentionality** feature of mind is its relatedness to, or its ‘knowing’ or cognisance of, things in the external world. Very few metaphors address this topic explicitly. We have perhaps just *her mind’s hold (grasp) on reality* and *his mind had lost touch with reality*. However, many mind metaphors specify (albeit in a picturesque way) the relation between someone’s mind and something in the world. The majority of these, in turn, are based on the idea (intrinsically incoherent when taken literally) of the thing in the outside world being ‘in’ the person’s mind. Other metaphors picture how it gets in there. Thus we have such various expressions as — *she had a white wedding in mind, it lodged (stuck) in my mind, it never entered my head that, she contemplated it in her mind, I got my mind around it, her words echoed in my mind, keep it in mind. See a mental image of* and *see it in my mind’s eye* may be examples of the ‘mind as place’ metaphor too. Certainly, they spell out a relation between mind and thing. Other expressions suggest a range of other relations between mind and thing — *she had just one thing on her mind, it crossed my mind, it rose up before my mind, call it to mind, kept my mind focussed on it, her mind turned to thoughts of it, it was impressed on his mind that, gave me the mental impression that, her mind seized on the fact that, what springs to mind is.*

All in all we are given a great variety of picturesque models for the intentionality ‘relation’. I have said that the subject matter of the mind metaphors is a range of special actions, varieties of thinking. The verbs which name these various actions are transitive verbs, they take an object — and that object is typically some thing in the world. The thinking-action in question is an action on, or with respect to, that thing in the world. One thinks ‘of’ something, yearns ‘for’ someone, wonders ‘about’ something, one minds the fire, etc. Action-patient relations such as these are inherently no more mysterious than the relation between a kick and a football. Possibly, it is only when one reconstrues a transitive verb as a noun that the relationship to the patient begins to look problematic, and calls for metaphor.

3.34 *Non-physicality*

The final feature of the lay concept of mind to be explained, if possible, in terms of the metaphors is the **non-physicality** or ‘abstractness’ feature. The mind is thought of as representing, or constituting, a unique ‘non-physical’ level or dimension of reality. It is a real thing but at the same time it is an ‘abstract’ thing. Unfortunately for the metaphorical precedent claim, the non-physicality feature cannot be explained by reference to particular mind metaphors. Not a single metaphor, in all the two hundred or so, casts mind as non-physical. Yet the non-physicality property is surely an integral and indispensable aspect of the lay concept of mind. So, how can the metaphorical origin theory explain it?

Suppose that, after having given a child a brief description of the nature and function of one or two internal body organs, one is asked by the child what the mind is. There is an uneasy sense that that this is a different *kind* of question than the one about the lungs or kidneys. After mentioning the first three properties of mind, and quoting relevant metaphors in corroboration, one might say, to register the difference and the unease, “But the mind is not a physical thing, it is... non-physical. It is abstract”. One does not want to say that the mind is not really there, or that it is unreal or a fiction because, clearly, our mind talk has a real and important subject matter. I suggest that *the mind is non-physical* and *the mind is abstract* are themselves metaphors, and that what they refer to is the fact, possibly only dimly apprehended by the parent or teacher who is asked what the mind is, that mind talk is figurative. Its subject matter is real and important, but the terms in which this subject matter is addressed are not literal terms, not the names of actual things. *Real but nonphysical* is a metaphor for ‘real but figuratively construed’. Thinking is real, but the inner venue, repository, agent and mechanism mentioned in connection with it are not.

At any rate, I suggest that *mind is non-physical* is an attempt to communicate, in a simple way, the figurative character of mind talk. Many people are, I think, intuitively aware that mind talk is figurative. [Arguably, a person must lose or repress this awareness if he or she takes seriously the traditional philosophical problems about mind.] The figurativeness of mind talk is not a simple business, however. And although an adult might be intuitively aware both that and how mind talk is figurative, neither could be explained to a child who is young enough to ask what the mind *is*. The metaphor, or fancy, of something real but incorporeal is a sensible alternative to a full rhetorical analysis.

On this account, the metaphor of ‘mind as non-physical’ is not so much *part* of the lay concept of mind, as a meta-comment on the concept, or an attitude towards it. It is the kind of metaphor a lay philosopher might employ. It adverts, albeit in the devious manner of all metaphors, to the fact that ‘mind’ the entity is a creature of metaphor.

3.4 *Lakoff & Johnson and others on metaphor-based concepts*

The view I am going to advance in 3.5 below is the third main plank of my metaphorical origin theory — after the exclusive use claim and the precedent-in-metaphor claim. The third claim is that the noun *mind* is not an ‘abstract noun’, not the name of some abstract thing, as is commonly assumed, but is a nominalisation of the archaic verb *mind*. Furthermore, I say *mind* is not an ordinary verb nominalisation, but one which requires to be mediated by a metaphor. It is thus only figuratively or nominally a noun. In the present section, I explore the alternative view — that is, that *mind* is the name of something (abstract) which we are acquainted with, and have formed a concept of, independently of the colloquial metaphors. On this view, the metaphors accompanying *mind* in everyday speech are there to help us understand ‘mind’, and mind is their subject matter, what they are about.

3.41 *The Berkeley view*

Bishop Berkeley believed that “...all talk concerning the soul is altogether, or for the most part, metaphorical” (Berkeley 1953, p.89). He expands on this theme:

We illustrate spiritual things by corporeal... Hence we speak of spirits in a figurative style, expressing the operations of the mind by allusions and terms borrowed from sensible things, such as *apprehend*, *conceive*, *reflect*, *discourse*, and such-like: and hence those allegories which illustrate things intellectual by visions exhibited to the fancy. Plato, for instance, represents the mind presiding in her vehicle by the driver of a winged chariot... (Berkeley 1950, p.306).

...when I speak of objects as existing in the mind or imprinted on the senses, I would not be understood in the gross literal sense, as when bodies are said to exist in a place, or a seal to make an impression upon wax. My meaning is only that the mind perceives or comprehends them... ... most part of the mental operations being signified by words borrowed from sensible things; as is plain from the terms *comprehend*, *reflect*, *discourse*, etc., which being applied to the mind, must not be taken in their gross original sense (Berkeley 1949, p.250).

Speech metaphorical more than we imagine insensible things & their modes

circumstances &c being exprest for y^e most part by words borrow'd from things sensible. the reason's plain. Hence Manyfold Mistakes.

The grand Mistake is that we think we have Ideas of the Operations of our Minds. certainly this Metaphorical dress is an argument we have not (Berkeley 1948, p.24).

Cooper attributes a similar view to Hegel.

Hegel thought that metaphors were originally required by people to represent 'mental' (*geistig*) phenomena in terms of the 'sensory' (*sinnlich*) phenomena which, necessarily, their understanding had first encompassed (Cooper 1986, pp.140-141).

Hampshire believes the view is widespread among philosophers.

It is characteristically a philosopher's complaint (*e.g.*, Bradley, Bergson and many others) that we normally describe mental processes and conditions in terms which have been transferred from an original use in application to physical objects. As transferred terms are, by definition and etymology, metaphors, most commonplace psychological descriptions may therefore be said to be ultimately metaphorical (Hampshire 1970, p.21).

Jaynes provides a modern statement of the view.

...mind is an analog of what is called the real world. It is built up with a vocabulary or lexical field whose terms are all metaphors or analogs of behaviour in the physical world. ...And the adjectives to describe physical behaviour in real space are analogically taken over to mental behaviour in mind-space when we speak of our minds as being 'quick', 'slow', 'agitated'... 'nimble-witted', 'strong-' or 'weak-minded'. The mind-space in which these metaphorical activities go on has its own group of adjectives; we can be 'broad-minded', 'deep', 'open', or 'narrow-minded'... (Jaynes 1976, p.55).

Thus, against the view I will be putting forward in 3.5, Berkeley, Hegel, Hampshire and Jaynes are assuming that *mind* (or *mental phenomena*, *mental processes and conditions*, *mental behaviour*, etc.) is the name of something, and inferring that this something is the subject matter of the metaphors in question. That is, they assume *mind* or *the mental* is the name of something which the metaphors are figurative characterisations of.

3.42 The Lakoff & Johnson thesis

It is sometimes contended that, not just in the case of 'mind' and 'the mental', but in general, we are obliged to construe abstractions on the basis of concrete physical things. Thus Lakoff asserts the following.

Metaphor is the main mechanism through which we comprehend abstract concepts and perform abstract reasoning. Much subject matter, from the most mundane to the most abstruse scientific theories, can only be comprehended via metaphor. ...Metaphor allows us to understand a relatively abstract or inherently unstructured subject matter in terms of a more concrete, or at least more highly structured subject matter (Lakoff 1993, pp.244-5).

In their influential 1980 book *Metaphors We Live By*, Lakoff & Johnson develop this theme. They examine the numerous metaphors associated with our everyday concepts, respectively of argument, emotion and love — and they cite with approval Reddy's 1979 analysis of the 'conduit metaphor' (see Reddy 1993), whereby we conceive verbal communication as a matter of transferring information from mind to mind via a conduit of words. They find that "Certain concepts are structured almost entirely metaphorically ...and therefore must be comprehended indirectly, via metaphor" (Lakoff & Johnson 1980, p.85). And they suggest that "...metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (*ibid*, p.3).

Lakoff & Johnson's central claim is that, where there are a number of colloquial metaphors employed for talking about a given subject matter (or 'concept' or 'target domain'), these metaphors will usually have a common theme. Thus, argument is consistently pictured as a form of conflict. Emotion is usually spoken of in terms of temperature, containment and pressure. Love is (supposedly) frequently construed as a journey. The conduit metaphor for communication is ubiquitous and consistent also. This claim of Lakoff & Johnson, that the colloquial metaphors around certain (especially 'abstract') everyday subject matters are generally monothematic, is known variously as the 'systematicity' or 'thematic fidelity' claim, or the 'principle of invariance'. In the cases of many everyday concepts, Lakoff & Johnson say, the surrounding metaphors are so numerous, and they have such a consistent theme, that our understanding of the concept is almost entirely determined by the content of the metaphors. Possibly following Black's 1962 (p.241) notion of a 'conceptual archetype', Lakoff & Johnson employ the term *conceptual metaphor* here. The metaphors amount to one big 'conceptual metaphor', dominating the concept, even 'constituting' it.

Although 'mind and mental phenomena' would seem to be a prime candidate for analysis in terms of 'conceptual metaphor', Lakoff & Johnson comment only in passing

on the metaphors that surround *mind*. They claim of two (purportedly idiomatic) metaphors — ‘the mind is a machine’ and ‘the mind is a brittle object’ — that “They give us different metaphorical models for what the mind is” (Lakoff & Johnson 1980, p.28), and they say that “metaphors like ‘the mind is a brittle object’ are an integral part of the model of the mind that we have in this culture” (*ibid*, p.29). The assumption here is that of the Berkeley view — that the mind is something abstract which the metaphors are helping us to picture in concrete terms.

A student of Lakoff, Sweetser 1990, has made a study of some of the metaphors in (what I call) the colloquial thinking vocabulary. These are metaphors for thinking which do not involve the noun *mind* (see my pages 93 and 94 above). Sweetser identifies the subject matter of the metaphors she is talking about variously as ‘mind’ and ‘intellectual understanding’ (Sweetser 1990, p.28), ‘the communicative and subjective internal self’ (*ibid*, p.41) and ‘our internal world’ (*ibid*, p.45). I will let ‘mental phenomena’ represent all these. Sweetser finds a ‘mind-as-body’ conceptual metaphor in the area. She mentions common metaphors for mental phenomena which have holding, grasping and manipulating as their theme. [‘Taking in’ probably belongs here too.] She explains how the Latin *comprehendere* (to seize) gave rise to modern Greek, French and English words for understanding. And she mentions metaphors which picture mental phenomena in terms of perceiving, which is also a bodily act. Thus hearing is used as a metaphor for attending or heeding generally; *feel* is also ambiguous in this way; *smell* can be used for suspicions, and *taste* for preferences. And there are numerous metaphors construing mental phenomena in terms of seeing, glimpsing, vision, brilliance, being in the dark, clarity, transparency, coloured, murky, etc. Sweetser concludes as follows.

The vocabulary of physical perception thus shows systematic metaphorical connections with the vocabulary of internal self and internal sensations. These connections are not random correspondences, but highly motivated links between parallel or analogous areas of physical and internal sensation. Nor are the correspondences isolated; Lakoff and Johnson, who correctly link up individual parts of our physical and mental vocabularies (such as understanding = grasping, or knowing = seeing) in their analysis of metaphor, do not yet notice that these are parts of a larger system of the kind which they would refer to as a conceptual metaphor. (That is, this metaphor involves our conceptualising one whole area of experience in terms of another.) The internal self is pervasively understood in terms of the bodily external self and is hence described by means of vocabulary drawn (either synchronically or diachronically) from the physical domain. Some

aspects of the instantiation of this metaphor may be fairly common cross-culturally, if not universally — for example, the connection between vision and knowledge — while others (in particular, less general aspects such as the choice of the vital organ which is thought to be the seat of emotion) may vary a good deal between cultures.

It should be reiterated that our models of our internal world are not always consistent, and in particular that we have multiple, apparently inconsistent mappings of our physical selves on to our internal selves. Sometimes consistency emerges from such apparently inconsistent mappings. For example, it appears inconsistent to describe the acquisition of knowledge both as seeing and as grasping; but when we notice that seeing is itself talked about in the vocabulary of grasping and object manipulation, we can see that there is some deeper regularity. (It is still unclear, however, whether knowledge is talked about as vision, vision as grasping, and hence — transitively — knowledge as grasping; or whether knowledge and vision are independently treated as grasping.) (Sweetser 1990, p.45).

I am primarily interested in metaphors for thinking which have the noun *mind* in them — and none of the ones Sweetser talks about do — but it is worth noting, regarding Sweetser's conclusions above, that the proportion of CTV metaphors which have either grasping or perceiving as their theme is fairly small. These 'mind-as-body' metaphors don't dominate the territory. More important, as Sweetser herself acknowledges, the two themes are at least superficially inconsistent. Lakoff & Johnson's 'conceptual metaphor' requires that the metaphors have a single theme.

3.43 *Is there a conceptual metaphor for 'mind'?*

The first question (of the four listed in Chapter One) which philosophers might ask about the lay concept of mind is — what sort of concept is it? Theory theorists say that the lay concept of mind is a theoretical postulate, part of a wider 'folk psychological' theory. And, because of the naivety and incoherence of this theory, some theory theorists (including Churchland 1981) also characterise it as a 'myth', or a 'cultural myth'. Lakoff & Johnson describe their 'conceptual metaphors' as cultural myths too. Although Lakoff & Johnson do not specifically address the lay concept of mind and the metaphors associated with it, the lay concept of mind does seem just the sort of concept their analysis should apply to. It is an everyday concept. It is suitably 'abstract'. And there are plenty of metaphors around it. Surely, here is a concept which is "structured almost entirely metaphorically". So, does the Lakoff & Johnson notion of a conceptual metaphor apply to our concept of mind?

A conceptual metaphor is a concept consisting entirely (or almost entirely) of a single extended metaphor, or a set of metaphors having a single theme. This may describe our everyday concepts of argument (as conflict) and of verbal communication (as transmission via a conduit), but it cannot apply to our concept of mind.

All colloquial or ‘dead’ metaphors, like other idiomatic phrases, although they are composed of several words, have come to function like ordinary one-word referring expressions. The metaphor, the seeing-as, ceases to be necessary and the expressions become ‘semantically opaque’. They just do their referring job. The perceptual imagining once cued by the word used metaphorically is still latent, but its assistance is no longer required in the referring process, and it becomes cursory and irrelevant. It could be argued that, because of this desuetude-engendered impotence of the image in the case of dead metaphors, one could never find the ‘consistency’ or ‘coherence of theme’ required for the ‘conceptual metaphor’ notion. No matter how apparently commensurable are the images a set of metaphors purvey, there is no commensurability because there is no image-purveying going on in the first place. As the Bard says, “metaphors are no argument, my pretty maiden”. However, I will not rely on this argument.

I will instead assume — what the leading writers in this field all assume — that one can extract the ‘content’ or ‘theme’ or ‘image’ from a metaphor and meaningfully compare it with that of another. [This is legitimate in literary studies perhaps, where the metaphors are fresh and still resonating, but it may not be legitimate when we are dealing with mundane practical metaphors that have died.] My argument as to the impossibility of a metaphor-based ‘concept’ of mind will rest on the fact that, as a glance at Appendix One shows, the colloquial mind metaphors are for the most part irremediably diverse as to theme. Most of them are one-offs. Taken together, they constitute not so much a concept as a gigantic mixed metaphor.

The mind metaphors do exhibit some recurrent themes. Specifically, in support of my precedent-in-metaphor contention, I cited groups clustered round the ideas of mind as, respectively, venue, repository, agent, mechanism and instrument. However, the Appendix One list shows that these clusters probably account for less than half the total. Even if we were to consider only the metaphors that do conform to a theme, there would still be no possibility of synthesising a coherent concept. The various themes are still incommensurable. An agent cannot simultaneously be a place or an instrument. And

because these three or four themes are mutually incompatible, any attempt to unify them would be far too internally incoherent to qualify as a ‘concept’.

What applies to ‘concepts’ applies also to ‘theories’ and even ‘myths’. Just as concepts and theories must specify an explanation that is to some degree sustained and coherent, so myths (even radically false ones) require a narrative that is to some degree sustained and coherent. In the case of ‘mind’, the only possible candidates for the role of ‘myth’ — in terms of number of metaphors and uniformity of theme — are the ideas of mind as internal place and mind as internal agent. But really, neither of these offers any ‘story’ or ‘explanation’ at all. Each is just a single image — ‘mind is a place inside the head’ and ‘mind is an agent inside the head’. These are too spare to qualify as ‘concept’ — or ‘myth’, let alone ‘theory’. As I say, the place and agent metaphors, though numerous, make up only a small portion of the mind metaphor opus. And their theme-cleaving tendency is atypical. What we have in the case of ‘mind’ is, for the most part, mere gestures at the required concept or theory or myth. We have multifarious ‘mini-narratives’ (‘mini-myths’ or ‘mini-fantasies’). That is, we simply have diverse *metaphors*.

According to my understanding of the English term *concept*, for a person to have a concept of X, he or she must (1) believe or, at least, be able to entertain the supposition that there is such a thing as X, and (2) be able to describe, in at least a rudimentary way, some properties of X. The lay notion of ‘mind’ is not ineligible for concept-hood on the first count. Despite the possibility that lay credulity as to the existence of mind and mental phenomena stems only from naivety about certain figures of speech, it is I think true that people generally believe (or at least vaguely apprehend, or whatever) that there is such a thing as mind. However, the putative lay ‘concept’ of mind does not satisfy the second condition. Even if we look only at the metaphors I grouped rather optimistically into four ‘properties of mind’, we see that the metaphors in ‘internality’, ‘agency’ and ‘intentionality’ groups are various and mostly mutually incompatible. One has not even begun to describe X if the properties one is attributing to X are not compatible with each other. Both theories and concepts require some consistency of content, and some coherence of attribution and argument. The idea of a concept being constituted by radically diverse and incommensurable elements is incompatible with this.

Another implication of *concept* is that one’s concept of X is one’s ‘take on’ X. ‘Takes’ in this sense are by definition contentious and corrigible. The implication is that

one's take on X might be inadequate or wrong. This in turn implies that there is an X out there which could, given the right conditions, be directly investigated to ascertain the quality of one's 'take' on it. If 'mind' is abstract or non-physical, then no investigative procedure could ever decide the quality of our concepts of mind *qua* takes. Thus the corrigibility feature, which I would have thought necessary to 'concept' is absent in the case of our imaginings in connection with the noun *mind*. This might be another good reason for eschewing the phrases *concept of mind* and *theory of mind*.

The conclusion of my metaphorical origin theory is that, rather than there being any folk 'concept' or 'theory' or even 'myth' of mind, there is only the folk's predilection for certain metaphors — metaphors which have for generations been found to be memorable and efficient means of specifying aspects of people's thinkings — and, perhaps, a tendency on the folk's part to take some of these metaphors too literally. At least in connection with the noun *mind*, there is no need to retain the term *concept* in any essential role. When a putative concept is based entirely on metaphors — as in the case of our 'concept' of mind — it ceases to be realistic or useful to continue speaking of a 'concept' at all. Legion diverse metaphors do not a 'cultural myth' make, either.

As Hacker says, in connection with a reference made by Wittgenstein (1963, #423-425) to the picture we all indulge of 'goings-on in people's heads' —

Presumably W. is alluding to such psychological turns of phrase as 'A thought flashed through his head', 'He said in his heart...', 'In my mind I saw...'. In such cases we use expressions into which a certain picture (not a theory) is built. It is not in dispute that these things happen, that thoughts flash through people's minds, that they see things before their mind's eye. These are the pictures we use and their validity is not in question. But when doing philosophy it is important that the application of these pictures be clarified, lest we be misled by the pictures into constructing philosophical theories or, worse, into criticising our ordinary ways of expressing ourselves as embodying false theories (Hacker 1990, p.541).

By *picture*, Wittgenstein and Hacker mean 'metaphor'. The ubiquity of our 'picture' of internal processes does not reflect any concept we have formed, or our adherence to any theory. There is only the colloquial metaphors, and our use of them, and our short- and long-term imaginings in connection with them.

3.44 *Murphy's line*

There is an inherent incompatibility between concepts and metaphors, which makes

the idea of a concept ‘constituted’ by metaphors tantamount to a contradiction. The term *concept* connotes something stable — something that is formed and retained by the person. In contrast to this, a metaphor, even if it ends up ensconced in the vernacular, is still in essence an *ad hoc*, temporary, makeshift piece of intellectual equipment. In what must be for space reasons a footnote to this discussion I should mention that Murphy 1996 takes the same critical line I do about the ‘conceptual metaphor’ concept. He thinks that concepts must by definition be to some extent stable and consistent — so that any integral involvement by metaphors (which are inevitably multiple, diverse and *ad hoc*) in a ‘concept’ is impossible. Murphy offers his own explanation of the relation between concepts of and metaphors for such as ‘argument’ and ‘love’. He believes his ‘structural similarity’ view (which is based on a comparison theory of metaphor) will accommodate the diversity of the metaphors.

...the structural similarity view does not have a problem with multiple metaphors for a single domain. For a complex concept such as *love*, it is not surprising that there are different kinds of correspondences that can be made to it. Each metaphor type simply picks out different aspects of the concept’s content. (In the same way a pet dog can simultaneously be similar to a wolf, a pet hamster or a statue of a dog — each in a different respect.) The journey metaphor takes a broad view of an entire love affair, including both participants. The insanity metaphor takes a much narrower view, focussing on the emotional reactions of one of the participants, during the initial, infatuation period of a relationship. Because the concept of love is assumed to have a representation independent of the metaphors, there is no problem with different metaphors picking out different aspects of the concept... (Murphy 1996, p.196).

By identifying as the stuff of concepts some initial ‘structure’ — which is presumably ‘static’, ‘independently represented’ and expressible in literal terms — and contemplating as ‘contributing to’ the concept only those metaphors that can replicate parts of this structure, Murphy is effectively denying Lakoff & Johnson’s claim that metaphors can somehow subvert and/or usurp the stuff of concepts. All the structural similarity view allows is that some aspects of concepts — those aspects captured by popular metaphors — will have a bigger public profile than others. [For a diametrically opposed view, see the Gibbs 1996 reply to Murphy. Gibbs thinks concepts are “temporary representations that are dynamic and context-dependent” (Gibbs 1996, p.313).]

My theory of metaphor in Chapter Two eschews talk of ‘domains’ and comparisons between domains. I say that a metaphor gets the hearer to imagine perceiving some

general subject matter X according to a perception recipe designed for something very different (Y) and, by this process directs the hearer's attention to some feature F of X — which feature is about all that Y has in common with X. [I am also very hot on saying that, in the metaphor, the Y is never directly referred to as such.] My account thus allows me to talk about scraps or fragments of similarity between Xs and Ys, but to talk as Murphy does of 'structural similarities' would be a strain. However, I think Murphy's account of the relations between metaphors for things and concepts of those things is more realistic than Lakoff & Johnson's. We should keep metaphors and concepts apart.

The Murphy approach is not going to help us determine the relationship between 'metaphors for mind' and 'the concept of mind' however, because — as I hope to show in the next section — the mind metaphors are not about 'mind' and we have no 'concept of mind'. On the other hand, it may well help us find out the relationship between the colloquial metaphors for thinking and our understanding, our concept, of what thinking is. Some of the referrings accomplished by metaphor can take on the appearance of quasi-theorisings or proto-theorisings. Our metaphorical depiction of thinking as a process, and a 'mental' process is a *bit* like a theory. I talk about the explanatory role of metaphors — especially our metaphors for thinking — in 3.6 below.

3.5 *The noun mind as a nominalisation of the verb*

One can, surely, say that men 'have minds', but what is this but another way of saying that men sometimes think? And if it is known by everyone that men sometimes think, what but confusion is gained by expressing just this fact in a way that might lead someone to think ...that it is not men, as we ordinarily think of them, who think, but rather their minds? (Taylor 1966, p.138).

Unfortunately the word *mind* has been almost universally employed to signify both that which thinks and the phenomena of thinking (*Oxford English Dictionary*, *mind*: 17).

What is the role of the word *mind* within the mind metaphors? How is it that, even though *mind* is not the word being used metaphorically, and 'mind' is not what the metaphors are about, the metaphors still manage to cast 'mind' in a certain role?

The scenario contemplated by the idea of the 'nominalisation' of a verb is as follows. We already have a verb in our language for referring to action X — or activity X or process X or condition X (to begin with, I will assume X is an action). However there is

something relating to action *X* which stands in need of a name. To answer this need, we change the verb morphologically and use the result as a noun, to refer to the *X*-ing-related thing in question. Thus we get the nouns *receipt*, *receptacle*, *reception* and *receiver* from the verb *receive*. As well as being the name of the process described in the sentence before last, the noun *nominalisation* may also refer to the product of the nominalisation process, i.e., the noun thereby formed. As well as changing the ending of the verb ('suffixation'), we sometimes leave the verb as it is, and just re-use it as a noun. This is known as 'conversion'. So *dance*, *cover*, *roast*, *probe*, *bruise* and *forge* are nominalisations of verbs too. In any cognate noun-verb pair, either the verb will be a derivative of the noun, or vice-versa. One relies on the dictionary to find out which.

My aim in this section is to show that the noun *mind* is a nominalisation (by conversion) of the verb *mind*. Unfortunately, the Oxford English Dictionary, on which I have relied to verify all the other nominalisations I quote, is quite unequivocal and specific about *mind* the verb. It says [f. MIND *sb.*]. This means the verb comes from the noun — which means no nominalisation; rather, the reverse. This is a set-back, but there are two mitigating factors. First, the OED allows that all the following are nominalisations of the corresponding thinking verbs — *thought*, *belief*, *desire*, *concept*, *emotion*, *feeling*, *fear*, *admiration*, *doubt*, *memory*, *heed*, *hope*, *attention*, *recognition*, *cognition*, *decision*, *opinion*, *anticipation*, *grief*, *purpose*, etc. Second, although *mind* can't be included in this list, when the etymology is taken right back, the Indo-European root from which *mind* (noun and/or verb) is descended is *men-*, *mon-* or *mn-*, which mean(s) the action(s) to think, remember or intend. [The entry for *mind* in the Oxford Dictionary of English Etymology is reproduced in my Appendix One. The Indo-European root gave rise to various verbs (in languages some of which contributed to modern English) which had such meanings as — to love, remind, exhort, advise, remember, deny, despise, think, believe and desire.] The situation is similar with two other conspicuous absences from the list, *imagination* and *intention*. *Imagination* in English comes from the noun *image*, but the latter derives from the Latin verb *imitari*, 'to imitate'. *Intention*, similarly, derives in English from another noun, but when you go back to Latin, the root is the verb *tendere*. I take comfort from this. Trans-linguistic nominalisation is still nominalisation of a kind. Another thing: in by far the majority of English noun-verb cognates or conversions, the verb is derived from the noun. The nouns and verbs in the colloquial thinking vocabulary certainly buck this trend.

This is not to deny that the firm ‘No’ from the OED is a blow. I ask only for a suspension of judgment until I have offered my explanation — which can then be compared with the explanation to which the OED (and adherents of ‘the Berkeley view’) are committed, namely, that we are capable of comprehending (or somehow imagining) ‘mind’ independently of its role *vis à vis* the various thinkings.

3.51 *Act versus accessory nominalisations*

The variety of morphological changes that verb-nominalisation may involve is intriguing. Consider *classification, swimming, swim, swimmer, employee, proof, movement, attendant, laughter, residence, residency, advice, repository, closure, refusal, error, speech, procedure, process, proceeds, proceedings, procession, producer, product, production, product, produce*. There are some near-rules whereby one can infer from the morphology to what type of referent the noun has — thus suffixation with *-er* often specifies the X-ing’s agent — but I shall not assume any relation between morphological change and reference. The nominalisation I am most interested in, *mind*, is anyway a simple conversion. What is most important for my purposes is distinguishing *per se* the general kinds of referent a nominalisation may have. I am assuming there are no rules and one just has to look and see — (a) what thing T the new noun refers to, and (b) how T is related to the act of X-ing which the verb names.

Linguists have not yet established a universally accepted catalogue of nominalisation kinds — and I mean kinds of referent a nominalisation may have, not kinds of morphological change. An exhaustive list would be difficult. Bauer 1983, p.185, illustrates the considerable range of meanings which just *-ation* suffixations may have. Various partial classifications have been mooted. I am going to propose one. It includes all the kinds that it is important for my purpose to distinguish. And I believe these are all the philosophically interesting kinds also. I can cite a linguistic authority for every item on my list, although not for the whole list. Similarly for most of my terminology.

Some nominalisations refer to the act of X-ing itself — (a) to X-ing considered as a phenomenon in general, or (b) to a particular instance, spell or session of X-ing. These are formal nominalisations: the referent is not changing from verb to noun — only, the action in question is now being considered under one or other of two formal aspects. Linguists call them ‘act’ nominalisations. To avoid any involvement in morphological issues, I shall cite only conversions as examples of the various nominalisation kinds.

Act nominalisations — *work, worry, touch, command, dance, sleep, fall, cry (weep), guess, fight, repair, kiss, sneeze, stop*. (Each of the first six may refer either to X-ing in general or to a particular instance of X-ing; the remainder refer only to instances.)

Act nominalisations, which still refer to the action itself, are to be sharply distinguished from nominalisations which refer to things which — although they play a role in the X-ing in question, and are specified by reference to this relevance to X-ing — can also be considered separately, as things in themselves, apart from any X-ing that may or may not be going on. This class of nominalisations (which together with act nominalisations exhausts the philosophically interesting kinds) I call ‘accessory’ nominalisations. The thing T which the noun refers to is always an ‘accessory’ (sometimes an indispensable one) to the action. The varieties of accessory I consider are agent of the action (or process, etc.), and patient of, instrument used in, product of, and venue for the action. All these accessories are intimately related to the action in question but can equally be comprehended as existing independently of the action. Here are examples of accessory nominalisations (again, all simple conversions).

Agent nominalisations — *nurse, judge, rebel, fly, lookout, cheat, tease, police, guide, drop-out, drain, mangle, cover*.

Patient nominalisations — *discard, convert, roast, drink, display, pick, chant, deposit, taste, smell, plant*.

Instrument nominalisations — *paint, drill, probe, swab, glaze, feed, rake, dress, brace, support, whistle, whip, stop*.

Product nominalisations — *sweat, crack, mix, tax, bruise, spill, coil, report, cut, produce, work, fart*.

Venue nominalisations — *dump, sleep-out, lounge, walk, run, dance, retreat, forge, hide, store, work, stop*.

Proponents of the Berkeley view and the compilers of the OED would presumably still agree that ‘mind’ is an accessory of thinking, in my sense. They, and many others, would assume that mind is the *agent* or ‘faculty’ of thinking (i.e., that thinking is, as Berkeley puts it, ‘operations of the mind’), and mind is the *patient* of thinking (things are impressed on our minds), and mind is the *instrument* of thinking (we apply our minds to problems), and a mind is the *product* of thinking (we become of a mind to...), and, above all, mind is the *venue* of thinking (thinking goes on in the mind). Indeed, mind is several accessories of the thinking process.

All that Berkeley and the OED would deny is that the mind is named after the verb *mind*. They would deny that the noun *mind* is an ‘accessory nominalisation’ in my sense. They contemplate, rather, a scenario in which we are acquainted with mind and minds — we are able to identify them — first, independent of and prior to our identifying mind’s roles *vis à vis* thinking or minding. It is only later, as it were, that we find out that mind is responsible for the process of minding, and other thinkings. We christen the minding process as we do because we realise this is one of the operations of the mind. Thus *mind* is not like the above accessory nominalisations. It is, rather, like *hammer*, *saw*, *fence*, *cook*, *fish*, *poison*, *milk* and *farm*. In these cases, the verb derives from the noun. At any rate, it would be agreed that ‘mind’ is an ‘accessory’ of thinking in my sense. It is intimately involved in the process of minding, or thinking generally — and in more than one capacity — but it can still be comprehended as existing independently of these processes in which it is involved.

3.52 *The old verb “to mind”*

Three or four centuries back, ‘minding’ was the general-purpose concept covering thinking-type activities. That is, the verb *mind* was used much as I am using the verb *think* in this thesis. Although it now covers quite a narrow range of thinkings, the verb *mind* used to mean, according to the Oxford English Dictionary, to remind, remember, think of, bear in mind, be aware of, perceive, intend, plan, wish and attend to. These meanings were in addition to its modern meanings of to care, care for (look after), be careful about and heed. What this brief excursion into etymology tells us is that the range of actions and activities I am calling ‘thinking’ — what philosophers usually call ‘mental phenomena’ — used to get called ‘minding’. At least, *to mind* was, not too long ago, the most general verb in the area. I will register this ahistorical synonymity between *minding* and *thinking* by — now and then, for a while — speaking of ‘minding/thinking’ instead of just ‘thinking’. Anyway, the suggestion I explore in the remainder of this section is that our modern noun *mind* is an accessory nominalisation of the archaic verb *mind*.

3.53 *But minding/thinking has no accessories of the required kinds*

I argued in Chapter One 1.6 that thinking is a simple action of the person and not an impersonal process. This means that thinking has no agent other than the person, and mind cannot be the agent of thinking. Nor is mind the patient of thinking. The only plausible candidate for ‘patient’ of thinking is what one is thinking about, and this is but

rarely and contingently ‘mind’. Thinking does not involve the use of any instruments, either. No tools or equipment or other hardware is required for thinking. Therefore, mind cannot be accessory to thinking in this way. Nor can mind be a product of thinking. The only plausible ‘products’ of thinking are such as decisions, opinions and solutions to problems. But *decision*, *opinion* and *solution* are act nominalisations of *decide*, *opine* and *solve*. Decisions, opinions and solutions are really only deciding, opinings and solving, they are not entities and hence cannot literally be the product (or any other accessory) of thinking. No entity or substance is produced by thinking. And finally, mind cannot be the venue for thinking either. There is no characteristic venue for thinking, bar the brown study. One can think anywhere. I will not re-visit the suggestion that thinking is something one does inside one’s head.

The fact that thinking has no accessories of the required kind, that there are no shoes for ‘mind’ to step into, is a difficulty for the Berkeleyans. How otherwise can thinking be characterised unless as ‘that which thinks’, ‘the seat of consciousness’, etc.? But it also, apparently, spells doom for my notion that the noun *mind* is an accessory nominalisation of the verb. If minding/thinking has no accessories to be named, then no word can name them. But is it, perhaps, that thinking has ‘fictitious’ accessories — or that it has accessories ‘figuratively speaking’? What gives us the idea that thinking has an impersonal agent, and/or employs a special instrument or mechanism, or has a distinctive venue? My belief is that the existence of all these putative accessories of minding/thinking, all called ‘mind’, is suggested to us by the metaphors which are the noun’s vehicles. That is, the accessories are figments of the mind metaphors.

3.54 ‘Metaphor-generated’ accessories for minding/thinking

We sometimes need to comment not on the content but on the style or quality or other feature of someone else’s thinking, or our own. This requires that we have some idea what sort of activity thinking is. However, for several reasons, although we are very familiar with thinking as performers, our concept of thinking, our ability to explain what thinking is, is rudimentary. We learned how to do it before we could have understood a description of what is involved in it, so there is no explanation at the beginner end. It is something we do all the time and it is difficult to be aware of an action that familiar. And thinking is often inconspicuous as a performance. It does not involve standard overt moves. Even brow-knitting is optional. Nor, in thinking, are there any easily observable

accessory things — apart from the agent — for us to define the act of thinking by reference to. I touch more on these difficulties in the next section. As elsewhere where referring is difficult, we have recourse to metaphor.

The situation is the same with using metaphor to pick out aspects of thinking as with using it to pick out any feature of any general subject matter. In order to refer to some feature of thinking, we liken or assimilate the act of thinking to some action or process which is memorable, easy to inspect, and which — though it is for the most part very unlike — has just one feature in common with thinking, or in common with the instance or variety of thinking we are concerned to show up that feature of.

Despite their far-fetched nature — or because of it, according to my theory in Chapter Two — the mind metaphors reliably refer hearers to recognisable real features of thinking, feeling, imagining, etc. For example, remembering has some features in common with putting things in a store, and by speaking of remembering as if it were a kind of storing, the speaker directs our attention to these features. In the same way, imagining is in some respects like viewing a picture in a private theatre. Feeling an emotion can be like having some force or agent at work inside one's body. Cogitating is somehow like holding a discussion inside one's head. Solving a problem is in some respects reminiscent of successfully plying an instrument or tool, and so on. In each case, the metaphor gets us to imagine some variety of thinking as something it is not — but is a bit like — so that our attention is drawn to just that (like) bit.

Typically, because actions and processes with easily identifiable accessories are the ones we know our way around best, the actions or processes to which we assimilate thinking, in the metaphor, are actions or processes which have easy, memorable and/or distinctive accessories. In short, the action or process of Y-ing, which the metaphor brings on for seeing-as purposes, will have distinctive accessories. For example, storing requires a storage place. This is the crux of my argument. The mind metaphors posit fanciful equivalents in thinking of accessories characteristic of the Y-ing which the thinking is being seen as. That is, mind metaphors describe thinkings *as if* they have Y-type accessories (which of course they really don't have). The metaphor argues, for example, that, if remembering is 'storing', then there must be some equivalent in remembering of the repository which is used in storing. Otherwise, how could remembering be like storing? Or, suppose that, in order to highlight some feature of the

way someone is reasoning, reasoning is being pictured as the workings of a mechanism. If reasoning is like the workings of a mechanism, there must be some counterpart of a mechanism in the case of reasoning. Or, if visualising is ‘seeing a picture’, there must be some equivalent in visualising of both the picture seen and the venue where it is seen. The presence of an appropriate accessory to thinking is in each case a natural corollary of the seeing-as which the metaphor prescribes.

It is only because of the metaphor that it would even occur to anyone that thinking might have accessories, such as a nether agent, a special venue, an instrument, etc. Positing the appropriate accessory is just a consequence of applying the metaphor. This is what I mean by calling thinking’s (fictional) accessories ‘metaphor-generated’.

3.55 *The noun mind as a ‘figurative’ accessory nominalisation*

So, the metaphors cause us to imagine that thinking has these several kinds of accessory. [And those that picture thinking as the functioning of an impersonal agent or mechanism thereby render thinking as a process rather than an action of the person. Even having it take place inside the head makes it a process.] As a kind of add-on to the metaphor, to put knobs on it, we *name* the fictional accessory. Because it is handy — ‘minding’ in the old sense (thinking) is the general subject matter after all — we convert the verb *mind* to this purpose. By the same eponymy that justifies ordinary accessory nominalisations, we call the putative agent (or patient or instrument or product or venue) of thinking which is stipulated by the metaphor, ‘mind’.

This story helps explain why, in colloquial speech, ‘mind’ is cast in such a variety of roles — agent, repository, theatre, venue, mechanism, instrument, etc. It is the different metaphors, likening thinking to different kinds of process, which have different accessory requirements. The noun *mind* is a kind of dummy name for any and all of the different fictional accessories of minding/thinking — that the different metaphors prescribe. ‘Mind’ is, each time, the creature of a different metaphor. *He put it to the back of his mind* needs mind to be a repository. *I gave her a piece of my mind* needs mind as an object or substance. *I went over it again in my mind* and *thoughts crowded into his mind* require mind to be a venue. *I had to make up my mind* wants mind as the patient of an action; *his mind was playing tricks on him* must have mind as an agent.

I suggest that the lay ‘concept’ of mind is in fact a set of colloquial metaphors, in each

of which some or other process-accessory is fancifully attributed to an act of minding/thinking. The noun *mind* has two jobs in these mind metaphors. It provides a label for the fictional accessory, and it indicates by eponymy that the underlying subject matter of the metaphors is some act of minding/thinking. The mind metaphors are thus not simply metaphors. They are combinations of metaphor and a device which could well be called ‘figurative accessory nominalisation’. The use of *mind* as a noun in everyday speech is sustained entirely by, and our ‘concept of mind’ is entirely the creature of, this two-fold rhetorical device.

3.6 Precedents for the ‘figurative accessory nominalisation’ idea

The only philosophers I have found who could be said to anticipate my nominalisation account are Reid 1969 (first published 1785), Collingwood 1938 and Taylor 1966.

Although Reid does not apply the analysis to *mind*, his analysis of how *conception* is related to *conceiving*, and the role of metaphor in this relation, is similar to mine of *mind*.

Of all the analogies between the operations of the body and those of the mind, there is none so strong and so obvious to all mankind as that which there is between painting, or other plastic arts, and the power of conceiving objects in the mind. Hence in all languages, the words, by which this power of the mind and its various modifications are expressed, are analogical, and borrowed from those arts. We consider this power of the mind as a plastic power, by which we form to ourselves images of the objects of thought.

In vain should we attempt to avoid this analogical language, for we have no other language upon the subject; yet it is dangerous and apt to mislead. All analogical and figurative words have a double meaning; and, if we are not very much upon our guard, we slide insensibly from the borrowed and figurative meaning into the primitive. We are prone to carry the parallel between the things compared further than it will hold, and thus very naturally to fall into error (Reid 1969, p.389).

Reid says that, because conceiving has something noteworthy in common with the painting of a picture, it is naturally and universally described, albeit metaphorically, as the painting of a picture. I call this metaphor the ‘depicting’ metaphor. As well as calling it an analogy about as often as he calls it a metaphor, Reid goes from talking about the *producing* of pictures to talking about the *viewing* of pictures, and back, without flagging the difference. I shall deem it that his depicting metaphor prescribes producing ‘and/or’ viewing of a picture. So, in the metaphor, the picture (and the picture’s putative analogue

in conceiving) may be either or both of two kinds of accessory — product or patient.

Conceiving as well as projecting or resolving, are what the schoolmen call *immanent* acts of the mind, which produce nothing beyond themselves. But painting is a transitive act, which produces an effect distinct from the operation, and this effect is the picture. Let this therefore always be remembered, that what is commonly called the image of a thing in the mind, is no more than the act or operation of the mind in conceiving it.

...conception, and the image of a thing in the mind, are synonymous expressions. The image in the mind, therefore, is not the object of conception, nor is it any effect produced by conception as a cause. It is conception itself (*ibid*, pp.390).

Here Reid begins by saying that conceiving is an ‘immanent’ act. That is, conceiving has no product or other accessory (apart from an agent). Painting, on the other hand, has a product — the picture. Reid does not specifically state that the depicting metaphor exacerbates our tendency to posit a product for conceiving — something, analogous to an image or picture, which is produced and/or viewed — but this is plausibly his intention. Why else would he be juxtaposing the warning about thinking of conception as something over and above conceiving, and the warning about taking the depicting metaphor too seriously? He clearly suspects some connivance between our tendency to take the noun form *conception* (or *image*) as the name of a distinct entity, and our tendency to over-indulge the depicting metaphor, with its implication of something produced and/or viewed. This connivance is central to my idea of ‘metaphor-generated-accessory’ nominalisation. In my terms, Reid is saying that we are misled by the depicting metaphor into misconstruing *conception* (which can at best be only an act nominalisation of *conceive*) as an accessory nominalisation — that is, as the name of something which is produced by, or viewed during, conceiving. Reid looks again at the accessories required by the depicting metaphor for conceiving.

By a distinct image in the mind, the vulgar mean a distinct conception; and it is natural to call it so, on account of the analogy between an image of a thing and the conception of it. On account of this analogy, obvious to all mankind, this operation is called imagination, and an image in the mind is only a periphrasis for imagination. But to infer from this that there is really an image in the mind, distinct from the operation of conceiving the object, is to be misled by an analogical expression; as if, from the phrases of deliberating and balancing things in the mind, we should infer that there really is a balance existing in the mind for weighing motives and arguments (*ibid*, pp.420-1).

Here the depicting metaphor is referred to with the phrase “the analogy between an image of a thing and the conception of it”. Reid says we cannot infer from the aptness of the metaphor to conceiving’s literally having an ‘object’ (product and/or patient) such as depicting has. He says this is like inferring, from the currency and aptness of the *weighing up of alternatives* metaphor, that, because weighing requires scales as an accessory, there must be in the mind a set of scales available for use during decision-making.

In the second sentence Reid suggests *imagination* as another synonym for *conception*. He implies the depicting metaphor is already implicit in the term *imagination*. This is moot as far as modern usage of *imagining* and *imagination* is concerned. Sarbin has done some research on this.

According to the Oxford English Dictionary, the etymological root of imagining, *imago*, was derived from a form from which *imitate* (*imitari*) had been developed. The root metaphor denoted imitating, copying, through constructing a graven image, a carved likeness, or a sculptured statue. The etymology suggests that a word was required to communicate about three-dimensional sculpturing and engraving. On the basis of partial similarity between events ordinarily denoted by *imitari* and the copying activities of artisans, the root form of *imitate* was borrowed to denote the latter. The use of related words, *image*, *imago* and similar forms was until the sixteenth century restricted to three-dimensional imitations such as objects of religious worship, sculptured figures and carvings. When applied in a metaphorical way to those occurrences that are currently called ‘imaginings’ the tenor was an active, constructive process. That is to say, the pre-Renaissance imager was regarded as a fashioner, an image-maker, a fabricator, a doer; no implication was intended that he was the passive registrant of a mysterious process happening in an equally mysterious mind (Sarbin 1972, p.337).

Shortly after, Sarbin adds, “..the fact is undeniable that a shift in metaphor occurred — a shift from imagining as an active three-dimensional imitation to imagining as a passive mechanical mirroring in the mind” (*ibid*, p.338). Possibly, the two senses of *imagine* were about equally current in Reid’s day.

Incidentally, Sarbin agrees with me that our noun *mind* has (largely) replaced the verb. He sketches an argument somewhat similar to mine and concludes that,

When the mind was conceptualised as an organ located within the person, it was assigned the job formerly given to its more active predecessor *mind*ing, which included imagining along with thinking and remembering (Sarbin 1972, p.338).

Collingwood 1938 is not talking about *mind* either, nor even about nominalisation, but he is making the important point — that a metaphor convinces us that an activity has an accessory which it does not in fact have.

Language is an activity, it is expressing oneself or speaking. But this activity is not what the grammarian analyses. He analyses a product of this activity, ‘speech’ or ‘discourse’ not in the sense of a speaking or a discoursing, but in the sense of something brought into existence by that activity. This product of the activity of speaking is nothing real; it is a metaphysical fiction. It is believed to exist only because the theory of language is approached from the standpoint of the philosophy of craft, and the assumption unquestioningly made that any activity is essentially a kind of fabricating. That being so, the activity of expression will be essentially the fabricating of a thing called language, and the endeavour to understand that activity will take the form of an endeavour to understand its product. This may seem a futile undertaking. What possible result, good or bad, can come of trying to understand a thing which does not exist? The answer... is that these metaphysical fictions are in one sense real enough. The person who tries to understand them is fixing his mind on a real thing, but is distorting his ideas about it by attempting to harmonise them with a preconception which is in fact false. Thus, what the grammarian is really doing is to think, not about the product of the activity of speaking, but about that activity itself, distorted in his thoughts about it by the assumption that it is not an activity but a product or ‘thing’ (Collingwood 1938, p.254).

Collingwood says that the inference to the fictional accessory — the inference that ‘language’ has an existence independent of the activity of speaking — is due to speaking’s being ‘approached from the standpoint of the philosophy of craft’ or ‘assumed to be a kind of fabricating’. Likely, he would agree with me that seeing speaking as a kind of producing or fabricating is, more precisely, indulging a metaphor. His argument would apply equally to the metaphor of ‘using’ language as one uses a tool. The question is whether the noun *language* names some genuine, objectively existing accessory of the act of speaking, or merely names the act of speaking itself, as seen under some formal aspect.

Taylor’s 1966 distinguishes thing-based and action-based theories of thinking. He describes the lay theory of mind as the ‘stream of thoughts’ theory, and says that some or other version of this theory has, at least since Hume, been taken for granted by most philosophers. This theory

...envisions thoughts to be a series or stream of things ‘within’ one. My thinking, then, consists of my *having* various things, such as ideas, impressions, images, feelings, and other subjective or ‘private’ things. It matters not what we call these

things, or what we decide are the ‘ultimate constituents of consciousness’. Some generic term, such as “ideas”, in the sense given it by earlier empirical philosophers, or simply “thoughts”, will do, letting it cover every thought or conscious state. The general picture is in any case clear enough. My thinking consists, on this view, of my having (say) thoughts, these following upon one another in a veritable stream. Consciousness is often thought to consist of just such a stream of thoughts, and the denial that certain things such as plants are ‘conscious’ is thus usually interpreted to mean simply that no such stream of things occurs within them. To say that I am thinking or, alternatively, that I am conscious, is on this view simply to say that there is such a stream of things occurring within me or, more commonly, ‘within my mind’. It is not, then, essential to say that I am doing anything when I am thinking. It is enough to say that something is happening, namely, that thoughts are occurring within me, and that they collectively constitute a series or stream (Taylor 1966, p.155-6).

He contrasts the stream-of-thoughts theory with the theory that thinking is ‘sometimes’ an activity. For Taylor, thinking is not always an action or activity: he believes that, say, idle reverie and compulsive thinking are ‘things that happen to one’ rather than things one does (see *ibid* p.163). My view is that thinking is always an action — albeit sometimes an involuntary and/or compulsive one. Anyway, Taylor criticises the ‘stream of thoughts’ or ‘thoughts as things in the head’ theory, and introduces his actional theory, as follows.

The other theory is to the effect that thinking is sometimes an activity, that my thoughts are not in the ordinary sense *things* that merely arise and subside in my mind, but that they are sometimes *acts* that I literally perform; that my thinking, in short, consists not in my *having* something, namely thoughts or consciousness, but in my *doing* something, and indeed, doing various things...

The conception of thought as action ...has two fundamental consequences which serve best to distinguish it from the theory of the stream of thoughts. The first is that while thinking is sometimes, on this theory, doing something, that which is done is not a ‘thing’ in the sense in which, on the theory of a stream of thoughts, a thought is a thing. Thus if one designs a pattern, the pattern is a ‘thing’ in the most ordinary sense, but one’s designing it, while this is something that is done, is not another ‘thing’ in any comparable sense. It is instead an act. Or again, if one waltzes, one does something, but there is not anything that is done. Waltzing a waltz is simply waltzing. And similarly, thinking a *thought* is simply thinking — the thought is not a *product* of thinking, nor something to which one is *related* by consciousness, nor something that one *has*, nor something which falls into a series or stream or bundle alongside other things. Thoughts, in short, are on this view not things that exist at all, any more than waltzes, throws and checkmates are things that exist. They are rather, like these, sometimes acts that are performed (*ibid.*, pp.156-157).

Clearly, my Chapter Three analysis (of metaphors in league with nominalised verbs) is an attempted explanation, or ‘deconstruction’, of the same thing-based view of thinking which Taylor identifies as the standard lay and philosophical view, and which he contrasts with the actional view. In the above passage, although the important word *figurative* is not used, Taylor indicates the need for an analysis such as mine. At least, he is indicating the need for some explanation of how the relevant ‘thinking’ verbs get to be replaced by nouns — an explanation of the sort offered by Reid. Taylor is clear too that the expression ‘having a mind’ means neither more nor less than ‘is able to think’ — with *think* here used in my broad sense as the name of a range of actions and activities. His impression of the range of ‘thinking’ activities is given in the following.

.. If having a mind just means, among other things, being able to do such things as lay plans, deliberate, select appropriate means to ends, pursue goals, make certain things happen in oneself and one’s environment in order that certain other things may happen, and so on, then it is no real *explanation* of how men are able to do such things, to say that they have minds. It is only a strange way of saying the same thing again (*ibid*, p.248).

Taylor does not speculate just what *sort* of action or activity thinking is, but he is clear that an actional analysis of some sort is an improvement on an ‘inner thing’ theory.

3.7 *Our reliance on metaphors for describing thinking*

From time to time we need to think about and/or refer to and describe thinking (in general, or instances of it) *qua* activity. This requires that we have a good general understanding of what kind of activity it is. Thus it is that from time to time we need to reassure ourselves we have such an understanding. As I said earlier, this is not easy. Because we have never been given instructions how to do it, because we are doing it all the time and it is second nature, because it is difficult to observe others doing and because it has no obvious accessories we could use as handles on it — for all these reasons, our concept of thinking is something of a runt. We fall back on metaphor.

Despite their far-fetched nature — or because of it, according to my Chapter Two — the mind metaphors reliably refer hearers to real and recognisable features of thinking, feeling, imagining, etc. However, as well as having a ‘selective referring’ role, metaphors can also serve a broader, quasi-explanatory or proto-explanatory role. This may help explain why the mind metaphors have been mistakenly thought to constitute a theory. As

Haack notes, metaphors are frequently the precursors of genuine theory.

The invitation [to metaphor] is especially useful in the exploratory stages of inquiry, as one is trying to develop an initial, usually very sketchy, idea into something worthy of the title ‘theory’. Part of what is useful about a metaphor in this context lies in its combination of lack of specificity and directedness. ...*Eventually* one wants a theory to be as specific, as detailed, as precise as possible; but in the process of developing a specific, detailed, precise theory a vague idea may be a very useful stage along the way. A figurative comparison is well-fitted to serve in this capacity because it is open-ended and unspecific, but at the same time invites a certain process of specification and filling-in of details... ..being initially incongruous, a metaphorical comparison is apt to direct one’s attention along so far unexplored paths. ...At any rate, a metaphor’s combination of lack of specificity, of directedness, and of novelty is indeed what makes it useful in the early, fumbling-around phases of inquiry (Haack 1994, pp.15-16).

See also Abrams 1953, pp.31-32, quoted in Black 1962, p.240, Black 1962, pp.219-243 generally, and the four papers on ‘metaphor in science’ in Ortony 1993, pp.447-558. Arguably, both layperson’s and philosopher’s ‘theory of thinking’ project still languishes at what Haack here calls the ‘fumbling-around’ phase. [I have suggested that the biggest fumble is a too-credulous rehearsal of the dominant ‘impersonal process’ metaphors, leading to the misidentification of something (‘mind’) that is actually only a figment of the metaphors, and/or a rhetorical prop for them, as their subject matter. It is theory of thinking that is required, not ‘theory of mind’.]

We cannot afford to allow our metaphors for thinking — not only the ones with *mind* in, but all the others in the colloquial thinking vocabulary — to ‘die’ on us. In lieu of a serviceable literal explanation of thinking, we need the metaphors to reassure us as to our grasp on thinking. Even the Oxford English Dictionary relies, in its definition of thinking, on *to conceive in the mind, exercise the mind, form in the mind, have in the mind as a notion, to do in the way of mental action, to form or have an idea of (a thing, etc.) in one’s mind, picture in the mind, call to mind*. One has no other way of reassuring oneself that one knows what thinking is except by rehearsing the old metaphors anew. We are intellectually reliant on the metaphors to this extent. We need them to stay alive, to stay viable as metaphors, so they can provide at least the impression of grasp.

Metaphors on which we rely intellectually are often the ones we take too literally. Because we are using the metaphors all the time, and there is no alternative literal idiom

to point up by contrast their metaphorical nature, people tend to believe that the Y-perception-recipe *is* the X-perception-recipe — that X really is a kind of Y. Thus people might think that argument necessarily is a form of aggression, or that emotion really is a matter of internal pressure seeking release, or that communication really does involve the transfer of something from one person to another. I suggest that the mind metaphors belong in this category. For lack of literal descriptions, we speak and think about thinking in predominantly metaphorical terms, and we tend to take the metaphors too literally. We believe, for example, that there really is a special venue for thinking, that it goes on (or fails to) somewhere in there behind the eyes of the person we are talking to.

Certain things about colloquial metaphors generally, and the mind metaphors especially, lead to a tendency in many lay people and philosophers to take these metaphors too literally. At least, these factors encourage an habituation to the metaphors, an uncritical and overly credulous way of bandying them, and a quasi-doxastic dependence on them. We depend on the mind metaphors for explanatory purposes — rather than just the *ad hoc* referential purposes they were originally devised for. The cumulative effect of the factors in question is akin to that of subliminal propaganda. I mean factors such as the following.

Subliminality. Due to familiarity, our rehearsing of the mind metaphors is so facile as to be done unawares. They go in and out so pat, we lose consciousness of their figurative character. The conscious ‘suspension of disbelief’ which accompanied them when new gives way to uncritical acceptance. One cannot be critical of what one is not aware of.

Repetition. The frequent repetition of a metaphor in everyday speech (over years, and a great variety of speakers and hearers) not only contributes to the familiarity which results in subliminal response to that metaphor, it also has the effect of persuading users and hearers of the cultural acceptability of that form of words.

Systematicity with variations. Where there is a variety of metaphors having a consistent theme — as in many of the mind metaphors for thinking — the message sinks in faster and deeper. For example, although we might speak of ‘making’ a pirouette, we would never be tempted to think of a pirouetting as a craft. Similarly, from one-off metaphors such as *fear gripped me*, *harbour a grudge*, *our hopes were riding on a speedy recovery* and *it tickled my fancy*, we are not going to indulge long-term imaginings as to the nature of fear, grudges, hopes and fancies. However, the situation is different with, for example,

the way we talk about kissing. Here the vernacular metaphors are consistently of ‘giving’, ‘having’, ‘stealing’, ‘granting’ and ‘sharing’. These paint kisses as commodities, and there is something of this in our concept of at least this kind of display of affection. The several themes in the range of mind metaphors have a similar effect.

Aptness of the metaphor and reality of the subject matter. No matter how outlandish a metaphor is, if it is apt, and thus reliably refers us to a real aspect of a real and possibly important subject matter, then the metaphor attracts, not entirely irrationally, the kind of credibility normally granted to a good literal description. People think of a good metaphorical description as a good description *simpliciter*. The respective aptness and reality make it difficult to see the metaphor as such. In a culture where Thor is responsible for the weather and rain is *thortears* — tears of despair at human obtuseness, perhaps — a budding meteorologist, who feels it necessary to deny the existence of Thor, will likely be confronted with people pointing ostentatiously to the rain outside, then looking at each other, and tapping their foreheads and saying *Der*, grimacingly. That is, if she’s lucky.

Indispensability. This is just the already-mentioned fact that if the metaphors are the easiest and best, if not the only, way of referring to this subject matter — as is the case with the mind metaphors for thinking — our dependence on them is greatly increased. If it is true that in the past, in English, the verb *mind* was capable of conveying all or most of the subtleties the metaphors now convey, then there is a theoretical possibility of re-establishing the verb as an alternative. But it is not available at the moment, and if we want to refer efficiently to features of thinking, we must use the stock metaphors.

Charm. The special, and as far as I know uncatalogued, rhetorical device which consists of metaphor integrated with a ‘figurative’ or ‘metaphor-based’ accessory nominalisation, has a distinctive appeal for speakers and hearers. This combined figure is endemic in the colloquial thinking vocabulary. Some non-*mind* examples are listed in 3.1 above, but the mind metaphors dominate. Within the figure there is a charming synergy between the metaphor component and the bogus-accessory nominalisation component. The noun *mind* appears to ‘bear out’ the metaphor, by positing something for the metaphor to ‘apply to’ or ‘be true of’. And the various metaphors return the favour. *Mind* acquires its referential reputation (and ‘the mind’ acquires ontological kudos) not just eponymously, from its being a relative of a genuinely referential verb, but also by virtue of its association with a range of indispensable metaphors. The metaphors prescribe something to visualise when

one is attempting a referential response to *mind*. One can imagine an inner arena, repository, agent, mechanism, etc. Then, once *mind* has been instated by the various metaphors, as an apparently independent referring expression, the mind's borrowed ontological credit can be leased back to the individual metaphors. Having *mind* as a component term enhances each metaphor's plausibility, as I said at the beginning.

At any rate, the above are factors which contribute towards our addiction to, or at least predilection for, describing thinking by reference to 'the mind'. It may come about that we are unable to set the metaphors aside. Wisdom asked "But what's the harm? What's the harm of a myth impregnating our language?" (Wisdom 1956, p.224). And this is not the question 'What's the harm of our having numerous metaphors established in everyday language?' but rather the question 'What's the harm of our taking many of these established metaphors too literally?'.

There is some harm. Habits of imagining and perceiving eventually affect abilities to imagine and perceive. We become unable to imagine or perceive X except in the (fanciful) terms prescribed by the metaphor. We are no longer able, if we ever were, to perceive X unadorned by the metaphor. Too long a reliance on the fantasy may diminish ability to perceive the reality. But, on the whole, debits for the lay person are perhaps small. The lay person does not need, for everyday purposes, to know exactly what kind of action or activity thinking is. He or she needs only to be able to be aware of the various features and aspects of thinking that are relevant in everyday social situations. And the mind metaphors and the others pick these out nicely. Habituation to the metaphors also means one does not have to think so much about what one is saying. The whole form of words is already there at hand. The phrases come out automatically, so to speak. Habituation to these ways of talking and thinking might also have societal benefits, such as presumably accrued in earlier cultures whose members entertained what one would literally call myths. The idea of an impersonal entity or agency, inside a person and responsible for the person's thoughts and actions, may be useful for rationalising certain cultural (including economic) practices. As I suggested in 1.4, 'mind' is good for fudging conflicts between objectivity and empathy.

For the philosopher, for whom an accurate overview of the thinking would be a boon, the potential debits of unaware addiction to figures of speech are greater. Unless the colloquial metaphors can be set aside, the desired overview will remain elusive.

There are words other than *mind* which signpost metaphor-based ‘concepts’ and some of these words — *reality*, *knowledge*, *meaning*, *time* among them — are of interest to philosophers. When Wittgenstein talks about ‘the bewitchment of our intelligence by means of language’ and ‘showing the fly the way out of the fly-bottle’, he can be taken as saying that the philosopher is unaware of the figurative nature of many of the ‘forms of words’ employed in everyday discourse, and that he or she often gets enmeshed in confusions which result from a too-literal reading of those forms of words. He says that “In our language lies a whole mythology” (see Hilmy 1995, p.237), “...philosophy struggles against myths, pictorial tendencies in our understanding” (*ibid*, p.238) and “If I had to say what is the main mistake made by philosophers of the present generation... I would say that it is when language is looked at, what is looked at is a form of words and not the use made of the form of words” (Wittgenstein 1966, p.2).

In saying that the philosopher ‘looks at a form of words’, Wittgenstein is saying that the philosopher takes at face value, and tries to interpret literally, what is actually only a figure of speech. Only by looking at what that form of words is actually used to refer to, in the everyday practical interpersonal contexts where it serves a purpose, can we recognise the metaphor for the figure of speech it really is. Otherwise we cannot escape its influence. In lieu of an alternative, literal description of its subject matter, the metaphor will continue to determine the perception-recipe according to which we look at that subject matter. Thus, Wittgenstein writes —

Philosophy is a battle against the bewitchment of our intelligence by means of language (Wittgenstein 1963, #109).

A simile that has been absorbed into the forms of our language produces a false appearance, and this disquiets us. “But *this* isn’t how it is! — we say. “Yet *this* is how it has to be!” (*ibid*, #112).

“But *this* is how it is — ” I say to myself over and over again. I feel as though, if only I could fix my gaze absolutely sharply on this fact, get it in focus, I must grasp the essence of the matter (*ibid*, #113).

...One thinks that one is tracing the outline of the thing’s nature over and over again, and one is merely tracing round the frame through which we look at it (*ibid*, #114).

A picture held us captive. And we could not get outside it, for it lay in our language and language seemed to repeat it to us inexorably” (*ibid*, #115).

Possibly, Strawson has these Wittgenstein passages in mind when, in the following, he describes as a ‘commonplace’ the idea that philosophers are prone to take metaphors

literally: Deliberate, aware use of metaphor — for pedagogic purposes, say — is very different from employing metaphor without being aware of doing so.

If they [philosophers] use what are plainly metaphors, as they often do, it is usually as metaphors that they use them; and hence they are not obliged to take them any further than they wish. What is consciously taken up as a figure can, as a figure, be consciously dropped at any point beyond which it would be unwelcome to pursue it. But it is a commonplace that philosophers are prone to be influenced in their theorising by models or pictures or figures of which they are not fully, or at all, conscious as such; to think they are advancing a literally correct account of some phenomenon when they are actually engaged in elaborating, or being puzzled by, features of the figurative mode in which they are thinking about that phenomenon. It is when the theorist is thus engaged, when he is unconsciously committed to this sort of thinking, that...[philosophical analysis]...is most appropriate and effective. It has the damaging effect of bringing the concealed figure out into the open. And the effect is damaging because you cannot say 'Thus far and no farther will I go with my figure' when you did not think it was a figure at all, but thought it was the literal truth about the phenomenon in question" (Strawson 1974, p.131).

If it is 'thinking' which the philosopher wants to describe in literal terms, and if he or she cannot help but conceive thinking as an 'internal and mental' process, performed in and/or by an internal organ, the mind — or, if not the mind, the brain — then it could well be puzzling how it is that thinking can relate to things in the 'external' world. Or it is puzzling how we can very often know what other people are thinking. Or it is puzzling how our experience of thinking — the particular experience of thinking about shortbread, say — is related to what our brain is doing. Or perhaps it is a special variety of thinking that is to be described — visualising, say — and the philosopher is puzzled as to how the image seen during visualising can be scientifically examined.

Metaphors devised for the purpose of elucidating aspects of a subject matter may end up by obscuring much of it. The rot sets in when, in order to simplify our grasp of their application, we attempt to systematise the metaphors and arrange them around a central 'concept'. Everybody does this at the back of their minds, but philosophers make a day-job of it. When the metaphors, devised originally to communicate piecemeal and unrelated *aperçus*, are 'compiled' in this way, they begin to obscure as much as they illuminate.

3.8 *Some benefits of the metaphorical origin theory*

The metaphorical origin theory suggests plausible explanations of several things that theory theory leaves vague or unexplained. Certainly, it accounts for the basic incoherence of the lay imaginings in connection with the noun *mind*. Such vagueness and illogicality as led Churchland to describe folk psychology as a ‘popular myth’ and as a ‘degenerating research program’ can be put down to metaphor. Yet vagueness and illogicality that would doom a theory do not harm, and may enhance, a metaphor.

The metaphorical origin theory helps explain why most of us believe that people have minds in their heads. Via the kind of propaganda effects I mentioned above, figures of speech may well come to be accepted as literally true. The theory is also well-placed to explain the anthropological reality of the lay concept (see Dennett quoted on page 16), its likeness to cultural myths, and the fact of its cultural, inter-generational dissemination, which several theory theorists point to. The metaphorical origin theory even supplies a ‘text’ — that is, a list of current metaphors which promulgate the putative cultural myth. To learn English is to acquire these ways of specifying aspects of thinking — and these give rise, at the backs of our minds, to the mind ‘concept’.

The idea that we use metaphor to picture abstract things as if they were observable physical things is sometimes invoked to explain what so many metaphors are doing in the vicinity of terms such as *mind*, *meaning*, *time*, *truth* and *reality*. What the metaphorical origin theory says about the noun *mind* is that the ‘abstract thing’ in question is essentially a by-product of the metaphors. If this is true, then the idea that ‘we have no means of understanding the abstract concept apart from the metaphors’ is true, but only for the reason that the abstract concept is nothing but the metaphors.

PART TWO

ACTION-BASED THEORIES OF THINKING

INTRODUCTION TO PART TWO

Physiological abbreviation theory

In the course of preparing this thesis I spent two years researching a long-standing tradition within what used to be ‘physiological psychology’. This tradition, arguably foreshadowed by Hume 1960, pp.1,2,86,96 (first published 1739), began in earnest with Washburn 1910 and 1914, was continued most notably by Pavlov 1927, Jacobson 1930, 1931, 1932 and Hebb 1949, 1958, 1968, 1980. It thrives today in numerous publications of Jeannerod, Rizzolatti, Kosslyn and many others. For reviews see Zikmund 1972, Annett 1995 and Jeannerod 1995, 1996. I call it the ‘physiological abbreviation’ theory of thinking. It is arguably a branch of the ‘motor theory of thought’ (see Scheerer 1984). A mock-up of the assumptions underlying the abbreviation theory would look something like the following. (Probably none of its proponents would agree to all the claims below.)

Performance of any given action (say, X) involves a complex physiological event distinctive to X. Depending on what X is, the physiological event will stay much the same across performances of X. The event will particularly include a distinctive ‘neural firing program’ — an anatomical and dynamic entity comprising a population of neurons (excitatory and inhibitory) firing in a certain order and at certain rates. The neural firing program for X is initially established, via modification of synapses in P’s brain and elsewhere, when P learns how to X. The ability to X is retained, and X is ‘remembered’, by the X firing program being kept permanently ticking over at a minimal subsistence level in the brain. Periodically, environmental stimuli will partially reactivate the X program to a special intermediate, ‘inhibited’ level of activation. This is P thinking of or imagining doing X. Alternatively, the environmental stimulus is sufficient to cause the X firing program to be fully activated, and a full performance of X ensues.

Within this context of assumptions, physiological abbreviation (PA) theorists conduct experiments to measure selected internal physiological variables during actual performance of an action and then during imagined performance of the action. Actual and imagined performances are instigated by the experimenter simply requesting the subject to do X or imagine doing X respectively. The PA theory is that the physiological event correlated with imagined performance of X is an ‘abbreviated’ or ‘inhibited’ version of the physiological event correlated with actual performance of X. This is usually verified.

The tacit conclusion is that thinking (imagining, remembering, etc.) is ‘physiologically abbreviated’ action. The function of the abbreviated response (imagining) is thought to be some kind of ‘refresher’ learning. Previously learned actions are consolidated in the repertoire and/or primed for imminent performance. I report what types of abbreviation PA theorists have found, and their verdicts as to its function, in Appendix Three.

Although the PA approach ostensibly defines thinking as a function of actions — that is, as a physiologically reduced version of action — I decided to abandon this line of research. I had several reasons. Although it would be conceded that one must know what action is in question, before one can identify the relevant physiology, PA theorists write as if actions *are* physiological (or macrophysiological) processes. And they write as if, by studying the physiology, one can study the action. However, I was impressed by my Chapter One, 1.6, arguments that the kinds of predicate which standard actions and standard physiological processes respectively attract are not only very different, but logically incommensurable. It also seemed to me that an action is something which can be comprehended only by an actual or a would-be agent — someone who can empathise the action under scrutiny — and yet the objectivity required to study physiological phenomena scientifically would oblige the scientist is to leave his or her status as a personal agent (and the use of empathy that goes with that) at the door of the laboratory. That is, it seemed to me actions are methodologically out of bounds for the scientist. This was another reason for thinking actions and physiological events could not be identical — if qualified to specify the one, a person would be ineligible to specify the other.

PA theorists also speak as if (the right) physiological events are not identical with but are nevertheless related in other ways to actions. It seemed to me that, *prima facie*, given that the body of the agent is functioning in a physiologically normal way — and is not subject to any pathology that might adversely affect the performance of the action — this physiological functioning is not relevant to the action, at least, not in the everyday social and practical contexts where ‘action’ talk belongs. For example, the idea that one can learn about Chef’s demonstration to the staff how to make bearnaise sauce by studying what is going on inside Chef’s body could well inspire scepticism. At least, this would not be an efficient way to learn the sauce recipe. The relationships PA theorists imply pertain are such as the physiological event being ‘an internal agent contributing to the action’, or the action being ‘the workings of an internal physiological mechanism’. These seemed to me to be figurative expressions. I had also been convinced by the writers I listed in

Chapter One on page 44 that talk of physiological events ‘causing’ actions could well be metaphorical also. I was more impressed with the idea of ‘causation’ working the other way — as, for example, in fitness training or in Hebb’s idea of actions causing synaptic changes, which in turn change neurophysiological events. Until we have a literally true account of the relation between actions and physiological events, then the relevance of the abbreviation findings must remain moot. See Appendix Three.

Four action-based accounts

In this middle part of the thesis, I review four accounts (two from Ryle and one each from Vygotsky and Hampshire) of thinking seen as a species of personal action. These three writers all regard thinking as something which people do, rather than something which the mind or brain does. Their accounts can be summarised as follows.

According to Ryle’s ‘adverbial’ theory, thinking is a matter of performing some ordinary action, but in a particular ‘thinking’ way. The paradigm of thinking being put forward here is ‘thinking what one is doing’. Actions such as telling a joke, doing the dishes, planting a tree, or whatever can be performed, for example, in a thoughtful or in a thoughtless or unthinking way. The main adverbial verb Ryle employs in this connection is *heed*, and perhaps the best formula for his adverbial theory is: thinking is *action performed heedfully*. Alternative adverbs, the applicability of which would also transform ‘doing X’ into ‘thinking about X’, include *mindfully*, *intelligently*, *carefully*, *deliberately*, *experimentally*, *tentatively*, etc. So, the story here is that you’ve got to be actively doing something in order to be thinking — and the thinking is in the quality of the doing.

Ryle’s ‘refraining’ theory construes thinking, especially imagining (again), as a special kind of *non-performance* of an action. To engage in pretend or make-believe X-ing, such as shadow-boxing, mime, etc., is — in some deliberate and systematic way — to abstain or refrain from actual X-ing. In much the same way, to visualise a mountain is in some sense to actively refrain from doing-and-perceiving just what one would be doing-and-perceiving were one actually seeing the mountain. Similarly for imagining hearing or singing a tune, and so on. The person staring at the last sausage roll is simultaneously thinking of grasping and consuming it and, effortfully albeit temporarily, refraining from grasping and consuming it. Ryle says here that the thinking just *is* the refraining.

The Russian psychologist Vygotsky's theory is that thinking derives from ordinary action by two steps — not just one as in the above theories. Thinking is *internalised social* action. That is, thinking is action which has first been 'socialised' and then 'internalised'. An action gets to be *socialised* by being taught to the child — by someone else — with the aid of speech, and by being made subject to control by speech. Speech is crucial to the socialising process. 'Social' action is, roughly, 'speech-mediated' action, that is, socially-learned cooperative activity which is controlled by speech. The second part of the transformation from action into thinking is *internalisation*. It occurs in two stages. First, the child becomes able, when by him- or herself, to perform actions which were previously performed only in the cooperative, speech-mediated way. Typically, when the child goes solo like this, at least at first, he or she 'thinks out loud' about what he or she is doing. The second phase of internalisation is when (while preparing to do something, for example) the child becomes able to perform the required action entirely 'internally', that is, in his or her mind. Thus, thinking. To recap. What the child masters first is overt social, speech-mediated action. The two stages of 'internalisation' which follow are first, solo overt performance with solo speech, and then solo internal performance with internal speech — or 'thinking'.

Hampshire suggests an account of what it is to feel emotion. To feel an emotion is to successfully suppress or inhibit behaviour which, if it were to be performed, would count as expressing that emotion. The ability to suppress or 'internalise' emotional behaviour is something which has to be learned. Once one is able to completely suppress emotional behaviour, one can then learn to 'release' vestiges of it — in dribs and drabs — and thus produce gestures, facial expressions, tones of voice, etc., to signal the emotion. Thus one might frown to show one is angry. The abilities to convey emotion by gestures, to feign emotion and to verbalise emotion all derive, according to Hampshire, from a basic human tendency to imitate others' actions. There is something essentially theatrical or demonstrative about emotional behaviour, even (or perhaps especially) when it is at its most sincere. It invites imitation, or at least empathy. Most of Hampshire's conclusions about people's emotional behaviour and its suppressed or internalised forms can be applied to expressive and demonstrative behaviour generally. Hampshire implies that, just as feeling emotion is the suppressing of emotional behaviour, so thinking is the suppressing of expressive and demonstrative behaviour of other kinds.

CHAPTER FOUR: Ryle's adverbial theory

In addition to his well-known dispositional (and 'mongrel-categorical') account of mental concepts in *The Concept of Mind* (1949), Ryle advanced two other accounts of thinking. These are the 'adverbial' theory and the 'refraining' theory. Both identify thinking as not itself a special kind of action but rather as a relatively simple function of, or meta-operation on, ordinary actions. I will deal with the adverbial theory in this chapter and the refraining theory in the next.

4.1 Doing X 'heedfully'

The adverbial theory is expounded in 1949, pp.135-49 and sporadically elsewhere, in *Collected Papers* Vol.2 (1971B), pp.465-496 and in *On Thinking* (1979), pp.17-49, 65-93. According to the adverbial theory, thinking is not an activity in its own right — rather, it is a matter of performing some ordinary activity in a distinctive 'thinking' way, or performing it 'thinkingly'. The paradigm of thinking being put forward is that of 'thinking what one is doing'. 'What one is doing' may be just about anything — anything, that is, which can be done either in a thinking or thoughtful manner or unthinkingly, thoughtlessly, etc. This is the model of thinking Ryle establishes, but his main aim is to explain what the classic thinker, *Le Penseur* is doing lost in thought on his rock. What *Le Penseur* is doing looks on the surface to be very quite different from cases of 'thinking what one is doing'. It seems different, say, from what the thinking tennis player intent on getting his shots right and outplaying his opponent is doing. And it seems different from what the absorbed conversationalist is doing, being thoughtful, inventive, amusing, polite. But Ryle's aim is to explain *Le Penseur*'s thinking on the same model, as also a case of thinking what one is doing. His aim is,

...to show that it is the notion of engaged thinking, like that of the tennis-player or the conversationalist, that is the basic notion, while that of disengaged thinking or reflecting, like that of *Le Penseur*, is supervenient. The notions of being pensive and having thoughts do not explain, but need to be explained via the notion of intelligently X-ing, where 'X' is not a verb of thinking (Ryle 1971B, p.471).

Ryle's main idea is that thinking is not any kind of *per se* action or activity such as would be expressed by an ordinary action verb. Thinking consists, rather, in a certain manner or style in which any (or almost any) action may be performed. As Bestor puts

it, according to Ryle, "...mentality and mental talk concern the special manner in which something is done..." (Bestor 1979, p.238). The gist of what Ryle is saying is that the key terms in our mentalist vocabulary — be they nouns, verbs or adjectives — can be paraphrased without loss of meaning into an adverbial form. It is the adverbial form, Ryle is claiming, which best exhibits the relation between doing and thinking.

According to Ryle, the conventional notion of 'thinking what one is doing' is of person P performing some overt action and paralleling this external performance with a separate internal performance, which is the thinking. Thus, making a chess move is doing one thing, and thinking about that move is doing another. Against this, Ryle insists that the thinking is not one of two 'components' in the performance. It is not an action (an 'internal' one) on a par with the moving of the chess piece. Rather, it is an adverbial quality *of* the move. The thinking is 'higher-order' than, or 'parasitic on' the *per se* action — in this case the chess move — but does not constitute a separate performance. Generally, the thinking agent "...conducts his operation efficiently, and to operate efficiently is not to perform two operations. It is to perform one operation in a certain manner or with a certain style or procedure..." (Ryle 1949, p.48). And,

To X, thinking what one is doing, is not to be doing both some X-ing and some separately do-able Y-ing; it is to be X-ing under a variety of qualifications, such as X-ing on purpose, with some tentativeness, some vigilance against known hazards, some perseverance and with at least a modicum of intended or unintended self-training. It is to X intentionally, experimentally, circumspectly and practisingly, and these by themselves are not additional things that he is doing or might be doing (Ryle 1979, p.24).

In 1949, pp.144-46 and 1971B, p.481 and 1979, p.18 and elsewhere, and in a personal communication quoted in Bestor 1979, pp.240-1, Ryle says that the concept of thinking is analogous to that of obeying. Obeying is not a *per se* doing in the way eating breakfast, for example, is. Like *thinking*, *obeying* is an 'adverbial' verb. [Ryle uses a variety of epithets to characterise the basic action which the adverbial verb qualifies — it is alternately a *per se* or 'proprietary' or 'host' or 'lower order' or *infra* action — but I shall employ only *per se* and *infra* for this purpose.] One can only obey an instruction by doing something else, X, which is the *infra* action. Because *obey* is an adverbial verb, rather than an ordinary *per se* action verb, it always needs to be specified, in conjunction with our use of the verb *obey*, just what action X has to be performed in order for the obeying to be achieved. Just as there is no action of obeying *per se*, so there is no

proprietary activity of thinking, Ryle claims. The lay person's proneness to construe thinking as a *per se* but 'non-physical' process or activity is, according to Ryle, the result of mistaking the 'logical grammar' of words like *obey* and *think*. Adverbial verbs are taken to be ordinary action verbs which refer to *per se* but non-physical actions. We mistake what 'logical category' obeying and thinking belong in.

Whereas the layperson thinks that thinking is a *per se* but inner or 'mental' activity, Ryle thinks it is a manner or quality of ordinary activities. It might be helpful at this point to contrast Ryle's view of thinking with both the layperson's assumption and the straightforwardly actional line I am developing. For the layperson, the underlying subject matter of mind talk is a substantive, that is, 'the mind' *qua* arena, agent or mechanism. For me, the underlying topic is an action, expressible by an ordinary action verb. And for Ryle, the underlying topic is a certain manner people have of performing (ordinary overt) actions. For Ryle, *thinking* has the logic of adverbs, rather than that of either substantives or verbs. Consider these three lists:

(a) *mind, minding, mindfully,*

(b) *consciousness, being conscious of, consciously,*

(c) *thought, thinking, thoughtfully.*

The layperson would choose *mind, consciousness* and *thought* as best reflecting the nature of the subject matter. I would choose *minding, being conscious of,* and *thinking*. But Ryle would select *mindfully, consciously* and *thoughtfully*.

To help specify what is distinctive about the 'thinking' manner of action-performance, Ryle looks to the adverbial forms of the verbs *mind* and *heed* in particular. So thinking is a matter of minding or heeding what one is doing. But he also floats (1949, p.136 and elsewhere) a raft of other adverbial verbs in which minding/heeding is implicit. These are such as *attending, scrutinising, enjoying, concentrating, pondering, searching, testing, debating, planning, fearing, calculating, anticipating, monitoring, investigating, demonstrating, imitating, referring to, imagining,* etc. According to Ryle, none of these verbs names a *per se* action or activity. Rather, they all register a particular heedful or thinking manner of performing some *infra* activity. Thus, for *attending* and *scrutinising* the *infra* activity being heedfully performed is presumably the observing of something; for *enjoying* it could be any of a number of pastimes, and so on. These verbs all readily, if not always idiomatically, adapt to an adverbial form.

The criteria for ascribing the distinctive 'minding' or 'heedful' manner to P's *in fra* performances are partly hypothetical-dispositional (relating to P's subsequent abilities and readinesses to do things) and partly episodic (relating to P's present behaviour and manner of behaviour). The adverbial verbs via which we attribute heed to P's performance reflect this duality. To think is to perform an operation "...in a certain manner or with a certain style or procedure, and the description of this *modus operandi* has to be in terms of such semi-dispositional, semi-episodic epithets as 'alert', 'careful', 'critical', 'ingenious', 'logical', etc." (Ryle 1949, p.48). A description of an agent as thinking what he is doing "...is just as much an explanatory report of an actual occurrence as a conditional prediction of further occurrences." (*ibid*, p.141). Accordingly, we establish whether P was listening, reading or driving carefully or attentively, partly by observing P's behaviour at the time and partly later on, and retrospectively, by testing what relevant new abilities, dispositions and readinesses to act P has acquired. Thus:

If we want to find out whether someone has been noticing what he has been reading, we are generally content to decide the question by cross-questioning him not long afterwards. If he cannot tell us anything about the gist or wording of the chapter, if he finds no fault with other passages which contradict the original chapter, or if he expresses surprise on being informed of something already mentioned in it, then, unless he has suffered concussion in the interim, or is now excited or sleepy, we are satisfied that he did not notice what he read. To notice what one reads entails being prepared to satisfy some such subsequent tests. In a similar way, certain kinds of accidents or near-accidents would satisfy us that the driver had not been taking care. To take care entails being prepared for certain sorts of emergencies (*ibid*, p.139).

In addition to this dispositional evidence, there is also episodic evidence to do with P's manner of performing the listening, reading or driving task. Take the driving case.

His readiness to cope with such emergencies would show itself in the operations he would perform, if they were to occur. But it also does show itself by the ways in which he converses and handles his controls even when nothing critical is taking place (*ibid*, p.48).

Although Ryle accepts these other, concurrent or 'episodic' manifestations of heed as a valid kind of evidence, which is often persuasive, he also expresses reservations.

Perhaps knitted brows, taciturnity and fixity of gaze may be evidence of intentness; but these can be simulated, or they can be purely habitual. In any case, in describing him as applying his mind to his task, we do not mean that this is how he looks and sounds while engaged in it; we should not withdraw a

statement to the effect that he had been concentrating merely on being told that his expressions and movements had been tranquil (*ibid*, pp.138-9).

That is, even if P is muttering to himself, evidence of heed is still only circumstantial. We cannot be sure. "He need not, though he may, be murmuring to himself comments, strictures, instructions, encouragements or diagnoses, though if he is doing this, it is again a proper question to ask whether or not he is thinking what he is murmuring" (*ibid*, p.143). By 1979 Ryle is more accepting of a criterial role for episodic evidence, especially in the kind of case where P is learning as he goes. If P's performance is in fact improving, and/or if he is appropriately admonishing himself for deficiencies in it, this is conclusive evidence. Thus,

...if someone is doing something on purpose and is exercising some ordinary care in doing it; and if, moreover, he is learning something, or at least being ready to learn something, however minimal, from his successes, failures, difficulties and facilities, so that he is in fact, if not in intention, tending to improve as he goes along, we shall not and should not hesitate to say that he is thinking what he is doing. He himself deplores some of his lapses, omissions, falterings and inadequacies in epistemic terms of abuse as mistakes, misestimates, muddles or at least stupidities (Ryle 1979, p.23).

4.2 Doing X 'self-teachingly'

Ryle is particularly interested in the kind of thinking where the appropriate adverbial qualifier is something like *self-teachingly*, *experimentally*, *tentatively*, *educatively*, *practisingly*, etc. — that is, the problem-solving kind of thinking. The main focus of *On Thinking*, and of the adverbial theory, is the thinking that *Le Penseur* is doing — and this is clearly a problem-solving kind of thinking. For the adverbial analysis to be applicable to what *Le Penseur* is doing, the problem-solving aspect would have to be expressible adverbially. *Le Penseur* would have to be performing some *infra* activity 'problem-solvingly', as it were. It is up to Ryle to show that what initially appears to be a *per se* activity — namely, problem-solving — can readily be explained in terms of P doing X 'self-educatively' or whatever. And this is the task Ryle undertakes in the 1979 (pp.65-78) chapter, *Thinking and Self-teaching*. Ryle does not restrict his characterisations of problem-solving thinking to single adverbs. English idiom makes this too limiting. Mainly, Ryle employs adverbial phrases. Anyway, the overall effect of the chapter is to establish a convincingly adverbial, or adverb-renewable, concept of *Le-Penseur*-type — problem-solving' — thinking, pondering, calculating, etc.

For Ryle, problem-solving consists in 'teaching oneself' how to cope in the problematic situation. It is a matter of self-education, of readying oneself intellectually. One's past experience as a pupil is brought to bear. "Thinking things out involves saying things to oneself, or to one's other companions, with an instructive intent" (Ryle 1949, p.313), but,

...*Le Penseur* is not, of course, engaged in privily teaching himself whatever it is that he wants to know — he cannot teach it because he does not know it — but ...he is experimentally plying himself with might-be cues, clues, reminders, snubs, exercises, spurs and the like, of types that are sometimes or often employed unexperimentally by teachers who are teaching what they do know. ...Anyhow, from the outset it seems plausible to say that *Le Penseur* could always have been saved from his present labours of pondering by getting someone else — the Angel Gabriel, say — to teach him the answer. Thinking is trying to make up for a gap in one's education (Ryle 1979, p.67).

The thinker's ignorance is far from total. For Ryle, thinking thrives in the border area between competence and incompetence. Thinking is an exercise of one's general competence in an area of activity, and yet it is brought into play when that competence is challenged, by changed circumstances, unforeseen obstacles, etc. Thinking is a display of both competence and ignorance. It is an attempt to adapt already-established competence to new exigencies, in new situations. Thinking is not simply a matter of applying rote-learned information. One's past experience as a pupil to some extent prepares one to be a teacher, and to be one's own teacher. Often it is previously acquired heuristic *techniques* which the thinker must now apply, to new problems, and possibly in new ways. Thus,

...when the pupil does make his own applications and misapplications in new tasks of what his teacher has told or exhibited, then he certainly qualifies as thinking. For he is now applying off his own bat a recently learned operation-pattern to a new subject or situation; he is today innovating according to a formerly set precedent. ...having learned, say, to spell does not reduce to having become the passive recipient and subsequent automatic regurgitator of some dictated letter-sequences. It is to have become able and ready to attempt new applications of acquired patterns, methods, precedents and examples. The young rock climber is first learning to climb when he ceases to tread *where* his teacher trod and begins to try to tread over new slopes *in the ways in which* his teacher treads (*ibid*, pp.70-71).

...*Le Penseur*, is tentatively, experimentally, suspiciously, and quite likely despondently trying out on himself expedients, routines, procedures, exercises,

curbs and dodges of types which teachers do employ, not always successfully, when they want to teach things that they do know to pupils who do not. ...Naturally my *Penseur* knows what it is like to be taught things that he does not know by teachers who do; and he knows what it is or would be like himself to be the teacher of some things he knows to others who do not. So now he experimentally applies to himself, just in case they may turn out to be effective, operations of the types that are often or sometimes employed effectively by live teachers upon live pupils (*ibid*, pp.74-5).

Ryle suggests "We might parody Plato and say that in thinking the soul is not just conversing or debating with herself; she is experimentally conveying could-be lessons to herself" (*ibid*, p.77). He concludes: "As A's well-charted teaching can occasionally dispel B's ignorance, so my uncharted thinking can occasionally dispel my own ignorance. Thinking is trying to better one's instructions" (*ibid*, p.78).

The form of the adverbial analysis is now clear. The *per se* X-ing which *Le Penseur* is engaged in is the trying out of certain moves, routines, gambits, etc., rehearsing possible descriptions, and so on. The 'thinking' or 'pondering' part is explained by the fact that this *infra*-level X-ing is being performed tentatively, experimentally, self-educatively, preparingly, practisingly, heuristically, etc.

In *On Thinking*, Ryle has thus augmented the simple 'heedfully doing' criterion for thinking first mooted in *The Concept of Mind*. He has added a requirement for self-education and initiative. By adding this requirement he is associating thinking especially with solo thinking, or 'thinking for oneself', rather than, say, with the kind of thought that goes into following what someone else (such as a teacher) is saying. If the sole criterion for thinking were to be degree of heed, then P's response as a pupil in actual teaching sessions would have to epitomise thinking. We must require to attend to and concentrate on what we are doing when we are first learning to do it. Factors in the educative situation intensify heed. Novelty arouses natural curiosity, which enhances attention. The concerting of attention with another person (the teacher) also enhances it. Arguably, the educative situation is the primary source of heed — the original 'heed factory' — and there may be a developmental link, if not a logical one, between heeding things and being shown things. However, although what the pupil and teacher are doing is undoubtedly one kind of exercise of thinking, our *paradigm* of thinking is not the following (or leading) that occurs in teaching situations. The popular notion of thinking is that it is a solo, if not a solitary affair, and not a social one. Ryle is no doubt justified in adding this

self-educative aspect to the general 'heedfully' qualifier. Thinking-for-oneself is a large part, and arguably an essential part, of our concept of thinking. But it does introduce a new notion. To account for the solo, self-educative, off-one's-own-bat, *ad lib*, un-slavish, thinking-for-oneself aspect of thinking, we have to go beyond both the idea of heed and the idea of teaching. Thinking is a significant modification of, or further-sophistication of, the original educative process. Self-teaching is 'higher-order than' being taught by, or teaching, someone else.

The adverbial format easily copes with the new 'solo' requirement. All we have to do is to add — to *heedfully*, etc. — some new adverbs such as *independently*, *creatively*, *freely*, *off-one's-own-battingly*, etc., and Ryle's own *self-teachingly*. A combination of adverbs would look a little unwieldy, perhaps, but couched in adverbial phrases, Ryle's formulae read well enough to the literary as well as the logical ear — as in a passage I have already quoted.

To X, thinking what one is doing, is not to be doing both some X-ing and some separately do-able Y-ing; it is to be X-ing under a variety of qualifications, such as X-ing on purpose, with some tentativeness, some vigilance against known hazards, some perseverance and with at least a modicum of intended or unintended self-training. It is to X intentionally, experimentally, circumspectly and practisingly, and these by themselves are not additional things that he is doing or might be doing (*ibid*, p.24).

Ryle's claim that thinking is merely adverbial to X-ing, and not a *per se* action in its own right is challenged by some learning scenarios. In some cases, while P is being taught X-ing, actual attempts at X-ing have to be temporarily abandoned, so that a necessary lesson can intervene. The lesson may take the form not of a new attempt to X but of a purely verbal interlude. Or there might be time out from X-ing just for thinking, or re-thinking. In these cases, heed-fostering procedures do seem initially to be add-ons, or ancillaries, separate from the X-ing and brought in to assist it. For example, you want to teach little P that it helps, when trying not to fall off a bicycle, if one has a certain momentum up. So you tell him to get off the bike and you push it away from you once slowly (and it quickly wobbles and falls over) and then you do it more vigorously, and the bike stays vertical for an impressive period. Or, if you are teaching him chess, you stop him as he is about to make a move and acquaint him with a very useful rule of thumb about pawns. In both cases you have to curtail the X-ing — the bike-riding or the chess

— before the lesson can take place. Clearly, the heed-fostering and the thinking is not adverbial on the original X-ing, or not directly anyway. However, Ryle can comfortably admit this. In these cases it is not bike-riding or chess-playing that P is doing attentively and self-educatively, but something else — namely, watching the bicycle-pushing exercise or listening to the rule of thumb. And although P's attention to the lessons is not attention to present bike-riding or chess, the lessons are designed to subsequently enable P to attend more closely and intelligently to bike-riding or chess. Indirectly the lessons *are* ways of attending to the original X-ings, the bike-riding and the chess.

With increasing competence, thinking eventually ceases even in appearance to be any kind of add-on or ancillary to the performance. It becomes, as it were, absorbed into the performance itself. As we watch the chess master at play, talk of the adverbial character of *thinking*, of thought as a quality informing action, seems just right. The intelligence is *in* the behaviour. But even so, even here where Ryle's account seems to sit so comfortably, it could plausibly be challenged. It could be said that expert action, just because it exemplifies full competence, is not 'thinking' at all. It could be said that expertise obviates thinking. Perhaps what the Zen archer aims at really is translatable as '*no mind*'. On this view, *thinking* would be a catalyst, which has a temporary role between incompetence and competence. It would not be, as Ryle seems to want it, a quality of action present in an expert's performance but absent from a tyro's untutored bumbles. There are good arguments for either view. The common wisdom is equivocal here. Two people might say, respectively, "she was so good, she didn't have to think at all, she knew instinctively just what to do" and "a lot of thought went into it, it was a very considered performance" — and be in agreement. Anyway, at least, there is nothing implausible in Ryle's view.

Ryle speaks as if heed concepts apply only, or apply primarily, to actions. There are two areas of interest here. Some of the examples which Ryle gives of actions performed without heed, without 'mind', seem hardly to qualify as 'actions' at all. In 1949, pp.135 he cites babbling and twitching and, on p.146, blinking, the habit of sleeping on one's right side, saying (aloud or in one's head) *Tweedledee* whenever one hears *Tweedledum*, and learning by rote. And yet in 1979 he is clearly talking about actions; he mentions, "...typing or climbing, absentmindedly or mechanically, and therefore without any care" (1979, p.24) and things one might do "...when vacant, frantic, dazed, sleepwalking or

when concentrating on some extraneous matter” (*ibid.*, p.26). Although we do speak colloquially of ‘acting without thinking’, this phrase need not be taken literally. If P makes some movement entirely heedlessly, one might well be reluctant to call it an ‘action’ of P’s. Intuitively, some minimum of heed is required for the term *action* to be applicable. If this is agreed, Ryle would have to concede there are no entirely heedless actions. This would have the difficulty of including an element of thinking, or at least of heed, in the very concept of action — which would in turn cast doubt on the non-circularity of any action-based account of thinking. I will return to this point later.

The second area of interest is that, by associating heed primarily with the heeding of *action*, Ryle seems to be ignoring the fact that we commonly speak of heeding — minding, thinking-about, attending-to, etc. — not just actions but, more importantly, things in the world. In fact, both lay folk and philosophers would usually assume that heed applies primarily to *things*. It would probably also be assumed that, if heeding does apply to actions, then it applies to them only in virtue of their status (assuming they have one) as ‘things’. Thus, if Ryle does intend heed and thinking to apply primarily to actions — and the whole thrust of the adverbial account is that he does — then he requires, in deference to our commonsense conviction that we also heed objects, to explain the heeding of objects in terms of the heeding of actions. However, this might not be such a difficult task. Attention to things — checking the oil pressure or the roast, for example — can nearly always be convincingly viewed as part of some current activity, some X-ing, such as maintaining one’s vehicle or cooking the dinner. Attention directed to a thing is thus neither more nor less than a manifestation of P’s heedful (and self-readying, etc.) engagement in some activity or other.

4.3 What ‘*infra*’ action is *Le Penseur* performing?

The most important problem for the adverbial theory of thinking is one that Ryle himself anticipates, and attempts to answer. Most people would say that, in the case of *Le Penseur*, while there certainly is thinking, there is no *infra* X-ing going on. *Le Penseur* is to all appearances *not* doing anything, other than thinking. It might be said that this is what is so distinctive, and conspicuous, about thinking as such — the immobility of the thinker, the fact that he or she is, apparently, actively doing *nothing*. For most people, this is why Robin’s *Le Penseur*, rooted to his rock and ‘miles away’, illustrates thinking so well. What can Ryle say here? What, if any, is the *infra* action which *Le Penseur* is

performing thinkingly, self-educatively, etc.? What *Le Penseur* is engaged in looks very much like an ordinary *per se* action in itself, with no *infra* X-ings going on at all. And Ryle admits that this is what it looks like:

...I have said nothing about what *Le Penseur* is engaged in, that is, about the person who is engaged in the thinking of thoughts. He is surely so meditating, reflecting, pondering or thinking that the report 'he is thinking' is *not* an unfinished adverbial report. ...The notion of thinking what one is doing does not amount to any of the notions of for example meditating, reflecting, examining, deliberating, pondering or calculating. The telephone interrupts the typist's attentive and careful typing; but it interrupts *Le Penseur*'s attentive and careful thinking (Ryle 1979, p.24).

The obvious thing about the thinker, as compared with the absorbed tennis-player, say, is that the thinker is effectively immobile, apparently doing nothing. Thus:

Both are absorbed, but the tennis player's absorption is in his and his opponent's momentary playing, while *Le Penseur*'s absorption is in something detached from the rock-squatting that he is momentarily doing, and the rain-drops that are momentarily wetting him. His quick and appropriate responses to what occurs around him on the tennis-court show that the player is concentrating. His non-responses to what occurs around him show, or help to show, that *Le Penseur* is concentrating. There are things, like his strokes, eye-movements, foot-movements, etc., which the tennis-player is here and now doing that he could not do, as he does them, without concentrating. They are well-timed or mistimed, concerted, wary, etc. Yet it seems that *Le Penseur* is doing nothing, nothing that can be characterised as well-timed or mistimed, concerted, wary or, generally, more or less attentive, except just tackling his problem. If he is visibly doing anything, like sitting still, breathing or scratching his cheek, he is not giving his mind to doing these things. He is detached, disengaged, 'absent' from all such doings (Ryle 1971B, p.466).

Le Penseur is 'tackling his problem', but Ryle is not putting problem-tackling forward as a candidate for the *infra* activity. Problem-tackling is just another name for the pondering or thinking going on. The task is to find some *other* activity — something being performed ponderingly, thinkingly, problem-tacklingly, etc. The now-tempting option of having thinking as itself a *per se* action is no longer open to Ryle. He is committed to the adverbial story and, in order for the adverbial story to apply, there needs to be some *infra*-level activity which *Le Penseur* is engaged in intently, concentratedly or mindfully — but which he might have been engaged in idly, unthinkingly or absent-mindedly. Ryle has to identify plausible *infra* activity in reflective thinking. The problem

is that "...we have the adverbial verbs that we need, but we seem to be at a loss for the desiderated non-adverbial or autonomous verbs" (Ryle 1979, p.26). Or,

...we now seem to be stumped to nominate any ...autonomous X-ing or X-ings such that *Le Penseur* must be X-ing more or less exploratively, tentatively, pertinaciously, pugnaciously, scrupulously or cannily. What is the X-ing that *Le Penseur* is non-absent-mindedly, non-somnolently or non-deliriously doing which if done absent-mindedly or somnolently or deliriously would not then amount to pondering, calculating, etc.? (Ryle 1971B, p.473).

But Ryle suggests some possibilities. Perhaps *Le Penseur* is composing a tune. If so, he could well be humming notes, out loud or *sotto voce* or 'in his head' — and this humming would be the *per se* activity being performed intently, carefully, etc. Or it is a piece of translating, or excuse-formulating or poem-composing that *Le Penseur* is undertaking, and his audible or *sotto voce* or intra cranial speech is what is intently, carefully performed.

...if *Le Penseur* is composing not music but an after-dinner speech, then, whether or not he happens also to be absent-mindedly humming snatches of music, he must be producing, mostly from his own resources, candidate words, phrases and sentences. But he is free to produce them aloud or *sotto voce* or in his head; or in ink on paper; or in 'mental' ink on 'mental' paper... (*ibid*, p.477).

Here, the *infra* activity is the muttering or jotting-down, or imagining, of words and phrases. This is what is being done intently, experimentally, etc. Or,

For example, if *Le Penseur* is trying to compose a melody, then he is very likely to be humming notes and sequences of notes, aloud, under his breath or in his head. ...Or if *Le Penseur* is trying to render an English poem into French... he is likely instead to be murmuring under his breath or in his head, French words and phrases... Or he might be trying to find out how many letters there are in the Greek alphabet, in which case he is likely to be muttering *sotto voce* or in his head the sequence of Greek letter-names 'alpha', 'beta', 'gamma', etc. ...There really are, in these cases, some positive, concrete, *per se*, non-adverbial things that *Le Penseur* is doing, perhaps even audibly doing, in composing, translating and counting... (Ryle 1979, p.26).

Here a greater range of possible *infra* activity is mooted. There is the uttering or muttering of words — done translatingly or enumeratively (as well as intently, self-readily, etc.). And there is the humming or singing (aloud, under the breath or in the head) of musical notes and snatches — which is to be done composingly, experimentally (as well as heedfully, self-teachingly, etc.). Again:

It does not matter whether *Le Penseur* actually draws his diagrams on paper, or visualises them as so drawn; and it does not matter whether in his quasi-posing his on appro Socratic questions to himself he speaks these aloud, mutters them under his breath, or only As-If mutters them on his mind's tongue (*ibid*, pp. 77-78).

Here, the drawing or visualising of diagrams is the suggested *infra*-doing. And Ryle makes it clear that, whatever the *infra* activity consists of, it has to be conducted in the 'thinking' manner. Some or other 'adverbs of thinking' must apply to the performance.

[*Le Penseur*'s thinking] ...is not *just* saying things to himself... It is saying things to himself with a special governing purpose, with a specially directed vigilance... and so on. Thinking then, can be saying-things-tentatively-to-oneself with the special heuristic intention of trying, by saying them, to open one's own eyes, to consolidate one's own grasp, or to get oneself out of a rut... (*ibid*, p.92).

And finally, a considerable variety of *infra* activity will serve as evidence that the chess-player is thinking:

Take a case of pondering. A chess-player may be considering what move to make. Perhaps he tentatively moves his queen to a new square, keeping his fingers on her; then he takes her back, and tries an alternative move, and retracts that. Or perhaps he sits with his hands in his pockets, and merely switches his gaze from one square to another, and back again. Or perhaps he shuts his eyes and visualises the board as it would look if he made this move, or that move. Or perhaps he is saying to himself, in Polish or English, 'If I move her to square so and so, she will be threatened by his bishop; but if I move her to square such-and-such she will be boxed in by her own pawns'. Or perhaps there occurs a patchwork of bits and pieces of incidents, of all these and other sorts (Ryle 1971B, p.267).

Consider all these overt and covert doings Ryle is pointing to — that is, all such as uttered, muttered and jotted-down words; scrawled part-diagrams; hummings, sub-hummings, chord-fingerings; aborted chess-piece-movings, feints thereat and across-the-board glancings; plus in-the-head versions of all the above, and visualisings. We can, for the moment, label all these as 'candidate-*infras*'. Clearly, Ryle thinks they will fit the bill. They are all possible "...positive, concrete, *per se*, non-adverbial things that *Le Penseur* is doing". Thinking is a matter of performing actions of these sorts "with a specially directed vigilance" and in the special self-educative way. However, we can legitimately doubt whether these candidate-*infras* really do fit the bill.

4.4 Are Ryle's candidate *infras* satisfactory?

Let us temporarily separate the candidate-*infras* into two groups: the overt (observable, audible, etc.) ones, and the covert (in-the-head) versions. And, to begin with, let us consider just the case where the thinker is doing overt things like muttering, humming, sketching, etc. The first thing to be said is that the occurrence of such overt actions does not mean it is not thinking that is going on. Thinking out loud is still thinking. We can agree with Ryle that:

The sealing of the lips is no part of the definition of thinking. A man may think aloud or half under his breath; he may think silently, yet with lip-movements conspicuous enough to be read by a lip reader; or he may, as most of us have done since nursery-days, think in silence and with motionless lips. The differences are differences of social and personal convenience, of celerity and of facility (Ryle 1949, p.34).

And we can agree that:

The child, told to think again, is not disobeying if he mutters audibly, 'Seven times seven is forty-nine, nine and carry four; seven times two is fourteen; four plus four is eight; one hundred and eighty-nine'. The architect is thinking out his design for his war-memorial while studiously arranging and re-arranging toy bricks on the carpet; and the composer is not taking a holiday from the labours of composition while his fingers move over the keys, so long as they move in a burdened, searching, tentative and critical manner (Ryle 1971B, p.259).

Certainly, the overt candidate-*infras* mentioned above (and on the preceding two pages) are not incompatible with thinking. In fact, they are clearly related, in some way, to the thinking that is going on. But in what way? Plausibly, they are some kind of 'by-product' of the thinking, or even a 'manifestation' of it. And we could say that their occurrence is at least circumstantial evidence that thinking is going on. But Ryle needs considerably more than this. He needs these candidate-*infras* to be integral in the thinking; he needs them to be what the thinking is *about*. They have to be 'the main event', as it were — what the thinker is primarily, and heedfully and self-educatively, *doing*. For at least two good reasons, the kinds of overt candidate-*infras* which Ryle cites are not satisfactory candidates for this 'main event' or *infra* role in thinking.

The first good reason is that they are not performed heedfully. The ponderer's mutterings if judged as speech, or the would-be composer's hummings or fingerings if judged as music, would be marked right down. They are very poor efforts — meandering,

perfunctory, fragmentary, incoherent, almost inaudible often. And, far from their being what the thinker is concentrating on doing, he or she may well be unaware, or only half-aware, of doing them. A couple of pages back, I quoted Ryle as saying: "If he is visibly doing anything, like sitting still, breathing or scratching his cheek, he is not giving his mind to doing these things. He is detached, disengaged, 'absent' from all such doings" (*ibid*, p.466). Agreed, here are some things that the thinker might be overtly doing which are related only incidentally to the thinking. No-one would think of these as being what the thinker is heedfully and self-educatively doing. But it might well be said that the kinds of overt candidate-*infras* which Ryle has nominated are in much the same boat. Breathing is admittedly different. It does seem totally irrelevant to the thinking. But sitting still and cheek-scratching — and one could add puzzled frowning — seem to have just the same kind of relevance to the thinking that Ryle's overt candidate-*infras* have. They are epiphenomena of the thinking performance rather than the topic or focus of it, they are peripheral rather than integral.

At least, if Ryle is giving the mutterings, etc., 'main event' status, then he must provide clear differentia between them and the cheek-scratchings and so on that he concedes are mere epiphenomena. But he does not provide clear criteria for identifying integral overts as opposed to peripheral ones. Indeed, he makes it extremely difficult for the reader to distinguish the two categories. Included in the quotations illustrating what Ryle puts up as candidate-*infras* is one about a chess-player who, whilst pondering a move, tentatively moves a piece, switches his gaze from one square to another, shuts his eyes and visualises moves, and says things to himself in Polish or English. Such doings are exactly the same kinds of doings he mentions in the other quotes — muttering, humming, visualising, arranging and re-arranging toy bricks, etc. And yet the quote about the chess-player continues on as follows:

But when invited to tell what he had been doing, he will construe the invitation not as a request to give a chronicle of these details [the various overt candidate-*infras*] but as a request to tell us what his predicament was... It is not that he has no literal way of describing the details; he just wants to tell us what matters and not to tell us what does not matter, i.e., to talk chess, and to spare us and himself pointless reminiscences (Ryle 1971B, p.267).

There is a second good reason why the overt candidate-*infras* which Ryle proposes cannot be the *infra*, task activity which *Le Penseur* is heedfully and self-educatively performing. The said overt candidate-*infras* are dispensable. The thinking can get along

just as well if the overt candidate-*infras* are not performed at all — and *Le Penseur* is utterly silent and immobile. If the overt candidate-*infras* were in fact what the thinker is heedfully and self-educatively performing, then non-performance of them would certainly curtail the thinking. But this is not so. The very same thinking can occur just as well without them. To preserve his adverbial account in the face of this rather obvious but telling objection, and to enable the nominated candidate-*infras* to play the role he has given them, Ryle is obliged to opt for a desperate remedy. He has to say — and he clearly in the relevant quotations does say — that, in the case where *Le Penseur* is silent and immobile, the candidate-*infras* are nevertheless still being performed. Only, they are now being performed in the thinker's head. In the five initial quotations, the phrase *in his head* occurs at least four times, the word *visualises* occurs twice, conceits such as 'the producing of words in mental ink on mental paper' and 'as-if mutterings on the mind's tongue' are contrived, and the expression *saying things to himself* is employed. Ryle clearly states that "It does not matter whether" the thinker performs the overt candidate-*infras* or the covert in-the-head or 'mental' versions. Either kind can play the *infra*-activity role.

Ryle's free use of the phrase *in his head* and his use of the expressions *in mental ink* and *on his mind's tongue* suggest he is making light of his appeal to 'the mental' and to 'inner doings'. But the fact is, he is having to *rely* on the doing-things-in-the-head idiom. There is no other way he can identify an *infra* activity for the silent and immobile *Penseur* to be engaged in 'thinkingly'. But readers cannot be satisfied with an explanation of thinking as, say, 'inner speech' done heedfully and self-educatively, if we have no prior explanation of what the expression *inner speech* literally refers to. Early in his investigations of thinking, Ryle clearly distanced himself from the in-the-head idiom. He said then that it is only a figure of speech:

When I do mental arithmetic, I am likely to say that I have the numbers with which I have been working 'in my head' and not on paper; and if I have been listening to a catchy air or a verbal jingle, I am likely to describe myself later on as still having the tune or jingle 'running in my head'. It is 'in my head' that I go over the Kings of England, solve anagrams and compose limericks. Why is this felt to be an appropriate and expressive metaphor? For a metaphor it certainly is. No one thinks that when a tune is running in my head, a surgeon could unearth a little orchestra inside my skull or that a doctor by applying a stethoscope to my cranium, could hear a muffled tune... (Ryle 1949, pp.36-7).

Yet at other points in Ryle 1949, such as his reference to 'silent babblings' on p.58, he does seem to rely on the metaphors. Hampshire comments that "Surely *silent babblings* (cf. *silent colloquies* on p.182) is metaphorical in Professor Ryle's sense if anything is... Yet such phrases (e.g., *silent monologues*) enter into his analysis of thinking" (Hampshire 1950, note to p.35). And the 'in the head' metaphor is firmly embedded in Ryle's explanation of thinking in the 1979 account.

Ryle argues in the passage immediately above, and elsewhere, that speaking 'in one's head' is not actually speaking at all. It is only metaphorically 'speaking'. And the same thing goes, *mutatis mutandis*, for inner music-making, inner diagram-sketching, inner chess-piece-moving, or whatever. So Ryle cannot say that 'it does not matter whether' one performs the candidate-*infra* action — such as saying things, overtly or in the head — as if there are two kinds of saying here. Saying things in the head is not a kind of saying at all. The 'doing in the head' metaphor does refer to something, of course, and the possibility remains that, although 'saying things in one's head' is not a kind of saying, it is still an action of some other kind. And it could be that this unnamed action is a plausible candidate *infra* action for *Le Penseur* to be heedfully and self-educatively performing. But Ryle has not, at least not in the context of the adverbial theory, told us what the doing-in-the-head metaphor really refers to. So he cannot put up doings-in-the-head as candidate X-ings. On the other hand, the case where *Le Penseur* is silent and immobile is certainly not an aberrant case of thinking. Rodin at least thought of it as a paradigm. If he stays with the adverbial theory, Ryle is committed to saying that, despite his silence and immobility, *Le Penseur*, is still doing some *infra* X-ing — and he is doing it heedfully and so on. But if he can only refer to the supposed X-ing by way of metaphor, and he makes no serious attempt to paraphrase the metaphor in literal terms, then we should not be convinced that there is in fact any X-ing going on at all. There might be. But Ryle has not shown us that there is. He has given us no good reason to think that the case of the silent and immobile *Penseur* conforms to the 'thinking what one is doing' model, or that *Le Penseur* is engaged heedfully and self-educatively in some activity other than thinking. Our initial impression, and what we would normally say, is that *Le Penseur* is doing nothing but thinking. And we would say that *thinking* is a *per se* action verb here. Ryle has not shown this initial impression to be misleading.

Our impression is that, despite his silence and immobility, *Le Penseur* is doing something. And when we try to say just what kind of something it is that he is doing, what

kind of covert performance he is engaged in, we have recourse to the doing-in-the-head metaphor. Suppose we forego the metaphor for the time being. Is the idea of covert activity (of some unspecified kind) essential to, or inherent in, the concept of thinking? Ryle says not, and it is his adverbial theory and the 'thinking what one is doing' model, that makes him say this. For Ryle, heedful and self-educative doings *are* thinking. But much thinking, even paradigm-case thinking, is of the *Penseur* type, and in this type of thinking the thinker is usually, evidently, doing nothing other than thinking. Where the thinker is doing overt things like muttering and sketching, either these overt doings are dispensable (and so not part of the thinking) or the person is not 'just thinking', but is muttering or sketching — albeit in a heedful and self-educative way. These facts tend to suggest, *contra* Ryle, that the idea of covert activity is logically inherent in the concept of thinking.

Are heed and self-teaching necessary components in thinking? Whether or not covert activity is a necessary ingredient in thinking, it remains to be queried whether the adverbial features which Ryle ascribes to thinking are also necessary. Does everything that we would normally call 'thinking' necessarily involve — in whatever way — heed and self-teaching? That is, are heed and self-teaching essential in thinking? Might not this kind of covert doing that 'inner doing' is a metaphor for be enough on its own to qualify as thinking? Ryle clearly thinks not:

Just as undisciplined and heedless saying is not thinking but babbling, so, whatever shadow-operations may be postulated as occurring in the other place, these too might go on there in an undisciplined and heedless manner; and then they in their turn would not be thinking" (Ryle 1949, p.330).

Ryle admits that we engage in "...some purposeless verbal doodling, under our breaths or in our heads. We do this when falling asleep, but we do a good deal of it also when wide awake" (Ryle 1979, p.40). That is, we sometimes "...say' things to ourselves doodlingly, without attention, intention, trying, care, relevance, point, interest, success or failure" (*ibid*, p.41). But he thinks these idlings are not describable as thinking — only perhaps as 'hangovers' from thinking.

Nevertheless, there are still some grounds for thinking that the 'shadow-operations', whatever they may be, are themselves sufficient. For example, the expressions *idly thinking that* and *absent-mindedly thinking that*, far from being incomprehensible, are often apt. Ryle himself says that:

The title 'thinking' is not reserved for the labours of trying to decide things. I am thinking if I am going over, in my head, the fortunes of the heroine of a novel that I have been reading; or if I am re-savouring a well turned argument, though I have long since accepted its conclusion. Or if I am drifting in idle reverie from one topic to another. Only some thinking is excogitation; only some thinking is work... (Ryle 1971B, p.258).

What are we to decide here? Is *idly thinking* literally appropriate in these cases, or is it just a figure of speech? *Absent-mindedly thinking*, at least, has a distinctly oxymoronic look. My inclination is to say these expressions *are* figurative, and to agree with Ryle that the heeding and self-educative components *are* essential ingredients in thinking. At the very least, Ryle's adverbial account, and the numerous examples he cites in support of it, have shown that heed and self-teaching are of the essence in 'thinking what one is doing'.

In evaluating Ryle's adverbial account, his elucidation of the heed-applying and self-educative nature of 'thinking what one is doing' is a significant achievement — even if he has not managed to apply the 'thinking what one is doing' model to thinking *simpliciter*. Given that both 'covert doing' and 'heed-and-self-education' are essential components in thinking, Ryle's difficulties have exposed the importance of the question of how they are related. His adverbial theory has the heed-and-self-education factor as an adverbial modifier of the covert doings. I have argued that, if the inner doings are anything like the overt candidate-*infras* (the overt mutterings, *sotto voce* hummings, graphic doodlings, etc.) discussed earlier, then they cannot be what *Le Penseur* is intently and self-instructively performing. But if the heed and self-instruction are not related to the 'covert doings' in Ryle's adverbial way, that is, with the former an adverbial styling of the latter, then how are they related?

CHAPTER FIVE: *Ryle's refraining theory*

In *The Concept of Mind* and in *On Thinking*, Ryle proposes yet another way of looking at thinking — particularly, in this case, imagining. He describes imagining as a kind of 'refraining from doing', and he analyses refraining as a negative 'action'. As with his adverbial theory, the negative 'action' account is intended to obviate both the metaphor of events occurring in an ethereal intracranial arena, and physiological abbreviation models of thinking. That is, as well as attacking the Cartesian assumption of thinking as necessarily an inner process, Ryle takes care, especially in *On Thinking*, to distance himself also from Watson's behaviourist view of thinking as subtle movements of the larynx muscles. The refraining, or negative 'action', theory is that imagining is neither internalised action nor abbreviated action, but rather a negative 'action', that is, a kind of refraining from action or 'non-action'.

In the Imagining chapter in *The Concept of Mind*, Ryle describes sparring or 'mock-fighting' as "...a series of calculated omissions to fight" (Ryle 1949, p.261), and as "...going through some of the motions of fighting in a hypothetical manner" (*ibid.*, p.265). This mix of 'refraining from doing' and 'doing hypothetically' is also used to characterise imagining which involves no overt activity. I shall concentrate in this section on the 'refraining' rather than the 'hypothetical doing' part. Ryle also uses verbs other than *refrain* in this connection — verbs such as *not-do*, *abstain*, *omit to do*, *forbear* — but for convenience, I shall make *refrain* do duty for them all. Ryle says that

...fancying one is humming a known tune involves 'making ready' for the notes due to be hummed, were the tune actually being hummed. It is to make ready for those notes in a hypothetical manner. It is not humming very, very quietly, but rather it is *deliberately not doing* those pieces of humming which would be due, if one were not trying to keep the peace. We might say that imagining oneself talking or humming is a *series of abstentions* from producing the noises which would be the due words or notes to produce, if one were talking or humming aloud. That is why such operations are impenetrably secret; not that the words or notes are being produced in a hermetic cell, but that the *operations consist of abstentions* from producing them. That, too, is why learning to fancy one is talking or humming comes later than learning to talk or hum. Silent soliloquy is a flow of *pregnant non-sayings*. *Refraining from saying things*, of course, entails both knowing what one would have said and how one would have said it (Ryle 1949, pp.269-70, my italics.).

Visualising Mt Helvellyn is also to be equated, somehow, with specific 'non-seeings of' or 'failures to see' Helvellyn.

It is one utilisation among others of the knowledge of how Helvellyn should look ... The expectations which are fulfilled in the recognition at sight of Helvellyn are not indeed fulfilled in picturing it, but the picturing of it is something like a rehearsal of getting them fulfilled. So far from picturing involving the having of faint sensations, or wraiths of sensations, it involves missing just what one would be due to get, if one were seeing the mountain (*ibid.*, p.270).

5.1 *Is refraining itself an action?*

Ryle clearly wants imagining to be a type of refraining. But what is it to 'refrain' from an action? And what is distinctive about imagining-type refraining? Ryle equivocates about whether imagining-type refraining is itself an action. On the one hand, he says in the quotes above that the imagining/refraining involves 'making ready', it is 'deliberate', it consists of 'operations', it is a 'utilisation' and it is 'something like a rehearsal'. These all point to its being an action of some kind. And, in the following passage, imagining is implied to involve difficulty and effort, which are also clear marks of action: "Very likely, too, people who imagine themselves producing noises tend to activate slightly those muscles which they would be activating fully, if they were singing or talking aloud, since complete abstention is harder than partial abstention" (*ibid.*). That is, the more thorough the abstaining, the greater the effort required. Thus it seems that Ryle thinks imagining-type refraining is definitely a proper *action*.

On the other hand, Ryle frequently speaks, as in the italicised phrases in the first quotation above, of refrainings as not 'doings' at all, but non-doings. He is implying in these phrases that complete abstention from an action — perhaps like the kind of 'totally abbreviated' action I discussed earlier — is not a species of action at all, but a species of nonaction. Which of the alternatives is Ryle most interested in? Does he think that imagining-type refraining is an action or not?

In the "Negative 'Actions'" chapter in *On Thinking* Ryle attempts to settle the broader question, of whether refrainings in general — not just imaginings but all kinds of refraining, abstaining, omitting, averting, resisting doing, avoiding, waiving, desisting from, etc — are actions or not. He begins by distinguishing what he calls *nullifying actions* from *negative 'actions'*. Nullifying actions are "...actions that we perform in

order that things may be *not* the case which otherwise would or might be the case" (1979, p.105). They are 'positive and witnessable actions' intended to ensure that some state of affairs does not obtain. Contrasted with these, are a class of 'non-actions' which "...consist in the agent's intentional *non*-performance of some specifiable actions" (*ibid*). Ryle calls these "negative 'actions'", and he is careful throughout the chapter to put scare quotes around the word *actions*, when it comes after *negative*. The force of this is to explicitly exclude these negative 'actions' from the class of actions — much as a decoy duck is a 'duck' but not a duck.

We can take it that Ryle's intention in studying negative 'actions' in general is to apply the results to imagining, and to thinking generally. So, if Ryle has decided in 1979 that refrainings are not actions, it looks as if he has resolved the equivocation that was evident in 1949. He has now made his decision about whether imagining-style refraining is an action. He has decided that it is not. Like any other variety of refraining, it is at best an 'action'. *Prima facie*, this conclusion should remove Ryle's negative 'actions' theory from our list of actional theories of mentation. However, I shall argue that Ryle's equivocation persists into the 1979 discussion and that, despite having declared himself decided, Ryle remains undecided about whether refraining is an action. In the remainder of this section I propose to, firstly, explain what Ryle thinks negative 'actions' are and why he thinks they are not actions. Secondly, I will argue that to deny that refraining is an action is, although in one sense correct, also very misleading. I say that for all intents and purposes, refraining *is* an action. In arguing this, I will make use of arguments and distinctions which Ryle himself employs, elsewhere in the 1949 and 1979 books. Although I cannot claim to be continuing my exegesis of Ryle, there is good reason to suppose that Ryle is in two minds here and could well approve my revision of his analysis. Thirdly and finally, I put my revised notion of refraining to work. I investigate how instructive it is to view imagining as a species of refraining.

Ryle has already told us that refrainings, abstainings, eschewings, avoidings, intentional omissions-to-do, etc., are negative 'actions', but what, in Ryle's view, is a negative 'action'? The *On Thinking* chapter is his attempt to find out, and tell us. Not all Ryle's observations about negative 'actions' directly bear on whether they are actions or not, so, before I look at why Ryle denies they are actions, I should mention some of the action-neutral features he attributes to them. First, they are not dispositions, neither to action nor to inaction. They are actualities, not potentialities or abilities. Second, the

negative 'action' is 'higher-order' than, or *supra* to, the action which it is a non-performance of. That is, the negative 'action' is in some sense an 'operation on' the *infra*-level action. Thus:

...our negative 'actions' do, in the required way, constitute one particular species of higher order 'operations upon' lower order positive actions. The positive *infra*-actions of eating flesh and divulging the secret are intentionally left unexecuted by the vegetarian and the confidant; [and] the statement of their *supra*-purposes in devouring fruit and in tongue-holding would subordinately mention flesh-eating and secret-blabbing (1979, p.113).

That is to say, there is no 'refraining' *simpliciter*; refraining is always 'refraining from' some action. It is always an 'operation' on this lower-order or *infra* action. In order to specify the refraining, the *infra* action must be mentioned. Accordingly, refraining 'involves the thought of' the *infra* action: the person doing the refraining must be conscious of what is being refrained from. Refraining is by definition conscious refraining. For example, refraining from eating meat is in the above respects, according to Ryle, 'of a higher logical order' than meat-eating. It will be noticed that the notion of 'higher-order' here is slightly different from the one in the adverbial theory. There the *infra* action was actually performed, and the higher-order nature of the thinking or heedfulness consisted in the fact that it was an adverbial 'operation on' the *infra* action. The higher-order nature of refraining requires not that the *infra* action be performed but only that it be 'thought of'.

Third, some negative 'actions' can be assimilated to what Ryle calls 'lines of action', i.e., policies or regimens of abstinence such as vegetarians and teetotallers commit to. Ryle also describes waiting for a train as both a negative 'action' and a line of action. Waiting for a train requires (for a time anyway) a regimen, of hanging round the platform, say. Yet there remain one-off, episodic refrainings — such as not stopping for a chat with the village gossip, but walking right past, with a cheery greeting — which are clearly not lines of action. And it is likely, given the episodic character of at least some imaginings and thinkings, that the latter are of the episodic (rather than the line-of-action) type of negative 'action'.

Ryle concedes there are several respects in which negative 'actions' — like abstainings, refrainings and omissions — *are* like actions. For example,

(i) Ryle notes that negative 'actions' are biddable: "I can be commanded, requested and

advised as well to *pause* as to move on" (1979, p.106). Ryle believes, and I agree with him, that biddability is distinctive of (if not exclusive to) actions. As well,

(ii) people are held morally responsible for their negative 'actions' as for their actions. There are sins of omission: "I may be punished for my *negligences* as well as for my active misdeeds" (*ibid*).

(iii) Negative 'actions' also share several of the temporal, durational properties of *bona fide* actions: "I began to *rest* at 3p.m. and went on until 4p.m.; I was *holding my tongue* off and on throughout the difficult interview... Like the positive action of singing a song, a negative 'action' seems often to be a duration-occupant" (*ibid*, pp.106-7). And,

(iv) like *bona fide* actions, negative 'actions' are conscious and intentional. As explained above, refraining 'involves the thought' of the deed being left undone. Thus, "A person ...holding something back, must be doing this consciously or wittingly" (*ibid*, p.110). Whatever is our notion of 'conscious', 'intentional' or 'witting', Ryle says, "...it will apply to our negative 'actions' no less than to our ordinary positive doings, sayings, ponderings, calculatings, regrettings, etc." (*ibid*, p.111).

Against all these good reasons for thinking negative 'actions' really are actions, Ryle gives reasons, which he thinks are even more compelling, for their *not* being actions.

(a) Negative 'actions' cannot be skilled or unskilled:

Ordinary positive actions commonly admit of characterisation as skilful or clumsy, efficient or inefficient, etc. ...But negative 'actions' seem not to earn good or bad points for their techniques. ...the 'agent' seems here to have no openings for proficiencies (*ibid*, p.107).

(b) Negative actions never involve the use of instruments: "Ordinary actions often require, or are helped by, special materials and implements. I write my letter on paper with pen and ink... But for *postponing* writing my letter I need no materials or implements" (*ibid*). (Since many actions involve no instruments this is somewhat lame.)

(c) There are no distinctive physical performances associated with negative 'actions': "We do many things by means of doing auxiliary things. ...But there is nothing in particular by doing which I await the train" (*ibid*). But the reason Ryle thinks most important is:

(d) "...the factual, circumstantial and behavioural hollowness of our negative 'actions'" (*ibid*, p.114, see also p.108). Ryle puts this 'hollowness' down to what he claims is "...a familiar point about negation in general" (*ibid*, p.108), namely, "...the factual hollowness of *denials* of existence, occurrence, performance, etc. in general" (*ibid*, p.114). That is,

the specifying of negative 'actions' involves no specifying either of circumstances or of actual performances. Ryle is saying (following Plato's account of negation in *The Sophist*) that a report that P refrained from X includes no information whatsoever as to what P actually did. Thus,

The negating title or description of a negative 'action' specifies only that one particular thing the agent is *not* doing, smoking, for instance, or moving away from the train's arrival platform, or continuing climbing; it is non-committal about what else in particular he is doing (*ibid*, p.108).

Ryle says that refrainings are negative 'actions' and he defines negative 'action' ascriptions as circumstantially and behaviourally hollow. There are thus two options for someone like me who believes that refraining ascriptions are not circumstantially and behaviourally hollow. I could accept Ryle's definition of negative 'actions' but deny that refrainings are negative 'actions', or I could deny that Ryle has defined negative 'actions' correctly. I shall adopt the former course. This means that in the course of my argument, where Ryle speaks of properties of negative 'actions', I shall assume for the sake of brevity that he is speaking of properties of refraining, and argue against him on this basis.

5.2 *Why refraining is an action*

Ryle says that ascriptions of negative 'actions', i.e., refrainings, are 'circumstantially hollow'. But I believe that he says this only because the Plato scholar in him has temporarily overpowered the linguistic philosopher also in there. My point is as follows. It may well be true that no positive information can be gleaned or inferred from the bare semantics of refraining ascriptions such as *he refrained from commenting*, *he abstained from alcohol*, etc. However, it is an essential feature of the *use* of words like *refrain*, *abstain*, *omit*, *forgo*, *waive*, *eschew*, etc., that they are employed only in connection with situations in which at least four conditions apply. The conditions are as follows.

1. There is some do-able and identifiable *infra* action X to be refrained from.
2. The agent P considers doing or 'has the thought of' action X.
3. P has the opportunity to do X. And,
4. There is some impetus influencing P towards doing X.

Ryle accepts that the first three of these conditions apply. His description of negative 'actions' (refrainings) as 'higher-order', implies the existence of some *infra* action for the refraining to be logically one-up on. He also insists, not only in explaining what *higher-*

order means but elsewhere too, that refraining — or anything that is 'higher-order' on an action — 'involves the thought of' that *infra* action. In *The Concept of Mind* Ryle says that generally, "...the doing of the higher order acts involves the thought of the lower order acts" (1949, p.263). And in *On Thinking* he says that "A person who is... holding something back, must be doing this consciously or wittingly. Indeed his doing it must incorporate in some way (*what* way?) the 'thought' of the very retort which he is holding back, or the very bit of letter-writing which he is deferring until later." (1979, p.110). And Ryle also concedes that for it to be able to be said that P 'refrained' from X, it would have to be possible in the circumstances for P to have done X. That is, P must have had opportunity. Ryle says, "Mentionings of abstainings, postponings and permissings specify things that could-have-been-done but were not actually done" (*ibid*, p.114).

As well as these three contextual requirements which Ryle explicitly concedes, there is the impetus requirement, which he ignores and I shall argue for. In addition to opportunity, there has to be some minimum positive probability that P will do X. For example, granted the relevant opportunity, one certainly can 'refrain' from taking the last sausage roll, because some natural tendency to take and eat sausage rolls can be assumed. But one cannot, *ceteris paribus*, sensibly be said to 'refrain' from hacking off one's own big toe with a carving knife, or 'refrain' from misspelling every thirteenth word one writes, or 'refrain' from doing anything which it would never occur to anyone to do. Unless there has been, in a particular situation, something influencing agent P towards doing X, no-one could correctly describe that situation in terms of P 'refraining' from doing X. Candidates for the kind of circumstantial impetus I mean could include things P perceives in the situation, i.e, circumstances in response to which it is sensible or 'human nature' or customary to X. Or perhaps P is, for no particular reason, in the habit of X-ing in these circumstances. Habit can also provide impetus of a suitable kind here. Or perhaps someone has told P to X. Others' hortations *per se* provide enough impetus to legitimise refraining talk. Or perhaps doing X is something P just thinks of doing — in the sense of 'feels tempted' to do, 'has a hankering or impulse' to do, or contemplates or considers doing. At a pinch, given opportunity to X, its just occurring to P that he or she might X could satisfy the impetus requirement. Anyway, always, although the exact kind of circumstantial impetus is not specified, some disjunct of possible influences (such as, reasonable grounds or habit or hortation or whim, etc.) is implied.

What I am arguing here against Ryle is that, by attributing a piece of refraining to P,

the speaker *is* thereby conveying information, albeit implicit information, about P's circumstances. If a speaker uses the word *refrain*, for example, it is reasonable to infer that (at least, the speaker believes that) P is in a situation where conditions 1 - 4 above apply. That is, there is a candidate *infra* action X in the offing, the thought of doing X occurs to P, P has the opportunity to X, and he or she is subject to some (perhaps minor) influence to do X. Not much information about the circumstances is being conveyed, but some is, and this is enough to rebut Ryle's claim of 'circumstantial hollowness'.

'Behavioural hollowness' would seem to encompass, and be stronger than, the other reasons ((a) - (c) on my p.156 above) Ryle gives for refraining's non-actionality. 'No skill component', 'no use of instruments' and 'no distinctive physical performances' are surely all already implied by 'behavioural hollowness'.

Ryle's claim of behavioural hollowness can be disputed using the same kind of argument (concerning inferences from the fact a word is used) similar to those I used to dispute Ryle's claim of circumstantial hollowness. The bare semantics of a refraining ascription may convey nothing about what P did do, but *the fact that the ascription is made* clearly implies behavioural information. By citing refraining from smoking, waiting for a train and pausing during a climb as examples of negative 'actions', Ryle is half-way to conceding this too. Notoriously, refraining from smoking requires some disjunct of earnest self-admonitions, effortful turnings-away, regretful declinings, and so on. And hanging round the platform is doing something. In an earlier essay, Ryle says that waiting requires "...only the simple circumstance of remaining near where the train will come in and not going to sleep" (Ryle 1971B, p.477) — but the words *act* or *expedient* would surely be more to the purpose in this context than the word *circumstance*. Flinging down one's backpack and sitting down for a while is also doing something. In the explanation of the term *higher-order* which I quoted above, Ryle actually specifies what the vegetarian and the confidant must do, if they are to further "their *supra* purposes". He mentions 'devouring fruit' and 'tongue-holding'. But his most explicit concession of the behavioural implications of refraining ascriptions occurs near the end of the chapter, in connection with refraining from stopping for a chat with Miss Bates. He says,

Roughly, in this particular context there is only the singular and perfectly specific answer to the question, 'What *else* did I do than stop for a chat?', namely, indifferently, 'I strode on to avoid chatting' or 'To avoid chatting I omitted to halt' (1979, p.118).

I argued above that there has to be some at least minimal tendency for P to do X before he or she can sensibly be said to be refraining from doing it. It stands to reason that, in order to refrain from X-ing, P must somehow, by some means, overcome this tendency to do X. Some active countervailing of the tendency is necessary on P's part if refraining is to be achieved. Presumably, the most common general type of countervailing action will be that of all Ryle's examples, namely the type where P undertakes some action which precludes, and is intended to preclude, X-ing. Ryle is perfectly correct in saying that the refraining ascription does not *specify exactly what* countervailing or preclusive action is involved. But he can hardly deny that refraining requires efforts of *some* kind to be undertaken by P. In most cases, the broad kind of refraining effort required will be well-known, and will be automatically inferred. Thus, refraining ascriptions not only convey circumstantial information, they also convey behavioural information. Arguably, refraining ascriptions are semantically 'behaviourally hollow', but pragmatically they bespeak preclusive recourses.

5.3 Task verbs and achievement verbs

The implications of 'behavioural hollowness' which refraining ascriptions may have are in my opinion due not to refrainings being creatures of negation but to their being *achievements*. In *The Concept of Mind* (pp.149-53) and *Dilemmas* (pp.102-107), Ryle distinguishes action verbs which are 'task' verbs and those which are 'achievement' verbs. The distinction seems to be a refinement of the one implicit in this passage from Locke:

... many words which seem to express some action, signify nothing of the action or *modus operandi* at all, but barely the effect, with some circumstances of the subject wrought on, or cause operating: v.g. 'creation', 'annihilation' contain in them no idea of the action or manner whereby they are produced, but barely of the cause, and the thing done. And when a countryman says the cold freezes water, though the word 'freezing' seems to import some action, yet truly it signifies nothing but the effect, viz. that water that was before fluid is become hard and consistent, without containing any idea of the action whereby it is done (Locke 1690/1964, Bk II, Chap.XXII, #11).

And Ryle's distinction seems also to have been foreshadowed by Macmurray.

The term *action* is involved in the same ambiguity that recent philosophy has found it essential to resolve in the case of terms like *perception* or *conception*. It may refer either to what is done, or to the doing of it. It may mean either 'doing' or 'deed'. When we refer to 'an action' we are normally referring to what

is done. ... [but] it is inherent in the very notion of action that what is done depends on the doing of it. To act is to effect a change in the external world. The deed is the change so effected (Macmurray 1938, p.74).

Roughly, according to Ryle, some action verbs refer to performings of task activity — that is, the active strivings which bring about achievements. Other action verbs refer to the achievements which those active strivings bring about. Ryle's 'task verbs' are those — like *to walk, inspect, smile, wrestle, juggle, dig, speak* — specifying task activity. His 'achievement verbs' are verbs — like *to win, find, say, unlock, conceal, solve, arrive, avert, repair, bury* — which specify achievements. Thus,

One big difference between the logical force of a task verb and that of a corresponding achievement verb is that in applying an achievement verb we are asserting that some state of affairs obtains over and above that which consists in the performance... of the subservient task activity. For a runner to win, not only must he run, but also his rivals must be at the tape later than he... (1949, p.150).

Elsewhere, Ryle elaborates on what it is that achievements require 'over and above' the task-performings. He distinguishes running (task activity) and two different achievements of the running, namely, reaching the terminus and winning.

Reaching the end of the measured mile of a race-track takes no time. The runner was running for some five minutes before he reached this point, but his reaching this point did not prolong his running-time. His reaching it is not something with its own beginning, middle and termination. The same is true of winning a mile race. Yet winning involves much more than reaching the end of the measured mile. To win a mile-race, the winner must have been running in competition with at least one other runner; he must not have started before the gun or taken a short-cut or used a bicycle or tripped up his opponent; and he must have reached the end of the measured mile ahead of any opponent. His winning the race comes with his reaching the end of the mile, but to be a victory it has to satisfy quite a lot of additional requirements. Both are attainings, but they are not homogenous with one another (Ryle 1960, pp.104-105).

Unlike task activity performings, achievements do not have duration. Achievement verbs declare termini-reachings, and advents (due to bringings-about) of sundry other states of affairs. Achievements are not processes. Nor do we experience doing them. Nor, strictly, are they witnessable.

Epistemologists have sometimes confessed to finding the supposed cognitive activities of seeing, hearing and inferring oddly elusive. If I descry a hawk, I find the hawk but I do not find my seeing of the hawk. My seeing of the hawk seems to be a queerly transparent sort of process, transparent in that while a hawk is

detected, nothing else is detected answering to the verb in *see a hawk*. But the mystery dissolves when we realise that *see*, *descry* and *find* are not process words, experience words or activity words. They do not stand for perplexingly undetectable actions or reactions, any more than *win* stands for a perplexingly undetectable bit of running, or *unlock* for an unreported bit of key-turning (Ryle 1949, p.152).

For good measure, I will quote Ryle explaining why achievement verbs cannot — as task-activity-performance verbs can — be used in a continuous tense.

It will, I think, be apparent why, with certain reservations, verbs which in this way declare termini cannot be used and are in fact not used in the continuous present or past tenses. The judge may say that he has been trying a man all the morning but not that he has spent the morning or any stretch of the morning in convicting him. I can say that I am occupied in searching for a pencil or getting the solution of the anagram. In the same way I can be looking for or looking at something, but I cannot be seeing it. At any given moment either I have not yet seen it or I have now seen it. The verb 'to see' does not signify an experience, i.e., something that I go through, am engaged in. It does not signify a sub-stretch of my life-story (Ryle 1960, p.103).

So, according to Ryle, there are basically two distinguishing criteria. Achievement verbs are distinctive in implying the fulfilment of certain conditions (one could call them 'felicity conditions') over and above the mere performance of task activity. And they are distinctive in that what they refer to, achievements, have no duration, they are not 'lived through'; hence, achievements verbs cannot be used in a continuous tense. As far as task verbs are concerned, Ryle is saying (or, at least, implying) that they name activity performings which require for their identification no felicity conditions — or, at least, fewer conditions than are required to identify the achievements the task activity results in (if all goes well). And, he is saying, because task-activity performing does take time, task verbs can be used in continuous tenses.

Ryle's distinction is a distinction between kinds of verb, kinds of word. He implies that most action verbs are 'dedicated' one way or the other, to referring to task-activity or to referring to achievements. As late as 1962 he is saying that he is "...distinguishing the logical behaviour of verbs of trying from that of verbs of succeeding and failing" (Ryle 1971A, p.193) — as if it is inherent semantic properties of the words he is talking about. Ryle concedes that some verbs are dual-purpose. He notes that "*Hear* is sometimes used as a synonym of *listen* and *mend* as a synonym of *try to mend*" (Ryle 1949, p.150). *To observe* is another example he mentions. But he considers these to be the exceptions.

Contra Ryle, I believe that very few action verbs are used exclusively in just one of the two modes. Most action verbs are 'systematically ambiguous' in this respect. They are meant to be ambiguous. Most action verbs (including most of those listed above) indicate either task-activity or achievement depending on the context and style of their use. To my mind, the distinction is best construed as being between not 'kinds of action verb', but rather two 'ways of referring to' actions, or two 'ways of using' or 'senses of' given action verbs. We can refer to an action *qua* task activity performed, or we can refer to the same action *qua* achievement. Thus, we refer to actions either by specifying the relevant task activity or by specifying the achievement which consummates that task activity. And most often, we would use the very same verb for both jobs. Most actions verbs are 'systematically ambiguous' in this regard. It is the context which tells the hearer which way to take the verb — and clues like whether the verb is being used in a continuous tense or not. Of course, where there is a specially dedicated verb (to be used exclusively for the task activity or exclusively for the achievement) then we can use that.

Thus, rather than postulating two kinds of action verb it is better to speak — corresponding to the two 'ways of referring to' actions — of two 'senses in which we may use' (most) action verbs. Thus *to observe* can be taken in the sense of (or taken as referring to) task activity such as maintaining a good viewpoint, attending in the right direction, scanning, scrutinising, interpreting, etc. Or, in another sense, *to observe* is taken as referring to the successful consummation of that activity, the observing, in the sense of 'observing that...'. *Polishing* can refer to a particular activity involving the gripping of a waxed rag, downward pressure and arm movements, or it can refer to the making of things to shine, by whatever means. Later on, I will sometimes employ the convention of using a subscript to distinguish an action (such as polishing) *qua* task-activity-performing from the same action *qua* achievement. Thus 'polishing_{perf}' as against 'polishing_{ach}'.

[From this point on, instead of using the expressions *task-activity* or *task-activity-performance*, I will use *task performance* or just *performance*. And I will refer to the distinction as the *performance* vs. achievement distinction. But where I am talking about Ryle's 'dedicated-verb' version of the distinction I will retain Ryle's terminology and speak of the task-verb vs. achievement-verb distinction.]

How does the performance/achievement distinction relate to our concept of action? We could say that the two senses of the various action verbs refer to two different

'aspects' of actions — the activity-performance aspect and the achievement aspect. But this would entail that, in using verbs in the different ways, we are thereby referring to two different things (albeit they are aspects of the one thing). I would rather say the performance sense of the verb and the achievement sense of the verb give us two different ways of referring to one and the same thing, the action. Performance and achievement are just different places to attach a handle on the one action. As I say above, we can refer to the action (of polishing, or whatever) *qua* activity-performance or *qua* achievement. It depends what 'take' on the action is relevant in the context — the physical exertions involved, or the effect achieved.

It is probably also true and useful to say that we have a dual concept of action — as the performing of task activity, and/or as the achieving (via whatever task activity) of effects or goals, that is, aimed-for states of affairs. The general term *action*, like the particular action verbs, has a performance sense and an achievement sense. So, I am saying that there are two senses — a performance sense and an achievement sense — not only of most action verbs but also of the term *action* itself. In one sense of *action*, actions are task-activity-performings; in the other, actions are achievements.

Anyway, I think the above is a plausible and useful way to develop Ryle's distinction. [Ryle himself seems to acknowledge, at least in 1962, that the distinction may not be just about verbs, words. He appears to leave room for revisions such as mine when he speaks of the distinction as defining "...an important, if somewhat subtle difference between two families of action-concepts" (Ryle 1971A, p.191). Possibly, his "action-concepts" here means what I mean when I speak of two kinds of 'take' on actions.] I also think my development of Ryle's distinction captures what Locke and Macmurray are saying too. The distinction has some interesting features. For example, it seems to be transferable, a moveable feast. Juggling, say, may be an achievement for the novice clown, but a task-performance (to achieve the entertaining of an audience) for the veteran. Similarly — depending on context — flexing the forefinger might be the task performance and pulling the trigger the achievement. Or pulling the trigger might be the task activity and firing the gun the achievement. Or firing the gun might be the task performance and killing the Arch-Duke the achievement, and so on.

There is an asymmetry in the logical relations between performances and achievements. To refer to an action *qua* performance does not imply that the

corresponding achievement has occurred. Usually, of course, it can be taken that the performance was successful, because people usually undertake only those performances which they expect to have a successful outcome. It even happens that, as Ryle himself concedes, "...we very often borrow achievement verbs to signify the performance of the corresponding task activities, where the hopes of success are good" (Ryle 1949, p.149). However, any inference from task activity to achievement has empirical probability only. One may easily polish without polishing. On the other hand, in referring to an action *qua* achievement, one is necessarily also referring by implication to the performing of corresponding task activity. One implies some task activity was performed which brought about that achievement. Ryle effectively concedes this point too when he says that, "When we say that the doctor cured the invalid, we are saying in one breath both that he treated the patient *and* that the patient was thereby restored to health. In a word the treatment was successful" (Ryle 1971A, pp.191-192, his italics).

The reason why reference to an action *qua* achievement is preferred (when it is preferred) may be that the nature of the task performance is unknown. However, more often, the probable nature of the task activity will be well-known, and easily inferred — or, at the least, some disjunct of likely or customary task activity performances will be inferred — and the reason why reference to the action *qua* achievement is preferred is that the manner of the task performance is immaterial in the context. Analogously, we refer to an action *qua* performance when it is the physical exertions we are interested in and the achievement which is immaterial. The essential point I want to make here — and it will later become relevant more than once — is the following. Achievements logically imply prior strivings of *some* kind. As Macmurray puts it above, "...it is inherent in the very notion of action that what is done depends on the doing of it".

5.4 Negative 'actions', preclusive strivings, and achievements

The relevance of the task-verb/achievement-verb distinction here is that the verbs which name Ryle's negative 'actions' — verbs such as *refrain*, *abstain*, *omit*, *eschew*, *forebear*, *avert*, *resist doing* — are all fine examples of achievement verbs. These verbs usually do not — as *walk on*, *hold back*, *inhibit*, *restrain*, *ignore*, *decline*, *remain unmoved*, *turn away* and *stifle*, say, arguably do — bespeak specific exertions, specific 'task activity'. And this is because the verbs in the former list are referring to their topic-actions by specifying what these actions *achieve* rather than by specifying what task

activity they involve. But as I say, achievements logically imply prior strivings.

Even achievements in the field of refraining must have exertions corresponding to them, i.e., for them to be the upshots of. In order to refrain from making a certain remark a person may have to pinch herself hard, or literally bite her lip, or some such. Keeping one's mouth shut may require sustained muscular effort. Some countervailing exertion, some resistance or preclusive action is essential, or the *infra* action goes unchecked.

The parallels between what Ryle says in 1949 and 1960 about achievements and what he says in 1979 about negative 'actions' are too close for us not to conclude that the names of negative 'actions' constitute a sub-class of achievement verbs. The 'behavioural hollowness' which Ryle attributes to negative 'actions' in 1979 is, though under other descriptions, just what he attributed to achievements in 1949 and 1960. Although achievements are strictly speaking deeds and not doings, to name an achievement is to refer to an action, at least by proxy. It is only at a superficial semantic level that ascriptions of refraining, for example, are 'behaviourally hollow'. Thus, my view is that Ryle's negative 'action' verbs are in fact achievement verbs, which we use, as we use any achievement verb, to refer to some (otherwise unspecified) action, *sub specie* achievement.

If refrainings are achievements, it could be that the task activity corresponding to them consists of what Ryle calls 'nullifying actions'. As I reported earlier, Ryle defines nullifying actions as "...actions that we perform in order that things may *not* be the case which otherwise would or might be...". [By contrast, negative 'actions' "...consist in the agent's intentional *non*-performance of some specifiable actions".] Suppose that the *infra* action which P refrains from is 'making an unkind remark' and, in order to accomplish the refraining, she bites her lip. According to my reading of the distinction, to say *She refrained from making the unkind remark* is to refer, using the achievement verb *refrain*, to the very same action to which one might also refer by saying *She bit her lip and thus stopped herself making the unkind remark*. That is, the latter sentence refers to the same action, but using task verbs. In the one version we are invited to view the action *qua* achievement, and in the other we are invited to view it *qua* task activity.

Accordingly, we should view Ryle's distinction between nullifying actions and negative 'actions' not as a distinction between a kind of action and a kind of quasi-action (or 'action'), but as a distinction between two ways of referring to a single action. The

nullifying-action verb refers to the action by specifying what task activity it involves, and the negative-‘action’ verb refers to that same action by specifying the outcome which that task activity achieves. Negative ‘actions’ such as refrainings would thus be achievements brought about only by that subclass of nullifying actions in which the state of affairs ‘which otherwise would or might be’ happens to be the agent’s performance of a given action. In the case of refrainings, the corresponding nullifying actions are countervailing or preclusive actions such as biting one’s lip, etc. And, refraining is what we see when we view successful nullifying activity (of this special action-preventing kind) in terms of what it achieves.

5.5 Is imagining a species of refraining?

Ryle’s original motive for proposing the negative ‘action’ concept is to clarify the nature of refraining. A clarified concept of refraining, etc., would in turn clarify his intuition that imaginings (and other forms of mentation) are kinds of refraining. He suspects that the negative, refraining-from-acting feature of imagining might be what we mistakenly construe as its ‘innerness’. At the end of the 1979 chapter, Ryle allows himself to hope that at least some ‘mental’ phenomena might be explicable in terms of negative ‘actions’, and that “In some cases, ‘Not muscular because inner’ may give place to ‘Not muscular, because both *supra* and negative’” (1979, p.119).

However, if my revision of his notion of negative ‘action’ is to stand, the maxim ‘Not muscular, because both *supra* and negative’ will not carry the day. I agree with Ryle that refraining is both *supra* (or ‘higher-order’) and in some sense negative. But I have argued that this combination of ‘negative’ and ‘higher-order’ does not disqualify refraining from being (at least the outcome of) an action. Thus, negativity and *supra*-ness do not stop refraining from presupposing ‘muscular’ exertions. I have claimed in fact that refrainings definitely do, *qua* achievements, imply corresponding active (and presumably muscular) exertions. In my view, refrainings are achievements, and achievements must have active exertions commensurate with them. To specify an achievement is not to specify task activity, certainly, but specifying an achievement still involves implicit reference to task activity. In drawing these conclusions I have employed distinctions and arguments Ryle himself employs — if not in the 1979 chapter then in the 1949 book. In a real sense, my analysis of refraining remains a Rylean one.

Despite the fact that it is no longer Ryle's officially-stated notion of refraining we are wielding, we can still ask how plausible it is to say, as Ryle does, that imagining (and perhaps mentation in general) is essentially a kind of refraining. That is, we can ask whether it is still plausible, on the new reading of refraining-abstaining, that

...imagining oneself talking or humming is a series of abstentions from producing the noises which would be the due words or notes to produce if one were talking or humming aloud. That is why such operations are impenetrably secret; not that the words or notes are being produced in a hermetic cell, but that the operations consist of abstentions from producing them (1949, p.269, already quoted).

According to the revised concept of refraining, in order for imagining to be a kind of refraining, five conditions must apply in cases of imagining.

- (i) There must be some *infra* action X which the imaginer P is refraining from performing.
- (ii) P must 'have the thought of' X-ing.
- (iii) P must have the opportunity to perform X.
- (iv) P must be subject to some influence or impetus, however slight, to perform X.
- (v) To refrain from (imagine) X-ing, P must be doing (have done) something to nullify this influence and preclude any performance of X.

I will discuss each of the five conditions in turn.

(i) In most cases of imagining, the *infra* action required for (i) is not hard to find. Essentially, any action one can perform one can also imagine performing. Ryle settles on 'saying things' and 'humming tunes' as examples, but he also likens imagining to pretend-doing, and any of the kinds of *infra* action he cites in cases of pretend-doing — shadow-boxing, demonstrating a knot without the rope, playing cowboys, etc.— he would presumably accept as examples of what is refrained from during imagining. However, Ryle claims some difficulty with identifying the *infra* action which is refrained from during visualising. Thus:

Even people who might allow that sparring consists in going through the motions of fighting in a hypothetical manner will not readily allow that the same sort of account holds good of seeing Helvellyn in one's mind's eye. What motions are there here to go through in a hypothetical manner? (1949, p.265).

What is the appropriate *infra* action in the case of visualising? The answer that first springs to mind is 'seeing'. The visualiser is engaging in episodes of refraining-from-seeing Helvellyn. But Ryle eschews this answer. He has already classified *see* and other

verbs of perception as achievement verbs and, since achievements are not themselves actions, seeings are not actions, and hence they are not proper candidates for either 'doing' or 'refraining from doing'. Ryle is quite right not to consider seeing *per se* as a candidate. But, for some reason, he does not notice that there is another candidate close by — on the other side of seeing, as it were — which is perfectly satisfactory. Where there is achievement there must be or have been task activity. And in the case of seeing, the correlative task activity is presumably the kind of scanning, looking-at, attending-to, focusing-on, scrutinsing, inspecting, etc., that we have to do in order to see anything. This task performance probably in turn involves at least some of the kind of subtle and complex oculomotor exertions detailed by Noton and Stark 1971. See my Appendix Two.

In fact, the role of 'task activity which brings about perceptions' is precisely and admirably filled by what Ryle (1949, pp.228-34) calls 'applying a learned perception-recipe'. And although Ryle does not employ his own perception-recipe concept here, I see no reason why we should not do so on his behalf. The *infra* activity refrained from by someone visualising Mt Helvellyn is the applying of the 'Helvellyn' visual perception-recipe. That is, what is refrained from is just the kind of active scanning, scrutinising and inspecting — probably involving distinctive patterns of eye-movement — that actually seeing Helvellyn would necessitate. Presumably we can employ Ryle's perception-recipe concept *mutatis mutandis* to supply us with the necessary *infra* activities for imaginings in the other sensory modes.

The frequent mentions in *The Concept of Mind* of pretend-X-ing, play-acting, make-believe, mime, going-through-the-motions of X-ing, etc., suggest that in the case of imagining there is another candidate for the *infra* action role. That is, instead of actual X-ing (or the actual performance of task activity appropriate to X-ing) being the *infra* action that is refrained from during imagining, some mime or pretend-doing performance is. Below, I suggest reasons why we might have to take this possibility more seriously.

(ii) Can requirement (ii) be satisfied? Does P have to 'have the thought of' X-ing before he or she can imagine X-ing? The answer here must be No. Ryle does say that imagining a tune "...involves the thought of following or producing the tune" (1949, p.269). But we are trying to explain what imagining is, and to require the imaginer to first *think* of X-ing would make the attempted explanation circular. Thinking presupposes imagining — and

even if it does not, then thinking is a species of mentation, and if it is imagining *qua* mentation that is to be explained, no variety of mentation can be part of the explanation. Here is one place where the imagining/refraining analogy breaks down. However, although imagining cannot now be a *kind* of refraining, it may still be a close logical relative of some other sort. We should press on with our attempt to spell out the analogy.

(iii) Does requirement (iii) apply in the case of imagining? Must the imaginer always have an opportunity to perform the relevant *infra* action? Clearly, in the case of visualising — because Helvellyn is nowhere in the vicinity and, very likely, P's eyes are tight shut — P has no opportunity or chance of seeing Helvellyn. Yet P has no difficulty imagining seeing Helvellyn. By the same token, whether or not P has the opportunity to engage in a boxing match, dine with Greta Garbo or tie a bowline, P can always imagine doing so. It should be noted that this conclusion applies not only to the *infra* action specified as an achievement (seeing Helvellyn, dining with Garbo, tying a bowline, etc) but also to the task activity required for that achievement. If the situation is such that P has no opportunity to see Helvellyn, then neither can P perform the required task activity — of applying the 'Helvellyn' perception recipe, say. If I have no rope, I cannot make the hand and finger movements with a rope such as are necessary to achieve a bowline. So the answer here is negative too. Opportunity to X is not a requirement of imagining X-ing, in the way it is a requirement of refraining from X-ing.

Does it make any difference if the *infra* action (which P must have the opportunity of performing) is not X-ing but pretend-X-ing? That is, the imaginer need not have the opportunity to actually do X, but perhaps there must always be an opportunity to, as Ryle puts it, 'go through the motions' of X-ing, or 'pretend' to X, or do some 'make-believe' X-ing. Although P may not have the opportunity to do the real thing, surely he still has the opportunity to go through the motions of knot-tying (using a non-existent rope), play-acting entertaining Garbo, pretending to descry and point out features of Helvellyn, etc. But even here, opportunity is not necessary. Even if P is in a situation where, for whatever reason, there is no opportunity even to do any make-believe X-ing — perhaps P is tied up or has been forbidden to move, for example — P can still perfectly well imagine X-ing. Of course, even if P is tied up, there is nothing to stop him or her from *attempting* to put on a performance of make-believe X-ing. There may be logical barriers to P's attempting to tie a bowline if he has no rope, but if his task is pretending to tie a

rope, then the lack of a rope may in fact make the task easier. At least, there are no logical barriers; there can only be practical ones — like being tied up. And although practical barriers may ensure that attempts are not successful, they do not prevent attempts from being made. Perhaps it is true that, in order to imagine X-ing, P must have the opportunity to *attempt* some kind of pretend-doing of X. It is hard to imagine cases in which P would not have this kind of opportunity. In this connection it is possibly worth mentioning another, very attenuated sense in which P might be said to necessarily have the 'opportunity' to X, or to pretend doing X. It could be said that P must at least 'know how' or 'know what it is like' to see Helvellyn, tie the bowline, etc. That is, P must have 'opportunity' at least in the minimal sense of being equipped with the relevant skills and experience. If P does not have the skills, then he or she does not have the opportunity to exercise them, even in an attempted pretend-performance of X.

(iv) Is requirement (iv) applicable in the case of imagining? Is there always, prior to or concurrent with P imagining doing X, some *impetus*, some factor influencing P, in whatever small way, to actually do X? Is there some positive influence to X-ing which has to be nullified if imagining X-ing is to be achieved? As I suggested earlier, candidates could include things P perceives in his or her situation, P's habits, other people telling P to do things, or P's own thinking. In the case of refraining, any event of these general kinds could constitute a suitable cue or prompt for P to perform a given action X — and thus also legitimise subsequent 'refraining' talk. Must there be impetus of one or other of these kinds in cases of imagining? In fact, events of these kinds — our perceptions, our habits, others' speech, our thinking — are exactly the kinds of prompts in response to which we imagine things. Even if these kinds of events collectively account for almost all of our waking moments, it is plausible that impetus of one or other type is required for us to imagine specific things. So we can say that requirement (iv) is satisfied.

Of course, it remains to be established just how it is that these prompts are effective in getting us to imagine things, or what kind of impetus they constitute. Ryle does not specifically address these questions, or even the earlier question of what kinds of prompts, if any, our imaginings have. But he contributes at least one interesting suggestion —

...people who imagine themselves producing noises tend to activate slightly those muscles which they would be activating fully, if they were singing or talking aloud, since complete abstention is harder than partial abstention. But these are questions of fact with which we are not concerned (1949, p.270).

This passage is interesting for several reasons. First, it is the closest Ryle comes to acknowledging anything muscular, indeed anything *actual*, in connection with refraining or abstaining. In some respects this is strange. Earlier in the 1949 book, in the Emotion chapter, Ryle talks about states of agitation and distraction. In such states, actual bodily agitations, certainly including such as 'slight muscle activations' are essential components. Their presence here at least is perhaps more a matter of logic than 'a question of fact'. It could also be argued that all states of agitation of this emotional kind presuppose acts of *imagining*. Ryle writes:

To be distracted ...is like being thirsty in the absence of water, or in the presence of foul water. It is wanting to do something while not being able to do it, or wanting to do something and at the same time not wanting to do it. It is the conjunction of an inclination to behave in a certain way with an inhibition upon behaving in that way. The agitated person cannot think what to do, or what to think. Aimless and vacillating behaviour, as well as paralysis of behaviour, are symptoms of agitations... (1949, p.97).

Here we find acknowledged not only 'impetus', but also bodily agitation associated with refraining. Unfortunately, the connection with imagining is not drawn.

The second point of interest is that the 'partial abstention' passage invites the following inference. If complete abstention is harder than partial abstention, then abstaining is effortful. And, if abstaining from X-ing is effortful, there must be some prior impetus to X-ing which required effort to overcome. To this extent, Ryle must be contemplating some prior impetus.

It should be noted again here that, in much of our imagining, the *infra* action in question — X is, say, dining with a Swedish actress who has been dead for ten years — is impossible. Thus, however strong the impetus to X-ing is, it is never going to result in any X-ing, and no refraining or abstaining is either possible or necessary. If there is effortful abstaining going on, it must be from something other than actual X-ing. As I say above, the other likely candidate for the role of 'what is being refrained from' during imagining, at least in Ryle's work, is pretend-doing (make-believe, mime, etc.).

The third interesting thing about the passage is that it implies that imagining may be occurring even though the refraining involved — and now we are talking about refraining from overt 'pretending-to-X' rather than refraining from real X-ing — is only partially successful. That is, incomplete or partial refraining will do. At least, the suggestion of

partial refraining implies that the *infra* action, the pretend-X-ing, is to some extent already in train. And this in turn raises the possibility that it is not 'refraining' that is involved in imagining but the 'desisting from' or 'aborting' of an action that has already commenced.

(v) Finally, does the imaginer need to perform some nullifying action in order to ensure that X-ing is not done? Clearly, in the cases where real X-ing is impossible, no nullifying action is necessary. In these cases, if any action needs nullifying, it is not X-ing but pretend-X-ing. We can concentrate on this case and rephrase the question accordingly. Does the impetus (whatever it is) to do some pretend-X-ing need to be countervailed? Does make-believe X-ing need to be actively precluded? This possibility — of the imaginer having to actively resist engaging in overt pretend-activity — is intriguing. Ryle's only contribution here is the suggestion just quoted that "...complete abstention is harder than partial abstention". While this implies that some effort is required, it does not tell us of what kind. As I speculated immediately above, if the *infra* action — and we are now assuming some pretence or mime — has in some sense already commenced, if P has begun an attempt to mime X-ing, say, then it is not in fact 'refraining' that must happen but something more like 'aborting' or 'desisting from'.

It is time to close this chapter. Ryle provides a negative 'action' analysis of refraining, which I have found fault with and attempted to strengthen. Despite his official avowal of the negative 'action' account, I believe Ryle leaves room for — and might also have been sympathetic to — an actional concept of refraining such as the one I suggest. My view is that P's refraining from X is (the achievement brought about by) a nullifying action of P's which precludes P's doing X.

The aim of clarifying refraining is to evaluate Ryle's construal of imagining as a kind of refraining. In *The Concept of Mind* Ryle often likens imagining to make-believe and pretend-doings of various kinds. He then seems at times uncomfortable with the fact that very often during imagining — as opposed to during pretending and make-believe — the agent is quite motionless and expressionless. Ryle's negative 'action' account perhaps reflects his impression that the person visualising something "...does not seem to be really doing anything" (1949, p.267). But my belief is, and much of Ryle's analysis bears it out, that imagining is an action. In an interview held in 1971 Ryle comments, in connection with *The Concept of Mind*, that

...there's another chapter about Imagination where also the negative things that I was saying were dead right... On the other hand there's a positive part of the story which I didn't capture and haven't captured yet. But here I don't feel so very guilty, because nobody else that I have seen, who has chanced his arm on this particular thorny topic, has made very much more headway than I did. So on this one I'm going to say that I don't greatly mind having left a huge gap here. Somebody's going to fill the gap one day... (Magee 1986, p.130).

Ryle's idea of construing imagining as a species of refraining-from-doing is a worthwhile challenge to the ideas of 'internalisation' or 'abbreviation' of actions, which other actional accounts of thinking rely on (see my following chapters). However, when Ryle's own negative 'action' concept of refraining is applied to imagining, the effect is perhaps to obscure, rather than bring into focus, some of the actional (and even muscular) features which imagining clearly has. Applying my revised concept of refraining to imagining brings out these actional features better. It also shows that, for at least two reasons, imagining cannot be a kind of refraining. For one thing, refraining can sensibly be said to 'involve the thought of' the *infra* action, but the same cannot be said, without circularity, of imagining. And secondly, P cannot refrain from an action which he or she has no opportunity to perform, but this is often the case with imagining.

Although it must finally be abandoned, the attempt to read imagining as a kind of refraining, when combined with an attempt to interpret other remarks of Ryle's, throws up several interesting possibilities as by-products. Our attempt to find an 'opportunity' requirement in imagining analogous to that in refraining, brings it out that the *infra* action in the case of imagining might not be an action *per se*, but rather a pretend-performance (or mime or some such) of an action. And when we attempt to find out what in imagining corresponds to the 'impetus' and 'countervailing action' features of refraining, the possibility is raised that the imaginer might in some way be actively commencing and then aborting this pretend-performance. If it had not been for Ryle's suggestion that we treat imagining as a kind of refraining, these possibilities might not have surfaced.

CHAPTER SIX:

Vygotsky: internalisation of speech-mediated social action

The Russian psychologist Vygotsky's theory of thinking, like Piaget's, is an 'ontogenetic' or developmental one. According to developmental approaches (in education and child psychology), such subject matters as perception, speech, art, cooperation, emotional behaviour, thinking, etc. — are viewed as actions or activities of the person, not simply natural functions of the human organism. Abilities to perform or engage in the activities in question are 'acquired' abilities, that is, they are not innately given, but must be learned post-natally, as a result of teaching by others and/or trial-and-error and practice. The underlying explanatory model is not of a biological process but rather of someone learning how to do something. The developmental psychologist's job is to identify the chief skill components in a given complex ability and to specify in what stages, and via what training and experience, these component skills are mastered.

The nature/nurture controversy is still alive, and there are ongoing disputes about certain items in the human repertoire, as to whether a biological or a developmental approach is most appropriate to them. The human abilities in dispute include the ones we are interested in, namely, speaking and thinking. The biological approach, represented by cognitive science, assumes that abilities to speak and think are largely predetermined by biologically-evolved mechanisms. Chomsky's and Fodor's suggestions that Language and Cognition 'modules' are hard-wired-in in the human brain constitute the background assumption for many theorists.

The main opponents of the 'innate linguistic and cognitive mechanisms' school are those, like Vygotsky and the social-constructivists, who stress the socially-taught and culturally-determined nature of speaking and thinking skills. However, it is probably true that all theorists, whether they align primarily with the 'biological innatist' or the developmentalist' camp, concede that both kinds of influence are important. For example,

...the more basic abilities, the linguistic ones for instance, must be, to an important extent, genetically determined; the construction of abilities from within, or the internalisation of culturally constituted abilities, can only take place on some well-developed innate foundation (Sperber 1986, p.1308).

6.1 The 'sociogenesis' of thinking

Vygotsky believes that a plausible developmental account of thinking can be given — an account which identifies thinking's component skills and shows how they might be, or are normally, taught or otherwise acquired. Such a developmental account, if it had no large holes in it, would be good evidence that thinking is in fact a species of learned action and not an impersonal process. Conversely, if thinking is a learned action, then some developmental story about thinking must be true.

Vygotsky's idea is that the component skills in thinking include both practical abilities and communicative abilities. The infant is born with both elementary practical abilities — motor and sensory-motor coordinations such as hand-eye coordinations, ability to visually track moving objects, balancing skills, etc., and elementary communicative abilities — gaze meeting and following, vocal and other imitation, expressive gestures directed at the other, etc. Whereas Piaget concentrated on the developing solo practical skills as the basis for thinking, Vygotsky emphasised the communicative, social-interactive side — and he emphasised the combining of practical and communicative activity:

...the most significant moment in the course of intellectual development, which gives birth to the purely human forms of practical and abstract intelligence, occurs when speech and practical activity, two previously completely independent lines of development, converge. Although children's use of tools [and practical activity generally] during their preverbal period is comparable to that of apes, as soon as speech and the use of signs are incorporated into any activity, the activity becomes transformed and organised on entirely new lines (Vygotsky 1978, p.24).

According to Vygotsky, the combining of the budding practical and communicative abilities produces a uniquely human type of activity, namely, 'semiotically-mediated', or 'speech-regulated' practical activity. [Although both *semiotically-mediated* and *speech-regulated* are standard (and synonymous) terms in the current Vygotsky literature, and although *semiotically* has the benefit of including communicative means such as signs and gestures as well as speech, I shall use the expression *speech-mediated* in this connection.]

What these various terms all relate to is the fact that speech is a means by which actions can be socially controlled. This enables coordinated and cooperative activity. Actions of one party may be incited, cued, controlled while in progress, or terminated, by the speech of another. Vygotsky thinks speech-mediated cooperative activity is distinctive of human beings. As well, actions which a person normally performs while alone — and

which are consequently not social or cooperative in a direct way — are nevertheless typically *learned* in a social, teaching context. And this educative context is cooperative and speech-mediated in the full sense. Speech is inextricable from either the practical, cooperative activity, or from any education the child is getting. According to Vygotsky, by learning to participate in cooperative activity, the infant is mastering the new, distinctively human, form of life. He or she leaves the animal kingdom, as it were, to join the human race.

The new form of behaviour, ‘speech-mediated practical activity’ can be seen as entering the infant’s repertoire in either of two ways. One way is by attaching a speech ability to some pre-existing pre-social practical ability of the infant’s. Speech then becomes a kind of handle by means of which the practical ability can be socially controlled. Thus, an infant might already be adept at feeding itself, and subsequently learn how to ask for and to receive items, and to be asked for and to pass them, and learn to eat or desist from eating on cue, and so on. Another way in which ‘speech-mediated practical actions’ can enter the repertoire is by the infant’s or child’s being taught them ‘whole’. Here the new skill is not being built on any identifiable pre-existing basis. As examples of these more purely ‘culturally-determined’ activities, we can consider games in which speech acts play an integral role. There are plenty of these. Or the child learns how to buy and sell things, or make and keep promises, etc.

For Vygotsky, the ability to *think* is the ability to rehearse speech-mediated practical activity ‘internally’. As Bakhurst puts it, Vygotsky “..represents consciousness as a developmental achievement precipitated by the internalisation of communicative practices, broadly understood” (Bakhurst 1996, p.212). In Vygotsky’s terms, the ability to think is the culmination of the socialisation process. The socialisation process begins with the infant being inducted by various means into speech-mediated practical activity, and is completed when what is learned is internalised. Internalisation is a two-stage process. First, the individual P becomes able to perform an action — that is, some contribution to a speech-mediated practical undertaking — while solitary, and independently of any immediate social influence. Second, P becomes able to perform the action entirely ‘internally’, that is, in the mind. I have described this second phase of internalisation in terms of the ‘in the mind’ metaphor because this is how, for the most part, Vygotsky describes it. Vygotsky’s view of society’s role in the development of the individual’s ability to think is admirably summarised by his colleague, Leontyev.

...the higher specifically human psychological processes can only emerge in the interaction between men, that is, they can only be interpsychological, and only later are they performed by the individual independently, some of them losing their initial external form, becoming intrapsychological processes... Consciousness is not given initially and neither is it generated by nature: it is generated by society, it is produced (Leontyev, quoted in Lektorsky 1984, p.145).

The first combining of sociogenesis and internalisation as an explanation of mental phenomena can be traced back to the French psychologist Janet in the early 1920s (see Van der Veer & Valsiner 1988). However, Vygotsky's idea of thinking as internally-performed communicating-for-practical-purposes is much more specific than Janet's. At the time Vygotsky was writing, and even slightly earlier, ideas similar to his were being mooted in American social psychology. The most sophisticated and detailed American account is that of de Laguna 1963 (first published 1927), for whom the primary function of speech is the coordination of cooperative action. She defines thinking in very much the same terms as Vygotsky:

The higher mental activities — conception and purpose, memory and imagination, belief and thought — so far as these are distinctively human, are found to be closely dependent on speech. They are fundamentally social in origin, being due indirectly to the development of *conversation*, which, it is argued, has the primitive function of preparing for concerted group action, much as distance-perception prepares the immediate response of the individual. Conversation is shown to have a characteristic structure, adapted to its function, and it is this structure which makes possible the organised activity of thought, in which it is reflected (de Laguna 1963, pp.xi-xii).

The form of conversation from which thought springs is the discussion, which has for its end agreement among the participants regarding some specific conditions of common action... Thinking is the internalisation of this form of conversation and its independent practising by the individual. This is originally and primarily a rehearsal in direct preparation for his active participation in the social enterprise of discussion. It serves also... as a preparation for his own individual primary action (*ibid.* pp.352-3).

Mead also insists on the social, communicative, origins of 'mind': "The internalisation in our experience of the external conversation of gestures which we carry on with other individuals in the social process is the essence of thinking..." (Mead 1962, p.47) (first published 1934). Mead

...accounts for the existence of minds in terms of communication and social experience; and by regarding minds as phenomena which have arisen and developed out of the process of communication and of social experience generally — phenomena which therefore presuppose that process, rather than being presupposed by it... (*ibid.* p.50).

I choose Vygotsky as exemplar of the sociogenetic approach to thinking not because his work is necessarily superior in range or detail to that of his American contemporaries, but because it is currently better known and more written about.

6.2 *Some loose ends tidied*

Vygotsky died (in 1934) at the age of thirty-eight, leaving several unresolved ambiguities and contradictions in his account of thinking. Before I look more closely at what is involved in the mastering and internalising of speech-mediated social action, I want to point^{out} some problem areas I will be ignoring, for lack of space.

(1) Vygotsky says human action differs from animal behaviour by virtue of its becoming speech-mediated. If ‘human action’ is the end product of the ‘speechifying’ process, then we cannot strictly speaking use the term *action* for whatever it is the infant ‘does’ before it starts producing proper human actions. Nor can we properly speak of the ‘actions’ of animals. The problem with distinguishing the two ‘levels’ of action is that the pre-social kind is not really a kind of action at all. Vygotsky intends any ‘action’ in the everyday sense to be an action of the second, speech-mediated kind. It is an action with speech already built in. It may well be inherent in the concept of an action that it can in principle be specified in words, hortated, commented on, etc. As one philosopher has observed, “Actions are what descriptions of actions describe, and different descriptions describe different actions. There is no other way to sort out actions” (Cody 1967, p.179). If there are no words for it, and the animal or presocial infant has no words for it, then it is not an ‘action’. The posited ‘pre-social actions’ (which Vygotsky calls ‘lower behaviours’) are impossible to specify. The moment we attempt to describe one, we are speaking of it *as if it were* a social action, which *ex hypothesi* it is not. I am shelving this problem.

(2) According to the ‘internalised speech-mediated social action’ account of thinking, the infant is born with, or develops on his or her own, certain pre-social and rudimentary practical skills, which sooner or later get ‘socialised’ into speech-mediated forms. Totally

new speech-mediated actions, with no pre-social precursors, are taught too. Both the internalising and the speech-mediated and social nature of what is internalised are essential ingredients in the ‘thinking’ which only we humans can do. Vygotsky sometimes speaks as if there is a more primitive form of internalisation, which animals and pre-social infants are capable of, and which operates on pre-social behaviours. That is, animals and pre-social infants exhibit ‘lower mental functions’. Vygotsky cites memory, perception and basic concept formation. Like other pre-social abilities, these lower mental functions can be transformed into ‘higher mental functions’ by the speech-mediating process.

The process of ‘interiorisation’ of cultural forms of behaviour... is related to radical changes in the activity of the most important psychological functions, to the reconstruction of psychological activity on the basis of sign operations. On the one hand, natural psychological processes as we see them in animals actually cease to exist as such, being incorporated in this system of behaviour, now reconstructed on a social-psychological basis so as to form a new entity. This new entity must by definition include those former elementary functions which, however, continue to exist in subordinate forms acting now according to new laws... (Vygotsky 1994, p.155).

The idea of the infant having ‘animal-level mental functions’ which are subsequently subjected to control by speech is an interesting one, which I return to in Chapter Nine. But are these lower mental functions completely replaced (‘ceasing to exist’ and ‘being reconstructed’ anew, as Vygotsky says above) or do they remain ingredient in thinking — ‘continuing to exist in subordinate forms’ as he also says? Numerous other questions arise too, but space forbids addressing them.

(3) Vygotsky is equivocal about the ontological status of speech. He sometimes writes as if speech were simply a kind of *action* — specifically, a species of meta-action which somehow controls or ‘regulates’ other actions. Thus he asks: “What is it that really distinguishes the actions of the speaking child from the actions of an ape when solving problems?” (Vygotsky 1978, p.26). On the next page speech is referred to as “a method of behaviour”. And speech is described as “This new form of activity, aimed at controlling another person’s behaviour” (Vygotsky 1994, p.117).

At other times he writes of speech as if it were literally a *tool*, a kind of hardware, like hand-tools but of different material and with different functions. And he employs the familiar synecdoche whereby it is the uttered words themselves, rather than to the speaker’s acts of speaking, that have action-regulating powers. Thus: “Now speech

guides, determines and dominates the course of action; the planning function of speech comes into being in addition to the already existing function of language to reflect the external world” (*ibid.*, p.28). And “The sign acts as an instrument of psychological activity in a manner analogous to the role of a tool in labour” (*ibid.*, p.52), and “...the basic analogy between sign and tool rests on the mediating function that characterises each of them” (*ibid.*, p.54).

Thirdly, in an apparent compromise between the actional and the hardware approaches to speech, Vygotsky sometimes writes as if speech is the *use* of a tool. Thus: “...children’s capacity to use language as a problem-solving tool...” (*ibid.*, p.27) and “...the essence of sign use consists in man’s affecting behaviour [of others] through signs” (*ibid.*, p.54). This third way of speaking implies that the semantic and regulatory effects of speech are due partly to the properties of the tool itself (the words used) and partly to how (with what expression, in what context, etc.) the speaker uses the tool. Like the hardware view, this compromise view implies that words, language, etc. are definable independently of people’s acts of speaking.

Interestingly, three twentieth century writers stressed that speech is conceptually located within cooperative activity and that it cannot be understood outside this context. They are de Laguna, Vygotsky and Wittgenstein. The same equivocation about the nature of speech — as to whether it is a pure action, an object of use (a sign, a piece of semiotic hardware), or the using of that use-object — is present in the work of all three.

I want to commit Vygotsky to the first, purely actional construal of speech. The ‘tool’ and ‘use of tool’ idioms are figurative. Speech can plausibly be regarded as a form of technology, but it does not literally involve the production or use of anything, any more than does walking or swimming. No hardware of any kind is involved in speech. Besides, Vygotsky is going to define thinking as ‘internalised speech-mediated action’, or ‘internal speech’ for short. Speech gets to be internalised in thinking. I have not yet said what Vygotsky thinks ‘internalisation’ or ‘internal speech’ are, but I have been assuming that what is to be internalised is some form of action or activity. If Vygotsky retains either a ‘tool’ or a ‘tool-use’ view of thinking, we are going to have to contemplate not only internalised actions but also internalised, physically present, linguistic hardware. The task would be to explain how a physical entity such as a tool or word could be ‘internalised’. One would also have to explain how, in its ‘internal’

application, the tool/word could retain its technical properties. The situation is a lot simpler if we stick with the purely actional view of speech. If we do, then ‘inner’ speech is just a special case of ‘inner’ actions generally. There is no point in taking on what looks like the far more difficult job of explaining the internalisation of hardware, for the sake of what looks like a figure of speech.

There is awareness of this difficulty in the Vygotsky literature. Bronckart asks ruefully, “What is actually ‘interiorised’: is it language as such (words) or general properties of communicative interaction, or even properties of ‘action mediated through signs’?” (Bronckart 1996, p.92). Some answers are as vague as Vygotsky is ambiguous.

With internalisation, what was originally in the interpersonal (or inter-mental) domain becomes intra-personal (intra-mental) in the course of development. However, this general concept of internalisation is not sufficient for elaborated theoretical use, nor is it helpful in deriving empirical research methodologies. To go beyond generalities it is necessary to specify what ‘materials’ are imported from society into the intra-personal world of any individual, and *in what ways* this process operates. The first question can be answered here in generic terms. In human internalisation, the materials involved are of a semiotic nature (Lawrence & Valsiner 1993, pp.151-2).

We need to know if we are talking hardware or software. Lawrence & Valsiner’s ‘materials of a semiotic nature’ does not help us decide. And surely we cannot know ‘*in what ways*’ internalisation operates without knowing what it operates on. To avoid such imponderables, I commit Vygotsky to an actional view of speech.

(4) There is another ambiguity about what is internalised. I have said that it is speech-mediated action which is internalised. And this means ‘action with speech attached’ as it were. For Vygotsky, the term *internal speech* is a synonym for *thinking* and shorthand for *internalised speech-mediated action*. However, there are many points in Vygotsky’s writing where it sounds as if he wants it to be just the speech component which is internalised, with no internalised action to go with it. I will proceed on the assumption Vygotsky thinks it is some mix of speech and practical action that is internalised. For Vygotsky, the core function of speech is the control or ‘regulation’ of people’s actions — other people’s and the speaker’s own. If there was no action to be regulated, there would be no speech. As Brockmeier says, this is the whole “...Vygotskian point: namely, to see semiotic action as inextricably linked to other forms of actions” (Brockmeier 1996, p.137). Even when the speech is internalised, the link with action is maintained. Vygotsky

wants internal speech to retain at least some of the action-regulatory properties of ordinary speech. In the case of ‘internal’ speech, the actions being regulated are those of the person P who is doing the ‘internal speaking’. In one kind of case, the actions are actually being performed, as when P is thinking what she is doing whilst doing it. In another kind of case, the actions are being performed ‘internally’ along with the speech — as when P is just thinking about doing X. In a third kind of case, ‘thinking out loud’, the speech is overt and ‘external’, but the action which the speech relates to is merely ‘internal’. In all three cases — just as when both speech and action are overtly performed — the *raison d’être* of the speech is regulating the action and if there is no action for the speech to regulate, there is no speech.

6.3 *Speech-mediation: from demonstration to gesture to speech*

According to Vygotsky, the distinctive feature of human action is that it is mediated — that is, controlled or regulated — by speech. Mediation boils down to the fact that one person, by speaking, can incite, cue, modify, halt, etc., the actions of someone else. How does this work? What sort of transaction occurs here, and how is it learned? And what are Vygotsky’s thoughts on this? In the material in English, Vygotsky is nowhere explicit. However, the beginnings, or the outline, of one possible explanation can be extracted, from various places in the material — so we can at least sketch the kind of answer Vygotsky probably intends.

The main idea seems to be that social control is effected first via imitation. Imitation is inborn in normal infants and is, almost from birth, a powerful and versatile disposition (Meltzoff 1996). It is this disposition that the adult exploits. By demonstrating an action, the adult can — sometimes, at least — get the infant to perform the action too. The achieving of concerted action constitutes a reward for both parties. As a means of social control, such demonstration-and-imitation is unwieldy, a blunt instrument, works relatively infrequently, and is suitable for only a limited range of simple actions. If parents did not enjoy the proceedings as much as infants, it might not be persisted with. But it has a great future. Later on, much-abbreviated demonstrations of actions — mere ‘gestures’ at performing the actions in question — are able to elicit the same kind of imitative response from the child. With practice, the abbreviated gesture becomes an effective cue for the child to perform the unabbreviated action. And finally, the use of gestures in the behaviour-regulating role is replaced by speech. Over the course of the present section,

I will present quotations from Vygotsky which show at least one plausible route, without too many large gaps, for this development from demonstration-and-imitation to speech.

Vygotsky acknowledges the adult's initial reliance on imitation in teaching the child how to do things when he cites, approvingly, the findings of Shapiro and Gerke concerning social influences on the acquisition of motor skills:

In their view, social experience exerts its effect through imitation; when the child imitates the way adults use tools and objects, she masters the very principle involved in a particular activity. ...The child, as she becomes more experienced, acquires a greater number of models that she understands. These models represent, as it were, a refined cumulative design of all similar actions; at the same time, they are also a rough blueprint for possible types of action in the future (Vygotsky 1978, p.22).

Children are capable of learning not only specific perceptual and motor skills by imitation, but also general heuristic, investigative and problem-solving skills. Vygotsky believes human infants are much better at imitating than apes are. For example, regarding their respective abilities to learn totally new behaviours by imitation, there is a significant difference between apes and children.

[Kohler's experiments] ...reveal that primates can use imitation to solve only those problems that are of the same degree of difficulty as those they can solve alone. [But]...Children can imitate a variety of actions that go well beyond the limits of their own capabilities. Using imitation, children are capable of doing much more in collective activity or under the guidance of adults (Vygotsky 1978, p.88). And:

The cleverest animal is incapable of intellectual development through imitation. It can be drilled to perform specific acts, but the new habits do not result in new general abilities. In this sense it can be said that animals are unteachable. In the child's development, on the contrary, imitation and instruction play a major role. They ...lead the child to new developmental levels. In learning to speak, as in learning school subjects, imitation is indispensable. What the child can do in cooperation today he can do alone tomorrow. Therefore the only good kind of instruction is that which marches ahead of development and leads it; it must be aimed not so much at the ripe as at the ripening functions (Vygotsky 1962, p.104; 1986, p.188).

By habitually imitating the infant, in an 'ostentatious' way and for fun, the adult accustoms the infant to the demonstrator role in the imitation game as well. The first important modification of the imitation game is when the person demonstrating the action

— and it may be either the child or the parent — gives only a very abbreviated or ‘token’ demonstration of the action to be imitated. A gesture is the performance of the beginning only of the action which is being incited. After some practice in this new streamlined version of the imitation game, the token performances or ‘gestures’, which are a lot less laborious for the demonstrator, come to have the same imitation-inducing effect as a full performance. Of course, the term *imitation* is now not strictly appropriate — the responder is no longer doing what the demonstrator is doing. The demonstrator is merely making a gesture, but the responder is performing the whole action. This basic streamlining of the original demonstration-and-imitation procedure seems also to have been achieved by apes:

Kohler describes highly diversified forms of ‘linguistic communication’ among chimpanzees. First in line is their vast repertory of affective expressions: facial play, gestures, vocalisation; next come the movements expressing social emotions: gestures of greeting, etc. The apes are capable both of ‘understanding’ one another’s gestures and of ‘expressing’, through gestures, desires involving other animals. Usually a chimpanzee will *begin* a movement or an action he wants another animal to perform or to share — e.g., will push him and execute the initial movements of walking when ‘inviting’ the other to follow him, or grab at the air when he wants the other to give him a banana. All these are gestures *directly* related to the action itself. Kohler mentions that the experimenter comes to use essentially similar elementary ways of communication to convey to the apes what is expected of them (Vygotsky 1962, pp.34-5; 1986, pp.71-72).

Vygotsky speculates about how one common gesture, pointing, could derive by this abbreviation process. He describes how, if an infant wants an object to be handed to him/her, then he/she may make a deliberately abortive reaching and grasping movement in the direction of the desired object. Then,

When the mother comes to the child’s aid and realises his movement indicates something, the situation changes fundamentally. Pointing becomes a gesture for others. The child’s unsuccessful attempt engenders a reaction not from the object he seeks but from another person... The grasping movement changes to the act of pointing. As a result of this change, the movement itself is then physically simplified, and what results is the form of pointing that we may call a true gesture (Vygotsky 1978, p.56).

As Luria (who collaborated closely with Vygotsky) reports, speech makes its first appearance early on, in situations where the adult both demonstrates (or gestures) the required action and verbally incites it:

For example, the experimenter may say to the child, *Give me the fish*, and then lift the fish, shake it, tap on it, or point at it with his finger. If the adult speech is reinforced with some action connected with the object, then ...the child can carry out the task (Luria 1981, p.94).

From then on, there is a gradual transition from demonstration-and-imitation to speech as the preferred means of instruction and/or hortation. The transition is slow:

...the adult's speech, which focuses the child's attention or regulates his/her action does not immediately attain these powers. Rather, the formation of this directive function of adult speech goes through a rather long and dramatic development (Luria 1981, p.93).

The change in preference from demonstration-and-imitation, to gestures, to speech as the preferred action-regulating technique seems to be paralleled in the increasing sophistication, with age, of child's make-believe games. Vygotsky remarks that "...play contains all developmental tendencies in a condensed form and is itself a major source of development" (Vygotsky 1978, p.102) and he reports experimental results which show speech gradually predominating over mime and gesture:

Whereas some children depicted everything by using movements and mimicry, not employing speech as a symbolic recourse at all, for other children actions were accompanied by speech: the child both spoke and acted. For a third group, purely verbal expression not supported by any activity began to predominate. Finally, a fourth group of children did not play at all, and speech became the sole mode of representation, with mimicry and gestures receding into the background. The percentage of purely play actions decreased with age, while speech gradually predominated. The most important conclusion drawn from this developmental investigation ...is that the difference in play activity between three-year-olds and six-year-olds is ...in the mode in which various forms of representation are used. In our opinion, this is a highly important conclusion; it indicates that symbolic representation in play is essentially a particular form of speech at an earlier stage... (Vygotsky 1978, pp.110-111).

The key to the nature of the transition between gesture and speech as the preferred action-inciting technique, probably lies in the first of the two Luria quotes above. The child has got used to responding (with the appropriate action) to either full demonstrations or very abbreviated demonstrations (gestures). Typically, the adult will habitually accompany his or her demonstrations or gestures with speech distinctive of that action. Presumably, as in the fish example above, the speech contributes an added ostentatious, attention-directing factor. And if it is repeated often enough, the speech,

which will be distinctive of that action, will be regarded as *part* of the action. It will be regarded as a noise one makes when (the rest of) that action is being performed. Subsequently, the adult may produce a particular action-specific piece of speech with no demonstrating at all, or with just a minimally affected gestures, facial expression or tone of voice. Speech is now occurring, effectively, on its own. But it retains the action-inducing effect of the demonstrations and gestures which it is a subtraction from. And the reason is that — because, in the early stages, the speech came to be regarded as an integral part of the activity — the speech-by-itself now counts as just another way of *abbreviating* the original demonstration, for convenience. For the same reason that a gesture is able to elicit the desired behaviour as effectively as a full demonstration, so speech by itself can now replace gesture in eliciting the behaviour.

Because certain speech acts have been a feature of past demonstratings and imitations of that behaviour, these speech acts are seen as a ‘part’ of the behaviour, or at least as part of the *demonstration* of it. Speech has obvious advantages over demonstration, mime and gesture. It is easier to perform than any demonstration or gesture, however abbreviated. As well, the hearer of speech does not have to be looking but only listening — “...gestures require that communicative exchanges take place in face-to-face situations, while vocalisations are not spatially restrictive” (John-Steiner & Tatter 1983, p.90).

Presumably, the point of ‘grafting speech onto’ a learner’s experience of given activity is to make the learner biddable in the context of that activity. As de Laguna says, the primary function of speech is to expedite cooperation. Really, speech-mediated activity *is* cooperative activity.

The mother communicates with the child and gives him/her instructions with the help of speech. For example, she draws his/her attention to objects in the environment (e.g., *Take the ball, Lift your arm, Where is the doll? etc.*), and the child carries out these spoken instructions. What is the mother doing when she gives the child these verbal instructions? As we have already said, she is drawing his/her attention to something, she is singling out one thing from among many. With her speech she organises the child’s motor acts. Thus the child’s motor act often begins with the mother’s speech and is completed with his/her own movement. Vygotsky pointed out that initially the voluntary act is shared by two people. It begins with the verbal command of the mother and ends with the child’s act (Luria 1981, p.89).

According to Vygotsky, the first stage of socialisation consists in inducing the child to participate, albeit in a guided and reactive way, in shared, cooperative activities. The

child's future ability to perform actions solo — and thus embark on the second, 'internalisation' phase of the socialisation process — depends on prior experience of performing them in concert with others and in response to others' speech.

Vygotsky was a Marxist and looked for 'cultural-historical' influences on the individual. Kozulin describes the socialisation or 'acculturation' process as follows:

Symbolism and the conventionality of signs were perceived by Vygotsky as important characteristics of human activity that are imposed on an individual's behaviour, shaping it and reconstructing it along the lines of the sociocultural matrix. The concept of activity thus was perceived as an actualisation of culture in individual behaviour, embodied in the symbolic function of gesture, play and speech systems (Kozulin 1996, p.106).

'Speech-mediating' of the child's activities is the means by which the child 'takes on board' the culture he or she is born into. That culture determines the speech forms and language-games which will regulate the child's behaviour. Via speech, the child appropriates the culture and the culture appropriates the child.

6.4 Internalisation, phase one: going solo

Once the child has mastered the responder role in cooperative activity, the stage is set for 'internalisation'. The important thing to be clear about is that, according to Vygotsky, what is internalised is 'cooperative activity' or 'speech-mediated social action' — it is action which has both a practical component and a verbal, communicative component:

...the process of internalisation consists of a series of transformations: An operation that initially represents an external activity is reconstructed and begins to occur internally. Of particular importance to the development of higher mental processes is the transformation of sign-using activity, the history and characteristics of which are illustrated by the development of practical intelligence... An interpersonal process is transformed into an intrapersonal one. Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological), and then inside the child (intrapsychological)... All the higher functions originate as actual relations between human individuals... The internalisation of socially rooted and historically developed activities is the distinctive feature of human psychology... As yet the barest outline of this process is known (Vygotsky 1978, pp.56-7).

As I said earlier, there are two phases in the 'internalisation' process. First, the child becomes able to act in the distinctive speech-mediated social way while he or she is alone

— although, because the child is now acting alone, *social* can at best mean ‘quasi-social’. Then secondly, the child becomes able to perform speech-mediated actions ‘internally’ or ‘on the intrapsychological plane’.

Before the child can go solo with his or her new social-actional skills, he or she must be experienced not just in the responder/hearer role in speech transactions, but also in the demonstrator/speaker role. He or she must become able to use speech to regulate others’ actions, solicit cooperation, etc., just as others are able to use speech to regulate his or hers. We can look, for an example, at how the child develops the ability to direct other people’s attention to things. Here again, but with a little more at the beginning, is a passage I quoted on page 185 above. The typical early context will involve an object, out of reach, which an infant sees and wants:

We call the internal reconstruction of an external operation *internalisation*. A good example of this process may be found in the development of pointing. Initially this gesture is nothing more than an unsuccessful attempt to grasp something, a movement aimed at a certain object which designates forthcoming activity. The child attempts to grasp an object placed beyond his reach; his hands, stretched towards the object, remain poised in the air. His fingers make grasping movements... When the mother comes to the child’s aid and realises his movement indicates something, the situation changes fundamentally. Pointing becomes a gesture for others. The child’s unsuccessful attempt engenders a reaction not from the object he seeks but from another person... The grasping movement changes to the act of pointing. As a result of this change, the movement itself is then physically simplified, and what results is the form of pointing that we may call a true gesture (Vygotsky 1978, p.56).

In the previous section I described how the child, as responder, learns to react to an abbreviated or aborted demonstration as if it were a full demonstration. The child comes to respond to mere gestures on the part of the adult. In the quotation above, we see the child’s first — almost accidental — proactive employment of this abbreviation strategy.

Simultaneously with the child’s production of demonstrations, mimes and gestures, he or she will produce speech. At this early stage the speech is still an indissoluble part of the prevailing activity — and the child’s attempts to ostentate this activity. Vygotsky thinks that attention-directing is the first and most important ‘action-regulating’ purpose speech serves. In the infant’s earliest experience, speech is still not disentangled from the demonstrating and mimetic gesturing. Speech plays an ‘adverbial’ role. It is part of the ostentatious manner in which the demonstration is performed. The speech has not yet

separated out and taken over the main burden of the action-regulating. It is still part of the crude ‘ostentatious-performance-inviting-imitation’ mode of action-regulating. Thus,

When we observe the child in action... it becomes obvious that it is not only the word *mama* which means, say, *Mama put me in the chair*, but the child’s whole behaviour at that moment (his reaching out toward the chair, trying to hold on to it, etc.). here the ‘affective-conative’ directedness toward an object... is as yet inseparable from the ‘intentional tendency’ of speech. The two are still a homogenous whole and the only correct translation of *mama*, or any other early words, is the pointing gesture. The word, at first, is a conventional substitute for the gesture... (Vygotsky 1962, p.30; 1986, p.65).

And, “...the child embellishes his first words with very expressive gestures, which compensate for his difficulty in communicating meaningfully through language” (Vygotsky 1978, p.32). Speech won’t yet work on its own.

We have now reached a point where, not only is the child amenable to having his or her actions regulated by the speech of others (thus having his or her actions ‘speech-mediated’), he or she is able to take the active role and regulate others’ behaviour. Once these two abilities are established, the child can then attempt to verbally direct his or her *own* behaviour, while he or she is alone. Here is the child’s first attempt to ‘go solo’ with this new kind of ‘speech-guided’ action. The first manifestation of this is what we call ‘thinking out loud’ and what Piaget and Vygotsky called ‘egocentric speech’. Vygotsky thinks “...children’s egocentric speech should be regarded as the transitional form between external and internal speech” (Vygotsky 1978, p.27).

Egocentric speech is inner speech in its functions; it is speech on its way inward, intimately tied up with the ordering of the child’s behaviour, already partly incomprehensible to others, yet still overt in form and showing no tendency to change into whispering or any other sort of half-soundless speech (Vygotsky 1962, p.46; 1986, p.86).

The development is gradual: “...egocentric speech is linked to the child’s social speech by a thousand stages” (Vygotsky 1994, p.119). He discusses (*ibid*, pp.109-20) experiments in which children are set problem-solving tasks with an adult in the room but not assisting. In this context, the children exhibit a “strange alloy of speech and action” (*ibid*, p.118). They “...solve practical tasks with the help of their speech, as well as their eyes and hands” (Vygotsky 1978, p.26):

...the child not only acts endeavouring to achieve its goal, but at the same time also *speaks*. This speech as a rule arises spontaneously in the child and continues

almost without interruption throughout the experiment. It increases and is of a more persistent character every time the situation becomes more difficult and the goal more difficult to attain. Attempts to block it... are either futile or lead to the termination of all action, 'freezing' as it were the child's behaviour... (Vygotsky 1994, p.109).

The behaviour of a small child in the situation just described presents, consequently, a complex skein; it consists of a mixture: direct attempts to attain the goal, the use of tools, speech either directed at the person conducting the experiment or simply accompanying the action, as if strengthening the child's efforts, and, finally, a paradoxical-sounding direct appeal to the object of attention (*ibid*, p.118).

An important change in the role of egocentric speech now occurs. From being a willy-nilly accompaniment to action — "as if strengthening the child's efforts" — the egocentric speech becomes much more judicious and deliberate. The speech begins to foreshadow actions. The child is laying the foundations for his or her future ability to 'think ahead'.

The change consists in the fact that the child's speech, which previously accompanied its activity and reflected its chief vicissitudes in a disrupted and chaotic form, moves more and more to the turning and starting points of the process, beginning thus to precede action and throw light on the conceived of but as yet unrealised action.

...The child's speech — due to the fact that it is first a verbal mould of operation or its parts — reflects action and strengthens its results, starts at a later stage to move towards the action's beginning, to predict and direct the action, forming it according to the mould of former operation, that was previously fixed by speech.

...As speech becomes an intra-psychological function, it begins to prepare a preliminary verbal solution to a problem which, in the course of further experiments, perfects itself and, from a speech-mould recapitulating past experience, becomes the preliminary verbal planning of future action (Vygotsky 1994, pp.120-121).

For Vygotsky, the child's egocentric speech is a way of exploiting the attention-focussing, readying and action-regulating functions of ordinary (social) speech, without the presence of an interlocutor being required. As Wertsch & Stone put it,

The result of mastering and differentiating the self-regulative, planning function of speech as opposed to its social, communicative function is to recognise that the former does not require an overt form of a communicative context (Wertsch & Stone 1985, p.172).

Putting it more simply: Vygotsky is effectively saying that, if the child is already

experienced at having his or her actions directed by (others') speech, and is already experienced at directing (others') actions by speech, then there is no need for any further explanation of how it is that the child is able to direct his or her own behaviour with his or her own speech. By comparison, in Dennett's explanation of thinking out loud, there is an attempt to fill in a bit of physiological detail as well:

...the practice of asking oneself questions could arise as a natural side-effect of asking questions of others, and its utility would be similar: it would be a behaviour that could be recognised to enhance one's prospect by promoting better-informed action-guidance. All that has to be the case for this practice to have this utility is for the preexisting access-relations within the brain of an individual to be less than optimal. Suppose, in other words, that although the right information for some purpose is already in the brain, it is in the hands of the wrong specialist; the subsystem in the brain that needs the information cannot obtain it directly from the specialist — because evolution has simply not got around to providing such a 'wire'. Provoking the specialist to 'broadcast' the information into the environment, however, and then relying on an existing pair of ears (and an auditory system) to pick it up, would be a way of building a 'virtual wire' between the relevant subsystems.

Such an act of autostimulation could blaze a valuable new trail between one's internal components. Crudely put, pushing some information through one's ears and auditory system may well happen to stimulate just the sorts of connections one is seeking, may trip just the right associative mechanisms, tease just the right mental morsel to the tip of one's tongue. One can then say it, hear oneself say it, and thus get the answer one was hoping for (Dennett 1991, pp.195-6).

Vygotsky and Dennett both use the term *autostimulation* in this connection. And they also agree that speech is not the only means of this kind of autostimulation. Dennett says "Talking out loud is only one possibility. Drawing pictures to yourself is another readily appreciated act of self-manipulation" (Dennett 1991, p.197). And Vygotsky speaks of speech and other sign media, which "...serve the child first and foremost, as a means of social contacts with the surrounding people, and are also applied as a means of self-influence, a means of auto-stimulation, creating thus a new and superior form of activity in the child" (Vygotsky 1994, p.111).

The important thing that egocentric speech has in common with normal interpersonal speech is the actual saying and/or hearing of the words. Given this feature of egocentric speech, Vygotsky can plausibly regard egocentric speech as an *abbreviated* form of normal speech. In the section before last, when I was recapitulating Vygotsky's account of how the child's actions get to be 'speech-mediated', I tied Vygotsky to a 'progressive

abbreviation' theory of speech mediation — whereby speech is the residue (which still has action-inciting powers) when demonstrations, mimings and gesturings of actions are progressively abbreviated out of a primary speech/action matrix. Now, if egocentric speech can plausibly be regarded as an 'abbreviation' of ordinary interpersonal speech, then this 'progressive abbreviation' theory can be extended. He can extend the abbreviation process past speech to include egocentric speech. So, the whole account so far would go as follows.

- (i) The demonstrating of action A has a natural A-inducing effect on the audience, given his or her natural tendency to imitate;
- (ii) after suitable training, an abbreviated demonstration — e.g., a mime or gesture — of A has a similar A-inducing effect on the audience — the mime or gesture now functions more as a simple cue than as a demonstration to be imitated;
- (iii) demonstrations and mimings or gesturings of action A by others are invariably in the learner's experience accompanied by speech of those others which is specific to A;
- (iv) after suitable training, speech done *without* demonstration, mime or gesture will count as an *abbreviated form* of demonstration (or mime or gesture), and will thus have action-inducing effects similar to those of a full demonstration or mime, etc.; that is, speech by itself will function as a cue for the audience,
- (v) egocentric speech retains sufficient features of ordinary speech to count as an abbreviation of it and would thus tend to have, along the lines of the other kinds of abbreviation above, a residual action-inducing effect on the hearer.

The important thing for Vygotsky is that egocentric speech is necessarily preceded by, and has its form and function determined by, social speech. And egocentric speech provides the same kind of assistance in practical action as is provided by social speech.

The greatest change in children's capacity to use language as a problem-solving tool takes place... when socialised speech (which has previously been used to address an adult) is turned inward. Instead of appealing to the adult, children appeal to themselves; language thus takes on an intrapersonal function in addition to its interpersonal use. When children develop a method of behaviour for guiding themselves that had previously been used in relation to another person, when they organise their own activities according to a social form of behaviour, they succeed in applying a social attitude to themselves. The history of the process of the internalisation of social speech is also the history of the socialisation of children's practical intellect (Vygotsky 1978, p.27).

As he or she becomes older, the child comes to rely less and less on out-loud egocentric speech — during play, problem-solving, etc. However, “...when egocentric speech disappears from view it does not simply atrophy but ‘goes underground’, i.e., turns into inner speech” (Vygotsky 1962, p.18; 1986, pp.32-33).

6.5 Internalisation, phase two: into the mental

The final step in the development of thinking is the disappearance of egocentric speech ‘inwards’. This completes the development that was incepted with the infant’s first participation in cooperative activity. Vygotsky’s main point is that the direction of the development of thinking is from the social to the inner (and ‘mental’):

...our schema of development — first social, then egocentric, then inner speech — contrasts both with the traditional behaviourist’s schema — vocal speech, whisper, inner speech — and with Piaget’s sequence — from nonverbal autistic thought through egocentric thought and speech to socialised speech and logical thinking. In our conception, the true direction of the development of thinking is not from the individual to the socialised, but from the social to the individual (Vygotsky 1962, pp.19-20; 1986, pp.35-36).

The idea being explicitly rejected here is that the infant or child first develops thoughts and then gradually acquires the means to express these publicly. For Vygotsky, thinking arises only *after* the social, and via *internalisation* of it. In this quotation, Vygotsky also distinguishes his ‘from speaking to thinking’ continuum from that of the behaviourists. The transition from social to egocentric to inner is for Vygotsky a developmental one, and a matter of skill acquisition, to do with the child learning to adapt the speech technique for use in new (e.g., absent-adult) situations. Although progressive abbreviation of the speech performance is involved in the transition, it is not the physical abbreviation *per se* that is important for Vygotsky, but the child’s increasing sophistication. For the behaviourist, the transition is entirely a physical matter. Vygotsky was thinking of Watson 1919, but as late as 1957 Skinner was saying:

The range of verbal behaviour is roughly suggested, in descending order of energy, by shouting, loud talking, quiet talking, whispering, muttering ‘under one’s breath’, subaudible speech with detectable muscular action, subaudible speech of unclear dimensions, and perhaps even the ‘unconscious thinking’ sometimes inferred in instances of problem solving (Skinner 1957, p.438).

Thus, although Vygotsky’s is an abbreviation story, it is not a simple physical abbreviation story like that of the behaviourists or the physiological psychologists I discussed earlier.

For Vygotsky, the abbreviation is to do with ‘making do with the minimum necessary’, and this is a skill and sophistication factor, rather than a physical abbreviation *per se*.

Vygotsky appeals explicitly to an abbreviation story when he is explaining how egocentric speech develops into inner speech. He cites Tolstoy’s Kitty and Levin in *Anna Karenina*, being able to communicate complex information without words. The two know each other so well, that they can communicate using written initial letters of words only, or by exchanging glances. Because each already ‘knows’ what the other is going to say, it need not be uttered out loud. Kitty and Levin’s abilities are relevant to the situation of the child graduating from egocentric speech to inner speech in that, presumably, the child knows itself even better than Kitty and Levin know each other. The child alone ‘knows even better’ what he or she would say were there someone else present.

With the Kitty and Levin analogy, and other informal characterisations, we are given some indication of what would tend to abbreviate speech in the relevant ways. Kitty and Levin’s speech is the minimum required for regulating each other’s action. With ‘internal speech’, what is ‘spoken’ is the minimum required for auto-regulation of potential action of the agent’s own. But we still have little idea what ‘internal speech’ amounts to. The ‘progressive abbreviation’ theory cannot be further-extended to cover internal speech. An abbreviation story is plausible only while there is something (and preferably something recognisable) of the original action remaining. This is apparently not the case with ‘inner speech’. So ‘inner speech’ cannot be a yet-more-abbreviated form of egocentric speech.

Vygotsky is lax in his use of the term *internalisation* — and in his associated use of the terms *intrapsychological*, *psychological plane*, *inner*, etc. Sometimes he uses these terms in connection with the initial ‘going solo’ phase, with its overt and audible egocentric speech. This is the stage at which the child has mastered or ‘appropriated’ a given social-practical skill for her- or himself — and can perform some adapted or abbreviated solo version of it while alone — but is not yet able to rehearse it ‘internally’. At other times Vygotsky uses *internalisation*, *interpsychological*, etc., in relation to the second phase, with its totally ‘internal’ and ‘silent’ speech. This second phase of internalisation is clearly distinct from, and more sophisticated than, the first. At the second stage, we are talking about something that happens after solo mastery, and involves the mastered activities being transformed into ‘internal’ activity. This is not just individual mastery of a social skill but, as Lektorsky puts it,

...the idea that internal psychical processes are the result of ‘interiorisation’, that is, ‘growing in’ or transposition onto the inner plane of those actions of the subject which are originally performed externally and directed at external objects (Lektorsky 1984, p.145).

It is the stage where egocentric speech ‘goes underground’, down to an ‘inner plane’, to become ‘inner speech’. In yet a third usage, Vygotsky employs the same terms, *internalisation*, *interpsychological*, *inner plane*, etc., to cover both these developmental phases — the going solo and the “transposition onto the inner plane”— considered together, as a single event. That is, Vygotsky sometimes uses these terms to refer to phase one, sometimes to phase two, and sometimes to both phases together. Although this terminological laxity could be largely due to difficulties of translation, it conveys an impression of prestidigitation. The ‘going solo’ phase is unproblematic, and Vygotsky explains it plausibly, in terms of abbreviation, etc. But because *internalisation* is also used to refer to the second phase, and to the two phases together, the impression is given that the whole two-phase sequence has been explained. And this is a false impression.

I shall assume that Vygotsky intends the terms *intrapsychological*, *psychological plane*, *inner*, etc., to refer primarily to what I have been calling the second phase of internalisation. Although I will continue to use the term *internalisation* to cover both phases collectively, I will use the remaining terms, *intrapsychological*, *internal*, etc., solely in connection with the second phase. The terms *intrapsychological*, etc., have an obvious connotation of ‘mind’ in the ordinary Cartesian sense. It could be argued that Vygotsky needs this connotation, initially at least, so that he can point to what it is he is trying to re-describe. He needs to first indicate the Cartesian concept, so he can then proceed to explain it away. The question is, does he explain it away?

The effect of Vygotsky’s combining his abbreviation story about ‘inner speech’ with the use of terms like *higher mental functions* and *intrapsychological* is that we get the impression that speech gradually fragments and abbreviates, right down to the point where no audible (or otherwise perceptible) speaking is being done at all. At that point, the speech slips around the corner as it were, into the mental. At the vanishing point, the mental takes over. One infers that the speech is still going on, only now ‘internally’.

As I said earlier, the abbreviation story cannot explain ‘internal speech’ because, if ‘inner speech’ were abbreviated egocentric speech, say, then there would be some residue of overt speech preserved in ‘inner speech’. But Vygotsky gives the impression that there

is no residue. The idea of doing things on an ‘inner’, ‘mental’ plane fails too, because it is obviously metaphorical. At least, the notion of a person performing an action inside him- or herself is untenable until it is clarified what sense of *internal* is being used here. And Vygotsky fails to specify the relevant sense of *internal*. Without this kind of literal spelling out, the ‘concept’ is only a metaphor. Vygotsky seems unclear about the inadequacy of the two ways of characterising ‘inner speech’. He sometimes combines the two, perhaps hoping that, together, they will disguise each other’s failings.

One frequently quoted passages in the recent literature is from Vygotsky’s other close collaborator, Leontyev. The passage is said to show that Vygotsky’s notion of the ‘intrapsychological’ does not presuppose any Cartesian-type mental domain — and that, for Vygotsky, ‘the mental’ is a purely actional and developmental concept. Here is the passage, plus a bit at the beginning not usually quoted:

The older psychology considered consciousness as some kind of metapsychological plane of movement of psychical processes. But consciousness is not granted initially and it is not originated by nature. Consciousness is originated by society; it is produced. For this reason consciousness is not a postulate and is not a condition of psychology but its problem, a subject for concrete scientific psychological investigation.

Thus the process of interiorisation is not external action transferred onto a pre-existing internal ‘plane of consciousness’; it is the process in which this internal plane is formed (Leontyev 1978, p.60).

The much-quoted part is the last sentence, which is usually read as implying that the ‘internal psychological plane’ is nothing over and above the internalisation *process* — as this process is applied to ‘external’, ‘social’ activities. Or the psychological is in some sense the *product* of that process. [Hampshire, whose concept of ‘inhibition’ roughly conflates Vygotsky’s ‘abbreviation’ and ‘internal doing’ concepts, makes what looks like the same claim as Leontyev. He says that the child’s “..full inner life begins with, *and is constituted by*, this power of intentional inhibition” (Hampshire 1971, p.163, my italics).] The Leontyev passage is usually taken as showing some anti-Cartesian sophistication on Vygotsky’s and/or Leontyev’s part(s). However, all we are in fact told in the passage is that a psychological world, or ‘plane’ — of a very Cartesian-looking kind — does not precede but rather follows the (as yet undefined) internalisation process. The idea of an ‘internal plane’ is still needed for the internalisation concept — whether the internal plane is thought of as the prerequisite for, or as the product of, the internalisation process.

Again, there is an impression of sleight of hand. Phase two of the internalisation process seems to be explained in terms of relocation on to the internal, psychological plane — which by implication has always been there. But then, when the status of the internal plane is queried, Vygotsky — or at least, Leontyev — makes as if to define the psychological plane solely as a function or product of the phase two internalisation process. Vygotsky does often write as if internalisation is the stashing away of ‘external’, ‘social’ accomplishments in an already existing ‘internal’, ‘private’ repertoire. However, even if the internal repertoire is constituted solely by the material delivered to it, or somehow brought into being by the delivery process itself, we still need to be told what kind of thing the inner repertoire or plane *is*. And we are not. We are not even told, really, *where* it is. And finally, whatever its provenance, Vygotsky’s ‘intrapsychological’ category looks very like the Cartesian ‘mental’.

Vygotsky’s inability to define either phase two of the ‘internalisation’ process, or the ‘intrapsychological plane’ — at least, without falling back on the conventional notion of the mental — is disappointing. But his recourse to the mental is made inevitable by a prior mistake — that of regarding ‘inner speech’ as a *kind* of speech. Once one believes there is speaking (of some kind) going on, one is committed to the inference that it must be going on somewhere. Because it is silent, the speech cannot be going on in the ordinary social world. Therefore, it has to be going on in some other world, or on some other ‘plane’. It is clear Vygotsky thinks that ‘inner speech’ is a kind of speech. He says:

Inner speech is speech for oneself; external speech is for others. It would not be surprising if such a basic difference in function did not affect the structure of the two kinds of speech. Absence of vocalisation *per se* is only a consequence of the specific nature of inner speech, which is neither an antecedent of external speech nor its reproduction in memory but is, in a sense, the opposite of external speech. The latter is the turning of thought into words, its materialisation and objectification. With inner speech, the process is reversed, going from outside to inside. Speech sublimates into thoughts. Consequently the structures of these two kinds of speech must differ (Vygotsky 1986, pp.225-226; 1962, p.131).

And he talks about the habit of egocentric speech making way for “the birth of a new speech form” (*ibid* p.135). Vygotsky is envisaging a silent, unvocalised kind of speech. It is bad enough calling egocentric speech a kind of speech. If there is no audience, no communication, no implicit ‘demonstration’ for another person, then, especially on Vygotsky’s own account of speech, there seems to be little of ‘speech’ left — or little, at least, of the ‘semiotic’ aspect essential to speech. The preferred modern term for

‘egocentric speech’ is *private speech* (see John-Steiner 1992, pp.285-6). Leaving aside the term *private language*, the concept of private speech might seem to borrow respectability from such concepts as ‘a private talk’ or ‘private chat’, or ‘private communication’. But these concepts all relate to a privacy exclusive to two or more people. ‘Private speech’ is ‘speech’ that is not addressed to anyone. The question of who this speech is private ‘to’, in the usual sense, does not arise. But however the case may be with egocentric speech, we are now asked to consider, as also a kind of speech, a performance which is quite undetectable. The point comes out better if we say that such imperceptible performances are being identified as a kind of *speaking*. To call these performances ‘non-speakings’ or ‘refrainings from speaking’ seems more appropriate.

The implausibility of describing ‘inner speech’ as a kind of speech is easy enough to miss, or to ignore or gloss over. My opinion is that the implausibility is concealed from us by the nature of the rhetoric of, and our overfamiliarity with, ‘internal doing’ metaphors generally. We tend to mistake dead metaphors for literal referring expressions. We are familiar with what the dead metaphor refers to, so we tend to think of it as a literal name. So, we unconsciously infer, if *inner speech* is a literal name then, what it refers to must literally be a kind of speech.

Ryle says it does not matter whether *Le Penseur* says things out loud, *sotto voce*, or in his head, and this is the same ‘catechresis’, that is, a confusing of the literal and the metaphorical. Ryle may be writing tongue-in-cheek here, but catachresis is a mistake. When the figurative nature of *inner speech* is unnoticed, the mistake is almost inevitable. Skinner makes the mistake. In the passage quoted earlier he talks about ‘the range of verbal behaviour’ extending to include ‘subaudible speech’. In another passage, he says,

...the reinforcing effects of covert behaviour *must* arise from self-stimulation. But self-stimulation is possible, and indeed more effective, at the overt level. When a man talks to himself, aloud or silently, he is an excellent listener....and is optimally prepared to ‘understand’ what he has said. Very little time is lost in transmission and the behaviour may acquire subtle dimensions. It is unsurprising, then, that verbal self-stimulation has been regarded as possessing special properties and has even been identified with thinking (Skinner 1957, pp. 438-9).

The expressions *talking silently* and *verbal self-stimulation* show Skinner is thinking of ‘covert speech’ as a kind of speech. And Dennett repeats the gaffe. He speculates that “once crude habits of [out-loud] vocal autostimulation..” become established in the repertoire, “..we should expect them to be quickly refined”, and he contemplates

...further enhancements of efficiency and effectiveness. In particular, we can speculate that the greater virtues of *sotto voce* talking to oneself would be recognised, leading later to entirely silent talking to oneself. The silent process would maintain the loop of self-stimulation, but jettison the peripheral vocalisation and audition portions, of the process, which wasn't contributing much. This innovation would have the further benefit, opportunistically endorsed, of achieving a certain privacy for the practice of cognitive autostimulation. ...Such privacy would be particularly useful when comprehending conspecifics were within earshot. This private talking-to-oneseft behaviour might well not be the best imaginable way of amending the existing functional architecture of one's brain, but it would be a close-to-hand, readily discovered enhancement, and that could be more than enough (Dennett 1991, pp.196-7).

Dennett's description of this 'silent talking to oneself' has a lot in common with Vygotsky's. Like Vygotsky, Dennett has a 'skill' or 'developmental' concept of the transition from out-loud to silent speech, rather than a crude 'physical abbreviation' one. And Dennett makes the important concession to a developmental approach generally, that 'the functional architecture of one's brain' may be 'amended' by educative practices. And Dennett's specification of the end-point of the developmental process in question is just as poor as Vygotsky's. Dennett's alternatives to the *inner speech* terminology — namely, his expressions *entirely silent talking to oneself* and *private talking-to-oneseft behaviour* — cannot be taken literally any more than *inner speech* can. *Silent speech* is as figurative, although in a different way, as *inner speech* is. Dennett's idea that the 'vocalisation and audition portions' are 'peripheral' to speech (or to this new kind of speech) and can be 'jettisoned' surely indicates it is no kind of *speech* he is talking about. If there is no vocalising and/or nothing to be heard, no actual speaking can be going on.

Whatever kind of activity so-called 'inner speech' turns out to be, it may well have meta-actional or 'action-regulating' functions similar to, and derived from, those of speech. But this is no reason to say 'inner speech' is a kind of speech. Clearly, it is not a kind of speech. Clearly also, Vygotsky's account of 'inner speech' is as limited as Ryle's. For Vygotsky, 'inner speech' is either equivalent to thinking or integral in it. Thus, without a satisfactory literal explanation of what 'inner speech' is, the last phase of the child's development as a thinker remains mysterious. But this failure does not by itself cast doubt on Vygotsky's account up till that stage. Vygotsky might still be right about how, from the ability to participate with others in cooperative activity, the child develops the ability to bring 'thinking out loud' to bear to assist his or her solo activity.

CHAPTER SEVEN:

Hampshire's inhibited expression theory of emotion

Hampshire writes about the relation between feeling an emotion and expressing that emotion in behaviour. The account is contained in two papers, 'Feeling and Expression' and 'Disposition and Memory'. Both date from 1960 and are reprinted in Hampshire 1971. 'Feeling and Expression' is also published on its own, in a version which contains five pages omitted from the 1971 edition. Where I quote from these five pages, I cite Hampshire 1961. All unattributed quotations (with just page numbers) are from Hampshire 1971. Hampshire's account of the feeling of emotion is speculative and not closely argued, but he nevertheless makes some original and interesting suggestions, particularly to do with the role of imitation in emotional behaviour. I also briefly discuss the account of political, moral and legal thinking in Hampshire's recent *Justice is Conflict* (Hampshire 2000A). This account retains basic features of his analysis of emotion, and confirms his allegiance to an actional and 'sociogenetic' approach to thinking.

7.1 Introduction

Hampshire tells a three-stage abbreviation-internalisation story reminiscent of Vygotsky's. The starting point is the infant equipped with no 'mental' abilities — and only 'proto-' practical and social abilities:

It is natural to begin with the assumption that infants, like the higher animals, exhibit for our inspection definitely discriminable patterns of behaviour and that at the very beginning they exhibit no powers that are distinctively mental for our easy discrimination, beyond and behind those patterns of behaviour (160).

As with Ryle and Vygotsky, the abbreviated performance of a behaviour is more sophisticated and developmentally advanced than a full performance. There are "...successive stages of the interiorisation of feeling" (152) — from full performance, to a partly inhibited or abbreviated performance, to 'inner feelings':

...a creature attacked becomes frightened or angry in the sense that it perceptibly behaves in the way that we would specify if we were asked for the natural response to attack — that is, by flight or counter-attack. At the next stage of mental development away from the primitive reaction, the behaviour typical of anger — i.e., aggression — may be inhibited, and only the physiognomy, or expression, that normally accompanies the behaviour may remain. ...[This is] the abstracted residue of aggressive behaviour; it is this aggressive behaviour at its

vanishing point. At the third stage of inhibition, even this remaining natural expression of anger may be intentionally controlled... [and a] stage of interiorisation is reached... That which remains as a residue, when both the behaviour and the physiognomy primitively associated with anger are controlled, is the mere feeling as a state of consciousness, the inner perturbation, the effect by itself. It is 'inner' in the sense that nothing of the anger remains to be perceived by an observer (163-164).

The account is clearly an actional one in my sense. The raw material for feelings is actions (or 'behaviours', 'expressions of emotion') of the person. And feelings are derived from this raw material by another action of the person, namely, 'inhibition'. Hampshire's inhibition corresponds to Ryle's 'refraining' and Vygotsky's 'abbreviating' or 'internalising'. Hampshire refers to it in various ways — "deliberately cut off the natural expression of the anger" (144), "restrains himself from doing something that he is inclined to do" and "has cut off the action of aggression" (145), "learning to inhibit or to control inclinations" (160), "the action of inhibiting", "intentional inhibition" and "deliberately to inhibit" (163), "an effort to suppress", "every natural expression of it suppressed" and "concealing every overt sign" (164), and "the counter movement of restraint" (165), and so on. Always the implication is of some active, effortful physical intervention. The inhibitings Hampshire has in mind are not just negative 'actions'.

Why do people from time to time inhibit their behaviours? Hampshire thinks one reason is something like 'prudent self-interest in a social situation'. Learning how to merely feel an emotion, instead of expressing it, is part of one's socialisation. One submits to social convention, and controls, for example, "...a sign of anger that others can dangerously interpret as such" (163). This is the same kind of motive Skinner sees for people choosing 'covert verbal behaviour' over thinking out loud:

Covert speech is not... wholly or perhaps even primarily a labour-saving device. As we have seen, verbal behaviour is frequently punished... That avoidance of punishment is a more likely explanation than convenience is shown by the fact that covert behaviour returns to the overt level when a punishing audience is no longer in control though convenience has not been altered. Many people who live alone gradually come to talk to themselves aloud (Skinner 1957, pp.436-7).

Dennett also implies that the privacy achieved by keeping one's thoughts to oneself is the main reason for 'entirely silent talking to oneself': "Such privacy would be particularly useful when comprehending conspecifics were within earshot" (Dennett 1991, p.197). The Hampshire-Skinner-Dennett idea of inhibition for safety-in-privacy perhaps derives

from Freud. In Part Three I mention other motivations for the 'inhibiting' or 'covertising' of behaviour. The motive Vygotsky assumes, for the various abbreviating and internalisings he talks about, is a convenience one. In demonstrating an action to oneself, as with demonstrating it to another, the aim is to create the desired effect on the audience. *Ceteris paribus*, the optimum effort required to achieve this is the minimum effort. Ryle suggests that 'thinking silently' has advantages — "...of social and personal convenience, of celerity and of facility" (Ryle 1949, p.34) — over 'thinking out loud'. For the psychologist Hunter, the main advantage of inhibiting a response is to delay it, until circumstances become more propitious for it. Pavlov's interpretation is different again. However, as far as Hampshire's account is concerned, the privacy motivation cannot be all-important. As I show later, his discussion of imitation presupposes that the contrary motivation — to ostentate and communicate behaviour — is just as important.

Hampshire's overall picture is of the mental as a kind of vestigial and internal version of overt expressive behaviour: "...the perceptible patterns of behaviour must be the original endowment from which the purely mental states or activities developed, as a kind of shadow of the original, or as a residue from it" (160). A person's "...inner life begins with, and is constituted by, this power of intentional inhibition" (163). Like Vygotsky (see Bakhurst 1996, p.199) and Ryle 1979, p.17, Hampshire is explicit in his desire to avoid both dualism and behaviourism. Ryle describes himself as "...trying to disentangle the notion of thinking both from the Scylla of Cartesian Duplicationism and the Charybdis of Watsonian or Humean Reductionism" (Ryle *ibid*, p.31). Hampshire says,

My motive in dwelling on... the derivation of inner feeling from inhibited behaviour, is precisely to point to a possible middle way, which is neither Cartesian dualism on the one hand, nor on the other hand a reduction of that which is distinctively mental to its overt behavioural expression (159).

The Cartesian assumption is that feelings are *sui generis* mental states, which may have overt emotional behaviour as a consequence. The feelings are logically prior to the behaviour and thus explain the behaviour. The picture is of

...feelings and states of mind, which are *first* distinguished and identified by the subject as feelings of certain kinds, and which are then *independently* found to have typical manifestations in behaviour. The manifestations in behaviour are conceived as something altogether independent which is added to the states of mind (155).

The Cartesian thinks of "...the emotions and sentiments as primarily something hidden in

a man's consciousness and as linked by a contingent and causal relation to their outcome in behaviour.." (165). But Hampshire believes the Cartesian way of individuating emotions is the wrong way round. He suggests

..an order of dependence in classification that is the very reverse: that we must first have distinguished certain patterns of behaviour in certain standard circumstances, and then, on the basis of this kind of classification, we can distinguish the various inner sentiments as controlled inclinations to behave in these ways in standard circumstances (155).

There is an echo here of Vygotsky's disavowal of Piaget's notion of the child's development as being

..from non-verbal autistic thought and speech to socialised speech and logical thinking. In our conception, the true direction of the development of thinking is not from the individual to the social, but from the social to the individual (Vygotsky 1962, p.20, 1986, p.36, already quoted).

For Hampshire, the expressive behaviour is logically (and developmentally) prior, and the feeling is the result of a function — the 'inhibiting', 'abbreviating', 'controlling' or 'interiorising' function — being applied to this behaviour. For this reason also, ".it is not a contingent fact about men that anger or sadness or amusement have their characteristic expression" (Hampshire 1961, p.6):

The expression of a sentiment or emotion is not something that is extrinsic to the sentiment or emotion itself, as something that may or may not be added to it. On the contrary, that which we call the natural expression is originally constitutive of the sentiment or emotion itself... (165).

On the other hand, Hampshire is not identifying feelings as 'nothing but' behaviour or bodily agitation, as the Watsonian or Skinnerian behaviourist would. Nor is he defining feelings as a purely logical construction out of behaviour — such as a tendency or disposition to behave — in the way that the logical behaviourist would. He is clear that, although feelings are derivative of overt behaviours and bodily 'expressions', they nevertheless constitute a separately existing kind. And they are actualities, not abstractions. They are "behaviour at its vanishing point"(163) or "inner perturbations" (144, etc.) or "residues" (164, etc.) resulting from the inhibition of overt behaviour. Or they are "incipient behaviours" (145, 151, 155).

The question whether expressive behaviour or feeling has logical (and/or developmental) priority is different from questions about which is more noteworthy,

culturally important or relevant for everyday purposes. Hampshire is chiefly concerned to establish that the ability to entertain feelings logically presupposes prior abilities to behave in certain expressive ways. Feelings arrive in the repertoire as inhibited versions of emotional displays. Children “...gradually acquire an inner life of unexpressed feeling, which becomes more and more distinct from their overt behaviour” (168) and “...the notion of the mental states that lie behind their behaviour and expression, as something distinguishable from them, becomes more and more definitely applicable” (160). Once ‘unexpressed feeling’ becomes habitual, priorities could change. It could be that, as a matter of sociological fact, emotion occurs more commonly in everyday adult life in the form of feelings than in the form of overt displays. For practical purposes, feelings could be more important and relevant than the displays, so that the latter are aberrant. If this were so, it might well be that the various emotion words are taken as referring primarily to the respective ‘inner feelings’, and only secondarily and derivatively to the corresponding overt displays. This might help explain the priorities of our existing colloquial mentalist vocabulary — and the appeal of the Cartesian assumption that feelings are ‘where the action is’ as far as emotion is concerned. But Hampshire’s logical and developmental point is unaffected ^{by such} matters of contingent sociolinguistic fact.

Although he has clearly distinguished his account from those of dualism and behaviourism, Hampshire is still undecided about just what kinds of things feelings are. The terms he uses most often in this connection are *inclination* and *disposition* — and I have also mentioned the terms *residue*, *inner perturbation* and *incipient behaviour*. But he throws other terms into the pot as well. In Section 7.2 below, I consider some of the different kinds of thing Hampshire seems to want feelings to be.

Hampshire believes imitation is an integral component in expressing feelings, and in perceiving, identifying and understanding the feelings of others. I talk about this in 7.3.

Hampshire is primarily concerned to explain what it is to feel an emotion, but he provides some hints about how the account could be extended to thinking, and mentation in general. He implies that thinking is generally more ‘verbal’ than feeling emotion. He compares the two “...corresponding powers of mind — the power to feel without acting and the power to think without saying” (167). This suggests that, whereas feeling emotion is the inhibited or internal performance of (expressive) actions, thinking is inhibited or internal speech. This theme is continued:

As it is of the nature of feelings or sentiments that they can be expressed by natural signs [i.e., partially inhibited behavioural displays], so it is of the nature of a thought, and a process of thought, that any perceptible expression of it is a conventional [especially verbal] sign, the significance of which is determined by learnt rules of use and syntax. My facial expression and gestures may express my expectancy and excitement. But I cannot (logically cannot) express my thought that my prodigal son will return without converting my gestures into separate signals which require rules of interpretation and of syntax (154).

But he has already stated that speech — at least, the ability to verbally identify the emotion one is feeling — is part and parcel of feeling. We thus assume that speech is essentially involved in both feeling and thinking, and that feeling and thinking cannot be distinguished according to whether speech is integrally involved. The difference must be a matter of degree:

We do not have here simple and unmixed opposites, but rather a continuous scale from natural to conventional sign, from likeness [imitation or gesture] to [verbal] statement, and complicated intertwinings of the two. We are more ready to speak of *knowledge* of reality in proportion as the medium consists of conventional signs arranged in accord with a system of rules, which are learnt as general rules of interpretation and of syntax (148-149).

If one did need to extend Hampshire's account of emotions to thinking, and thus did need to specify the important differences between feeling and thinking, this criterion of 'relative complexity of speech involved' could be retained. One might also want to distinguish the two on the basis of — what is also a difference of degree — the technical sophistication of the action being 'internally performed' in the respective cases. Emotion is normally to do with relatively simple and immediate, and 'natural' interpersonal encounters. Thinking usually concerns more technically sophisticated and complex problems and procedures. There is also the possibility, which Hampshire mentions, of "complicated intertwinings" of cognition and emotion, or technical behaviour and emotional behaviour. However, my present intention is to expound Hampshire's theory as a theory of emotion *per se*. Its usefulness as a source of components for a theory of thinking can be judged in retrospect, in a later chapter, when it is clearer what an actional theory of thinking should look like.

Finally, Hampshire tries to say what *kind* of account he is offering. He recognises that his reader might "...want to ask for the justification of this, or any other, simplified philosophical theory of the emotions in their relation to behaviour" (166) and he asks

“What is a philosopher’s authority for distinguishing phases of human development beginning with primitive behavioural reactions and ending with inner concealed emotion?” (*ibid*). Although he says “I am referring to the development of any single individual of the species, from infancy onwards” (160), he does not think of himself as doing developmental psychology, which is “not the work of philosophers” (166). What he is offering, rather, is one application of a “...theory of language, a theory of how concepts must be properly introduced and applied in their normal contexts” (*ibid*). The area of language he is theorising about is emotion talk, and the concepts in question are emotion concepts. Hampshire takes himself to be “...specifying the implications, and the method of confirmation, attached to uncriticised, ordinary statements about human emotions of the most rudimentary kind” (*ibid*). To understand how it is that an explanation of a given area of language can include speculations about what children learn, and when, we need to note what is the theory of language Hampshire is espousing.

The theory is that language exists chiefly in order to serve practical purposes — such as drawing people’s attention to things, cueing actions, asking, thanking, cursing, greeting, praying, etc. — in the context of cooperative undertakings. To understand a given piece of speech, or whole area of discourse, one has to understand the practical social context, or ‘language-game’ in which that speech plays a role. Hampshire believes that we can best understand the social practices which underlie emotion talk if we go over what children have to learn when they master these social practices.

7.2 *Inhibition vs disposition*

As I mentioned earlier, Hampshire uses several different terms to specify what kinds of things ‘feelings’ are. He refers to feelings variously as *dispositions*, *inclinations* or *tendencies* (all to behave in given ways), as the *residue* or *shadow* of behaviour, and as *incipient behaviour*, *inner perturbations* and *unseen mental states*. The variety reflects an incoherence in Hampshire’s account. His central thesis is that feelings are some kind of internal residue left over from behaviours which the agent has inhibited or refrained from. However, the terms he most commonly uses to describe feelings are *disposition*, *inclination* and *tendency*. I do not propose to enter the long-standing philosophical debate about what is the most useful concept of ‘disposition’ for philosophical purposes. Nor do I propose to attempt a single formal definition of the everyday English word *disposition*. The word has too many different everyday meanings. But it is fair to say that, in at least

one of its everyday usages relating to people's behaviour, *disposition* is approximately synonymous with *inclination* and *tendency*. In this usage all three terms imply an increased or at least noteworthy likelihood of a person performing behaviour of a given kind. Someone who has a disposition, say, to touch, is more likely than others to touch, or is more likely now than usually to touch, etc. He or she is at least temporarily, and relative to some baseline, 'prone' to touching. It seems to be this everyday sense of *disposition* that Hampshire intends when he speaks of feelings as dispositions. A desire to touch is a disposition, inclination or tendency to touch. Even quite technical philosophical concepts of 'disposition' respect this colloquial 'raised probability of behaviour' sense of the word. An example is Armstrong's (1968) account of mental states as dispositions — that is, states of a person 'apt for bringing about' certain behaviour.

The problem for Hampshire is that, if feelings are dispositions in this 'raised probability' sense then Hampshire has to say that, by inhibiting his or her performance of a certain kind of behaviour, a person thereby raises the probability that he or she will perform that same behaviour. The 'inhibiting' story has made the *non-performance* of given behaviour a defining feature of feeling. He cannot then describe feelings in terms of a disposition or inclination, defined as an increased likelihood of the *performance* of that same behaviour.

Hampshire does attempt — in a 1959 paper included in Hampshire 1971 — to formalise his own concept of dispositions, for explicating mental concepts. The attempt is less than successful. The conflict between the disposition idea and the inhibition story might have been avoided by a concept of 'unmanifested' dispositions, but Hampshire insists that: "A disposition must be manifested and must show itself in actual incidents; there must be at least some cases or instances of it (*sic*) dispersed over some period of time" (35). This makes conflict with the inhibition story inevitable. Another difficulty follows Hampshire's requirement that dispositions be more or less 'settled': "There are short-term and long-term dispositions, but a disposition cannot come into being, then pass away and then come into being again very rapidly" (34). Yet people's feelings are fickle:

There is a primary sense of disposition, disposition in the sense of inclination, typically applied to persons rather than physical objects: the sense in which I may report that I was at a certain moment disposed or inclined to laugh or cry. A disposition in this sense is something that may occur at a particular moment... (161).

And, far from always being settled, inclinations are often “confused and conflicting” (165), as when one feels anger and fear at the same time, or in rapid succession.

Hampshire realises he is putting a considerable explanatory burden on ‘dispositions’.

When we say that a man is disposed, or inclines, or wants, to do something, which he is not actually doing, what kind of potential behaviour is this? Until we have answered this question, we have still said nothing that is definite and clear about the relation of the inner life of feeling to perceptible behaviour... (157).

He retains the term *disposition*, but at the same time despairs of defining a sense of it which will serve his purpose.

I think that it is at least possible that there is at least one sense of disposition in which dispositions cannot be significantly attributed to machines, or to any kind of material object, and perhaps not even to dumb animals, but only to human beings. But if there is such a sense of disposition to be found, it has certainly not been found yet, or even closely approached (Hampshire 1961, pp.5-6).

Hampshire's own somewhat lax use of the words *disposition* and *inclination* makes the disposition concept even more problematic. As one would expect from a writer intent on “...deriving the concept of feeling and sentiment from the concept of inhibited behaviour” (156), Hampshire frequently talks in terms of inhibiting, restraining, deliberately cutting off and suppressing ‘behaviour’ or ‘overt expression’ or ‘the physiognomy of anger’ or ‘doing something’ or ‘actions’. The problem is that he also talks, just as often, about inhibiting the *disposition* or the *inclination* to perform the action. Thus, we read, “inhibited dispositions” (157), “conceal a present inclination” (147), “controls his inclination” (153), “learning to inhibit and control inclinations” (160), “disposition in this sense... may be inhibited or indulged” (161) and “restrained... inclination” (162).

If an inhibition story is to be retained at all, it has to be *behaviour* (action) which is inhibited. Hampshire is clear that feelings are the result of, or derived from, the inhibition of behaviour. If feelings are now to be equated with dispositions or inclinations, then these dispositions or inclinations must be what *results* from the inhibition of behaviour. They cannot be what is inhibited. Certainly, there is a customary sense in which we may inhibit or suppress or control our inclinations, and there may also be a customary sense in which we may inhibit, suppress or control our ‘dispositions’. But these customary usages are not consistent with either of Hampshire's two claims — that feelings result

from the inhibiting of behaviour, and that feelings are dispositions to behave. Hampshire's countenancing both 'the inhibiting of behaviour' and 'the inhibiting of dispositions' leads, for example, to the idea that, when an emotional display is simulated, "...there is the behaviour alone, without the original inclination to effective action behind it" (147). This implies that in the case of a genuine expression of feeling, the behaviour and the feeling *both* occur. Thus Hampshire contemplates "...the mental states that lie behind their behaviour and expression, as something distinguishable from them" (160) and "...the inclination that lies behind the behaviour" (162). The possibility of the expressive behaviour and the feeling occurring together explicitly contradicts the main 'inhibition' thesis — which is that the feeling is what you get when the behaviour is *inhibited*, that is, does not occur. We should dismiss the 'inhibited disposition' usage as an aberration.

However, the main problem remains that the inhibition story and the disposition story appear to be incompatible. Both stories have some plausibility. Some sort of disposition feature — whereby part of what one asserts when one ascribes a given mental phenomenon to P is that there is an increased likelihood of P behaving in a certain way — seems intuitively true. And the inhibition story seems plausible too. Can an inhibition story be reconciled with a disposition story? Is there any sense of 'disposition to behaviour X' which both implies an increased probability of behaviour X and is yet compatible with the inhibition of behaviour X? Preferably, to preserve Hampshire's account, the inhibition should be what *brings about* the state of increased probability. And there is another thing. The required mix of 'inhibition of X' plus 'increased probability of X' must persist for a time. 'Mental' states have duration. Is there any hope of reconciling inhibition, disposition and duration?

From the discussion of Ryle's refraining theory, it emerged that refraining from (or inhibiting) action X could not be a mere negative 'action'. Some impetus towards person P's performing X would have to pertain and, more to the point, the refraining would have to involve some task-activity performance. It would have to involve P's active countervailing of the impetus in question. Hampshire has talked only about inhibiting *qua* achievement (inhibiting_{ach}) and not about inhibiting *qua* performance (inhibiting_{perf}).

One way an inhibiting performance could be fitted into the scenario is as follows. Suppose that, due to some 'impetus' (some perception, say), action X were to actually commence — but then, due to some unspecified immediate countervailing or preclusive

performance on P's part, is stopped before any overt physical movement ensues. The countervailing performance, whatever it consists in, is inhibiting_{perf} (see my p.195 above). Hampshire does use the term *incipient behaviour* (on 145, 151 and 155). And the deliberate restraining or countervailing of 'incipient' or 'barely commenced' behaviour does seem a likely format for the 'inhibiting' of behaviour.

To take the duration requirement first. Although inhibiting_{ach} cannot have duration, inhibiting_{perf} can. How might it come about that the inhibiting_{perf} takes time, or occurs over time? A scenario that might fit the bill is one in which the original stimulus-to-X — the visibility of something eminently touchable, say — *persists* after the successful inhibition of the touching behaviour. That is, the persisting stimulus causesthe X-behaviour to be commenced — and be inhibited again, yet re-commence, and be inhibited again, and so on. And these commence-and-inhibit cycles could be quite rapid. Here the inhibitory act is a one-off episodic *fait* (like stopping a horse with a single tug on the reins), and the duration factor consists in this act having to be done repeatedly for a time.

Another kind of possibility is that the inhibitory act itself has duration — that it is a continuing performance like holding-on (or holding-back, or holding-in-abeyance) rather than a one-off *fait*. Inhibiting_{perf} would require sustained effort. If this were so, the inhibiting would presumably be modulated to suit the 'activation level' of the incipient X-behaviour. Too little effort and there would be "...occasions when the inhibition of the natural expression of the anger is incomplete and only partially successful, and sufficient signs remain as the basis for an inference..." (164). That is, some degree of actual X-ing, some involuntary spillover, might occur. But too much inhibition could be unpropitious too: very possibly, it could needlessly inhibit P's performance of other, unrelated actions. So we should contemplate an inhibitory effort geared to keeping behaviour X at some minimal, manageable, level of incipience. Inhibitory effort could be expected to fluctuate if the stimulus to X does. And one might expect a degree of tension and bodily agitation to accompany this balancing act. Hampshire does speak of 'inner perturbations'.

Anyway, these two scenarios seem to accommodate the duration requirement. In the first one, the stimulus-to-X persists and the X-ing keeps commencing and having to be inhibited — and the inhibiting is an all-or-nothing effect, which is rapidly repeatable. In the other case, the inhibiting is a sustained holding-back, which maintains behaviour X at some stable sub-overt-performance level of incipience.

However, we still have not accommodated the disposition requirement. It still looks as if, whatever inhibition strategy is employed, if it is successful we are going to be left with 'X not going to happen', full stop. There still seems to be no logical room left for the 'disposition' or 'inclination' idea, with its implication of an increased probability of X. On the other hand, perhaps all is not lost. Perhaps we do have all we need to fit in the 'disposition to act' parameter. Depending on which inhibition model one chooses, the inhibitory effort is a matter of repeatedly just-catching-up-with-and-stopping the incipient X-ing, or it is a matter of precisely-countervailing the incipient X-ing. In either case, the X-ing is being held 'on a hair trigger', as it were. If the stimulus to X is reinforced and/or the situation changes to become more propitious for X-ing, then it is quite likely that the inhibitory strivings will lapse or be overcome, and that X-ing is free to occur and does occur. To the extent that intensification of the stimulus to X-ing (or some other event conducive to X-ing) is likely, to that extent the probability of X-ing is increased. The inhibition in question is at best only conditional and/or temporary inhibition. It is conditional on what happens to the stimulus to X, and to the agent's inhibitory efforts.

On an account such as this, Hampshire can continue to talk of the inhibiting of behaviour X and to in the same breath talk of an increased disposition to do X. On this story, we can speak of a stimulus triggering an 'inhibition period' — during which there is an increased likelihood of X-ing. The likelihood of X-ing is increased as compared with the likelihood of X-ing before the stimulus to X-ing occurred. That is the important qualification. Before the stimulus to X, presumably, the probability of X-ing is negligible. The occurrence of the stimulus sharply increases the probability of X-ing. The probability is then knocked right back again, by the inhibitory effort. Although actual X-ing does not occur (except perhaps to some minimal, hastily curtailed extent), nevertheless the probability of X-ing is still significantly above what it was before the initial stimulus to X-ing occurred. During the inhibition period, the person still has a disposition to perform X.

An intensification of the stimulus to X-ing, or the advent of other factors propitious for X-ing, may well lead to the inhibitory effort being overcome or abandoned, which in turn leads to actual X-ing. But this is not the only way of ending the inhibition period. If the stimulus to X were to disappear, there would be no need for further inhibition of X and inhibition would normally be abandoned in this case too. So, the disappearance of the eminently touchable object is almost as good as one's actually touching the object at curtailing one's 'desire' or 'inclination' or 'disposition' to touch it.

Already, even in this very speculative filling-in of what inhibition and dispositions could amount to, a quite useful-looking behavioural strategy is emerging. If an animal, say, can respond to an initial cue to X not by actually performing X but by commencing-and-aborting X-ing in such a way as to 'put X on a hair trigger', then this could enable a faster and more vigorous response if, subsequently, new and more propitious stimuli-to-X do eventuate. The animal is 'delaying' the X response, and within the delay period, the X response is being 'primed'. The animal has 'readied itself' for X-ing. But I am speculating prematurely. Some filling-in such as above is necessary. Without providing details about what inhibiting is and what dispositions are, Hampshire cannot avoid the appearance of conflict between inhibition and disposition. He does not provide the requisite detail. But it does look as if it would be possible to provide the requisite detail.

7.3 *The role of imitation*

In order to explain how emotion words — and by implication other 'mental' terms — are used, Hampshire sketches the basics of the social transactions or 'language-games' in the context of which they are used. The underlying assumptions are as follows. Emotion words are used — in the form of referring expressions, descriptions, self-avowals, imperatives, etc. — to refer to both expressive behaviour and to certain difficult-to-observe or unobservable personal phenomena called 'feelings'. The words are used in the context of social transactions characterised not only by expressive behaviour but by inhibition of expressive behaviour, and by imitation, gestures, mock-emotion, etc. The emotion words take their place alongside these. To understand what roles the speech plays, a person must be familiar with all the contributing actions and activities. This in turn requires that the person be a competent participant in them.

Entry into a certain 'form of life' is a necessary background to using and attaching a sense to these concepts: namely, entry into that adult human form of life which includes, among other things, the habit of deliberately controlling the natural expression of inclination, and includes also a growing knowledge of conventions of speech and of behaviour (156).

Hampshire would argue that one cannot understand what the word *anger* refers to, for example, unless one is oneself able to inhibit aggressive displays, feign anger, empathise on the basis of a glare, recognise and identify others' anger, and so on. He would say this applies to a philosopher trying to get a perspicuous purview of the use of emotion terms as to a child learning what it means to not get cross when you don't get what you want.

Hampshire gives imitation an integral role in the 'feeling emotion' language-game. According to Hampshire, the ability to imitate others' behaviour is basic in the human repertoire: "Imitation is one primitive and natural way of learning routines and customs and the use of language itself, and it is the child's first way of entry into social life. That it must be counted as an original disposition of men seems certain" (p.146). Hampshire suggests that imitation, along with make-believe, plays an important heuristic and cognitive role in our lives generally. It is, he says, an essential factor in our perceiving, recognising and verbally identifying others' behaviour. Thus,

...perception of expression and of behaviour, and imitation of them, have not ordinarily been considered together... It is no longer possible to ignore the relation between the cognitive interests of men, as perceiving and classifying beings, and their imitative faculties and their primitive dispositions to play. These concepts of imitation and play, which enter into ..explanations of the cognitive function of art, must have their place also in the theory of knowledge (Hampshire 1961, p.5).

Possibly following Collingwood's lead in the philosophy of history, Hampshire is here introducing elements of the *verstehen* tradition into British philosophy of mind. He thus anticipates such developments as 'simulation theory' three decades later (see my p.23). According to Hampshire, one aspect of imitation's cognitive role is its corroborative, standardising function. We use imitation not only to 'read' another's behaviour, but also to communicate our reading of the behaviour back to the original agent — for confirmation, as it were, that we have got it right. Thus, "...we can show that we have perceived it by adopting the same expression in imitation" (151-152). We confirm that we have perceived the other's emotion by a brief quasi-imitative display.

Imitation and make-believe are essential for communicating feelings: "...the primitive faculty of imitation, and of imitative play and fiction, are a necessary background to the communication of feeling" (143). And imitation is the precursor of communication by speech. Thus, "The child's responses to meaningful gestures, and his imitation of them, are the earliest phases of a continuous history, which ends with the use of language" (169). There is room in Hampshire's account for, and some outlines of, the kind of story which I attributed to Vygotsky earlier. That is, (i) full demonstration-and-imitation of a behaviour (with accompanying speech) gives way to (ii) abbreviated demonstrations and imitations, i.e., gestures, (also with speech attached), and these in turn give way to (iii) speech by itself. There is also a close connection here with Wittgenstein's theory that verbal expressions of pain 'replace' pain behaviour. "When Wittgenstein suggested that

the *words* 'I am in pain' can be said to replace a cry of pain, he concentrated an immense transition, a whole history, into this single word 'replace'" (154).

By emphasising the close interrelationships between imitation and expressive behaviour, Hampshire moots a concept of emotional behaviour in which imitation is indispensable. In this view, imitation is not just an optional social extra, which may or may not occur in response to expressive behaviour. In some form or other — presumably, usually some very abbreviated form — imitation by an audience *invariably* accompanies expressive behaviour. Imitation plays a necessary role not only in the teaching, performing, communicating, and identifying of this behaviour, but possibly even in our referring to it. There is an essentially social, demonstrative, ostentatious and theatrical element in emotional behaviour, and in the concept of an emotion. 'Expressing feeling' is not just a solo performance but an interaction with an audience. Emotional behaviour is essentially *display*. It is a very similar point about actions in general that Wittgenstein is making when he says, as I quoted earlier, "An action is something one can *demonstrate*" (Wittgenstein 1980, #655).

To say that expressing feelings is a social transaction implies that the audience plays an active part, and an essential part. What does the audience do, other than observe and perhaps label the performance? Hampshire believes that the audience in some sense 'imitates' the performance. A named emotion is, for a child, an "independent reality" (148) of the adult world. To learn what that reality is, the child must learn to, accurately yet disingenuously, imitate the expression of that emotion. The child's

...playing at doing things, and imitating others for the sake of imitation, become for him autonomous activities, distinguishable from all others and requiring their own particular skill. Then he may engage in imitative play, deliberately and at will, and knowing what he is doing. He assumes the expression and posture of an angry father, or of a frightened child, distinguishing this fiction from fact. The success of the imitation, as imitation, carries its own satisfaction with it, as truth-telling carries its own satisfaction with it. They are both cases of making or doing something which matches, and which is in its own medium an equivalent of, an independent reality. The making, or discovery for oneself, of such an equivalence is at once the source and the evidence of an adequate grasp of the reality. The making of an equivalence may be taken as a kind of mastery of the independent reality, a reduction of it to our own terms... (148).

On this account, 'having the concept' of a given emotion is having the ability to accurately imitate its expression. Our knowledge of emotions is thus a performer's or

participant's knowledge rather than an objective knowledge. The name of the emotion is not so much a label on a thing in the world, but a cue for a charade.

Hampshire's concept of 'imitative play' can plausibly be regarded as a precursor of the simulation theorist's concept of 'simulation' or 'empathy'. The simulation theorist is chiefly concerned to explain our abilities to interpret, explain and predict others' behaviour — and these are thought of as 'cognitive' or 'mental' abilities on our part. At least, the 'empathy' which the simulation theorist talks about is a covert process. We do not have to overtly do anything — apart from attend — in order to empathise what someone else is feeling and or thinking. On the other hand, Hampshire's term *imitation* implies some overt performance. And clearly, the simulation theorist's concept of empathy is more plausible. Obviously, not all of our mature observation of others' behaviour is accompanied by overt mimickings of what we are witnessing. Certainly much of it is — at least if we can count imitations of a stylised and abbreviated or token-gestural kind, such as sympathetic murmurings, smiles, frowns, and so on. But at least some of our witnessings of emotional scenes are impassive. And we can be impassive without either being heartless beasts or failing to appreciate what is going on. Hampshire does not attempt to explain why it is — if imitation is instinctive as he says, and as necessary to understanding emotional behaviour — that we experience others' emotings without imitating them, in even a token way.

He easily could explain this. He could easily moot the idea of 'inhibited' imitation — the 'inner' or 'mental' equivalent of overt imitation, just as feeling is the 'mental' equivalent of overt expressive behaviour. 'Inhibited imitation' looks a plausible characterisation of 'empathy'. Rather than being a 'doing with' the other person, as imitation is, empathy is just a sort of 'feeling with'. An empathic response to another's emotional behaviour would thus be a 'feeling' which triggered by the other's behaviour. This kind of emotional contagion indubitably happens. But Hampshire does not seem interested in applying the 'inhibition' concept to imitation. The nearest he gets to this is in his emphasis, on the cusp of pp.150-151, on the 'disinterested' or "contemplative and enquiring" attitude in some of our responses to art.

If expressive behaviour is essentially theatrical, this is going to affect what it is that is 'inhibited' to produce feelings. That which is inhibited would become a piece of theatre, a *social* transaction, rather than the solo action of an individual. It is clear that Hampshire,

like Ryle and Vygotsky, acknowledges a social component in thinking, or at least in feeling. In Ryle's adverbial account, the social component in thinking is the educative component. For Ryle, however, the social, educative factor is not part of what is 'internalised' or 'inhibited'. The 'in the head' or 'inhibited' property of thinking, when it does apply, is a property of the action which is being performed thinkingly — not of the adverbial factor. The educative factor is expressed in adverbs like *teachingly* or *self-teachingly*, which help characterise the 'thinking' manner in which this action is performed. For Vygotsky, the social component of thinking derives from its origins in cooperative activity generally, both educative and practical. For Vygotsky, thinking is internalised speech-mediated cooperative activity. For Hampshire, feelings are inhibited 'demonstration-and-imitation' sessions, or perhaps charades — and here the social component being emphasised is the demonstrative or theatrical component.

There is another interesting consequence of seeing the expressing of emotion as a social transaction involving demonstration and imitation. We normally assume that emotional behaviour has, for the most part, purely personal and 'internal' causes. Someone cries because something has made them feel sad, someone laughs because something has 'tickled their funnybone' so to speak, and made them laugh. Hampshire suggests that, always, at least part of the reason for expressing emotion is to affect the audience — to somehow inveigle the audience into the behaviour too. At any rate, there is no completely spontaneous display. The performance is always to some extent for effect. The interpersonal dimension of the performance is ineliminable. Hampshire's main theory, deriving the internal feeling from the external performance, has already reversed our customary 'inner feelings causing emotional display' way of looking at things. When the implications of the imitation story are added to this, we get quite a different impression of what the 'expressing' of emotions amounts to. Now, the play's the thing, and the 'feeling' is the derivative and ephemeral part.

Finally, to emphasise the inherent 'showing' and 'for show' aspects of emotional behaviour is to further blur the distinction — which Ryle, with his concepts of 'heedful performance' and of doing something 'teachingly', began deliberately to blur — between simply performing an action and learning to perform it, showing someone how to perform it, demonstrating it, portraying it, etc.

7.4 *From imitation to gesture, to speech, to feeling*

Although Hampshire confines himself to offering “..that kind of speculation which can lead only to provisional and doubtful conclusions” (1961, p.22), he does make room for the same kind of developmental continuum — from demonstration-and-imitation plus speech, to mime and gesture plus speech, to speech by itself and thence to ‘the mental’ — which I attributed to Vygotsky. And this continuum can, as I hope to show in Part Three, provide the basis of a definite theory. The core of Hampshire’s contribution is the three-stage derivation of feeling from expression — from full expression, to abbreviated expression (gesture), to fully inhibited ‘expression’ (feeling). However, as I showed in the previous section, he also wants to integrate speech into every stage of this derivation. And, as I show below, he does contemplate an intermediate stage between gesture and feeling, where speech ‘replaces’ both full behavioural display and gesture in the expressive role. Thus his account can easily be read as a four-stage one, identical in the main to Vygotsky’s. To conclude my discussion of Hampshire’s account, I shall reprise its main features — but as adapted to a four-stage developmental progression rather than a three-stage one.

7.41 *Full demonstration and imitation*: The paradigm case of imitation is a social transaction where person A demonstrates some action X and person B watches and, using A’s X-ing as a guide, does X too. Hampshire does not distinguish this full-blown kind of transaction from what could be called ‘delayed’ or ‘absent demonstrator’ imitation, where B is alone and copying an action of A’s from memory. This latter is what Meltzoff 1996 calls ‘deferred imitation’. And Hampshire thinks ‘mimicking for fun’ or ‘make-believe-type’ imitating — when imitating is “a form of fiction” (147) — is the important variant. But it is clear he thinks that imitation, whether slavish or disingenuous, is a child’s main way of learning what behaviour, including what emotional responses, to perform.

Hampshire points to “complicated intertwinings” (149) and “complex interaction” (167) of speech and imitation-learning at this early full-demonstration-and-imitation stage of socialisation. And he implies throughout the two papers that avowals, referrals, ascriptions, descriptions and hortatings are part and parcel of the emotional behaviour the child learns, and part and parcel of what is imitated. In fact, we can regard speech as homogeneous with the other behavioural, expressive, gestural, ostentatious aspects of the imitation-learning transaction. Hampshire’s account is consistent with speech having a

role as integral as that which Vygotsky attributes to it at this early stage. Hampshire insists that, by the time we get to the 'feeling' end of the developmental continuum, speech is essential. The indispensability of speech to feeling could be explained by its indispensability at the initial demonstrating-and-imitating, full-expressing, imitation-learning stage of emotional behaviour.

7.42 *Gesture*: Widespread imitation will cause stock behaviours to become increasingly stereotyped. If Hampshire's 'theatrical' concept of emotional display is correct, customary forms of emotional expression should also tend to become abbreviated and essentialised. The aim of an emotional display is to get the audience to imitate or empathise appropriately. The law of least effort dictates that the minimum performance that will reliably achieve this end, will become the norm. (See the various motives for the inhibiting of behaviour on my pp.202-203 above.) Full-scale emotional displays are readily replaceable for communicative purposes by much-reduced versions, mere gestures.

Posture, gesture, facial expression are immediately legible by others, as signs of an inclination to behave in a specific way, when they are the last vanishing vestige of a familiar and classifiable pattern of behaviour. So the man who looks daggers at his neighbour has cut off the action of aggression, and the vestige of it remains in his glance... ..the truncated action is legible as a sign (145-146).

Conventional gestures of feeling necessarily have an 'artificial' aspect. Talking about fist-brandishing as a gesture of aggression, Hampshire says: "If a movement is seen effectively to serve some evident and familiar human need or purpose, its significance as gesture is lost. The behaviour generally needs to be uneconomic and useless, as action, in order to be taken as a sign" (153-154). Hampshire reviews (on 163-164) a range of cases intermediate between full expression of an emotion, and total inhibition of the expression. In some of these cases the residual vestiges of expression are involuntary, but in other cases they are feigned, or anyway voluntary.

Hampshire is not specific about the role of speech in this intermediate 'partial inhibition' phase. But his account leaves ample room here for the possibility that facial expressions, abbreviated displays, gestures, mimes, etc., are learned primarily in a context of language learning. Thus, the relation between speech and gesturing is not quite the same as the relation between speech and full displaying. Vygotsky, for example, writes as if speech is 'grafted on' to (or 'baptises') the full display. It is not a case of the gesture or whatever being taught first, and the appropriate speech being subsequently 'attached'

to it. It is rather as if gesture is an adjunct, an add-on, in the teaching of the appropriate speech. In any event, Hampshire's account is perfectly consistent with, if it does not specifically avow, the idea that appropriate speech and the partial inhibition of an emotional display are developmentally inextricable.

7.43 *Speech alone*: If speech is homogenous with the non-verbal components of the original display, then this enables us to give speech an essential role without our having to complicate the inhibition and/or abbreviation story. Hampshire's original inhibition story is a three-stage one — from full emotional displays, to residual gestures, and then to totally (or almost totally) inhibited 'displays' called feelings. As it stands, this accords speech no special role, nor does it sketch in the link to Wittgenstein's replacement theory of pain ascriptions. In fact, however, Hampshire could consistently insert 'speech alone' into the abbreviation continuum here at stage three. Speech is the overt residue when not only the full emotional display is done without, but ninety-nine percent of the stock non-verbal signs and gestures are foregone too. You get, maybe, speech with a mere inscrutable edge on the voice and glint in the speaker's eye. And this is a stock kind of case. By dint of progressive and piecemeal abbreviation and/or inhibition, the verbals have crystallised out of the primary display-and-imitation matrix. The words that were strategically ostentating the matrix, the pins charting it, now do for it.

The borderline between this stage and the last one is a shifting one. Emotion talk is usually delivered with some expression, such as facial expression or distinctive tone of voice. But Hampshire clearly acknowledges a stage on the developmental continuum where speech occurs more or less by itself. As I mentioned earlier, he cites with approval Wittgenstein's idea "that the *words* 'I am in pain' can be said to replace a cry of pain" (154), and he says that observers "must rely primarily on the subject's avowal" (164) of feelings. However, he does not go so far as to spell out the derivation of emotion talk in the same way that he spells out the provenance of conventional expressive gestures and of feelings. If speech of the relevant kind — that is, emotion talk — can be regarded as homogenous with other behavioural components of expressive displays, then, when it occurs more or less on its own, this emotion talk should be definable, like gestures and facial expressions, as a partially (or largely) inhibited rendering of a full emotional display. Hampshire should be able to explicitly define the speech too as a 'vestige' of the original display. However, he contents himself with alluding to Wittgenstein's 'replacement of pain behaviour' line on pain talk.

7.44 *Feeling*: Hampshire posits the same 'mental' developmental terminus as Vygotsky. Vygotsky relies on the term *internalisation*. Although Hampshire occasionally uses *interiorisation*, he relies mainly on the term *inhibition*. The aim of both theorists is to redefine phenomena which are commonly misconceived as 'mental', as meta-actional operations — the results of a learning process whereby actions come to be performable in progressively abbreviated forms.

For Vygotsky, speech (then egocentric speech) is the main departure point into the 'mental'. I suggested in Chapter Six that Vygotsky makes too much of speech in this connection. He sometimes seems to forget that by *speech* he always means speech-in-the-context-of-social-action. This is all he can mean if his account is to be consistent. The reader is often given the impression that Vygotsky thinks thinking is a matter of 'inner speech' *per se*. That Ryle also thinks speech crucially important in the provenance of 'the mental' is reflected in Ryle's proliferation of synonyms for thinking — such as, *sayings in one's head*, *silent babblings*, *silent colloquies*, *talkings to oneself*, *inner voices*, *inner asseverations*, *note-takings on an inner note-pad*, etc.

Hampshire can be taken as agreeing with Vygotsky and Ryle. Although he is not at all specific about how or why, and at what developmental stage, speech is so important, Hampshire does make remarks like "I am representing a human being's learning of a language as at the same time the acquisition of inclinations which he may on any occasion choose to realise or to inhibit" (163). And he insists that the agent must have verbal abilities commensurate with his or her abilities to feel. Inhibited speech clearly plays some part in the 'inner perturbation' of which feeling consists. I would argue, in support of all three theorists, that suitably delivered speech is one of our most powerful modes of emotional expression, if not the most powerful, and intuitively, an obvious feature of 'feeling' is incipient expressive speech. Speech could be integrated in a variety of plausible ways into the three-stage developmental progression which Hampshire puts forward. Speech gives invaluable, if not indispensable, technical assistance at every stage.

Even if feelings are totally undetectable as performances — and in practice, they seldom are — they are still public currency and publicly nameable. The fact they are publicly nameable means the performer, for one, usually puts words to them. If speech is just one component among others in the original emotional display, then the performer's public avowals themselves count against feelings being undetectable — or 'private'.

7.5 *The provenance of adversarial thinking*

In a personal communication, Sir Stuart says that one of the topics of his book *Justice is Conflict* (Hampshire 2000A) is “the social origin of mental acts (propositional attitudes), which in any person’s experience are first encountered as observable interpersonal business” (Hampshire 2000B). This is a clear restatement of the 1961 view he shares with Ryle and Vygotsky (and also de Laguna and Mead). It is the essentially anti-Cartesian view that ‘mental processes’ are public interpersonal transactions which a person has become able (after a long developmental process) to engage in in a special inhibited and/or internalised way. Thus,

Descartes presented the paradigm of thought as a process in the inner consciousness of the solitary thinker, sitting beside his stove, hoping to reconstitute the whole world for himself, as the artificer of his own reality.

I suggest that the Cartesian paradigm should be reversed, and that the paradigmatic setting and circumstance of intellectual thought is not the solitary meditation by the stove but the public arguments for and against some claim publicly made: the supposition is that we learn to transfer, by a kind of mimicry, the adversarial pattern of public and interpersonal life onto a silent stage called the mind. The dialogues are internalised, but they still do not lose the marks of their origin in interpersonal adversarial argument. Viewed in this way, the mind is the unseen and imagined forum into which we learn to project the visible and audible social processes that we first encounter in childhood: practices of asserting, contradicting, deciding, predicting, recalling, approving and disapproving, admiring, blaming, rejecting and accepting, and many more. A child observes the family scenes, the conflicts in which the adults around him discuss and decide, assert and contradict each other, and he soon finds no difficulty in a solitary imitation of these exchanges (Hampshire 2000A, pp.11-12).

Ryle identifies the interpersonal activity which is internalised as ‘educative’ activity (see section 4.2 above), Vygotsky talks about the internalisation of ‘speech-mediated practical activity’ and de Laguna specifies ‘discussion in preparation for cooperative activity’ as what is internally rehearsed (see section 6.2). In 1961, Hampshire was talking about the internalisation of emotional exchanges of various kinds. In 2000, he is interested in political, moral and legal thinking, which he calls ‘adversarial’ thinking. In adversarial thinking, the public activity being internally rehearsed is one or other of those more or less institutionalised kinds of discussion and debate, engaged in by families, politicians, lawyers, diplomats, etc. Philosophically, it is not important which *kind* of public interpersonal activity is internalised in thinking — thinking is sufficiently ‘polymorphous’

in Ryle's sense to accommodate the internal rehearsing of all the activities mentioned in this paragraph and others besides. The important claim is the 'sociogenesis' one — the claim that 'mental acts' have a social origin and "in any person's experience are first encountered as observable interpersonal business" (Hampshire 2000B).

As to how it is that public, interpersonal proceedings get to be 'internally' participated in, Hampshire is no more specific in 2000 than he was in 1961. In explaining how private adversarial thinking is related to public adversarial procedures he relies on the doubtful illumination provided by the metaphor of the shadow.

Mental processes in the minds of individuals are to be seen as the shadows of publicly identifiable procedures that are pervasive across different cultures. Everyday speech helps here. The words that we ordinarily use to distinguish mental processes — *deliberating, judging, adjudicating, reviewing, examining, and many others* — have both a public and an inner mental use. The inner mental uses are best explained through reference to the observable public activities. The relations between the public activities of deliberating and adjudicating are open to everyone's observation, and their shadows, the corresponding private mental activities, are presumed to duplicate those relations (Hampshire 2000A, p.7).

Discussions in the inner forum of an individual mind naturally duplicate in form and structure the public adversarial discussions. 'Naturally', because advocates, judges, and diplomats rehearse what they are to say before they step on to the public stage. Anyone who participates in a cabinet discussion, in a law court, in a diplomatic negotiation, acquires the habit of preparing for rebuttal by opponents. He acquires the habit of balanced adversary thinking. The public situations that I have mentioned give rise to corresponding mental processes which are modeled on the public procedures, as a shadowy movement on a ceiling is modeled on an original physical movement on the floor. Moral conflicts are part of every person's experience. In the ever-recurring cases of conflicts of principles, adversary argument and then a kind of inner judicial discretion and adjudication are called for (*ibid*, p.9).

As well as the shadow metaphor, Hampshire 2000A frequently employs some or other form of the 'inner' metaphor. In the first passage I quoted he speaks of 'a silent stage called the mind'. In the personal communication, he writes of action which is performed in an 'inhibited (or concealed)' way, or performed 'under wraps'. He is well aware that he is employing metaphor.

In private deliberation the adversary principle of hearing both sides is imposed by the individual on himself as the principle of rationality. 'Hearing' here becomes a metaphor. Most of the verbs of thinking are tainted with these

metaphors: seeing, weighing, reviewing evidence, and many more. The very notion of a procedure, which I follow in my own mind, is in a sense a metaphorical one (Hampshire 2000A, p.9).

The possibility of a literal description of the 'internalisation' process is suggested by the mention, as in 1961, of imitation. In the first passage he uses the expression "we learn to transfer, by a kind of mimicry..." (the public procedure onto the private stage) and he uses the expression "solitary imitation". In the personal communication he also refers to..

...inhibited (or concealed) shared action, as a person who follows 'in his mind' a tune through many harmonic distractions participates in singing the tune 'under wraps' as it were. This is the point at which imitation becomes central. I think *mimesis* in Plato and Aristotle embodies...[the]...notion of shared action (participated in) rather than copying (Hampshire 2000B).

The idea of internalisation as being a kind of imitation, or abbreviated or inhibited imitation, is familiar from Vygotsky. The idea is also picked up by Sarbin 1972, whom I quote in the Introduction to Part Three (which begins shortly). Sarbin talks about 'muted role-playing' in this connection. Clearly, imitation is still an overt form of activity and — although there is an element of copying or, rather, participation in thinking — the link to imitation (whatever it turns out to be) cannot help us explain the unique subtlety and covertness of thinking. I say what I think is the relevance of imitation to thinking in Chapter Eight, 8.3.

PART THREE

THE INCEPTING OF CONCERTED ACTIVITY

INTRODUCTION TO PART THREE

I describe thinking as a synthesis of two skills, the *concerting* of activity and the *incepting* of activity. In my account, concerting is mastered before incepting and incepting is applied solely to previously learned concerted activity. Possibly, for a brief period in early infancy the two skills are practised independently. However, I think the basic order of development is concerting, then incepting. Abilities to concert and incept behaviour are both prefigured in innately-given abilities. The two abilities in question seem also to be present in various other mammals, if not all of them. I fret about how to describe the precursors of concerting and incepting — and ask whether they are fully replaced, or merely modified, by the versions we teach infants — in Sections 8.2 and 9.3 respectively.

In Chapter Eight, I first note the influence of mentalist concepts (or, at least, ways of talking) in developmental theory. The idea that mentation is an impersonal process, occurring (and genetically pre-programmed to occur) in the brain has possibly distracted some theorists from details of what the infant is learning to do when he or she learns thinking. However, there is plenty of invaluable source material in the developmental literature. Second, I describe concerting (as, roughly, ‘mutually aware imitation’) and say how important it is, not just for the infant. I then describe how the concerting of actions assists in the teaching of them, and I give examples of how the caregivers teach infants this way. I look at the role of speech in the educative concerting of actions and firm up some suggestions of Vygotsky, Hampshire and Ryle regarding this. And I look at how the infant and child learn to initiate sessions of concerted and cooperative activity. One way to initiate sessions is to perform a token fragment of the desired activity.

Such tokening and its uptake is the first form of the ‘overt’ incepting of concerted activity. I begin Chapter Nine by sketching a simple model of overt and covert incepting, and suggest how — if one doesn’t see it as a skill *in statu nascendi* — covert incepting could easily be misinterpreted as an impersonal process, something going on ‘inside’ the person. I then elaborate the simple model into something recognisable as what we do as adults. In 9.5, a key part of the thesis, I show how prototype ‘full’ concerting gives rise — via a succession of abbreviations effected by the incepting (instead of actual performing) of more and more elements of the prototype — to indispensable forms of communicative and other activity. These include showing people things, initiating actions by speech, directing attention by speech, referring to absent things, performing actions

solo, cooperating on an *ad hoc* basis, making and using representations, having a conversation, and so on. One end point in this developmental progression — or ‘tree’, or even bush — where the whole session of concerted activity is being incepted by an individual rather than performed (with others), is thinking. Thinking is the incepting of concerted activity. In 9.6 I describe thinking as seen in this perspective, and try to define in what sense thinking is and is not a social activity. Finally, I re-examine the four features which lay folk attribute to ‘mind’, and show just how apt the relevant metaphors are — if ‘incepting of concerted activity’ is their subject matter.

If my view of the provenance of thinking is correct, then the developmental sequence I set out, or similar, must have been followed by early humans and must be followed by modern infants and children. However, this does not mean that, in order to trace the development of thinking, we must rely on empirical data from the fields of palæoanthropology and/or developmental (and comparative) psychology. For one thing, many intermediate forms — in the action-technological progression from full concerting to solo thinking — continue to be represented in the repertoire of the modern adult. It is not things solely the prerogative of prehumans or children, but things we still do ourselves, which are in question. For another thing, the skills required for the performance of any action can (in principle, anyway) be identified by any competent practitioner of that action. What is required is self-awareness in the act of thinking — which presupposes ability to see behind the colloquial metaphors, even their formalised academic versions. These are both philosophical skills. On the other hand, speculations about prehuman behaviour or findings about child development are neither irrelevant nor unwelcome. Interesting illustrations of the various developmental stages can be obtained from these sources, just as they can be obtained from things in our adult repertoires. In the last resort though, if thinking is an action which we perform, then learning what thinking is is a matter of learning to recognise what we are doing when we are thinking.

Precursors of my theory of thinking

The chief influences on my account are the writers discussed in Part Two. It is worth going quickly over their theories again, this time pointing up some of the ways they contribute specifically to my Part Three account.

Ryle’s adverbial theory renders thinking as a ‘way of performing’ actions. Thinking is, roughly, the ‘in-the-head reprising of prior educative heedings’ with regard to what

one is presently doing — and it is this construed adverbially. That is, one performs the action ‘heedfully’ and ‘self-teachingly’. Perhaps the most important contributions of the adverbial theory are, first, to point to the essential involvement of *heed* in thinking and, second, to source heed and the fostering of heed in *social, educative* activity. Ryle’s achievement is to identify and source a package of skills which are indispensable in thinking. In my opinion he mistakes the way this package is delivered during thinking. He says it arrives in the form of heedful, self-educative performing of the *infra* action. I say it comes in the form of an ‘incepting’ of past educative sessions — which incepting is a self-contained activity and may be carried out in conjunction with, or independently of, actual performance. But this is a detail.

In presenting his adverbial theory, Ryle leans unashamedly on the ‘doing-in-the-head’ idiom. His refraining theory deals more seriously with what I call the ‘incepting’ component in thinking. A defect in Ryle’s refraining account is his again describing thinking (in the form of imagining) as not itself an action. Imagining is a meta-actional phenomenon, it is still an operation on an *infra* action X, but it is a refraining or abstaining from doing X, and Ryle says this is not an action. Thus, it seems to me, he gets the incepting half of thinking half right. Ryle is only half right about incepting because, although incepting is a species of refraining, refraining *is* an action — one which involves some active striving to preclude the refrained-from action. In addition, in order for an action to be refrained from, there has to have been some initial tendency to perform it, or some likelihood of its being performed, which is overcome by the preclusive action. Even though Ryle likens imagining to fancying, play-acting, pretending and making believe — and in these cases the person has to ‘make as if to’ perform X, or actually commence doing so, before refraining or desisting — he does not acknowledge the need for inhibitory effort. However, although I think he is wrong in these respects, Ryle has nevertheless drawn our attention to an important feature of the thinking performance — the ‘not-doing’ of the *infra* action, the sense in which *Le Penseur* is doing nothing.

Vygotsky makes some attempt to paraphrase out the *in the mind* idiom — by talking about the abbreviating of speech to the bare essentials required for communication (between lovers, for example), and then the ‘internalising’ of it. However, the main virtue of his speech-mediated-action theory is the idea that the ability to think derives from *social, interpersonal, abilities* — such as abilities to imitate, cooperate, use gestures and speech to influence others’ actions, and to allow others to influence one’s own actions by

gesture and speech. Although modern studies of imitation add significantly to what he said, Vygotsky spelled out the important early stages of this ‘sociogenesis’ of thinking better than anyone. What he shares with Ryle and Hampshire is awareness of (1) the social, educative component in thinking, (2) the ‘internalising’ or incepting component, and (3) a development leading from the social abilities to the ‘internal’ ones.

Hampshire’s main contribution is an analysis of the sociogenesis of an important item in the thinking range — the feeling of emotions. Emotional displays have some innate basis but, in everyday adult contexts they are performed in a socially reconstructed and standardised way. The mature social agent must be able, when required, to ‘play down’ such a display — that is, perform the display in a much-abbreviated and stylised form. This is my ‘overt incepting’. Overtly incepting an emotional display enables one to communicate to another person, with a minimum of effort and interpersonal disturbance, that one is ‘feeling’ the emotion in question. The mature agent must also be able where necessary to inhibit the display entirely, or feign it. Hampshire is correct in saying that this cluster of skills — the sequential development of which he sketches — is the reality underlying our everyday vocabulary of ‘emotions’ and ‘feelings’. Hampshire develops useful concepts, in the area of emotional behaviour, of ‘learning by imitation’ and of ‘the suppressing of dispositions to behave’. These concepts are precursors respectively of my ‘educative concerting’ of activity and the ‘covert incepting’ of activity.

In addition to these major theoretical contributors, three other writers — Richards 1924, Burke 1969, and Sarbin 1972 — supply relatively minor corroborations. In all three cases, the volume of published material directly relevant to my project is too small to have warranted treatment in Part Two. However, each of the three says something original and important about thinking — and the contributing factors I call ‘concerting’ and ‘incepting’ — which is worth touching on now.

Richards 1924, pp.107-113, talks about the visualising and other imagining we do in response to poetry. He sees these imaginings in response to the complex stimuli which literature provides as a special case of the ‘incipient actions’ we perform in response to complex situations in everyday life.

The result of the co-ordination of a great number of impulses of different kinds is very often that no *overt* action takes place. There is a danger here of supposing that no action whatever results or that there is something incomplete and

imperfect about such a state of affairs. But imaginal action and incipient action which does not go so far as actual muscular movement are more important than overt action in the well-developed human being (Richards 1924, pp.110-111).

Richards also refers to his 'incipient actions' as 'imaginal actions', 'attitudes', 'tendencies to action', 'implicit activity' and 'preliminary preparations for doing'.

Burke, a literary critic like Richards, follows Richards' use of the terms *incipient action* and *attitude*. He reiterates Richards' point about incepting being a way of adjusting to competing environmental stimuli.

In sum: 'we are ready to grasp the hammer before we reach it, and the attitude of manipulatory response directs the approach'. But the whole situation is complicated by an 'arrest' which allows us to take 'competing tendencies' into account — as an animal's attitude of desire towards its prey might yet be modified or arrested by an attitude that takes the prey's own resources of defence or escape into account (Burke 1969, p.238).

Burke makes clear that incipient action can represent not just the *priming* of a response, but its *delaying*. And he makes the crucial point, which I argued against Ryle's "negative 'action'" account, that the delaying of or refraining from an action is itself a positive action, requiring specific relevant countervailing effort.

From the standpoint of action, in the full sense of the term, such a state might properly be considered as a delay — but as regards the bodily *motions* we must remember that a state of delayed *action* cannot be a corresponding state of delayed *motion*.

In sum, the *action* is delayed precisely because one has trained the body to undergo certain physiological *motions* of a sort designed to forestall the kind of motions ordinarily following such a stimulus when it is received uncritically. The body during the state of delay does not cease to exist. The mental *attitude* of arrest must have some corresponding bodily *posture*. The very delay of action is thus maintained by motions, since the *attitude* of criticism, or delay, or "consciousness of abstracting" [a term of Korzybski's] must be matched by its own peculiar *physiological* configuration. There is at least as much neural motion going on in the body that hesitates before sitting down as in the body that sits down without hesitation. Mentally to look before one leaps has its equivalent in internal bodily motions quite as leaping does (*ibid*, p.242).

And Burke makes the interesting point — which he relates to Aristotle's discussion of potentiality in *Metaphysics*, IX, 8 — that "...the concept of *incipient* acts is ambiguous. As an attitude can be the *substitute* for an act, it can likewise be the *first step towards* an

act” (*ibid.*, p.236). And he says that “...the notion of the attitude as an incipient or delayed action ... is essentially ambiguous, as an attitude of sympathy may either lead to an act of sympathy or may serve as substitute for an act of sympathy” (*ibid.*, p.242).

The psychologist Sarbin sketches an account of imagining as ‘*as if*’ behaviour’ or ‘muted role-taking’ — an account in which “...imagining was [is] an active form of conduct, a performance, a doing, that had [has] its origin in the practice of imitating with models present and with models absent” (Sarbin 1972, p.344). Like Burke, Sarbin stresses that imagining is an active, positive performance. Even better, whereas Burke seems on the verge of talking about incipient action as a physiological phenomenon, Sarbin is clear that imagining is a learned action of the person. Like Vygotsky and Hampshire, Sarbin sees the foundational role of early imitation. Although Sarbin does not have my concept of ‘concerting’, he does point to one very important way in which imitation can be sophisticated — that is, by the imitator rehearsing the action in question in the absence of the demonstrator. He calls this ‘imitation with absent model’. This is what Meltzoff 1996 calls *deferred imitation*. As we saw in Chapter Seven, Vygotsky uses a similar concept to explain the origin of solo action.

Sarbin’s attempt to explain imagining in terms of ‘as if’ behaviour is reminiscent of Ryle’s ‘refraining’ and ‘pretending’ theories. His mention (below) of ‘muted’ speech also has precedents in Vygotsky’s account of ‘inner’ speech. Sarbin explains his idea as follows.

A three-stage sequence of child development is required to account for the achievement of the *as if* skill. As we know, the child acquires knowledge in a number of ways, one of which is imitation. In the developmental sequence, the first stage is the outright copying of performances of another person. This is the paradigm of imitation. That is to say, to imitate is to copy the actions of a model that can be seen and heard. In the second stage a complexity is introduced. The child imitates the actions of another, but that other is absent. The child imitates the motions and the talk of the absent model. This is the paradigm of role-taking. To pretend to be Fido when Fido is out of sight is a high order achievement. The importance of playing ‘let’s pretend’ games in the development of the role-taking skill cannot be overemphasised. As an instance of engaging in suppositional, hypothetical behaviour, a child may set up a tea table with limited stage props; she may pour fictional tea into ephemeral cups and talk to an unoccupied chair as if it were holding a guest.

The third stage is concurrent with another achievement of early childhood: the

muting of speech. To talk to oneself rather than aloud at first requires only the skill in controlling the volume of air that passes over the vocal cords. With practice, the child learns to inhibit most of the obvious muscular characteristics of speech. At the same time that he acquires the skill in muting his speech, the child learns to attenuate his role-taking actions, to reduce the amplitude of the overt responses that compromise his 'let's-pretend' roles. For this third stage — muted, attenuated, role-taking — the word *imagining* is appropriate (Sarbin 1972, pp.341-2).

Clearly, Sarbin is here proposing, in outline, an account of the sort which I develop in detail. Unfortunately, the above text is the most extensive and specific statement of his 'muted role-taking' proposal that I have found.

It is interesting that Sarbin's even briefer account (in the same 1972 article I quote from above) of the primarily figurative usage of the words *image* and *mind* — and associated rhetorical facts and etymological probabilities — could also be said to anticipate some aspects of my metaphorical origin theory.

CHAPTER EIGHT: Concerted activity

A Sunday school teacher once led all his children out of the stuffy church, where they were distracted and uneasy, and off to the woods. There he blindfolded every one and had them just sit on the ground and feel, without being able to look at, the pebbles, the plants, the earth. Not a word was said, not one single word, and when the blindfolds eventually came off, the children were startled to discover that every hand was in the tight clasp of another's (Taylor 1973, p.16).

...the mimetic layer of representation survives under the surface, in forms that remain universal, not necessarily because they are genetically programmed but because mimesis forms the core of an ancient root-culture that is distinctly human. No matter how evolved our oral-linguistic culture, and no matter how sophisticated the rich varieties of symbolic material surrounding us, mimetic scenarios still form the expressive heart of human social interchange (Donald 1991, p.189).

Thinking is a synthesis of two kinds of contributing action. The first is some amalgam of heeding, educating and socially interacting. This I trace back to, and explain as a derivative of, the *concerting* of actions, that is, people performing actions in unison. The second contributing action is the simultaneous 'commencing' and 'aborting' of an action, which I call *incepting*. The task is to describe how these two actional parameters, *concerting* and *incepting*, come together in the various thinkings. In this chapter I introduce *concerting* and in Chapter Nine I explain *incepting* and show how it combines with *concerting*.

8.1 Mentalist concepts in developmental theory

Vygotsky assumed the existence of an internal 'psychological plane', which is gradually populated (or constituted) by internalised social actions. The psychological plane is thus an indispensable piece of stage-setting in the child's intellectual development. Modern descriptions of child intellectual development are also couched in mentalist terms. It is assumed that normal adults possess minds and knowledge of minds, and that at some stage infants acquire both too. Researchers assume that some basic mental equipment is either inborn, or develops naturally as a result of early interactions with the mother. The child's intellectual development is always seen as beginning with the acquisition by the child of 'an internal mental faculty' of some kind.

For Trevarthen 1977, 1979, 1992 the basic mental equipment is ‘primary intersubjectivity’ (the term is from Habermas) — that is, “...the mutual adjustments of conscious voluntary agents (subjects) to one another’s mental states” (Trevarthen 1977). He insists on “...the precocity of a general interpersonal understanding” (Trevarthen 1979, p.347) because he assumes that some such mental basis is necessary to explain why the infant “...is not just a puppet to be animated by a miming mother” (*ibid.*). However, Trevarthen 1993 opts for emotion as the starting point: “...the human being is born with intuitive emotions and different ways of attaching these to objects to regulate different kinds of relationship that have differing psychological motivation” (Trevarthen 1993, p.74). For Stern 1985 the child’s main task is to acquire ‘the sense of self’, but the initial achievement is, again, ‘intersubjectivity’.

Between the seventh and ninth month of life, infants gradually come upon the momentous realisation that inner subjective experiences, the ‘subject matter’ of the mind, are potentially shareable with someone else. The subject matter at this point in development can be as simple and important as an intention to act (“I want that cookie”), a feeling state (“This is exciting”), or a focus of attention (“Look at that toy”). This discovery amounts to the acquisition of a ‘theory’ of separate minds. Only when infants can sense that others distinct from themselves can hold or entertain a mental state that is similar to one they sense themselves to be holding is the sharing of subjective experiences or intersubjectivity possible (Stern 1985, p.124).

Hobson 1993 believes that the infant’s intellectual development begins when he or she acquires ‘the concept of a person’. For Moore 1998, mind first appears in the form of ‘imaginal cognition’. Theory-of-mind theorists posit a variety of ‘meta-representational’ or ‘mind-reading’ abilities in the infant or child — abilities to conceive and recognise others’ intentions, beliefs, desires, other emotions, and minds *per se*. Carpenter *et al* 1998 believe that, between 9 and 15 months of age, infants acquire ‘an understanding of others as intentional agents’ and they learn to ‘adopt the intentional stance’ towards others.

Thus, the explanatory strategy of choice is to attribute to the infant some original item of mental furniture, and derive the more sophisticated mental or cognitive abilities from that. Observed infant behaviour and mother-infant interactions at the various ages and stages are taken as evidence for the existence of, first, the basic equipment, and then, in order, the various improvements. For example, Carpenter *et al.* 1998 take the ‘checking’ (to see if the other is attending) which accompanies pointing as evidence that the infant is ‘viewing the other as an intentional agent’. (The 12-month-old child does the checking

just after the pointing. The 16-month-old checks before pointing.) Butterworth takes the same attention-directing and checking abilities as evidence for the ‘meeting of minds’, thus “Joint visual attention and the production and comprehension of pointing necessarily entail a meeting of minds in the processes of referential communication” (Butterworth 1994, p.129). And see Stern 1985, pp.128-133, for what counts as evidence for, respectively, ‘intersubjective relatedness’, shared ‘intention’ and shared ‘affective states’.

I conceive the explanatory task differently. I think of it not as a matter of explaining the origin of internal mental faculties, but as a matter of explaining how the infant comes to be able to perform a certain kind of action, namely thinking. My starting point is two in-born abilities — ‘native’ imitating and ‘proto-incepting’. In this chapter I suggest that native imitating develops, in the first weeks of an infant’s life, into what might be called the mother or midwife of all actions — concerting. For reasons I gave in Part One, I try to refrain from using mentalist terms. I do not consider myself to be trying to explain how the infant ‘develops a mind’, for example.

It might be thought that my term *action* logically presupposes the concept of mind. Or it might be thought that the concept of the activity ‘thinking’ presupposes the concept of mind. It could appear that, by definition, one has to have a mind in order to be able to think — the mind is what one thinks with. The whole of Part Three is, effectively, an attempt to explain ‘actions’ and ‘thinking’ without reference to minds. But does one need a mind to think with? I say in Part One — and Taylor, who I quote on pages 107 and 119, agrees — that expressions like *having a mind* and *using one’s mind to think with* are simply figurative ways of referring to the ability to think, or to the act of thinking.

After my account of thinking in Chapter Nine, I include a section which explains why expressions invoking ‘mind’ and things ‘mental’ are such apt and useful, albeit figurative, descriptions of thinkings and aspects thereof. My point now is just that dispensing with mentalist terminology does not put an explanation of how children learn to think at any disadvantage. To insist on using explicitly or implicitly mentalist terms like *emotion*, *self*, *intersubjectivity*, *intention*, *belief* and *communicate* is just to insist that we speak figuratively. Commitment to figurative terms is more likely to jeopardise an enquiry such as I am undertaking than is a determination to give them up. My aim is to define what thinking is in purely actional terms — that is, define it in terms of what contributing actions must be learned first, and how we might have learned them.

I am not a qualified student of infant behaviour and, to provide accredited examples of it, and informed comment on these examples, I rely in what follows on the research findings of experts. I use their findings to illustrate my account. That the experts generally construe their findings in mentalist terms, while I talk of the infant's early 'concertings' and 'inceptings', is not a problem. The infant's uninterpreted behaviour is usually clear.

8.2 *Concerted activity*

Normally, when we think of imitation — mimicking for an audience, following a demonstration as part of learning how, playing Simon Says, repeating something back to someone to check that's what they said, etc. — we think of it as an act of an individual. Person P imitates person Q. We don't think of Q as participating. However, in most cases the model Q is aware of being imitated and will signal this back to P. By the same token, the imitator's goal is usually not merely to get the action right but to have the model acknowledge that it has been got right. Where the imitation is successful in this respect, we can speak of 'mutually aware' imitation, or *concerted* performance. Thus, in my terms, whereas *imitation* is something the imitator does by him- or herself, without regard to any response from the model, *concerting* is an interpersonal transaction; it is imitation consummated by a satisfaction signal from the model. Considering the fact that most imitation is aimed at concerting, we could also characterise concerted performance as the achievement of which imitating is the task activity. Concerting is the interpersonal transaction brought about (or not) by imitative strivings. More simply, concerted activity is two or more people doing the same thing and being aware of doing so.

We engage in concerted activity often in everyday adult life — in shaking hands, meeting another's gaze and smiling, walking or drinking tea together, joining forces to lift a heavy suitcase, getting a dance step right, and so on. Normal children are addicted to concerting, especially in games and other recreations. Infants (with parents only to happy to oblige them) get into it enthusiastically and early. The infant first experiences concerting, usually with the mother, in such simple forms as — meeting the other's gaze, mutual smiling, sharing other facial expressions, vocalising the same, laughing, waving, kissing, cuddling, touching faces, holding and playing with hands, shared contemplation and manipulation of objects, and doing various of these things in combination. There are three main categories of concerted activity — *recreational*, *educative* and *practical* concerting. The differences will become relevant later.

As well as the model's signalling, with some approving gesture, that the imitator has got it right, the imitator will usually him- or herself register pleasure at the success. We can make the presence of a *mutual* display — that is, success displays by both parties — a necessary characteristic of concerting. Both are required for 'concerted' activity.

The imitator's success display will vary slightly from the model's, but both will consist of gaze-meeting accompanied by facial expression of pleasure, head nodding, vocalisation, more enthusiastic performance, or such. Between adults such displays may be barely visible, and then only to the practised eye. Between children they may be exaggerated. Sometimes, with children, a recursion seems to set in whereby successful imitation begets more enthusiastic performance, the acknowledgement of which begets even more enthusiastic performance, and so on, leading to hilarious collapse. Another kind of recursion seems to operate often too. This is when the imitator's success display functions as an imitation of the model's success display, and the parties attempt to acknowledge this further level of concert. And so on. This kind of recursive mutual acknowledgement may be what underlies the common state of 'I know that you know that I know that you know... etc.' that pertains between familiars. Again, where children tend to make a meal of it, it is genteelly restrained between adults. However, compared to children's glee, adults' smiles of mutual understanding are more 'resonant'.

Concerting has a distinctive and near-inexhaustible charm for us. One contingent (rather than defining) feature of concerting is that it is often a cooperative undertaking. The model will not only approve success when it occurs but will typically also facilitate the imitator's initial efforts — by ostentating and/or slowing parts of the action, or by adjusting the setting to accommodate the new participant, or by simply encouraging. It may also happen that imitator and model roles alternate, or become irrelevant, and a free-wheeling conformity of action is sustained. Here, rather than being the result of imitation, concerted activity is 'joint' activity, as if of one agent, with the parties side by side in it.

8.3 *Innate imitative ability*

It is natural to assume that the ability to imitate is decomposable into sub-abilities — abilities, at least, to perceive the model's movements, to perceive the things in the environment the model's action relates to, to make movements of that general kind, to perceive ^{one's} own movements, to make movements just as the model makes them (i.e., to

imitate), and so on. Developmental psychologists confirm very young infants have these abilities. First, there is a range of *basic perceptual skills*. The infant is able to fixate and track three classes of local phenomena — (1) movements and other actions of other people, especially facial expressions and vocalisings, (2) objects and other accessories of the action to be imitated, and (3) movements the infant him- or herself makes.

...babies no more than a few minutes old may adapt their orientations and states of alertness to fit the motion of objects that are remote from their bodies. New-borns can detect patterns in the recurrence of particular things... Babies adapt, by coordinated movements, to the time, place and nature of events that have importance for them. Events caused by human movements hold the greatest interest for them. ...a baby born without trauma or sedation is strikingly alert within minutes of birth to the new world of sights and sounds. The wide-open eyes make finely coordinated stepping movements aimed in different directions round the body. They may stop or change direction to fixate bright places, or track stimuli in motion. They also clearly orient to the face of a person who approaches close and speaks gently in a tone of greeting. The eye-movements are coupled with small pulsating rotations of the head. Films of new-borns orienting to and tracking objects with their eyes reveal that a reach-and-grasp movement of arm and hand is inherently co-ordinated within a visual space-time field of awareness... Reactions to persons are the most remarkable. Tests show that new-borns will turn in the direction of a loudspeaker behind a curtain, orienting not only the head and ears but the eyes as well, as if searching to see the person who calls (Trevarthen 1987, p.363-4).

Second, the infant has *basic motor skills* which he or she can exercise independently of others' actions. He or she can produce a range of limb movements, facial expressions and vocal sounds which exhibit sensory-motor coordination and constancy under repetition, but are not necessarily identifiable as 'actions'. Some are more like bits and pieces of actions — mere potential behaviour components. Others, especially facial expressions (and vocalising and qualities of movement) of emotion, are like coherent actions. Anyway, the infant has some repertoire to begin with, before he or she can copy others. Trevarthen verifies at least the ability to express basic emotions.

Expressions of concentrated puzzlement, surprise, pleasure and displeasure are clearly delineated, and arms and hands make movements that vary systematically with the other signs of attending. Evidently babies are ready to show a variety of feelings to others. ...a wide repertoire of well-formed expressions is present before the baby has had an opportunity to learn from adult exemplars... (*ibid*, pp.363-4).

Then there is *imitative ability* itself. The infant is almost from birth able to imitate a good range of facial expressions, hand and arm movements, vocal sounds and perceptual behaviours (such as gaze-meeting, gaze-directing, listening, palpating). Presumably, some innate ability to ‘translate’ behaviour-perceptions into behaviour-performances is operating. Here is part of a passage already quoted in Chapter One, 1.3.

Taken together, human and monkey data indicate that, in primates, there is a fundamental mechanism for action recognition. We argue that individuals recognise actions made by others because the neural pattern elicited in their premotor areas during action observation is similar to that internally generated to produce that action... (Rizzolatti and Arbib 1998, p.190).

Initial evidence of infant imitative abilities was provided by Meltzoff & Moore 1983. Meltzoff 1996 reviews relevant studies. Trevarthen summarises the basic findings —

...babies less than a month old are capable of imitating facial expressions. Indeed, with some babies, it is easy for a mother to see for herself that her new-born, just minutes old, may watch her mouth intently if she protrudes her tongue or opens her mouth wide, then move his mouth and appropriately poke out his tongue or open wide his mouth. The model is accurately copied. Expressions of happiness, sadness or surprise are also imitated. With calling vocalisations, a similarly prompt imitation can be obtained, when the baby is a few weeks older. Imitation of movements of the hands opening or coming together has also been seen. All these movements, like the expression of smiling, knitting of the brows, etc., and hand movements of gesture, including making a fist, extending all fingers, or pointing with the index finger, may occur also without a model — but prompt and well-differentiated imitation of some of them is undeniable (Trevarthen 1987, p.364).

Another feature of imitation is the imitator registering when his or her imitation is deemed successful. Meltzoff confirms the existence of this ability, saying that, “Imitation is an end in itself. Infants struggle to match the adult, self-correct if they do not get it right, and smile upon producing a matching behaviour. Human infants derive joy in matching *per se*” (Meltzoff 1996, p.363).

In order for the infant’s imitative abilities to thrive, a supportive model is also required — one who is more or less permanently available for being imitated (and imitating), is patient and cooperative (will slow down and ostentate, etc.) and who readily manifests pleasure in being imitated. These characteristics are near-universal in parents and other caregivers (quotes later). The last characteristic, the model’s pleasurable response to

being imitated, is all that is needed over and above the above ‘innate endowment’ for concerting to naturally ensue from imitations. The responsiveness to being imitated is found not only in parents but also very early in infants. Bruner notes that “...smiling and vocalisation can be greatly increased in the infant by like responses in an adult” (Bruner 1975, p.8) and Meltzoff reports that,

Evidently infants do not just recognise that another moves *when* they move (temporal synchrony), but recognise that another moves in the same *manner* as they do (structural congruence). Thus infants not only imitate others, but can recognise when the form of their own behaviour is being matched (Meltzoff 1996, p.358).

8.31 Some hand-wringings about ‘innate abilities’

As I said in Chapter Six, 6.2, in connection with Vygotsky’s ‘lower behaviours’ and ‘lower mental functions’, there is a problem with ‘innate abilities to do things’. The imitating that near-new-borns may exhibit — and other ‘behaviours’ such as scanning a scene, harkening at a noise, smiling with pleasure, soliciting attention, etc. — lack many of the features of standard ‘actions’. They are untaught and unlearned (which is why we say they are ‘innate’ or ‘biologically given’). They are not the result of, nor are they monitored by, thinking; they cannot be hortated or proscribed; they are not ‘goal-directed’; they have no moral overtones; nor is the infant responsible for performing them. They are, in fact, so little like actions that it seems inappropriate to call them actions.

On my account there is an added reason not to call the infant’s first untutored ‘doings’ doings. My story in Chapter Nine is that solo actions of the person are adaptations of, and developmentally posterior to, concerted performances of those actions. The infant’s innate abilities, such as the ability to imitate, are established in the repertoire before any concerting takes place. Thus, at least on my account, the early doings cannot be actions.

A corollary of my chapter Nine account is that I am inclined to make ‘personhood’ conditional on the ability to concert actions. As adults, and thoroughly steeped in the concerting (and performing, teaching, hortating, empathising, imagining, supervising, etc.) of actions, we cannot help but consider the infant as a person and consider what he or she ‘does’ as proper actions. However, strictly, on my account this fellow-person attitude is not justified until the infant masters concerting — at two months, or whenever. This is no

problem at the everyday practical level. We make allowances for the infant in the way we make allowances for people who are asleep or ill or drugged, or temporarily ‘out of it’ for some other reason. The infant is only temporarily out of it too, and only by reason of extreme greenness. We justifiably *treat* the infant as a person. This is just as well. It is largely due to our assiduous treatment of the infant as a person — constantly talking to him or her and showing things and imitating and smiling and being responsive generally — that he or she becomes one.

On the other hand, it is not tempting to view the infant’s doings as physiological or macro-physiological phenomena. For one thing, as I say, it is very difficult psychologically to withhold empathy and view an infant as an organism. Much infant (and even animal) behaviour irresistibly elicits empathy, and action labels, from us. As well, it is natural to say — at least in connection with the elementary perceptual and motor skills I mention above — that the infant him or herself ‘gets better at doing’ whatever it is. We would not speak in this way about physiological mechanisms. See my 1.63, on page 39.

Another reason against construing the infant’s native abilities as physiological phenomena is that physiology requires us to forego our usual action labels — expressions like *looking at*, *imitating*, *smiling*, etc. Nor could we avail ourselves of everyday reference points like ‘mother’, ‘his own hand’ and ‘the plastic rattle’. This would make it extremely difficult to define which physiological phenomena are relevant. Thirdly, if it is true — as the writers I mention in 1.68 (on page 44) believe — that physiological descriptions necessarily already include metaphors of action, then it is obscure what gain would accrue from viewing, say, neonate imitation as a physiological phenomenon.

It is common for developmental psychologists to speak of innate ‘behaviours’ or ‘responses’ which are then ‘socialised’ by training — that is, made to conform to various practical and other societal requirements. After socialisation, what was an innate response becomes a voluntary action. Although it is rarely explicitly stated, one assumes that in their initial form innate responses are macro-physiological phenomena, natural functions of the infant’s organism. This means that the socialisation process, whatever it is — and likely my ‘educative concerting’ features large — is a way of deriving actions from physiological phenomena. However, if my arguments in Chapter One, 1.6, are sound, then, at some point in the transition from physiological process to action, the observer would have to change her heuristic strategy and terminology. Once we are talking

‘actions’, we have necessarily lost sight of the physiological precursor. This vitiates the claim that the action — ‘going to the potty’ or whatever — *has* a physiological precursor.

Despite this, talk of ‘socialisation of innate abilities’ seems very natural. Surely, the child’s eating *is* derived from the neonate’s instinctive sucking. And if the instinctive sucking is neither an action nor a physiological phenomenon, what kind of event is it?

I cannot see any solution to this dilemma — that is, how to categorise ‘innate abilities’ such as the infant’s perceptual, imitative and expressive abilities. However, there are some mitigating circumstances. The problem is not going to get out of hand. The number of actions which can plausibly be described as the developmental descendants of innate abilities is relatively small. If one has studied a little psychology, it is easy to assume that most learning is like potty-training — that most of the actions we perform as adults are explicable in this way, as biologically-given abilities, or at least tendencies to act, which have been changed by some sort of educative or socialisation process into voluntary actions. However, the ‘raw material’ — if that is a meaningful concept — for most actions is usually not nearly well-formed enough to deserve the title ‘innate ability’. Most learned actions, where they are not syntheses of other learned actions, are syntheses of multifarious, unidentifiable and fragmentary natural abilities. For example, what ‘natural abilities’ enable an infant to feed itself with a spoon? Or enable a child to learn her eight times table? Or enable an adult to set up an Internet site? Even in the first months of life, the production of an action from a relatively stereotyped biologically-given ‘behaviour’ is a relative rarity. The vast majority of actions are made *de novo* and *ad hoc* from multifarious unidentifiable scraps of ability, many never exercised before, in any form.

The above does not help us categorise the infant’s imitations, however. In this case there definitely is a stereotyped, sustained and systematic ‘behaviour’ — and intuitively, it is what our adult imitative abilities do derive from. A consideration that may alleviate some of the anguish is the following. Even in the few cases where the educating of infants does seem to be a matter of retaining and adapting and refining an existing biologically-given ability, this appearance may be misleading. It may be a case, rather, of by careful degrees destroying an innate ability — by supplanting it with the ‘socialised’ factitious version — as verbal avowals of emotion or pain may ‘replace’ autochthonous behavioural manifestations of these. Accordingly, it could be that the assisted, cooperative, mutually aware version of imitation, which I call ‘concerting’, simply ‘ignores’ the biologically-

given unilateral form. It takes over whatever functions the unilateral form had, and/or it serves new functions. Perhaps the ‘social construction’ of an action is always contingent on the ‘social destruction’ of any innate forebear it might have.

8.4 Concerting as the prototype of consciousness

It would be natural to assume that the concerting of activity, because it requires (at least) that each party be aware what the other is doing, presupposes that the parties are capable of being ‘aware’ of actions, and thus presupposes ‘awareness’ or ‘consciousness’, which is itself a ‘mental’ capacity, requiring ‘mind’. It would seem that my attempt to establish concerting as one of the two basic ingredients of mind, or thinking, is doomed to circularity from the start. The same argument looks to apply to the innate, unilateral form of imitation. I said above that it would be natural to analyse neonatal imitation into perceptual abilities, motor abilities and abilities to translate from the former to the latter. And the perceptual abilities alone, the ability to scrutinise another person’s movements — and perhaps analyse them into component movements, etc. — already seems to presuppose mentation. Concerting and imitation seem to already include ‘consciousness’.

Certainly, my imitation of an action is evidence I am familiar with (or conscious of, or know) the action. I said in Chapter Seven, 7.3, that we use imitation not only to ‘read’ another’s behaviour, but also to communicate our reading back to the original agent, to solicit confirmation that we have got it right. I quoted Hampshire: “...we can show that we have perceived it by adopting the same expression in imitation” (Hampshire 1971, pp.151-152). We show we are aware of the behaviour being demonstrated by imitating it back — albeit sometimes only in token form. In the following passage, Ryle seems to be making a stronger claim — that the imitation is somehow *identical with* one’s awareness of the behaviour.

We concede that a person knows what the publican’s temper is like if, though he is unable to give to himself, or to us, even a lame verbal description of it, he can yet play the part to the life; and if he does so, he cannot then say he is unable to think how the publican behaves when annoyed. Mimicking him *is* thinking how he behaves. If we ask the person how he thinks the publican acted, we shall not reject a response given by impersonation (Ryle 1949, pp.262-263).

My self-appointed task in the rest of this chapter and in Chapter Nine is to explain thinking, or ‘mind’, in terms of the concerting of behaviour and incepting. A useful

preliminary move is to redefine all consciousness — awareness, knowledge, heed, cognition, mind — in terms of knowings-how. It is usually assumed that our knowledge of things in the world is basic. In Appendix Two, I sketch how it might be possible to redefine knowledge of things in the world as a species of knowing-how. I suggest knowledge of things could be defined in terms of our perceptual and (related) verbal abilities. If this move is accepted, the epistemological task becomes that of explaining what ‘knowing how’ amounts to. And, to encompass everything we might want to call knowledge (or consciousness, etc.), the ‘knowing how’ bag would have to accommodate not only abilities to perform actions, but a range of meta-actional abilities — to perceive, recognise, verbally identify, evaluate, hortate, proscribe and monitor actions — and abilities to be self-aware in (and of) the act of X-ing, and to imagine X-ing. My strategy — in Chapter Nine, 9.5 — is to describe all these aspects of knowing how as different developmental derivatives of ‘prototype concerted performance’ of the action in question.

Vygotsky, Hampshire and Sarbin — and Ryle, when he talks about ‘pretending’ and ‘make-believe’ — all think imitation is fundamentally important in explaining ‘mind’. I emphasise concerting (*qua* transaction) rather than imitating (*qua* solo action). My claim is that concerted performance of a given action is the *original form* of our consciousness of that action. All our subsequent abilities (knowings-how) with respect to that action are developmental sophistications (usually ‘streamlinings’ or ‘abbreviated’ forms) of the prototype concerted performance.

Plausibly, the concerting of action X ‘includes’ solo consciousness of action X by both parties. But if we regard consciousness of the action being concerted as a separately identifiable radical within the whole concerting performance, we should see it as a bound radical rather than a free one. Conventionally, we do think of solo consciousness as something autonomous and *sui generis*; I am saying that solo consciousness is in reality an incomplete, ‘solo-ised’, diminished version of shared consciousness. And I am saying that shared consciousness can always be identified as a concerted *doing* of some kind. Consciousness is only ‘allowed out on its own’ — it can only be exercised (or considered) in isolation from concerted performance — on a conditional basis. If it doesn’t get home in time (if one does not sooner or later realise one’s solo consciousness in a fully shared performance) then one’s ‘consciousness’ evaporates. It turns, or returns, to fantasy. When, by catching the café owner’s eye and raising a finger in a certain way, P gets the bill put on the slate, she has in one sense not avoided paying for lunch — although in

another sense she has. It is only in the sense that P has lunched without paying that consciousness can occur in the absence of concerted activity.

It has been accepted since Meltzoff 1983 that infants are able to imitate in quite a sustained way, very early — within days if not hours of birth. It is uncontroversial also that imitation in which the parties are both aware (that is, my ‘concerting’) is early too — probably first occurring, normally, when the infant is around two months old. However, no matter how early imitation and concerting are, there will still be those who will say we are *born* possessed of minds — or, at least, born with a capacity for ‘awareness’ of other’s actions. [In fact, the very earliness of imitation could be cited as evidence of this.] I would like to see the ideas ‘we are born with minds (or awareness-abilities)’ and ‘we require minds before we can imitate or concert’ set to one side for a moment. I suggest we entertain the idea that, for the infant, the ability to imitate is developmentally prior to the ability to ‘be aware of’ other people and their actions — that is, developmentally prior to ‘mind’.

I ask the reader to suppose that what we call ‘awareness’ of actions is not a prerequisite for, but instead a derivative of, primary imitative ability. And I am asking the reader to suppose that, in the beginning, the easiest thing is for the infant to cleave to the movements of another individual. My story requires that imitation comes before awareness, rather than the other way round, that it is easier to imitate than to be aware, and that, to acquire ‘awareness’ of other people and their actions, and to be able to produce actions of his or her own, the infant must first be able to imitate. Alternatively, the ability to imitate what the other is doing is what ‘being aware what the other is doing’ *amounts to*, in the first instance. ‘Being aware’ first occurs in that form. And ability to copy what someone else is doing is also what ability to ‘perform that action’ amounts to, in the first instance. Imitation is the first ‘version’ of both mind and agency.

8.5 *First concertings*

As mentioned earlier, Trevarthen believes that ‘a sense of intersubjectivity’ is in some way and to some extent innate. He appeals to

...the precocity of a general interpersonal understanding. In the first functional stage of human communication, before transactions with objects are developed beyond a few simple orienting reactions and thoughtless explorations, the infant recognises the mother and invites her to share a dance of expressions and

excitements. The infant needs a partner but knows the principle of the dance well enough, and is not just a puppet to be animated by a miming mother who ‘pretends’ her baby knows better (Trevarthen 1979, p.347).

The infant’s ‘awareness’ of concerting an action with another and his or her excitement in doing so seems, after several weeks, to suddenly increase. The increase signals an important change in the infant. Whereas the infant is imitating unilaterally within days, even hours, of birth, it is likely that concerted activity first occurs in its true, powerful form when the infant is around six to eight weeks old. At least, it is around this time (see Stern 1985, pp.37) that mothers, who have up till this time been ‘pretending’ that their infant is a person, realise for the first time that the infant now actually *is* a person. I do not want to set time limits for the onset of ‘genuine’ concerting or the mother’s first sense that the infant is a real person, but it seems likely that they arrive roughly together. Parents first start to feel there is ‘someone at home in there’ during imitation games (see Stern 1985, pp.100-102, and Meltzoff & Gopnik 1993, p.355), and this seems to happen around two months.

Concerted action is just as likely to be initiated by the mother imitating the infant as by the infant imitating the mother. As Meltzoff notes,

In humans, imitation is a bidirectional activity. Human adults not only adopt an explicit ‘do what I do’ pedagogical style (which requires infant imitation to be fulfilled), they are also rabid imitators of their young for the first several years of an infant’s life — sliding objects when their infants slide, banging when their infants bang, and cooing when they coo (Meltzoff 1996, p.364).

Trevarthen has studied what he calls mother-infant ‘communication’. He confirms that mothers are enthusiastic imitators, always wanting to do things *with* the infant.

In the communications we have observed, close imitation of the infants by the mothers is characteristic... The imitated behaviours, often reproduced with playful exaggeration or gentle mockery, include excitement and vigorous calls. Mothers imitate tossing back the head, raising eyebrows in surprise or emphasis, opening the mouth, frowning and laughing. Some mothers include conscious or semiconscious humorous, sometimes teasing or aggressive, reproductions of comical expressions in their imitations, including poking out the tongue or grimacing... But most of the imitation in our sample is unconscious following of the infants’ most vigorous or most prominent gestures. The behaviour may be described as mirroring, although, since it is slightly after the infant in time, ‘echo’ describes it better. At other times, mothers synchronise with or even slightly anticipate what infants will do. Reflecting excited or melodramatic behaviour

evidently plays a role in sustaining communication (Trevarthen 1979, pp.339-340).

Anyway, whoever initiates the session, what starts out as simple unilateral imitation ends up, with the addition of mutual ‘awareness what the other is doing’, as *concerted* action. Baldwin 1905 called the infant’s early imitating *participation*.

Concerted action is an essentially social phenomenon. It is more than a ‘transaction’ even; it implies some kind of merging of agency. For example, Stern writes that there are

...many games and routines in which a great degree of similarity of behaviour between parent and infant is the rule. May not these present a ...difficult task for the infant in distinguishing self from other and from ‘us’? These include early forms of pat-a-cake, where mother makes her hands and the infant’s hands do the same thing, various imitation routines, affect leading and following as in the mutual escalation of smiles, and many more. ...in imitative interactions, the behaviour of the other may be isomorphic (similarly contoured as far as intensity and vitality affects are concerned) and often simultaneous or even synchronous with the behaviour of the infant. One might expect that these experiences are the ones that come closest to the notions of merging or of dissolution of self/other boundaries... (Stern 1985, p.107).

It could be objected that my account — which has the participants separately contributing to the concerting phenomenon by dint of their respective demonstratings and imitatings — does not do justice to the basic ‘concerted’ element. It could be said that my account still allows for some sort of social solipsism, in which each individual contribution is captured but not the effect of the whole, which somehow enhances and transmutes the individual contributions.

As I said earlier, the infant first experiences concerted behaviour with the mother, in such very simple forms as meeting the other’s gaze, mutual smiling, sharing other facial expressions, vocalising the same, laughing, waving, kissing, cuddling, holding and shaking hands, shared contemplation and manipulation of objects, and doing various of these in combination. These concertings may be engaged in with great enthusiasm. Stern mentions “mutual escalation of smiles” above. Elsewhere he says that,

...in smiling interactions the dyad can increase by increments the level of intensity of the affect display. One partner increases a smile’s intensity, eliciting an even bigger smile from the other partner, which ups the level yet again, and so on, producing a positive feedback spiral (*ibid.*, p.102).

And Bruner notes that,

There is also abundant evidence ...that there is a distinctive response in the infant to eye-to-eye contact and that it is a crucial bonding phenomenon between infant and caretaker. Moreover, smiling and vocalisation can be greatly increased in the infant by like responses in an adult (Bruner 1975, p.8).

Meltzoff thinks the excitement in concerting is a source of 'joy' for the infant.

Imitation is an end in itself. Infants struggle to match the adult, self-correct if they do not get it right, and smile upon producing a matching behavior. Human infants derive joy in matching *per se*. Imitation is its own reward (Meltzoff 1996, p.363).

And it gives a unique and powerful satisfaction to the parent too.

Imitative games between parent and child have been recorded in widely differing cultures. Do they serve any psychological function over and above the shared enjoyment that is experienced? As one parent expressed it to us: 'After playing these games I feel so happy — like I've been able to reach my baby and communicate with her' (Meltzoff & Gopnik 1993, p.355).

Stern sums up the connections between love and solidarity, and the excitement of concerted activity.

Moments of self/other similarity tend to occur at times of high arousal and retain throughout life their ability to establish a strong feeling of connectedness, similarity or intimacy, for good or ill. Lovers assume similar postures and tend to move toward and away from one another roughly simultaneously, as in a courting dance. In a political discussion that divides a group into two camps, those of the same position will be found to share postural positions... Mothers and infants, when feeling both happy and excited, will tend to vocalise together. This has been given several different names: coacting, chorusing, matching and mimicking (Stern 1985, p.107).

There is agreement in these passages from the psychological literature as to the motivational and developmental importance of concerting. Even so, perhaps the importance is understated. Possibly, concerting in its various forms constitutes the primary motivation in people. As for its developmental importance, I claim that concerting is one of the two basic abilities from which 'mind' develops.

8.6 Concerting for educative purposes

Much of the education of children in simple societies is still mimetic in nature. The basic vehicles of such training are reciprocal mimetic games and the imitation and rehearsal of skills. Children mime adults in every respect, including

mannerisms, posture and gesture, they learn the customs and scenarios associated with each principal arena of action, and they acquire the manufacturing and survival skills essential to the tribal way of life. In addition, children learn a series of subtle limitations on impulsive behaviour in a variety of contexts; this very basic type of learning is difficult to achieve in primates. ...the period of child rearing was already being extended with the australopithecines, but it surely would have become even more extended with *erectus*. A capacity for pedagogy in adults would be crucial in guaranteeing the child's acculturation into a mimetic society (Donald 1991, pp.176-177).

With the human, zoological evolution may have reached some sort of plateau. The behavioural repertoires of sub-human animals are largely wired-in at birth. In the human case, the distinctive part of the repertoire (different from that of any other mammal) — including most of what ensures our survival — is mostly acquired by acculturation. All that needs to be pre-programmed-in is amenability to the acculturation process. The core human ability, effectively the only survival equipment that evolution has left the human with, is an open-ended ability to concert behaviour. For the infant to be able to (eventually) participate in concerted behaviour, all that has to be genetically given, over and above what any mammal gets, is advanced imitative ability.

The means by which the infant can subsequently acquire the multifarious survival abilities he or she needs are roughly as follows. We can start with a suitably tuned version of the following principle:— given that the infant or child pupil is at a suitable stage of development, it takes only two or three assisted trial performances of a novel action for that pupil to master that action, and to be able to perform it on request or as otherwise appropriate. We call this 'practice makes perfect' and Hebb calls it 'the principle of synaptic facilitation'. Given this principle, if a teacher knows what the pupil's level of development is, and what actions can be mastered at this level, the teacher's main tasks are (1) to get the pupil to attempt to perform the action in question, and (2) to assist him or her with the performance as necessary. The best way of inciting another person to attempt to do something is to give him or her a demonstration of the action and invite him or her to imitate, and thus join you in a concerted performance of it.

Demonstration-and-imitation-leading-to-concerted-performance is not only the best but effectively the only way of teaching infants how to do things. Later on, a variety of other methods become available. However, and this is an important part of the argument of this chapter, I claim that all these other teaching methods are just derivatives of,

streamlined versions of, the demonstration-and-imitation procedure. As for the ‘assistance’ the teacher may give, when the pupil is an infant, it consists chiefly of making the action-demonstration as ostentatious, inviting, unambiguous, detailed and patient as will maximally tap the infant’s developing predilection for concerting.

There are three main contexts for concerted activity — recreational, educative (‘learning by imitation’) and practical (exploiting the all-hands-to-the-pump principle). The three contexts, or motives, for concerting are complementary. Trevarthen thinks the practical motive is primary, and that practical applications of concerting (including cooperation) are essential to our survival. Pleasure in recreational concerting is just a sweetener, ensuring we get plenty of experience in concerting from early on. Recreational concerting establishes a fund of *communitas* which is drawn on during long and possibly arduous periods of ‘serious’ concerted activity.

In adult society, working beliefs and relationships of trust needed for practical cooperation (doing tasks together) appear to be strengthened by exuberant rule-breaking expressions of pleasure in moving and experiencing with others — in art, sport, theatre, carnival, festivals of all kinds. The essential quality of sharing happiness and vitality, and the solidarity of purpose that it creates, is already apparent in the games of 6 month olds. Their actions already have a purpose in building and testing their relationships of trust with identified others (Trevarthen 1992, p.113).

Kaye distinguishes the educative and recreational motivations — he calls them “cognitive versus social reasons for imitating” — and then shows how closely interrelated they are. In evidence for the separate existence of a cognitive (educative) motivation, Kaye cites the fact that children are most keen to imitate in contexts where imitation is most likely to lead to successful learning. There are echoes here of Vygotsky’s ‘zone of proximal development’. Kaye comments as follows.

There are at least two different kinds of motivation for infants to imitate, corresponding to two different functions that imitation seems to serve in development... The cognitive motivation involves the accommodation of skills... Several studies at various ages have found that moderately difficult models are imitated more than extremely familiar or extremely novel or difficult ones... It is clearly adaptive for children to imitate models just beyond their levels of competence rather than wasting time on actions they have already mastered or cannot yet hope to master.

On the other hand, imitating and being imitated have important effects upon interpersonal relationships... as well as being evidence of prior positive

relationships... Therefore the child has a motive for continuing to imitate some very familiar or very silly kinds of actions, when doing so will create or maintain a mutual attraction with a parent, interesting adult, sibling, or peer. These social relationships involve both 'attachment' in the sense of proximity and mutual interest, and the repeated turn-taking games whose frames and rules are shared with specific adults.

These two motives are closely related, once infant and parent move into the period of shared memory where the parent possesses special knowledge about the infant's interests and experience with particular toys, games and expressions. This knowledge makes them for the first time a dyad, sharing jointly managed skills not available to the infant in interaction with strangers. An infant's ability to make optimal use of imitation for cognitive development, by being presented with salient models on the frontier of his existing repertoire of skills, is facilitated by greater dyadic experience with adults who know where his frontier is (Kaye 1982, pp.180-181).

The story here is similar to Trevarthen's — namely that, by playing along with the 'very familiar or very silly' stuff, the child will ingratiate him- or herself with those adults (especially parents) who are best positioned to show him or her optimally-learnable behaviours to imitate. In my opinion, even if this rationale operates at some 'pre-conscious' level, it is too Machiavellian to be plausibly attributed either to infants or to evolution. It would be simpler just to program in an overweening urge to behave in concert with others. That way, the practicalities would be learned along with the pastimes.

Some portion of the mother and infant's repertoire of concerted activity will be stable and often-repeated. Some of it will become familiar ritual. Other, basic concerted behaviours are common to all mothers and infants and to all but the simplest concertings. Concerted smiling (and to a lesser extent other facial expressions) and (at least intermittent) mutual observing and gaze-meeting, and mutual gaze-following culminating in joint perception of external objects, are all in themselves concerted activities and are all ingredients in almost every other kind of concerted activity mother and infant undertake. Mutual smiling and intermittent mutual observing, gaze-meeting and gaze-following will be more or less constant, or at least will be sustained for long periods, when the other is present. The mutual observing, gaze-meeting and joint perception of external objects is necessary anyway, to see what the other is doing. The smiling is easy and rewarding. They are the backdrop to mother-infant concerting, the set scene. But, against this relatively stable backdrop — within this 'zone of proximal development' — the mother is constantly introducing minor novelties and variations.

Of course, the introduction of novelty is incompatible with simultaneous performance — at least, on the occasion the novelty is first introduced. One early derivative of or variation on concerting is what Meltzoff calls ‘reciprocal imitation’. Here imitations immediately follow demonstrations rather than being simultaneous with them. Meltzoff mentions reciprocal imitation in connection with adults’ keenness to imitate infants:

...human parents tend to imitate their young. Human parents shake objects when the infant does, slide them when they slide, and coo when they coo. Dyads often engage in long bouts of reciprocal imitation at the highchair or kitchen table — first the infant performs an act, then the parent, then the infant, and so on (Meltzoff 1996, pp.356-7).

Stern lists a dozen or so researchers into what he calls the “enormous and important” role of imitation in mother-infant interaction, and he comments as follows on their findings. Again, he is talking primarily about reciprocal imitation.

Most of these investigators have described in detail how caregivers and infants mutually create the chains and sequences of reciprocal behaviours that make up social dialogues during the infant’s first nine months. ...What is striking in these descriptions is that the mother is almost always working within the same modality as the infant. And in the leadings, followings, highlightings, and elaborations that make up her turn in the dialogue, she is generally performing close or loose imitations of the infants’s immediate behaviour. If the infant vocalises, the mother vocalises back. Similarly, if the infant makes a face, the mother makes a face. However, the dialogue does not remain a stereotypic boring sequence of repeats, back and forth, because the mother is constantly introducing modifying imitations ...or providing a theme-and-variation format with slight changes in her contribution at each dialogic turn; for example, her vocalisation may be slightly different each time (Stern 1985, pp.139-140).

The mother is constantly accustoming the infant to following where she leads, and to combining and adapting previously established behavioural skills.

One important educative application of immediate (but not simultaneous) imitation is in problem situations where the infant has the good fortune to be accompanied by the mother. The infant can find out how to react simply by looking at what the mother is doing and copying that. Meares describes research into this kind of ‘instant learning’.

...the mother participates in the child’s play in a way which seems attuned to the infant’s affect. ...For example, the mother is playing with soap bubbles. She blows these bubbles into the baby’s face, where they burst. The baby is startled and does not know how to respond. The mother laughs, so the baby laughs too,

knowing now that this is fun. It is as if the mother shapes, affectively, the baby's experience. She, by her attunement, gives it a kind of meaning. She mirrors it if you like... The baby's behaviour, when he or she looks into the mother's face for some signal concerning the meaning of a situation, has been studied by means of a modified visual cliff experiment. The babies were a year old. As the children moved out over the transparent floor and saw space below them, they became apprehensive and looked toward their mothers. If the mother smiled and showed pleasure, the baby went on. If, however, she had been asked to show facial fear, the baby turned back, perhaps showing some distress (Meares 1992, pp.29-30).

'Deferred' imitation is another, further, variation of prototype concerting. In this case, circumstances are such that simultaneous or near-simultaneous performance is not possible. The imitator's performance has to be delayed. However, something of the excitement and rewarding effect of actual concerting is preserved. Firstly, during the demonstrator's performance, the would-be imitator is still empathising (proto-incepting that action) with the demonstrator, and secondly, later, during the imitator's performance, the imitator is still proto-incepting the original demonstration. The respective abbreviated versions reprise some of the excitement of a full session. Clearly, for concerting to become a powerful and useful educative tool, it has to become sufficiently versatile to function in situations where the imitator has to delay his or her performance for an indefinite period.

For imitation to be of far-reaching significance in human development, infants will need to imitate... novel acts after significant memory delays. Human parents engage in purposeful pedagogy of the type 'watch what I do', often demonstrating a new skill at a time and place far removed from when the infant has an opportunity to imitate. If the human young (or any species for that matter) could imitate acts immediately but *not* imitate after a lengthy memory delay, this would necessarily constrain theories about the role of imitation in the transmission of culture for that species... Thus, if we want to draw inferences to cultural transmission, we need to know about imitative generalisation across time and space (Meltzoff 1996, p.354).

In fact, infants are very good indeed at deferred imitation.

It has been found that human infants will imitate the behaviour of a conspecific after delays of up to 4 months. Deferred imitation was demonstrated when the infant was barred from picking up or handling the test object during the initial exposure period. The infant simply watched the adult act during the first session. Memory and differential imitation of multiple acts after 4-month delays (with no immediate imitation) attest to the robust nature of imitative learning in the human

infant. Other research found that infants will readily imitate peers as well as adults, strangers as well as mothers (Meltzoff 1996, p.362).

As well as demonstrating new responses for the infant to imitate, the mother will often employ another technique, that is, selectively imitating desirable behaviours which the infant just happens to come up with. Or she uses selective imitation to further educe presently inchoate behaviours from the infant. The two techniques — demonstration-for-imitation and selective-confirmation-by-imitation — are not mutually exclusive. The teaching method at work in the visual cliff experiment has features of both.

We might suppose that at the moment when the baby glanced towards the mother's face, his or her feelings were amorphous or mixed, including both apprehension and curiosity. The mother's response is selective, determined, at least in part, by her own personality and experience. If a situation similar to the visual cliff arose in ordinary life, some mothers would signal anxiety and others would encourage daring (Meares 1992, p.124).

At any rate, to imitate a behaviour of the infant's (whether that behaviour is fully performed or just nascent) is to reward the infant for performing it — or, more accurately, to increase the excitement of that behaviour and thus etch it better into the repertoire (or the cortex). Although he seems to be affected somewhat by litotes in what follows (I refer particularly to "potential developmental sequelae"), Meltzoff is in little doubt — from experiments he has himself conducted, and reviewed in Meltzoff 1996 — that infants are very aware when their behaviour is being imitated, and that they find being imitated strongly rewarding.

Evidently infants do not just recognise that another moves *when* they move (temporal synchrony), but recognise that another moves in the same *manner* as they do (structural congruence). Thus infants not only imitate others, but can recognise when the form of their own behaviour is being matched. The fact that infants literally prefer (look longer at) adults who imitate them has social-developmental implications, and the discovery that infants can process the equivalence in the behaviour, not merely the temporal contingencies, has potential developmental sequelae... (Meltzoff 1996, p.358).

The rewarding and behaviour-channeling effect of selective imitation is put to good use by the mother. For example, as Meares reports, it is used to improve the infant's speech.

The baby and mother, or other caregiver, have their eyes fixed upon each other. The mother's gaze elicits responses from the baby which the mother, in turn, responds to, often imitating something of the baby's expression. But this imitation is selective. She is much more likely to echo sounds which resemble the

beginnings of language rather than nondescript crying noises. The mother is not simply a mirror. In her responsiveness to the infant, she gives back some part of what the baby is doing — but only some part and not all — and also gives him something of her own (Meares 1992, p.27).

Partly the mother is demonstrating something new, and partly she is coaxing out and clarifying something the infant is already, if indistinctly and incompetently, doing. She uses selective imitation to improve the infant's humour too.

The mother's behaviour when the baby's emotional state is positive differs from what she does when the baby is, for example, frightened or unhappy. When the baby's affect is positive, the mother often participates and contributes to it. Her behaviour has an imitative element and in this way it is unlike her response when the baby is distressed. She does not, for example, mimic his crying. (Although she may frown and even moan a little bit.) However, when the baby's affect is positive, the mother's response is characteristically to 'mirror' it. When the infant is content, for example during feeding, she is content; when the child is interested, she too shows interest; when the child is happy she behaves like the child, escalating the happiness (*ibid.*, p.123).

Papousek & Papousek point to another variation, where the mother imitates at the start of the action but is demonstrating by the end. Imitation here shades into demonstration.

In the repertoire of maternal behaviour two components deserve special attention from the point of view of imitation: her increased readiness to imitate her infant's facial expressions, vocal sounds, and movements, and her tendency to demonstrate to him the desired outcome of his behaviour. Both components are present during the first few days after delivery.

According to our observations the mother more often imitates the activity occurring in the area of the mouth, nose, and eyes, as well as whatever new behavioural patterns develop in her neonate. Here the mother's 'instructions', i.e., models demonstrating the desired outcome of the infant's behaviour, also first appear. Opening her eyes before her infant can fully open his eyes after a nap or opening her mouth before bringing a spoon to her infant's mouth can be given as examples of such early instructions (Papousek & Papousek 1977, p.82).

Trevarthen reports a variation on this in turn, and explains some of why and when imitation gives way to demonstration (and vice versa).

It has often been noted that young infants tend to imitate acts that are within their own spontaneous repertoire. These are taken up by adults and then reproduced for the infant in a specific demonstrative manner... With babies two months old we find imitation occurs after a period of intense attention to a carefully demonstrated act by the mother who becomes a teacher in response to the infant's

interest in her reproductions. When the infant is being more expressive and demonstrative, similarity between what the baby is doing and what the mother is doing is invariably due to the mother adopting the role of the mimic (Trevvarthen 1977, p.247).

Last, Kaye summarises the educative bias of the mother's imitations and sets it in context.

When the mother imitates, it is much more than a mirroring of her baby. She pulls him from where he is in the direction of her own agenda for him. For example, there is *maximising* imitation: baby opens his mouth and mother exaggeratedly opens her own mouth. We can read her intention even without hearing the kind of remark which sometimes accompanies such behaviour: 'Yeah, come on, you can do it'. Or there is *minimising* imitation: baby begins with a cry face and mother responds with a quick cry face that lasts only an instant and flows back to a bright expression. We are seeing the mother flash to where her infant is, and attempt to draw him back to where she wants him to be. Again, sometimes a vocalisation will serve as a gloss on this behaviour: 'No don't cry'. Finally there is *modulating* imitation: baby whines 'waaaah' and mother responds with the same pitch, intonation and duration but mellows it to a sympathetic chanting 'awwwwww'.

There is an important truth here about imitation. It is never a perfect match, always a variation, in the direction of an individual's personal style, a learner's incompetence or an instructor's agenda (Kaye 1979, p.199).

Just as the mother's urge to imitate her baby is in many contexts inextricable from her urge to demonstrate to it, so does the basic recreational motive for concerting shade into the educative one.

8.7 Vocalisation in concerted activity

Speech is a natural 'ostentator' of action. Like any irrupting noise, vocally produced sounds attract attention naturally. If you speak, people will look at you, and if you are doing something at the time they will look at what you are doing. Speech focuses attention on what is happening at the moment. A distinctive speech pattern repeated during an action creates a 'baptism effect'. Those parts of the action flagged by speech will be better heeded, and better remembered, and will be remembered as a unity. In a learning context, speech functions to make behaviours memorable, standardise their performance, selectively ostentate specific aspects of them, register public recognition of them, and generally helps etch them into the repertoire.

Usually the mother's demonstrations-to-be-imitated are liberally accompanied with

vocals. And vocalisings are easy to do, they are distinctive (that is, easily discriminable one from another), they broadcast well, and they reliably attract attention to what the vocaliser is doing at the time. The mother uses vocals both to ostentate the performance she is demonstrating as a whole and to ostentate particular phases of it. So, although the vocals may have some recreational value, as far as the mother is concerned their primary role is educative. They are an aid or adjunct to educative concerting. The actions or action phases which the demonstrator accompanies with vocals will be those which (the demonstrator feels) the infant should be mastering at the time.

The mother-infant interactions in which vocals first begin to play a useful ostentating role are extremely simple. Waving whilst uttering *hello* or *goodbye* is one example. Saying *thank you* on being given something is another. I cite examples from Bruner and others shortly. It is important to realise that, at this early stage, the vocals have no ‘meaning’ as it were. They are merely, to paraphrase Collingwood (below), ‘noises one makes when performing the action in question’. Or better, the vocalising is ‘something one does’ when performing the action. It is better still to say that the vocalising is *part* of the performance which is being concerted. I have been writing as if speech were an ancillary, a part of the publicity team behind a demonstrated action, helping to launch it as a cultural phenomenon. But it is equally appropriate to see the speech as itself part of the action — and essentially homogenous with whatever arm and hand movements, facial expressions, perceptual behaviour, etc., the action consists of. The speech component of an action perhaps does more ‘ostentating and baptising for memorability’ than other components — it has a more ‘public relations’ role — but there is no difference in principle apart from that. Speech is still an effective way of tokening the action.

The infant will typically attempt to imitate the mother’s vocals as part of his own performances of the action. Collingwood surmises that,

...sooner or later the child is heard imitating in a garbled form phrases which it has heard on different kinds of occasion, when new occasions arise which seem to call for them. Its mother may have been in the habit of saying in her baby-talk, when removing its bonnet, ‘Hatty off!’; and, if so, when it takes its own bonnet off and throws it out of the perambulator it will say in tones of great satisfaction ‘Hattiauw!’ ...The child regards it [the sound ‘hattiauw’] as a noise made when one takes a hat off. Hearing its mother make that noise goes with having her remove its hat; and consequently making that noise for itself goes with removing the hat for itself (Collingwood 1938, pp.227-228).

In order for behaviours to be mastered they have to be practised, and in order for them to be practised, they need to be in a fairly standardised form. Behaviours also need to be standardised if they are going to be done concertedly. Both parties need to be sure what they are doing. Accordingly, as Bruner puts it,

...mothers seek themselves to 'standardise' certain forms of joint action with the child — mostly in play but also in earnest. This usually consists of setting up standard action formats... ...the principal form of signalling is MARKING THE SEGMENTS OF ACTION. Most usually it begins by the use of terminal marking, the use of what might be called a COMPLETIVE (Bruner 1975, p.13, his upper case).

In order to standardise a procedure, that procedure first has to be given a beginning and an end. The beginning is usually fairly obvious. (I discuss early ways of initiating concerted activity in the next section.) The end point may be more difficult to establish. Bruner mentions "...action patterns when two are involved, when there is need to signal that one member, in this case the mother, regards the act as completed" (*ibid.*, p.13). He goes on as follows.

The notable thing about video records of young children's behaviour is that, in fact, they are so continuous, so 'seamless' and without definite beginnings and ends. The use of completives provides a finite structure that permits reproducibility. And reproducibility there is, for it would seem as if both infant and mother take particular pleasure in repeating acts (with variation) for which a definite complete has been agreed upon (*ibid.*).

The main means of marking off the various phases of an action is by flagging them with vocal sounds — thus making the phases in question relatively memorable. I suppose that is the key. The mother is giving the infant mnemonic assistance with the behaviour, making it easier for him to remember. If part of an action is performed more ostentatiously than others, then that part is not only more noticeable and more attractive to imitate, it is also easier to remember. Anyway, from the beginning, the mother's vocalising in concert with the infant's behaviour has this 'marking off', 'formatting' effect on the behaviour. Trevarthen has this to say about 'baby talk'.

...the mother may become active and playful, or teasing, making rhythmical and exaggerated movements of her head, trunk and whole body, or reach to touch the infant in emphatic ways. When playing in this way she tends to use nonsense sounds. In visible records of the sounds of baby talk the overall effect is that of repeating patterns as in simple music. Apparently baby talk is regulated to create short dramatic episodes of action, with controlled change of intonation to a short succession of marked climaxes. The same may be said of the mother's playful

movements of the head and face, of her touching with the hands and of her singing or nonsense syllables to create voice games (Trevarthen 1979, p.336).

Bruner gives an example from his research of how the mother employs vocals to mark phases in various shared activities. M is playing peekaboo with eleven-month-old C.

M initiates game while drying C's hair after bath, covering baby's face with towel, saying *boo* twice on uncovering. Both laugh. Ten minutes later, C initiates, raising her petticoat over face and holding there until M says *boo*. Laughs and lowers petticoat. C repeats three times, M maintaining excitement by varying time to say *boo*, and C does not lower until signal *boo* is given (Bruner 1975, pp.15-16).

A fortnight later, the following similar interchange is recorded. "C has cleaning tissue in hand. Raises it in two hands to cover face. Says *Achoo*, lowers and looks at M, both laughing. M repeats on herself, saying *Achoo*" (*ibid.*). Bruner notes, "Closer analysis of both episodes shows that before game in both instances, initiator is in eye-to-eye contact that is steady and more than a glance. Similar eye-to-eye contact after unmasking" (*ibid.*).

Many mother-infant games involve a larger vocalisation (or speech) component, with standard vocals counterparting and accentuating virtually every move in the game. Pat-a-cake is one example, and another one is:— *Round-about, round-about went a wee mouse*, (chanted slowly, finger tracing slow circles round the child's palm) *round-about, round-about* (more circular tracing) *and... into his wee house!* (Rapidly and loud, with fingers scampering up the child's arm and into his or her armpit). In such games, the stereotyped ritual nature of the proceedings is all-important. It is the massive predictability that the child needs to adjust to. Sometimes, as in chants or songs, the ritual vocal is all there is. But this is relatively infrequent. The main task of vocalisation in early mother-infant interactions is simply to differentially mark concerted activities and phases thereof. And concerted activity here includes cooperative sequences. This is as true for the infant as for the mother. As Bruner observes, "...the child, in using language initially, is very much oriented towards pursuing... action being undertaken jointly by himself and another" (Bruner 1975, p.7). We can say *hattiaw* to that.

With the assistance of judicious vocals the child is learning not only the correct phases, and timings and emphases, involved in particular actions. He also learns, or begins learning, the technique of 'disciplining actions with speech' in general. One is reminded here of Vygotsky's expression *speech-regulated social action*. However, the only

regulating we have seen speech do so far is a crude kind, the kind of marking done by drum, or cymbals' decision and emphasis — that is, ostentation by temporal association. Admittedly, the selective vocal ostentatings, the vocal parsings of actions, the accentuations of key phases and termini, etc., are all achieved by *distinctive* vocal sounds. Each vocal is (more or less) unique to its particular action-ostentating, action-regulating job.

But there is more to it, even early on, than the simple 'distinctive marking' of actions and action phases. The mother's vocals are integrated into host actions in a much more intimate way than the mere temporal association 'marking' suggests. Much of the mother's vocalising has the function of as it were 'translating' actions (or bits of them) into the vocal medium. She does a 'vocalisation' of the action. And this vocal rendition (vocal modelling, vocal imitation, onomatopoeia) is then welded back in with the actual performance to achieve a more gripping ostentation than mere marking could. Stern calls this 'affect attunement'; the mother is attuning her feelings to the infant's. Stern cites, among others, the following examples.

A nine-month-old boy bangs his hand on a soft toy, at first in some anger but gradually with pleasure, exuberance, and humour. He sets up a steady rhythm. Mother falls into his rhythm and says *kaaaaa-bam, kaaaaa-bam*, the *bam* falling on the stroke and the *kaaaaa* riding with the preparatory upswing and the suspenseful holding of his arm aloft before it falls.

An eight-and-one-half-month-old boy reaches for a toy just beyond reach. Silently he stretches toward it, leaning and extending arms and fingers out fully. Still short of the toy, he tenses his body to squeeze out the extra inch he needs to reach it. At that moment, his mother says, *uuuuuh... uuuuuuh!* With a crescendo of vocal effort, the expiration of air pushing against her tensed torso. The mother's accelerating vocal-respiratory effort matches the infant's accelerating physical effort.

A ten-month-old girl accomplishes an amusing routine with mother and then looks at her. The girl opens up her face (her mouth opens, her eyes widen, her eyebrows rise) and then closes it back, in a series of changes whose contour can be represented by a smooth arch. Mother responds by intoning *Yeah*, with a pitch line that rises and falls as the volume crescendos and decrescendos: *Yeah*. The mother's prosodic contour has matched the child's facial-kinetic contour...

A ten-month-old girl finally gets a piece in a jigsaw puzzle. She looks toward her mother, throws her head up in the air, and with a forceful arm flap raises herself partly off the ground in a flurry of exuberance. The mother says *YES, thatta girl!* The *YES* is intoned with much stress. It has an explosive rise that echoes the girl's fling of gesture and posture (Stern 1985, pp.140-141).

These examples illustrate what might be called integration of vocals with muscular activity at a ‘microscopic’ level; here we are looking at a very simple and brief units of muscular performance marked by vocals. However, later on, longer term activities, such as games lasting perhaps tens of minutes, can be vocally marked in the same, but now ‘macroscopic’, way. Carpenter *et al.* 1998 report research of Bruner and others on “...joint action in the prelinguistic period and the establishing of routines and mother’s language in them” (Carpenter *et al.* 1998, p.26). Again, the primary function of the mother’s vocalising is to segment, order, and time their joint activity, to better coordinate it and help the child remember it.

[Certain 1978 researchers]...tracked two infants’ learning and practice of two versions of a hiding-finding game with their mothers from 5-9 months of age. In each case, over successive episodes the game became more routinised, but with some variations periodically introduced by the mother to keep the game lively. Over time, each infant became able to predict certain steps in the game, and even variations, and eventually became able to switch roles with the mother, actually hiding things from her. The mother’s language was also highly predictable, both in terms of content and in terms of timing in the game structure, again with some limited variations. Along these same lines...[1986 researchers] found that the vast majority of all conventionalised acts (mainly gestures and words) by both infants and their mothers were produced when they were jointly engaged with an object (both participants focusing on the same object...). [And 1988 researchers] ...reported that many of children’s early symbolic gestures that are learned via imitation seem to arise and occur in particular places in well-practised social routines (*ibid.*).

One of the most common activities mother and infant engage in is concerted *perceptual* behaviour. Perceptual behaviour is simply perceiving, done either as an activity in its own right or in the course of performing some other action. I discuss perceptual behaviour in detail in Appendix Two. Mother and infant are all the time embarking on concerted (and reciprocal and cooperative) perceptual behaviour. They are all the time giving each other things to look at, palpate, listen to, taste, bite, manipulate, etc. A considerable proportion of the perceptual behaviour mother and infant engage in together is visual. Bruner mentions “...the speed with which mother and infant follow each other’s line of regard and come to attend jointly to common, concrete foci” (1975, p.9) and “...the mother’s tendency to follow the child’s line of regard and to comment on what the child is thought to be observing” (*ibid.*). He claims that “...at four months the child (given undistracting conditions) also follows the mother’s line of regard, and soon after does so

more readily when the mother's phonation is of the pattern of such demonstratives as *Oh look!* " (*ibid*). Like any form of activity, perceptual behaviour also has its varieties, phases and termini, needing to be signposted by distinctive vocals — if the behaviour is to be standardised. Perceptual behaviour can be left *relatively* unsystematic, compared with other forms of action. People can have their own priorities, itineraries and techniques for scrutinising things in the world. However, some order, some standard investigative procedures and heuristic strategies need to be established. Perceptual behaviour needs to be vocally ostentated, and 'regulated' to some extent too.

Bruner reports that although at first it is invariably the mother who takes the lead in joint perceptual activity, she will also encourage the infant to take the lead. For him to be able to do this, the activity must have already become somewhat ritualised.

Typically, mothers then seek to dissociate act from agent, and they follow a surprisingly regular pattern. It consists of dramatising or idealising the act [perceptual behaviour] itself with some kind of serial marking. Handing the child a desired object, the mother will move it slowly towards him with an accompanying sound increasing in pitch or loudness as it approaches the child, or changing sounds with steps in the approach. Over a period of days this will be repeated as a game, until the child begins to show an anticipatory act, usually at the end of the approach, taking hold of the object rather than having it placed before him. In the process, the agent and the act are being differentiated, attention shifting from the former to the latter. The child next becomes the agent in a reciprocal process of handing the object back to the mother, the mother becoming the recipient of the action (Bruner 1975, p.13).

Ideally, the mother's use of vocals during educative sessions of concerted perceptual behaviour should be strictly germane, and consistent from session to session. Collingwood doubts whether this is always the case. At least, he is in two minds. Although he seems to think above that *hatty off* reliably accompanies the hat-removing procedure, earlier on the same page he says that,

When the fact comes out that when a mother points to the fire she probably says 'pretty', when giving it milk, 'nice', and when touching its toe, 'this little pig went to market', the conclusion can only be expressed in the words of a (possibly mythical) schoolmaster: 'parents are the last people in the world who should be allowed to have children' (Collingwood 1938, p.227).

There is no doubt some truth in Collingwood's observation — no doubt piggy does go to market quite often — but there is also research to indicate that mothers in fact do

a lot of straight-forward ‘labelling’ for their infants’ benefit. Collis 1977 has shown that in many familiar situations mothers constantly monitor their infant’s direction of gaze. Tracking the infant’s gaze enables a mother to anticipate (and hopefully facilitate, or otherwise participate in) what the infant is about to do. And it enables her to vocalise in a way which reinforces the particular attending behaviour the child — and now she — is/are engaged in. Collis found that, to an extent far greater than could be due to chance, the mother’s vocalisation consisted of the name of the object the child is (they are both) attending to. We have a parallel here to the variant of educative concerting I quoted Papousek & Papousek on in the previous section. In that case the mother begins by disinterestedly imitating the infant, but subsequently construes the *denouement* of the imitated action according to her own agenda. She effectively turns what was an imitation into a demonstration of something she wants the infant to copy. In the kind of case Collis observed, the mother begins by imitating the child — following his gaze, attending where he is attending — but then adds her own ‘desired outcome’, namely, the appropriate vocalisation for that perceptual behaviour.

Probably most early sessions of concerted perceptual behaviour are a mix of work and play, education and recreation. Bruner reports the following episode, which includes some deliberate attention-directing and naming (of toes) and some associated irrelevant silliness. “During nappy change, child holds toes up in air expecting game. M ostentatiously mouths and nibbles at C’s toes. C laughs” (Bruner 1975, p.16). Two months later, educative progress — “Toes game has gone on at home. M asks, while drying C after bath, *Where are your toes?* C vocalises and laughs and holds legs high. M nibbles C’s toes as in previous episode” (*ibid.*).

It is perhaps worth reiterating that the idea of ‘names’ and ‘labels’ is premature in this early context. The case of vocals used to ostentate perceptual behaviour or aspects thereof is no different from the case of vocals used to ostentate any other kind of action or aspect thereof. That distinctive vocal is still only ‘something done in the course of’ this perceptual behaviour. When mother (and then infant) make the sound *dolly*, say, the concerted behaviour which this particular vocal belongs in happens to be ‘perceptual behaviour of the looking-at-the-doll kind’. It is this behaviour (but perhaps also doll-feeding or doll-throwing) that *dolly* goes with, is part and parcel of, and ostentates the consummation of.

8.8 *The initiating of concerted activity*

The infant is totally dependent for concertings on a willing and patient caregiver. Fortunately, large people are generally keen to imitate the very small. As Meltzoff puts it, adults are “...rabid imitators of their young for the first several years of an infant’s life — sliding objects when their infants slide, banging when they bang and cooing when they coo” (Meltzoff 1996, p.364). This means that, when the other is present and attending, the infant can do practically anything, and be reasonably confident of its being imitated. So the requirement for an ability to solicit imitation is perhaps alternative to, or at least complementary to, the requirement for a willing partner.

However, from the beginning, the infant also has dedicated means of attracting the mother’s attention. Crying is the main one. But after a month or two, the baby may also gesture for attention. And physical discomfort is not necessarily the only cause of his or her doing so. Trevarthen reports that “...the infant may move to recover communication if the mother fails to display affection. The infant makes forced, abrupt and large gestures which attract attention, then shows passivity and sadness or grimaces and gestures of distress” (Trevarthen 1979, p.335). Presumably the mother then comes along and makes sympathetic noises — albeit, possibly, somewhat mockingly.

According to Stern, it is at around 7-9 months of age that infants first deliberately seek concerted activity, rather than just enjoying it when it happens. And this is when they learn more efficient ways of bringing it about. Up until eight months or so, the only way of initiating concerted activity is to give a demonstration of the action in question — an ostentatious, expectant-looking demonstration, with vocals for good measure — and hope to be imitated. However, it eventually transpires that a much more economical performance is employed to get the other party to join in. The trick is: one just *begins* the demonstration, and this is enough to get the other imitating.

But it will only work if the action in question is an already standardised and familiar one which the other party will quickly recognise the beginning of. Or the action may not be habitual, but it is familiar in the sense of recent, or it is emotionally exciting in some way — anything so the other will recognise it quickly.

And ‘recognising’ here, or ‘being aware what the other is doing’, amounts only to: beginning a performance of the correct action in response to seeing the other begin it. The

infant could acquire this trick by accident as it were, that is, by setting out to do a full ostentatious performance and then finding, a second or two into the performance, that, because the performance is so familiar, the mother is already responding correctly. If this happens, then the next time the infant feels the urge for this particular bit of concerting, or the time after that, the radically truncated demonstration will be employed straight off. Alternatively — again only if the activity is familiar — the mother may already be successfully employing the abbreviated demonstration on him. He sees her initiating their joint sessions of this action this way, and he eventually imitates her.

Whatever the provenance of the technique, it must be reasonably simple. On page 185 above I quoted Vygotsky reporting Kohler's finding that,

Usually a chimpanzee will *begin* a movement or action he wants another animal to perform or to share — e.g., will push him and execute the initial movements of walking when 'inviting' the other to follow him, or grab at the air when he wants the other to give him a banana (Vygotsky 1962, p.35; 1986, p.72).

And there is corroboration that chimpanzees can do this.

In the Yerkes Laboratory two chimpanzees were given the task of pulling up a basket by means of a piece of string threaded loosely through the handle. The two animals had to pull the ends of the string at the same time. When one of the chimpanzees saw how to solve the problem, he took his companion to one end of the string and made him hold it in his hand; he then ran quickly to the other end, picked it up and mimed the action of pulling it (Lorenz 1977, p.215).

Human infants may come to this ability early and untutored. It seems to rest on a kind of synecdoche — part doing for whole. (Or synecdoche rests on it.) The ability to exhibit the imperative, expectant, or mendicant manner, and the repeated meeting of the gaze of the other person — all accompanying the token-beginning of an action — is a skill which develops early in infants. (Come to think of it, don't dogs do a version of it too?)

At any rate — and back in the nursery — the beginning of the action is not the only phase of the action that can be used as a cue. Perhaps the beginning phase of the action is not suitable. Perhaps it is not distinctive enough to adequately cue the correct activity. Perhaps several activities start with more or less the same moves, and the would-be joiner-in cannot tell which is 'intended'. In this case it will often be that some other phase of the action, or any snatch of it, which *is* distinctive, will do as the initiating ploy. The 'typical level of excitement' and the 'generalised vocative' which Bruner mentions in the following are probably good examples of the infant's early attempts at initiating joint

activity. However, they will not usually be specific enough. And this suggests a third way the infant might produce a suitably economical cue — by the gradual crystallising-out, from a very ‘vague’ demonstration of the desired activity, of some truly distinctive element. Bruner reports the following.

At the outset... the mother is almost always the agent of the action, the child the recipient or ‘experiencer’. His mode of signalling for the recurrence of the action is usually to show a typical level of excitement or a generalised vocative in an appropriate context, or by performing some portion of the desired action (e.g., pumping up and down on the adult’s knee to produce a recurrence of ‘Ride-a-Cock-Horse’) (Bruner 1975, p. 13).

Other examples of abbreviated and/or commenced-and-aborted and/or stylised ‘demonstrations’ the infant might pick up and employ to initiate sessions are, say, putting out a hand palm up to receive an object, offering the object by holding it out, miming a kiss, and making banging movements (to initiate Stern’s ‘banging’ game above).

As I suggested during the account of Vygotsky’s theory in Chapter Six, any distinctive vocalisings which have been integrated into the activity for ostentative and terminus-marking purposes may also be used, *qua* ‘abbreviated demonstrations’, to initiate sessions of that activity. Vocalisings need not be thought of as merely ancillary to the activity. They are proper parts of it — and are thus available for use as ‘synecdochal tokenings’ of the activity. How the infant comes to use a vocal for this purpose (rather than any other fragment of the activity) is moot. The vocal may be arrived at by ordinary truncating of a would-be full demonstration (leaving only the vocal), or by imitating the mother’s use of vocals to initiate the activity, or by gradually improving what Bruner calls a ‘general vocative’ (*qua* very inchoate ‘demonstration’) into a vocal distinctive of that activity.

The concerting of perceptual behaviour is a popular pastime for mother and infant and the infant will sooner or later acquire means of initiating this too. These would include pointing, the holding out of objects for the other to inspect, and the use of general eye-on-the-object-type vocals, which might or might not amount to fragments of speech. I quoted Bruner above on the facility with which four-month-olds follow the mother’s gaze, especially if she employs some ostentating vocal (of the eye-on-the-object type) like *Oh look!* According to Stern, it is not until 7-9 months that infants first learn to respond appropriately to pointing. They stop looking just at the mother’s pointing hand and look in the direction it indicates.

Infants of nine months, however, do more than that. They not only visually follow the direction of the point but, after reaching the target, look back at the mother and appear to use the feedback from her face to confirm that they have arrived at the intended target. This is now more than a discovery procedure. It is a deliberate attempt to validate whether the joint attention has been achieved, that is, whether the focus of attention is being shared.

Similarly, infants begin to point at about nine months of age, though they do so less frequently than mothers do. When they do, their gaze alternates between the target and the mother's face, as when she is pointing, to see if she has joined in to share the attentional focus (Stern 1985, pp.129-130).

Stern is saying, not only do they now follow the mother's point, it is also at about this age that they themselves learn to point, as a means of initiating concerted perceptual behaviour. Butterworth 1998 reports earlier research of his own which found that

...infants at 6 or 9 months were as likely to fixate the pointing hand as the designated target. If babies at 6 to 9 months succeeded in fixating the target, they did so in two steps, pausing first at the adult's hand, then alighting on the target, whereas 12-month-old babies looked to the target rapidly and smoothly. Indeed, it has sometimes been noted that mothers go to a great deal of trouble, with exaggerated hand movements, to lead the young infant's gaze from her hand to the target (Butterworth 1998, p.157).

Carpenter *et al.* 1998 confirm this period as the formative one.

Gaze alternation between the object and the adult during pointing is considered an indication that infants are checking to see whether adults are paying attention to their communicative signal. The first instances of points at objects that are accompanied by such gaze alternation occur between 9 and 10½ months of age (Carpenter *et al.* 1998, p.20).

There is broad agreement in these findings. However, in my account it is the nature and relative order of achievements rather than their absolute chronology that is important.

On page 185 above, I quoted Vygotsky explaining pointing as an abbreviation of (or a commenced-and-aborted version of) the act of reaching-for-and-grasping-an-object. This account is nowadays widely but not universally accepted as being true. The literature assumes a distinction between 'imperative' pointing, where the infant wants to have the object handed to him, and 'declarative' pointing, where the infant merely wants the adult to attend to the object (see, for example, Carpenter *et al.* 1998, pp.17-22). Thus, Vygotsky is interpreted as saying that declarative pointing develops out of imperative pointing. Butterworth 1998 agrees with Carpenter *et al.* 1998 that research suggests that

“...the pointing gesture in humans initially serves a protodeclarative purpose (i.e., look at that) rather than a protoimperative purpose (i.e., give me that)” (Butterworth 1998, p.160), and thus that Vygotsky’s view cannot be correct.

However, Butterworth then goes on to speculate, employing Darwin’s ‘principle of antithesis’, that pointing may very well derive from grasping. Darwin 1872, pp.50–65, introduced the antithesis concept in connection with the ‘expression of emotions’ in animals and gave examples of antithetical postures in dogs.

After a fight, the subdued posture of the defeated dog signals submission because the muscles are activated in the opposite configuration, or antithesis, to those involved in aggression. The opposition of the tip of the index finger and thumb in the pincer grip is postulated here to have pointing as its postural antithesis (Butterworth 1998, p.160).

Butterworth’s application of the Darwinian idea to pointing would imply that pointing is in some sense the opposite of grasping, and means ‘don’t give me that’ rather than ‘give me that’. This would in fact tend to support Vygotsky’s view, which is that pointing is deliberately abortive (and stylised) grasping. However, Butterworth concedes only a physiological and not an interpersonal-functional relation between pointing and grasping.

My own views are as follows. First, on my account, concerted attending involves the adult (and the infant) in ‘doing something’ just as much as handing the thing to the infant would. Thus the conventional distinction between declarative and imperative pointing is, for me, a distinction between two kinds of imperative (‘look at that with me’ and ‘give me that’). But I also think that Vygotsky may well be right in thinking that pointing is a stylised abbreviation of, or a commenced-and-aborted version of, grasping. The act of ‘being handed something and grasping it’ and the act of ‘grasping something to hand it to someone’ do have a ‘nondeclarative’ role — in the context of eating, for example, or just taking possession of an object — but they also have an important, indeed an essential, role in concerted perceptual behaviour, at least in the form in which the infant first learns it. Passing things to and/or fro, *qua* showing each other things, is the main format of early joint perceptual behaviour. Pointing could well arise as a token effort at ‘grasping X to pass it to the other to have a look at’ or as a token effort at ‘grasping X to look at it (assuming the other is going to pass it)’. Only, pointing comes to be useful in itself (that is, without leading to grasping and whatever) because the effect it achieves — getting the other to attend in the right direction, look at the right thing — is now (by the time the

infant masters pointing) accepted as a satisfying form of shared perceiving in its own right. One does not now need to grasp something in order to share perception of it.

At any rate, sooner or later, the infant or child becomes able to initiate the sharing of very specific concerted perceptual behaviours, by using the correct vocals. Vocals, which were originally embedded in concerted perceptual behaviour as ostentators of the proceedings, later serve very well as ‘abbreviated demonstrations’ to solicit concertings of particular perceivings. Any abbreviated or commenced-and-aborted demonstration of an action done in order to initiate a concerted performance of that activity might be called an ‘imperative’. The term I prefer is *hortation*. One would normally restrict both of these terms to the case where the abbreviated demonstration consists entirely or almost entirely of vocals, or ‘speech’, and I will so restrict myself. Anyway, what we would normally describe as ‘teaching the child the names of things’ goes in my account ²⁴ under the heading ‘integrating distinctive vocals into concerted perceptual behaviour’. What we would normally speak of as ‘saying the name of something in order to draw someone’s attention to it’ — or ‘referring’ — is, in my terms, ‘hortation of specific concerted perceptual behaviour’.

CHAPTER NINE: *Incepting*

So far, I have made use of quotations from leading developmental psychologists to illustrate early concerted activity, in its recreational and educative forms. I have also quoted expert findings on some ‘meta-actional’ activity to do with concerting — that is, the use of vocalising to discipline concerted activity, and the use of ‘abbreviated demonstrations’ (including vocalisings) to initiate concerted activity. The next topic is also a meta-actional ability. It is the ability to *incept* concerted activity.

9.1 *Overt and covert incepting — a simple model*

Incepting is a meta-action, in the sense that it is an action performed on or with respect to another (and *infra*) action. In its earliest and crudest form, *overt incepting*, it consists of starting to perform action X but then stopping — that is, commencing action X, but then aborting it. Although the aborting or inhibiting phase is just as important as the commencing, I still call it just ‘incepting’ rather than the clumsier ‘commencing and aborting’ or ‘incepting and aborting’. My technical term *incepting* has to be taken to include the desisting as well. The *overt* signifies that some portion of action X is actually, overtly performed. If, before stopping shamefaced in the middle of the room, I have started out of my seat with an indignant cry, raised my hands in preparation for strangling, and taken steps towards my accuser, then the aggressive act has been overtly commenced. Or perhaps I do not pause until my hands are two inches from his throat, and I freeze there, red-faced, eyeballing him.

The kind of situation which prompts this kind of start-stop, irresolute or ambivalent response is one in which a perception which is normally a cue for doing X occurs in an incomplete or otherwise inadequate form. (I am insulted by the accusation, but not insufferably.) Alternatively, the cue for X-ing is perceived all right, but so is a cue for doing something incompatible with X-ing. (My accuser is the Professor.) Or, the X-ing is cued and one commences X-ing but it then transpires that, for whatever reason, the X-ing is not sustainable. (I notice the Professor has pulled a knife.) In all such ‘inadequate-cue’ situations, a natural but crude way of responding — it could be called, ironically, the *faux pas* strategy — is to actually commence doing X but then abort the performance. Another possible name for it is ‘trial and error’.

After various experiences of inadequate-cue situations and commencings-then-abortings — with respect to particular actions and with respect to actions generally — the commencing and aborting gets to be accomplished much more efficiently. One is eventually able to do it quite quickly, more or less effortlessly, and without any (or with very little) overt movement. One can imagine aborting one's 'attacks' on the Prof. earlier and earlier, as one becomes accustomed to his heartless jibes. After a while, you stay put in your chair, and just grip the seat fiercely and glare. Or, even more mature, you merely tense your arm muscles and your eyes go dark for a second. Finally, you might evince no sign whatsoever of being in attack mode. You might even smile politely. This mature, facile, inconspicuous version of commencing-and-aborting is what I call *covert incepting*.

The concept of the 'covert incepting' of an action is thus a fairly simple and straightforward one. Covert incepting is just an efficient, sophisticated version of overt incepting, which in turn is 'starting to perform X, and then aborting the performance'. This is not a difficult concept. Incepting is not difficult to *do* either. The 'ability' to overtly incept actions — it is often more like an inability than an ability — is present early. "Two-month-olds can stop and start activity, a capacity which is essential for reciprocal exchange" (Trevvarthen 1979, p.334). Beyond basic starting and stopping, and stopping half-way, the infant would seem to need only practice, to get the starting and stopping down to a fine art — that is, to be able to do it covertly.

Inceptings, like thoughts, may be fleeting and episodic or they may be persistent. The logic of commencing and inhibiting can accommodate this. Neither 'commencing' nor 'inhibiting' need be one-off, episodic *faits*. On page 211 above, when I was showing how inhibition and disposition could be reconciled in Hampshire's account, I distinguished two kinds of inhibiting (corresponding to two kinds of commencing) — the one-off 'knocking on the head' kind and the continuous 'maintaining a tight grip on' kind. The commencings and inhibitings involved in incepting could be episodic, and in this case one would have to account for duration in terms of constant repetition of the commencing, with it each time being knocked back by the inhibitory effort. On the other hand, clearly, much incepting is of the 'maintaining a tight grip on' sort — in which the commencing effort is continuous, but is continuously held in check. I think of Dr Strangelove's struggle (with his left arm) to hold down his right arm, when it attempts to rise in salute. Wanting and waiting to go to the toilet requires the same sort of continued effort. In these cases, incepting's duration requires no explanation.

Whether the incepting is episodic or continuous may depend to some extent on whether it is overt incepting or covert incepting one is talking about. Suppose one is waiting for an opportunity to speak in a seminar. You perceive what looks like a long-enough silence and start, and one's overt commencing-to-speak is episodic. Then someone else speaks at the same time, or the door opens and the Secretary cheerfully pops her head in, or you realise you are going to contradict yourself — and you stop, also episodically. However, it is still true that, independently of whether the incepting is overt or covert, one is commencing *something* of the saying of one's piece on a continuous basis. For example, one might be maintaining one's vocal musculature in the posture required to utter the first words. And the same *kind* (albeit, perhaps a different degree) of inhibitory effort required to abort speech that has overtly commenced will presumably be required to inhibit speech that has not yet overtly commenced. If I see the time is not propitious, and desist, but stay keen to say it — that is, if overt incepting gives way to covert incepting of the same act of speaking — then the same kind of inhibition which aborted the overt speech will need to be maintained, albeit at a lower level.

Thus, the logic of commencing and inhibiting can accommodate duration in incepting. I do not want to have to speculate on what precise kinds of subtle physical movement are required to effect covert incepting. Presumably there are muscular equivalents of both episodic (including repetitious episodic) and continuous inhibitings, or countervailings or precludings. There seem to be at least three ways sustainable commencing-inhibiting might be done. It might be a matter of (1) activating the muscles required to commence a response but not to a degree sufficient to produce actual overt movement, or (2) activating the required muscles but then nullifying their effect (by relaxing them or by activating countervailing muscles) quickly enough to preclude any actual overt movement, then repeating this sequence, or (3) *simultaneously* activating *both* the muscles required to commence the response *and* countervailing muscles, so that a balance of excitation and inhibition is sustained, and the movement hovers, as it were, on the brink of performance.

A lot depends on whether the inhibiting is thought of as done just after, or simultaneous with, the commencing. Perhaps, whereas with overt commencing, the inhibiting follows the commencing, with covert incepting the two are more or less simultaneous. It may also be that there are physical (for example, muscular) ways of maintaining extremely long-term inceptings, ones that last for years. Possibly, such long-term inceptings would leave physiognomic traces — on a person's face, say, or posture.

9.2 How covert incepting could appear puzzling

If you don't see the incepting skill develop from its bumbling overt beginnings, and you only notice mature covert incepting, as a *fait accompli* in the child's and adult's repertoire, then certain features of it could easily appear mysterious. For one thing, the *covert*ness of covert incepting might seem mystifying. Incepting is an action and yet in a good sense the person P who is ^{covertly} incepting some action X is doing nothing — even conspicuously doing nothing, standing there motionless, maybe blushing slightly. The appearance that P is doing nothing may persuade us that P is in fact doing nothing. From the fact that P is not doing any X-ing, we infer (what is false) that P is not doing anything at all. Yet, although P is not doing anything, there is clearly 'something going on with P'. We infer it must be some impersonal phenomenon that is occurring. The end result is that we are aware of the existence of what I am calling ^{covert} incepting, but we assume that it is not an action of the person, but rather a 'process' of some kind.

In order to capture the systematic unobservability of this 'process', we then employ the metaphor of 'unobservable, because internal'. Subsequently, we are seduced by habit into taking this metaphor literally — or, at least, not bothering to take it figuratively — with the result that our puzzlement about ^{covert} incepting is exacerbated. What I identify as the person's act of ^{covert} incepting is now thought of as mysterious *internal* goings-on — something happening *inside* the person. The unobservable-because-internal metaphor has highlighted the unobservability of ^{covert} incepting nicely, but it has cost us our ability to conceive it *in toto*. I say above that the concept of ^{covert} incepting is in itself a simple and straightforward one, and not difficult to understand ^{covert} incepting is just a matter of starting and stopping, done in a sophisticated and streamlined way. However, if we are to think of ^{covert} incepting as an impersonal process which occurs inside one's head, then it quickly becomes a very difficult concept indeed.

Our puzzlement relates to certain features of the putative internal process in particular. I will mention three of them. First, although it seems itself so insubstantial, the unobservable inner process yet has substantial and observable external effects — on the person P's subsequent behaviour, for example. The process *readies* P for acting in a certain way. How can such an ephemeral-looking phenomenon exert such powerful effects over P's actions? Second, as well as causing P to behave in a certain way — in the short, medium and/or long term — the internal phenomenon often also causes immediate

and substantial *involuntary bodily agitations* in P. I mean such agitations as smiling, trembling, blenching, blushing, fist clenching, sweating, eye-widening and jaw-dropping, becoming sexually aroused, moving one's lips as if in speech, and so on. What kind of goings-on on the inside could be causing these sometimes dramatic effects on the outside? Third, the internal process clearly has some *relation to things in the external world*. It is some kind of causal relation. For example, if I walk past and notice a beautiful ripe nectarine in a bowl on the table, the inner phenomenon springs into existence. I know the phenomenon has come into existence because it causes bodily agitations in me such as salivation. It causes me to stare at the nectarine. And it may even be powerful enough to cause me to pick the nectarine up and take a bite out of it. What is puzzling is the first part — how the nectarine on the table brings about the internal phenomenon. I know it is the nectarine which has caused the inner phenomenon to occur because, if I look away from it, and walk on, the phenomenon disappears. By what means can something external bring about an event inside me? What kind of causal relation can be operating here?

Thus, in addition to the puzzling unobservability and insubstantiality of covert incepting, there are these three other aspects of it which also appear to stand in need of explanation. But these features only appear problematic when covert incepting is construed as an impersonal internal process. If the 'internal process' is recognised as in fact an action which the person is performing — an action consisting of the very efficient commencing and inhibiting of some *infra* action — then these features are easily explained. Or rather, they hardly call for 'explanation' at all.

As far as the 'unobservability' of covert incepting is concerned, and the conspicuous air of 'not doing anything' surrounding it, these features are just what is to be expected, given the kind of action covert incepting is. Covert incepting is commencing, or making as if, to do something, and then desisting from doing it. If one is to do this very quickly and efficiently, then (at least once you are very used to doing it) there is no need for one to make any actual overt movement at all. If any action can be performed without, or with hardly, moving a muscle, incepting can.

The first of the three derivative mysteries was the apparently mysterious power which the 'inner impersonal phenomenon' has, to 'make P do things'. When the internal phenomenon is seen as incepting, which the person him- or herself is actively doing, the 'power' in question evaporates. If what P is doing is some highly efficient commencing

and aborting of X-ing, then we do not need to explain (let alone invoke some ‘power’ to explain) why P is ‘ready’ or ‘primed’ or ‘motivated’ to do X. By virtue of covertly incepting X, P is already putting him- or herself on the verge of actually performing X. To incept X is already (albeit to some minimal extent) to commence doing X. Depending on how the perceived situation turns out, a full performance of X is imminent. If the situation changes so that the inadequate cue situation is replaced by one in which the cues justify uninhibited X-ing, then P will stop merely covertly incepting X and will forthwith proceed to full overt X-ing.

The second mystery was the inner phenomenon’s power to cause involuntary bodily agitations in the person in whom it occurs. Here too, if we construe what we are looking at as the simultaneous commencing and aborting of an action, then there is an explanation close to hand. Cases where there is noticeable bodily agitation are cases where the incepting is being done under stress and thus being done inadequately or incompetently. At least, it is being done without the usual subtle ease and imperturbability we most of us incept with. Because of some difficulty, the incepting is becoming clumsy. It is not properly ‘covertised’. The commencing and the inhibiting are not in balance; they are seesawing. Portions of the behaviour are being overtly (rather than merely covertly) commenced. And/or, as when you have to bite your lip to stop a remark coming out, the inhibiting side of the performance is becoming clumsy and obvious too. Perhaps the most important thing to be clear about here is the following. The mystery appears when the inner phenomenon is assumed to ‘cause’ or ‘underlie’ the observed bodily agitations. In my story, with the ‘inner phenomenon’ revealed as an act of incepting, what we are observing when we observe the ‘bodily agitations’ is the act of incepting itself — albeit a somewhat flustered and inefficient performance of it.

Finally, there is the mystery of how the external object, the nectarine, causes an event inside P. Identifying the so-called ‘inner event’ as covert incepting, and identifying this in turn as very subtle commencing and inhibiting helps considerably here too. We can proceed as follows. Rather than saying that the nectarine is the cause of the incepting we can say it is P’s *perception* of the nectarine that causes it. We can further simplify what is happening if we regard P’s perceiving of the nectarine as not some impersonal transaction between the nectarine and P — or between the nectarine and some part or organ of P’s — but as an action which P is performing. (I argue in Appendix Two that perceiving is best construed as an action of the person.) With the nectarine replaced in

our explanation by P's act of perceiving it, we can then turn to look to the subtle commencing and aborting P is doing. The simplest explanation — one in which the problematic 'relation between' perceiving and incepting disappears — would put the nectarine-perceiving as an integral (and indispensable) *component* in nectarine-eating. However, nectarine-eating is the action P is incepting. We can identify the nectarine-perceiving as part of the 'commencing' phase of the commencing-and-aborting (incepting) of the nectarine-eating. That is, the 'commencing' is the actual performance of perceivings that would normally be done in the course of performing the action. Ordinary uninhibited overt action is usually commenced with perceivings too. The difference is that the perceivings which initiate covert incepting are incomplete or otherwise inadequate, and this inadequacy leads to P inhibiting the overt response.

[The above could perhaps be read in conjunction with Appendix Two. Perceiving is the initial component in not only ordinary uninhibited action, but both overt and covert incepting. So 'covert' incepting is only as covert as is the perceiving which begins it.]

I have suggested that, once one appreciates that it is an action — a developmental sophistication of overt commencing-then-aborting — there is nothing about covert incepting that particularly calls for explanation. [One thing about covert incepting which I agree is remarkable, is how we get to be so good at it. I try to explain this later in the chapter.] However, largely as a result of the naturally deceptive appearance of covert incepting, and the charm of the 'internal goings-on' metaphors, people have mistaken covert incepting for an impersonal inner phenomenon. And, naturally enough, they have tried to explain what kind of phenomenon it is. They have tried to explain it in terms of operations of, or in, or using, something called 'the mind'. And others have tried to explain it in terms of physiological processes.

Suppose now, for the sake of argument, that we accept what it is the main task of this chapter to show — that thinking is a species of covert incepting. I argued in Part One that there is no possibility of a literal explanation of incepting (*qua* thinking) in terms of 'the mind'. Someone unsatisfied with explanations in terms of mind might look instead for a physiological explanation. It might be thought that, whereas mind talk offers us only a mythology about what goes on inside people — and I deny that it even offers us that much — physiology offers us a science. The supposition is that, by careful scientific scrutiny of what actually does go on in people's heads, we should be able to locate and

explain the internal phenomenon in question. However, if what I am saying is true, then there is no ‘internal phenomenon’ to be explained. There is only an action we perform — admittedly a very subtle one — which in its inconspicuousness is a bit like something done in a sequestered location.

Although, in the following passage, Wittgenstein does not identify thinking as an action, he is clear that to think of it as an impersonal process is a mistake.

How does the philosophical problem about mental processes and states and about behaviourism [or physicalism generally] arise? — The first step is one which altogether escapes notice. We talk of processes and states and leave their nature undecided. Sometime perhaps we shall know more about them — we think.. But that is just what commits us to a particular way of looking at the matter. For we have a definite concept of what it means to know a process better. (The decisive move in the conjuring trick has been made, and it was the very one that we thought was quite innocent.) — And now the analogy which was to make us understand our thoughts falls to pieces. So we have to deny the yet uncomprehended process in the yet unexplored medium. And now it looks as if we had denied mental processes. And naturally we don’t want to deny them (Wittgenstein 1963, #308).

Thus, the important mistake is not that of taking the innerness metaphor too literally, and assuming that the phenomenon to be explained occurs inside the body. More important is the mistake of assuming the existence of a ‘phenomenon’ or ‘process’ to be explained in the first place. We infer from the inconspicuousness of covert incepting that it is not an action of the person we are contemplating — and we conclude that it must therefore be an impersonal phenomenon of some kind. Then the idea of the phenomenon being ‘inner’ intervenes, and makes it even more difficult for us to see incepting as an action. (It is incomprehensible that we could literally perform actions inside our own heads.)

However, there *is no* impersonal phenomenon, internal or otherwise. Incepting is an action of ours, something which *we* do. Incepting is not an impersonal process, such as the functioning of a mechanism, or other phenomenon such as might call for scientific explanation. If my arguments in Chapter One, 1.6, are sound, physiology is no more relevant or irrelevant to incepting, whether overt or covert, than it is to any other kind of action — cooking pikelets, teaching someone how to become an effective political lobbyist, or walking to the shop to buy the paper.

9.3 Other mammals do something very like incepting

Although most other mammals cannot in my account be said to think — and I say why in the next section — they are all evidently capable of activity which looks just like incepting, of both overt and covert varieties.

Two classic experiments in comparative psychology illustrate what might be called ‘proto-incepting’. Hunter 1913 conducted a series of experiments on ‘delayed response’. In view of a restrained dog, Hunter placed food in one container of several out of the animal’s reach. The containers were then for a short period screened off from the dog’s view — after which time the screen was lifted and the dog freed. Initially, during the enforced delay period the dog would repeatedly attempt to move, against its restraint, towards the interesting container — and would repeatedly be checked and have to abort the response. The even better known experiments of Pavlov 1927 also illustrate the proto-incepting, or commencing-and-aborting of a response. A dog is conditioned to the sound of a buzzer being followed by meat powder administered directly into its mouth. Subsequently, the buzzer is sounded without the meat powder being delivered. On hearing the buzzer, the dog commences ‘meat-powder-chomping’ — it salivates and moves its jaw muscles — but then shortly after, when the meat powder fails to arrive, the response is inhibited and the chomping and salivating ceases. A similar but decreasing commencing-and-inhibiting reaction occurs on further trials of buzzer without meat powder.

One can also see proto-incepting in nature programs on the television. The lion stalking a zebra ‘freezes’ as the zebra raises its head and looks round. And the hyenas later, are ‘poised’ to go in, waiting for the lion to finish feeding. Another kind of animal behaviour in which sequential commencing and inhibiting is central is ‘tentative’ behaviour. An ungulate advancing into a clearing will often pause, and perhaps retreat, before advancing again, a little further next time, and so on. ‘Threatening’ behaviour is also common among mammals. The animal commences an attack but almost immediately inhibits it (by immobilising itself) and then repeats the sequence, and so on until the situation changes (the other animal flees, or whatever).

Anyway, in all proto-incepting, there is commencing-and-aborting of a behaviour X, in response to a situation where a full and unambiguous complement of cues to trigger X-ing is lacking. Perhaps some of the above animal scenarios — and the different varieties of overt and covert commencing then aborting — will have parallels in the infant’s first

weeks of life. Possibly, the proto-incepting typical of the young animal or infant human is at first episodic, just *faux pas* and backdown, perhaps repeated after a pause. And then, some time subsequently, after practice, proto-incepting appears in a sustained and much more covert form, in which the animal or infant *simultaneously* ‘commences to do’ and ‘actively refrains from doing’, rather than its doing these two things in sequence. That is, after a bit of practice, the animal or infant naturally becomes able to replace the original episodic commencing-then-aborting with a more sophisticated and covert simultaneous-commencing-inhibiting, which can be sustained indefinitely.

These speculations seem to tie in with what Pavlov observed in his conditioned dogs. The conditioned response (salivation and other agitation) would apparently gradually ‘extinguish’ if the buzzer were repeatedly sounded without the animal being rewarded. However, following such extinction-from-disappointment, just one reward would bring the conditioned response — the ‘proto-incepting’ — immediately back to full strength. On a random reinforcement schedule, when the meat powder follows the buzzer reasonably often, but according to no pattern, the conditioned response becomes reduced, to the point where it is covert, but it never extinguishes.

9.4 Overt and covert incepting — a more complex model

The aim of this section is to show how incepting combines with concerting to enable an action we would want to call ‘thinking’. The important difference between most mammalian (and very early infant) ‘proto-incepting’ and the incepting adult people do, is that the latter is ‘socialised’. That is, the incepting people do is always the incepting of some or other concerted activity. The *infra* action is always some concerted performance. And also, in the human case, the act of incepting has itself been learned in educative concerting sessions. For people, incepting originates as a concerted activity. It is when both the *infra* action and the incepting itself have been first learned as concerted activity that I speak of ‘socialised’ incepting.

Two other important differences concern overt incepting specifically. First, the asocial overt proto-incepting of animals (and possibly early infants) looks more like a mishap than a deliberate play. It is making a gross overt *faux pas*. For people, on the other hand, overt incepting is seldom this. More frequently it is done deliberately and for a purpose. For instance, it is used to initiate concerted activity, as described in the last section of Chapter

Eight. It is also used to initiate concerted covert incepting. And the second distinctive feature of socialised overt concerting — as compared with its asocial precursor — is that, very often, the ‘commencing’ of the *infra* activity is done in a very ‘artificial’ or stylised way, a way which often bears little obvious similarity to the activity being incepted.

I admit that to use the expression ‘proto-incepting’ is contentious and perhaps unjustified. It implies that what animals and pre-social infants ‘do’ is a cruder, less sophisticated version of the incepting that people do. Despite the appearance of similarity to what we do, we really have no idea what animals or pre-social infants are ‘doing’. We have no guarantee that their ‘proto-incepting’ is anything like our mature overt and covert incepting. It is very possible that our ability to incept actions is an entirely socially-constructed one — an ability which is not the result of our building on and improving some inborn ability of the infant, but is rather a new fabrication which entirely displaces what was there before, if there was anything.

Whichever model we assume — whether building on a pre-existing skill-base, or constructing an entirely new skill — the teaching task to be undertaken by parents and others is going to be much the same. The job is to either develop or induce *de novo* a level of covert incepting ability that approximates our adult, fully socialised ability.

The infant and child must be taught —

- (1) how to participate in *full concerted* versions of a range of actions and activities X;
- (2) how to *overtly incept* activities, that is, he or she must be taught the customary and most efficient way of overtly incepting particular Xs, (depending on what is the purpose of the overt incepting); and
- (3) how to ‘*covertise*’ these ways of overtly incepting X; he or she must be shown how to achieve, and given ample practice in, the gradual streamlining and sophisticating of the relevant commencings and inhibitings, to the point where the incepting is almost as easy and covert as the incepting we adults do.

The child’s wide experience in fully concerted activity was discussed in the previous chapter. I also mentioned in that chapter (in 8.7) that a technique for initiating concerted activity is employed whereby one party ‘commences’ the activity — in a characteristically ostentatious and mendicant style — and then stops, and/or resumes from the beginning. This distinctively-styled ‘commencing’ or ‘abbreviated demonstrating’ of an activity is the human, socialised equivalent of the *faux pas*-type overt incepting we see in the animal

world. It is ‘overt incepting’ of the human kind. In the human case — basically because people are more or less permanently on the look^{out} for concerted activity to participate in — the overt incepting of an activity has a reliable effect on the behaviour of others present. The difference between pre-social overt incepting and the social version is perhaps best illustrated in Vygotsky’s analysis of pointing (see my page 185). Once it is given a social context, the out-stretching movement in question goes from being an abortive grasping of a too-distant object, to a gesture designed to attract the attention of another (with longer arms) and to thus initiate a session of concerted manipulation and investigation of the object. To overtly incept an action in view of others is primarily to *cue* the other person to join in doing X.

I also mentioned in Chapter Eight that one feature (of any given activity-to-be-initiated) which is likely to be abstracted for use as a cue is the speech associated with it. Speech is used in the teaching of the activity, and in the regulating of its performance and, for several reasons — because much of the speech in question will be unique to that activity, because speech is easy to do and to witness, etc. — the speech component of an activity, done more or less by itself, serves well as a means of overtly incepting that activity. The infant or child learns to regard the speech as a cue to join in the session that is getting under way. Presumably, the child is also going to learn to him- or herself successfully initiate sessions, by speech or other overt incepting.

As well as overt incepting coming to serve as a concerting-session-initiating ploy, overt incepting is also taught as an activity, a skill to be acquired, in its own right. The infant needs practice simply in the production of ‘commenced and then aborted’ versions of actions. Often, one might find mother and infant practising some or other gesture or facial expression, or bit of speech, with no attempt being made to actually commence a session of the wider host activity that gesture or whatever belongs in. Word pronunciation practice is one kind of example of this. But really, the whole range of make-believe games fall into this category too. Make-believe is concerted, stylised overt incepting of activities, done as a pastime. There is an educative side to make-believe however. In make-believe, the child is practising overt incepting as a skill in general. The whole range of kinds of overt inceptings — not only speech and conventional gestures, but all the little expressive bits of activities which can be used as mime, all kinds of facial expression, tones of voice, bodily agitations, etc. Typically, at first, an adult model will educe imitation from the infant by ostentatious demonstratings — this time of ‘stylised abbreviations’ of activities.

The most interesting part of the child's intellectual development is not so much steps (1) and (2) as listed above — that is, learning to participate in concerted activity, and learning efficient overt incepting of activities. The interesting part is how the infant or child is taught *covert* incepting. The difficulty is that, because the action in question is to be done covertly, it would seem impossible to teach it by the usual demonstration and imitation method. However, covert incepting can be taught — or, at least, it can be done in a concerted way — along with the overt variety.

One way covert incepting can be introduced to the child is by the adult announcing some activity well in advance. Suppose the activity in question is dinner. For whatever reason (one hopes not teasing), the adult overtly incepts the activity — with speech and eating noises, say — and then stops and looks for a response from the infant. The infant, after checking to see whether or not dinner is in train, and finding it is not, may reciprocate with a further-abbreviated reprise of the adult's performance. He or she makes a brief chewing movement, say, a 'mini-incepting', and smiles at the adult — who smiles in return. What is being performed in a concerted manner at this point, and also being confirmed by the exchange of smiles and mini-inceptings, is their *covert* incepting of the dinner-eating.

Consider this 'delay scenario'. Overt inceptings have been done and acknowledged, but related full-scale activity is not going to immediately ensue. In this situation, once the overt incepting has done its job — readying the other party in the right direction — it will give way, not to unrelated activity but, to a covert version of the same incepting. Although continued overt incepting (including of the 'mini', confirmatory kind) is not necessary, some form of incepting is still needed, to 'maintain the readiness' — for dinner, in this case. Otherwise, within a minute or two, the parties may 'forget'.

What I am pulling out of a hat here is an ability on the infant's part to incept covertly. And this ability has to be established prior to the above kind of delay scenario. So, presumably, it will have to establish 'naturally', as it does for other mammals. It will have to be a 'proto-' version of covert incepting. Granted this, however, it is also true that the delay scenario as described above provides an excellent social-learning environment to nurture the nascent covert-incepting skill. The task in the delay scenario is to maintain some incepting of (or readiness for) activity X *after* overt incepting has ceased. This incepting may as well be covert. One advantage of the delay scenario is that the covert-

incepting task can be made as easy or difficult for the infant as is desired. The adult can always intervene, if necessary, with another overt incepting of dinner. This will temporarily relieve the infant of having to continue covertly incepting dinner.

Another advantage of the delay scenario is that the covert incepting can in a real sense be concerted — that is, it can be ‘successfully mutually demonstrated’ between adult and infant. In the period immediately after an overt incepting, or in the intervals between periodic overt inceptings, the parties are still exchanging ‘mini’-type second-order confirmatory imitations (of the overt incepting), and they are exchanging confirmatory smiles. (See Chapter Eight, Section 8.32). During this period, what is going on — although it is itself not visible — is covert incepting by both parties. Effectively, it is the covert incepting that is being concerted — and the confirmation that it is being concerted are the mini-overt-inceptings and smiles that the parties are exchanging. Plausibly, in the delay scenario for the first time, covert incepting will be experienced as something infant and caregiver can participate in together. And this is going to encourage the infant with respect to covert incepting in general.

We can look briefly at another kind of example. In one common form of the game ‘peekaboo’, an object being jointly observed is made to disappear and reappear — with considerable ostentation, and vocals to mark the disappearings and reappearings. The educative features of this game are at least three-fold. First, the infant is getting practice in concerting a certain perceptual behaviour (i.e., the perceptual behaviour distinctive to this object). The appearance-disappearance method of presentation of the object is as efficient as pointing in delimiting just *what* perceptual behaviour is to be shared. The behaviour is defined by a temporal frame. Second, the infant is learning the rapid starting-and-stopping of an action (i.e., this piece of perceptual behaviour), and this kind of practice is beneficial in refining overt-incepting skills. But thirdly, peekaboo of this type enables covert inceptings to be selectively shared. The appearance-disappearance strategy creates a frame not just for the shared perceptual behaviour but, conversely, for what is happening while the object is invisible. What is happening when the object is invisible is that both parties are covertly incepting the perceptual behaviour in question. In everyday terms, while the object is obscured, mother and infant are nevertheless ‘imagining’ or ‘visualising’ it. And this covert incepting, this ‘non-seeing’ of the object, is shared — and confirmed with vocals and smiles and exchanged glances — just as enthusiastically as the subsequent fully-performed perceptual behaviour is, when the cover is lifted.

What happens eventually — perhaps as the result of ‘delay’ scenarios extending out to ‘someday, perhaps’ scenarios — is that overt incepting gets to be practised not only as an initiator of full-scale concerted activity, and as an exercise in its own right, but also as an initiator of the concerted covert incepting of activity. Overt incepting comes to function as a cue for concerted covert incepting. The role of overt inceptings in the context of make-believe, in which a lot of mother-infant time is spent, is not at all to signal the onset of some full-scale ‘real’ joint endeavour, nor is it primarily to hone verbal and theatrical skills. The primary function of make-believe is probably to provide experience in shared covert incepting. In the examples of make-believe Harris describes below, the focus of joint attention is just as much what is left undone, as what is done.

Playful acts with some of the features of pretence can be seen towards the end of the first year. Thus, infants will proffer an object or food to an adult but teasingly withdraw it at the last moment... Here, we see in embryonic form the same pattern that is extended and elaborated in the second year. The infant engages in a familiar, goal-directed sequence but deliberately stops short of the standard terminus for that sequence. Thus, the infant holds out an object or a spoonful of food, but omits to hand over the object or let the food be eaten. In the course of the second year, similar behaviours are produced but with the terminus suspended in an even more radical fashion. For example, Lucienne at 19 months pretends to drink out of a box and then holds it to the mouths of all who are present (Harris 1994, p.257).

The overt incepting — whether ‘pouring of the tea’ or growling like a bear, or whatever — is merely to cue, to orchestrate, the main event, which is the concerted covert incepting. The overt is merely a cue for the covert.

As well as getting a lot of practice in the concerting of basic-level overt and covert incepting — the peekaboo-type ‘do this, don’t do this, do this’ stuff, and the ‘tricks’ you play on people — children also get a lot of practice in concerting more sophisticated inceptings. They are eventually able to incept perceptual behaviours appropriate to complex scenarios, and long sequences of action within these scenarios. A variety of interpersonal transactions in which covert incepting is concerted become familiar. Such transactions include sustained make-believe games with and without toys, complex hortations (requests to do things), endless stories and descriptions of what other people did, the viewing and showing of pictures and other kinds of representation, and so on.

Walton notes “...that dolls, toy trucks, and representational works of art contribute to social imaginative activities by assisting in the coordination of imaginings” (Walton 1990, p.21). For Walton, the *raison d’être* of toys, pictures, etc., is as ‘props’ and ‘prompters’ of imaginings.

Prompters are obviously a boon to collective imaginative activities. A toy truck or a well-executed snowman induces all who see it to imagine approximately the same things — a truck or a man of a certain sort. It coordinates their imaginings. ...Moreover, it is probably obvious to each participant that the others will imagine what he does (Walton 1990, p.23).

The concerted covert incepting of quite complicated perceptual behaviour can be initiated by showing pictures. A picture of a man chopping down a tree both cues the act of ‘looking at a man chopping down a tree’ (so we set about doing it) and inhibits it, because it is only a piece of paper there. Presenting the picture is thus a (heavily stylised) way of overtly incepting the perceptual activity ‘looking at a man chopping down a tree’. We learn to respond to this kind of overt incepting of given perceptual behaviours — that is, the presentation of pictures — by covertly incepting the same perceptual behaviour. I go into more detail about our response to pictures on page 296 below.

Conventional gestures, including facial expressions, are another kind of overt incepting done to elicit covert incepting in response. Many of these conventional gestures are simply abbreviated mimes — the kiss at a distance, shaking one’s fist at someone, expressing surprise, showing the length of a fish, showing attentiveness or pain. An interesting example is the nod-and-*mmm* of agreement in conversation. Possibly, this is a stylised abbreviation of ‘repetition of what the speaker has just said’. The hearer is saying ‘I am incepting what you are incepting and, to prove it, I am ready to repeat back to you just what you have said to me, and here’s a start...’. The nod-and-*mmm* is intended to elicit, from the original speaker, an incepting of the hearer’s incepting of the speaker’s original incepting (of whatever it was). The speaker may nod-and-*mmm* back.

In all these cases, the cue is ambiguous. It presents only a part of a whole activity, or it presents that activity in drastically abbreviated and/or very stylised form. Speech is a good example of the latter. The responder is torn between joining in with the (largely non-existent) activity or inhibiting this impulse. So he or she does both, in the sense that he or she commences-inhibits, or ‘incepts’ the action or activity in question. And, because it is clear (from the speech) what activity the speaker is incepting, and the speaker has no

reason to doubt the hearer is covertly incepting the same activity, the hearer's incepting of the activity can stay covert. At any rate, we eventually learn to respond to all the above kinds of cue, and to complicated series of them, with sophisticated and covert acts of incepting. We learn to covertly duplicate the incepting that the author (of the gesture, picture, mathematical formula, description, or whatever) is demonstrating in overt form in front of us. We learn to concert our covert inceptings with the overt inceptings of others. And this means we are concerting our covert inceptings with theirs also.

9.5 Developmental descendants of concerting

It is interesting to look at everyday activities and ask how the three levels of activity I have been talking about — fully realised concerted activity, overtly incepted activity and covertly incepted activity — are represented in them. Fully realised concerted activity is a relative rarity, except in small-scale interchanges such as handshakes, smiles, etc., and in recreational activity, such as sport or dancing, religious observance, football match attendance, etc. Much more common are forms of activity which fall short, in one or more ways, of being 'fully realised concerted activity'. I talk about this below. On the other hand, overt incepting — the performance of some distinctive fragment of an activity for the purpose of initiating either an actual session of it, or the covert incepting of it — is ubiquitous, especially if speech is included as a variety of overt incepting. And covert incepting, as a means by which individuals maintain an orientation towards or readiness for a certain kind of activity, is ubiquitous too.

Most common in everyday life — perhaps common enough to be regarded as the basic pattern of our lives — is activity that would be fully realised concerted activity except for the absence of some component. It is concerted activity that is compromised in some respect. Some ancillary thing or person happens to be absent, or some contributing action is for whatever reason unperformed, and yet the participant or participants press on with the activity anyway, making do without the component in question. It is like, so to speak, playing a form of 'tennis' without the ball. Make-believe games are an example, but of an extreme kind: generally, in make-believe, the absent component of the activity in question (bears fighting lions, the Prime Minister having tea) is the whole setting, including the proper personnel. More common is practical activity that falls short of being fully realised concerted activity in some less drastic way.

The ‘doing without’ is a matter of continuing with the activity as normally as possible, given the absence of the component or components. Instead of performing that portion of the activity — that is, the behaviour that would have been performed had the absent component been present — the participant or participants merely *covertly incepts* it. This particularly applies to perceptual behaviour. One covertly incepts perceptual behaviour such as one would be actually performing were the absent component present. Although the component is absent, one maintains an orientation and readiness for it. One acts *as if* it were present, or at least in the offing. This covert incepting (of the behaviour that would be appropriate were the absent component present) serves to ‘motivate’ and sustain one’s present compromised performance. The covert incepting, *qua* expectation (however unrealistic), serves to fill in for the absent components. It allows us the impression that what we are doing is of a concerted nature. Possibly, we need this impression to give us the energy to persist with the present performance — as if lip-service to the sharing of an enterprise is enough. It is time for some examples.

Each of the following subsections concerns an everyday activity which I claim is an abbreviated or ‘streamlined’ form of some prior more cumbersome concerted activity.. Presumably the further from ‘fully realised concerting’ a given form of activity is, the more developmentally advanced it is. Presumably also, infants or children have to master the various forms, the various kinds of defalcation and compromise, one at a time. I put the activity of ‘thinking’ in its own category, a category which comes after all the other ‘abbreviated forms’ of concerting. Thinking is, as it were, ‘totally abbreviated’ concerted activity. It is where the whole show is ‘covertly incepted’.

9.51 Early ‘going solo’

The most important kind of ‘abbreviation’ of concerted activity is ‘solitary performance’. An activity learned as a concerted activity is able to be engaged in (after a fashion) by the infant, in the absence of the other participant. In the following quotation from Stern 1985, the prototype concerted activity in question — Stern calls this as a ‘social episode’ or an ‘interaction generalised’ (approximately, ‘familiar game’) — is ‘shared rattle play’. The deficit in the present situation, which the infant compensates for with covert inceptings, is the absence of the mother. The infant’s covert incepting of perceptual behaviour appropriate to ‘mother’ and ‘mother sharing in rattle play’, in her absence, is what Stern calls the ‘evoking of a companion’. He writes,

Evoked companions can also be called into active memory during episodes when the infant is alone but when historically similar episodes involved the presence of a self-regulating other. For instance, if a six-month-old, when alone, encounters a rattle and manages to grasp it and shake it enough so that it makes a sound, the initial pleasure may quickly become extreme delight and exuberance, expressed in smiling, vocalising, and general body wriggling. The extreme delight and exuberance is not only the result of successful mastery, which may account for the initial pleasure, but also the historical result of similar past moments in the presence of a delight- and exuberance-enhancing (regulating) other. It is partly a social response, but in this instance it occurs in a nonsocial situation. At such moments the initial pleasure born of successful mastery acts as a retrieval cue to activate the RIG [representation of an interaction generalised], resulting in an imagined interaction with an evoked companion that includes the shared and mutually induced delight about the successful mastery. It is in this way that an evoked companion serves to add another dimension to the experience, in this case, extra delight and exuberance. So that even if actually alone, the infant is 'being with' a self-regulating other in the form of an activated memory of prototypic lived events. The current experience now includes the presence (in or out of awareness) of an evoked companion (Stern 1985, p.114).

Stern's 'self-regulating other' (in the third and third-to-last lines) is another person who is regulating the infant, rather than their own self. Stern's 'RIG' or 'representation of an interaction generalised' is, approximately, my 'covert incepting of already-mastered concerted activity'. Stern begins to make my general point about abstractions from a prototype concerted interaction, when he says:

....it seems likely that the infant has almost constant rememberings (out of awareness) of previous interactions, both in the actual presence and in the absence of the other person involved in the interactions. ...Whenever an infant encounters one part of attribute of a lived episode, the other attributes of that generalised episode (RIG) will be called to mind. Various evoked companions will be almost constant companions in everyday life (*ibid*, pp.117-118).

9.52 *Solo performance for an audience*

Solitary performance may derive from concerted performance via an intermediate form, 'solo performance for an audience'. If the mother is teaching the infant something he eventually needs to be able to do by himself, like eating with a spoon, she will probably begin by demonstrating. When he imitates her, she will continue to participate — either by continuing to do it herself in that ostentatious way, or by physically assisting his efforts, in either case inserting speech at strategic points. So, the infant's first experience

of eating with a spoon is of it *qua* concerted activity. Once he has mastered the perceptual behaviour and the larger motor skills, and perhaps some of the accompanying vocals, and is participating enthusiastically, the mother can begin to extricate herself from the proceedings. During a session, she stops physically helping him. Or, if she has been eating with him, she begins to mime some of the movements rather than actually performing them. Then she just perfunctorily gestures them. Subsequently, she stops the large movements altogether, but perhaps vocalises sympathetically — using her voice to dramatise the movements and consummations in the infant's performance. At this stage, she is still very much a party to the proceedings. She continues to exhibit the excitement due to a concerted performance, although it is not now, strictly speaking, concerted.

She then withdraws further, by restricting the vocals to an occasional approving noise, and perhaps she smiles when he happens to look up — as he still often will. At the end of this stage she is participating only to the extent that she is still there, and still attending to what he is doing. Concerted activity has become a solo performance for an audience. But the solo performance is still literally a social occasion. The performer still plays to the audience, and the audience, though mostly motionless, still contributes now and then with sympathetic looks and nods and other vestiges of participation.

This pattern of the mother teaching an activity in concerted sessions and then gradually and unilaterally withdrawing will be repeated across a variety of new actions and activities. As a pedagogic strategy, it will streamline. Eventually it will reduce to just one or two demonstrations, with appropriate vocal hortations, followed by a more or less competent solo performance, or deferred imitation, on the child's part. The new skill might at no stage get to be exercised concertedly, yet its solo performance by the child still in some good sense 'developmentally presupposes' concerted performance. Presumably, covert inceptings of the teacher's original demonstrations will for a long time or always accompany the child's solo efforts. The further abbreviation of the scenario by abstracting the audience — so that the child is now doing a 'solitary' performance, we can say (to distinguish it from a solo but witnessed one).

9.53 *Spectator empathy*

Solo performances for an audience presuppose the complementary ability, on the audience's part, to spectate and empathise, that is, to attend to the other's behaviour and covertly incept it, but refrain from joining in. Sooner or later the infant or child will have

to learn this skill too. How? Possibly, via the same sort of gradual withdrawal from concerting that the mother is so practised in. The infant might drop out from fatigue — his contribution gradually diminishing, until even perfunctory overt inceptings (done to show willing) give way to entirely covert incepting. The infant remains attentive, however, and will still smile and catch the performer's eye. Empathy is covert incepting of the behaviour one would be performing if one were to be imitating the demonstrator's performance. More simply, empathy is covertly incepted imitation.

The infant could possibly learn to do 'spectator-only' by watching the mother's behaviour with respect to his, in learning scenarios like the eating-with-a-spoon one. He sees her attending closely to, and subtly overtly incepting, a performance by someone else, and yet she does not join in. Later, he imitates her. He tries out this interested-spectation-without-participation trick for himself. Perhaps he is staring at her eating her breakfast, watching her use a spoon. Then she looks round at him and sees what he is doing, and smiles, and he sees her doing this, and does his own smile. And the role of 'spectator', the practice of 'empathy', is thus officially concerted by them. It becomes a recognised action, a thing to do, to be included in their shared repertoire. Arguably, this particular compromise-version of concerted action, spectator empathy, determines the form of all our subsequent awareness of other people and their behaviour. The 'interested spectator' or 'would-be imitator' mode becomes our primary heuristic recourse with respect to others' actions.

9.54 *Hortation*

The Oxford English Dictionary calls hortation "the action of exhorting or inciting". I will assume that hortation is by definition verbal. I suggest above how sessions of concerted activity can be initiated by one party's overt incepting of the activity. In cases where the overt incepting is verbal, this could be described as hortation. The hearer is being 'hortated' to participate in the joint activity. However, I would like to use the term *hortation* to refer specifically to the case where hearer P is being exhorted to do something on his or her own — that is, to undertake a solo performance of some action. Presumably, hortation (in this sense of P₁ inciting a solo performance by P₂) could come about if P₁ uses speech (qua overt incepting) to initiate a session of concerted X-ing with P₂, and then him- or herself refrains from X-ing. P₂ will be left X-ing on his- or her own. The basics of the hortation transaction are anyway already prepared in the 'solo

performance’ and ‘spectator empathy’ scenarios above. The child will be accustomed to carrying on a performance while the other watches. The hortation itself — *Go on, eat your dinner*, or whatever — has precursors in the diminishing demonstrations of solidarity which the mother contributes in the course of retiring into her spectator-only role.

Roughly, two kinds of word are used for specifying actions. We use action verbs to cue the motor component of the action, and thing nouns to cue the perceptual behaviours involved in the action. We are eventually able to respond appropriately to such complex hortations as — ‘ride to the shop on the bicycle and buy a dozen free-range eggs’.

9.55 Solitary performance

Solitary performances in my sense are a developmental advance on solo ones, and represent a further departure from the ‘fully-realised concerted activity’ prototype. The difference is that whereas the solo performer interacts with an audience, the solitary performer merely covertly incepts such interaction. For example, the solitary performer incepts perceptual behaviour such as he or she would perform were that audience present. The ‘audience’ category can be expanded to include not only empathising spectators, but more involved parties as well — such as, a full fellow-participant or an instructor (teacher or hortater). Thus, the child doing something whilst alone might well be concurrently covertly incepting (the perceptual behaviour appropriate to) a present fellow-participant, or instructor, or other audience. Stern above uses the general term *evoked companion*.

Stern thinks that the solitary child’s indulgence of what I call ‘covert incepting’ of (perceivings appropriate to) the presence of a companion is inevitable and strong. In the passage above, Stern associates the covert incepting of the companion with “...extreme delight and exuberance, expressed in smiling, vocalising, and general body wriggling”. Although such enthusiasm does not characterise the solitary actions of the older child doing chores as commanded, the motivating effect of imagining the absent other to be present remains strong. Cooley 1902, de Laguna 1927, Mead 1934 and Stern 1985 — although they use different terms (different again from mine) — all agree that the covert incepting of ‘evoked companions’ is inveterate in adult life too. For example, Stern says,

Various evoked companions will be almost constant companions in everyday life. Is it not so for adults when they are not occupied with tasks? How much time each day do we spend in imagined interactions that are either memories, or the fantasied practice of upcoming events, or daydreams ? (*ibid* p.118).

Jaynes 1976 says that acting on instructions given by ‘inner voices’ is the first real evidence of ‘mind’. It is worth mentioning here also that Vygotsky’s central term *vmutrenniy golos*, which usually gets translated as ‘inner speech’, can also be plausibly translated as ‘inner voices’. In Jaynes’ account, the inner admonitions at first have something of the quality of hallucinations. He says that

...the presence of voices which had to be obeyed was the absolute prerequisite to the conscious stage of mind in which it is the self that is responsible and can debate within itself, can order and direct, and that the creation of such a self is the product of culture (Jaynes 1976, p.79).

Jaynes is surely wrong if he is suggesting that, for the normally developing child, the covert incepting of hortations to regulate solitary action is, even in the beginning, necessarily something that ‘happens to’ the child — as “the presence of voices” seems to imply. Much more plausibly, the incepting of a companion and/or advisor, and appropriate speech, is something the child effortfully does.

I have been assuming that the solitary action of the child is action catered for fairly specifically by some previous instruction the child has received. The child has merely to incept hortations (and/or other admonitions) which he or she is already familiar with. A further developmental advance is necessary before the child is capable of truly autonomous solitary action — that is, action in relation to which the child has had no specific instructions. Here the child must incept instructions of his or her own devising. Solitary action, whether bidden or autonomous, would seem a large and decisive step away from concerted action. Yet it is plausibly a developmental descendant of concerted action. And it is in a good sense an ‘abbreviated form of’ concerted activity. The participation of a companion and the verbal instruction which are components of concerted performance are ‘done without’, but they are instead covertly incepted.

9.56 Cooperation

On the basis of our everyday notion of cooperative activity, we would include as ‘cooperative’ such concerted practical activity as us lifting a heavy suitcase together, or everyone making a noise to scare away a dangerous-looking sheep. However, we would probably not include concerted activity that is purely formal (such as hand-shaking in greeting) or purely recreational (such as dancing or wrist-wrestling). For an activity to be ‘cooperative’ it has to have a clear practical aim. The ‘all hands to the pump’ has to be because we are taking on water, not just for fun.

We would also want to include as cooperative — perhaps as paradigm cooperative — activity which in one sense is not concerted at all. This is activity with two or more participants in which, although a common goal is being worked towards, the participants are contributing to the achievement of this goal in different ways. The waiter and the cook, for example, although they are engaged in the same enterprise, do different things. They coordinate their respective actions but they do not concert them. This kind of ‘divided labour’ cooperation is the important kind. At least, it is what most of us spend most of our waking lives engaged in.

The question arises whether divided labour cooperation (henceforth just *cooperation*) is developmentally prior to concerted activity. Some child psychologists imply it is prior. They say that mother and infant adjust their actions with respect to each other — probably by a sort of operant conditioning process — well before ‘shared understandings’ (or ‘concerted covert incepting’) could be justifiably imputed. For example, the infant soon learns to raise his or her arms cooperatively, when he or she is about to be picked up. No doubt there are many examples of this kind of ‘instinctive’ — innate and/or operantly conditioned — coordination of behaviours, and not only in the mother-infant repertoire but also in the mother-offspring interactions of other mammals. Perhaps these phenomena could be called ‘proto-cooperative’. However, if we are going to make ‘acting on a shared understanding’ a necessary feature of cooperation, as is plausible, then we will find it easier to source cooperation in concerted activity.

Theoretically, we could include cooperation as a kind of concerted activity by fiat. We could re-define job-descriptions so as to remove all divisions of labour in advance. Thus, for example, both the cook and the waiter are equally ‘feeding the guests’. Although there is something to be said for this approach, it might be more useful to describe the relationship between concerted activity and cooperative activity more as follows. We could say that the ability of a group to undertake cooperative activity begins as the ability to undertake fully concerted activity. The contributions of given participants can be gradually differentiated, over time, as a result of the practice of hortation. The solo performances of individuals are modified, by hortation, in ways conducive to the concerted activity going on around them.

In this picture, cooperation would developmentally presuppose ability in hortation — that is, the use of speech to get people to perform solo and/or solitary actions. Hortation

would have already developed as an ability out of prototype concerting, and cooperation would be the result when hortation is ‘mixed back in’, as it were, into a prevailing concerted activity. Thus, cooperation would be not so much a matter of ‘streamlining’ or ‘making do in the absence of some feature of’ concerted activity. It would be more like a more complicated form of concerted activity. Even so, cooperation still belongs in this section. It is an important ‘developmental descendant’ of concerting.

9.57 Absent-referent referring

Referring, in the sense of drawing someone’s attention to something, is concerted perceptual behaviour initiated by the overt incepting of that behaviour. The overt incepting is in the form of speech, and/or a gesture such as pointing. In Appendix Two I argue that perceiving is in fact a species of action, learned in concerted form.

Referring is learned by the infant, as touched on in Chapter Eight, in a form in which the referred-to thing (or *referent*) is present and obvious — that is, literally at hand and/or immediately visually accessible. This is ‘basic’ or ‘present-referent’ referring. As I say, a person initiates a concerted performance of a given piece of perceptual behaviour, or hortates the other person to a solo performance, by overtly incepting that perceptual behaviour. This is done most economically by uttering the name of the thing being referred to. Roughly, the ‘name’ is the speech which in the past has been used to ostentate this perceptual behaviour for educative purposes, and is thus specific to the concerting of this perceptual behaviour. The concerting of perceptual behaviour, and associated ‘learning of the names of things’ is an abiding imperative for normal children.

The chief practical importance of present-referent referring, whether recreational or educative (as in ‘learning the names of things’), is that it enables subsequent ‘absent-referent’ referring. Absent-referent referring is indispensable for the kind of complex hortations that enable sophisticated cooperation. Absent-referent referring specifies the perceptual component of the action being hortated.

In absent-referent referring, a person overtly incepts the concerting of a given piece of perceptual behaviour, that is, he or she utters a referent thing’s name — and in an appropriate practical and verbal context, and with the correct eye-on-the-object look and tone of voice, and perhaps other facial expression or gesture — when the thing in question, the referent, is absent. Because the hearer cannot perform the required

perceptual behaviour, he or she can only incept it. And unless there is any doubt about what kind of perceptual behaviour the speaker has incepted, the commencing and aborting that the hearer does may as well be covert. The hearer need only ‘visualise’ or ‘imagine’ what is being referred to. He or she covertly incepts the perceptual behaviour it would have been appropriate to perform had the thing being referred to actually been present.

The development of absent-referent referring from present-referent referring is a good example of the modification of a fully-realised concerted activity by ‘making do’ in the absence of a component — and compensating by covertly incepting the unperformable behaviour. The absent component is the referent, the thing perceived, and the behaviour that has to be incepted (because it cannot be performed) is the corresponding perceptual behaviour. Absent-referent referring does not have the same function as present-referent. The function of the latter is simply to make^{the} former possible. Present-referent referring teaches the verbal and perceptual skills on which absent-referent referring relies. The fact that the perceptual behaviour in question is merely covertly incepted in absent-referent referring, as opposed to being actually performed, is immaterial. The function of absent-referent referring is only to induce a *readiness* to perform certain perceptual behaviour. Covert incepting is all that is necessary for this.

Absent-referent referring is still a form of concerting. Speaker and hearer are covertly incepting the same perceptual behaviour. The interchange via which the fact of successful concerting is verified is not much different from when the referent is present, either. When the referent is present, one looks at the referent and then periodically up at the other, to confirm their direction of gaze, etc. When the referent is absent, there are similar checks as to whether the other person is doing the right incepting. Instead of looking at the referent, one looks in the air perhaps, or shuts one’s eyes, but you still catch the speaker’s gaze and nod and/or make confirmatory noises, and you adopt an appropriate facial expression for the speaker to look at.

Practical use of absent-referent referring (in hortations and descriptions) is supported in the child’s repertoire not only by prior present-referent referrals but also by intensive educational and recreational absent-referent referring. This occurs in stories, in school lessons and in conversation.

9.58 *Showing someone a picture*

Showing a picture is a procedure that is ancillary to absent-referent referring. A picture of absent thing T assists the hearer/viewer to covertly incept the perceptual behaviour appropriate to T. A picture is an ‘ambiguous cue’ as far as the perceptual behaviour for T is concerned. The picture cues the viewer both to commence perceiving T (because it looks a bit as if T is actually there) and to inhibit the perceiving of T (because the picture is only a piece of paper or whatever). That is, the appropriate response to the picture is to ‘incept’ that perceptual behaviour. If the viewer is familiar with pictures of things, and it is a good picture, there is no point in the viewer overtly (with speech, or another depiction) incepting the perceptual behaviour. It can be covertly incepted.

How does a picture help to cue the covert incepting of perceptual behaviour? I have stated as a general principle that concerted covert incepting of an activity may (like fully realised concerted activity) be cued by someone overtly incepting that activity — that is, by someone producing an abbreviated and stylised performance of (some distinctive aspect of) that activity. In what sense is a picture, or the showing of a picture, ‘an abbreviated and stylised performance of (some distinctive aspect of)’ the relevant perceptual behaviour? Vygotsky 1978, pp.107-8, has an answer. He thinks that a drawing is a relic — and in this extended sense an ‘abbreviation’, or at least token — of the act of drawing. Vygotsky describes the act of drawing, in turn, as a matter of tracing the outline of a thing in the air. It is a kind of abbreviated and stylised palpation-cum-ostension of the thing that is drawn. It is a manual enactment of a visual perception recipe, which happens to be done adjacent to a piece of paper and with a pencil in one’s fingers. The viewer of the finished picture presumably covertly incepts the original palpatory-cum-ostensive gesture, on the basis of what the picture looks like. My account, in the preceding paragraph, is simpler. I say that the viewer covertly re-enacts the perceptual behaviour itself. Thus, visualising usually involves actual eye-movements. Vygotsky says, roughly, that the artist’s hand movements are covertly re-enacted too.

One could almost say that what the picture ‘re-presents’ is not so much the thing T that it is ‘of’, but rather the act of ‘perceiving T’ or the act of ‘drawing attention to T’. There are also grounds for saying that, if T is being represented by anything, it is being represented by the artist. The depicter is the one who is drawing attention to T, initiating joint contemplation of it, demonstrating (for the viewer to imitate) just how T is to be

perceived. Of course, one could still say, by a kind of synecdoche, that ‘the picture represents the thing’. Just as a word, if it is a referring expression, is only a relic or token (a mere inception) of the speaker’s act of directing attention to thing T, so is the picture of T a relic of the depicter’s somewhat different method of drawing attention to T.

Looking at a picture whilst the depicter points to parts of it and explains what they ‘are’ — as with giving street directions with the aid of a diagram — is less sophisticated than viewing (or making) a picture whilst alone. In the solitary case there is more that is absent (from a notional fully-realised concerted performance of those perceivings). More needs to be incepted. When one is making or looking at a picture alone, the participation of the other person (viewer or depicter) must be incepted in addition to the original perceiving. Covertly incepting both components is more difficult.

9.59 Solitary perception of things

At least part of the everyday notion of a ‘thing’ is captured if we define a ‘thing’ as a topic, that is, any focus of joint attention. It looks as if the notion of ‘thing’ is closely related to the notion of concerted perceptual behaviour. According to the Oxford English Dictionary, our word *thing* derives etymologically from the Old Norse word *ting* which referred to a conclave, or court or parliament assembled to discuss an issue of public concern. At any rate, there is something in one’s solitary perception of things of an *ersatz* or would-be social occasion. I explain this in terms of solitary perception’s being an incomplete (and partially covertly incepted) form of concerted perceptual behaviour. In its fully realised prototype form — with a full complement of participants, actually performed perceptual behaviour, speech, ostensive gestures, etc. — concerted perceptual behaviour is what I call above ‘present-referent referring’.

In absent-referent referring, the perceptual behaviour and related ostensive gestures are covertly incepted rather than actually performed. However, since the other party to the referring is still present, the covert incepting can itself be concerted. In solitary perception, on the other hand, the perceptual behaviour can be performed all right, because the referent thing is actually present — only, this perceptual behaviour cannot be concerted with anyone, because one is alone. Here is the adult context for Stern’s ‘evoked companion’. Although the full ‘body wriggling’ glee which Stern’s infant exhibits (when he or she sees the rattle) is absent, there is a vestige of it remaining in adult’s

solitary perceptions. One is sometimes surprised by joy and turns to share the transport. There is some at least perfunctory incepting of perceptual behaviour that would be due were a companion-perceiver to be present, and/or incepting of some of the speech that would be done. This conjuring of a companion somehow strengthens the perceiving, as whistling in the dark emboldens.

Another etymological aside is perhaps in order. Solitary perception of things in the world is, for philosophers at least, a paradigm of ‘consciousness’. Alone, one is nevertheless conscious of the things around one. The developmental psychologist Butterworth, whom I quoted earlier in connection with the advent of joint visual attention, reports the following about the word *consciousness*.

Originally the word derives from the Latin *con*, meaning ‘together with’ and *scire* meaning ‘to know’. In the original Latin the verb *conscire* (from which came the adjective *conscius*) meant literally to share knowledge with other people. In time the circle with whom the knowledge was shared became tighter and tighter until it included just a single person, the subject who was conscious. That is, consciousness shifted from being a matter of public knowledge to being one of private knowledge. Most recently, there was a further shift of definition to having knowledge to which, by its very nature, no-one else could have access (knowledge of one’s innermost thoughts and feelings). That is, consciousness became acquainted with subjective experience (Butterworth 1994, p.117).

We can think in terms of ‘perception’ rather than ‘knowledge’. And we can ignore Butterworth’s fancy of a gradually decreasing number of those in the know. However, it may be that the original application of the Latin verb *conscire* was limited to concerted, shared attending — and that subsequently the verb was also applied to the ‘partial’ version of shared attending (filled out with compensatory covert inceptings) which is all a solitary individual can essay. And perhaps something analogous happened regarding the usage of the Old Norse *ting*. The quorum for a ‘ting’ was reduced from two to just one.

The extensive practice which everyone gets in both present- and absent-referent referring serves to *discipline* our perceptual behaviour — to make it conform to standard recipes, and to make it biddable and physiologically robust. A good grounding in concerted perceiving allows one to go solo with confidence. We are well able to covertly incept a social, referring, attention-sharing context in which to couch our solitary perceptual behaviour. By doing this, we keep alive our enthusiasm and our aptitude for telling people things. And this is a good thing.

If the above is true enough then perhaps most other mammals cannot perceive things. Looking at their behaviour, we may find it impossible not to imagine that they *do* perceive things, and in the way we do. But it is only to the extent that they can refer each other to things and perceive in concert — exchanging glances in the process — as we do, and it is only to the extent that they can, during their solo perceivings, covertly incept the concerting of them, that they can be said to perceive ‘things’ as we do.

9.6 *Thinking and its social dimension*

9.61 *A room in the public arena for people to do their covert incepting in*

There are two important aspects of incepting — a public face and a personal face, so to speak. There is a public institution, or arrangement, in the context of which incepting occurs. This is obvious at the level of overt incepting. It is publicly accepted that one is allowed — instead of fully convening a full session of some concerted activity — to merely incept it, by a gesture, or speech, or dumb-show. Other people understand what one is about, when one incepts some concerting by a word or whatever. This is accepted practice. There are even detailed conventions about what overt incepting performance — what speech, say — is customary for the (foregone) concerting of what behaviour. The convenience of not having to go through with the whole concerting performance is allowed one on the understanding that, if it was required, one *could*, at least in principle, successfully convene a full session. The public arrangement underpinning overt incepting is analogous to financial credit. The understanding — and the slate — which enables the Department Head to pay for her and her friend’s coffee by raising a manicured finger and giving a little smile is exactly analogous to the understanding whereby *There was a Maserati in the car park* is allowed to do duty for the two of us staring at the thing.

There is just as entrenched an arrangement covering our covert inceptings. There is, as it were, a space created in interpersonal dealings for us to do our incepting in. There are no rules about *how* we are to do it — that is left veiled in metaphor — so it is not as it is with overt speech. But there is an expectation that the covert incepting of concerted behaviour is something we are going to need to do. And it is regarded as a ‘valid’, useful, allowable thing to do. One is given leave to undertake specific preparations, covert readyings of oneself — which are also refrainings — before or *in lieu* of overtly incepting (or actually convening and beginning) sessions of concerted activity. The individual’s

covert incepting *qua* physical performance — the subtle eye-muscle activation, bodily agitations, facial expressions, *sotto voce* muttering, exaggerated stillness, or unobservable vestiges of these — must be seen in the context of this institution. These are the multifarious bodily corollaries of the commencings-and-abortings we need to do — to ready ourselves personally for our parts in social transactions. (And all these transactions are ‘concerted activity’ or derivatives thereof.)

9.62 *Varieties of thinking*

The term *thinking* covers many of the inceptings required in the ‘partially incepted forms of concerting’ above. The expression *I thought of...* can be filled out with names of missing components — a person, an action, object, speech, etc. Thus one ‘thinks about’ what one’s interlocutor is saying or what one is reading; one ‘thinks of saying’ such-and-such (see below); one ‘imagines’ the smile of the person on the other end of the phone; the empty shoes ‘remind’ one of the person who wears them; talking with Jack you cannot help but ‘think of’ the splendid new car he showed you yesterday; at the politician’s dinner party you catch yourself ‘thinking’, *If my daddy could see me now...* In these cases, some components at least of a full-blown social transaction are in place. We use the everyday term *thinking* in connection with our incepting of the absent ones.

Most often, the thinker in this sense is a participant or interested spectator in some actual social encounter (a conversation or other speech-mediated transaction) and the ‘thoughts’ are inceptings of potential speech acts. They are things the thinker ‘keeps to herself’. It can be a speech act of almost any kind that is incepted — although it has to be reasonably brief. One might be thinking — *What a swine! Why me? Things can’t go on like this. Someone will give him a ride home, surely. The deuce! One more crack like that and I’ll... Yes, please. Uncommon civil, I’m sure. Oh no! or Stuff that for a lark!* Similarly, in a social situation, one might ‘think of’, for example, blowing someone a kiss, or belting them one.

‘Thinking what one is doing’ is also an important branch of thinking. Here one incepts, during and ancillary to one’s performance, the giving or receiving of admonitions, commentary or explanation concerning one’s performance. Again, parts of the full social scenario are in place and some are not, and those absent must be incepted. The account in the previous section bases all individual action on concerted action — in the sense that the solitary performer must incept, as it were ‘around’ his or her performance, a context

of concerted activity. Unless the action is entirely habitual, the solitary agent imagines a fellow-participant, an instructor, or an appreciative (or whatever) audience to be present and he or she imagines speech appropriate to the action being performed. In addition, the majority, or all, of our actions are cooperative to some degree. This is a further respect in which our actions depend on concerted action. In the case of solitary cooperative action, the imagined conferring and instructing, etc., may have actually been performed (rather than just being incepted by the agent). One is acting under instruction, say.

The term *thinking* is arguably most at home as a label not for partially but for totally incepted concerting. This is thinking one does when lying in the dark alone, or when with others but absented — ‘paying no attention’ to them or what they’re doing, or to one’s present surroundings. One is ‘in another world’, ‘absorbed in’ one’s thoughts. It is what Ryle’s *Le Penseur* is doing on the rock. In these cases it is not just some accessory or contribution to a social transaction that is incepted, but the whole transaction.

Few of our adult actions are fully concerted, in the prototype sense — like running into the surf with a partner, holding hands and laughing gaily. They are mostly more or less etiolated and degenerate forms, or relics, of concerted activity. I am re-hashing this because, when I say that in solitary thinking one incepts a ‘whole social transaction’, the reader may wonder whether ‘social transaction’ here necessarily implies ‘concerted activity’. If ‘social’ implies ‘to some extent cooperative’ (which seems plausible), and if my argument in 9.56 above is adequate, then ‘social’ activity always involves some concerting. And I have been saying that our solitary actions are also always set in some actual or imagined context of concerted activity. Even solitary, *Le Penseur*-type thinking has an essential basis in concerted doing.

[There is another reason why the activity incepted during thinking must involve some concerting. All thinking involves the incepting of perceptual behaviour. Our adult perceptual behaviour is all socially managed, all done with reference to socially instated ‘things’ — and things, like the old *tings*, require a quorum of at least two. They require *concerted* attending and perceiving.]

9.63 *Is any particular kind of social activity incepted during thinking?*

What kinds of action and interaction are incepted during thinking? One might be incepting going fishing, patting someone on the behind, stealing the wedding ring,

donating 10% of one's salary to the Hare Krishnas. And that is just for starters. However, whatever the action or interaction, it will come equipped with distinctive speech.

Probably, in a majority of cases, the social transaction incepted during solitary thinking is a conversation of some kind. And conversations are of a great variety of kinds. One may be showing something to someone, referring them to something, reporting or otherwise telling them something, remembering something with them, explaining something, and so on. Much solitary thinking could be described as the incepting of recreational concerting. In these cases, the incepting — of the gossiping or boasting or whatever — is itself recreational. It is not done self-teachingly, in preparation for any performance, but *in lieu* of the pleasure of sharing, as a substitute pleasure. At other times, the verbal exchange being incepted is one that would reassure the inceptor. It is whistling in the dark. What is incepted is what the agent would like to say, or hear said, if there was a suitable companion present — only, there isn't.

In the *Le Penseur* case, the thinking *is* being done self-teachingly, and in preparation for some performance — even if this is only a verbal performance, such as the propounding of a theory of thinking. The cooperation being incepted during solitary self-educative thinking is not so much a conversation as a discussion, lesson or investigation of some kind. Here again is the passage from de Laguna I quoted in Chapter Six —

The form of conversation from which thought springs is the discussion, which has for its end agreement among the participants regarding some specific conditions of common action... Thinking is the internalisation of this form of conversation and its independent practising by the individual. This is originally and primarily a rehearsal in direct preparation for his active participation in the social enterprise of discussion. It serves also... as a preparation for his own individual primary action (de Laguna 1963, pp.352-3).

Le Penseur will incept the kind of conversation or discussion which his or her thinking is a preparation for participation in. The baby incepts rattle play with his or her caregiver as 'evoked companion' (in Stern's phrase). The teenager will imagine a conversation about clothes or cars conducted with his or her 'reference group' or 'generalised other' (in Mead's terms). Piaget tells us what kind of colloquy the professional scientist incepts when he or she thinks, at least *ex officio*.

The adult, even in his most personal and private occupation, ...thinks socially, has continually in his mind's eye his collaborators or opponents, actual or eventual, at any rate members of his own profession to whom sooner or later he

will announce the results of his labours. This mental picture pursues him throughout his task. The task itself is henceforth socialised at almost every stage of its development. ...the need for checking and demonstrating calls into being an inner speech addressed throughout to a hypothetical opponent whom the imagination often pictures as one of flesh and blood. When, therefore the adult is brought face to face with his fellow beings, what he announces to them is something already socially elaborated and therefore roughly adapted to his audience (Piaget 1974, p.59).

Hampshire allows us a glimpse into the minds of another kind of professional.

Discussions in the inner forum of an individual mind naturally duplicate in form and structure the public adversarial discussions. ‘Naturally’, because advocates, judges, and diplomats rehearse what they are to say before they step on to the public stage. Anyone who participates in a cabinet discussion, in a law court, in a diplomatic negotiation, acquires the habit of preparing for rebuttal by opponents. He acquires the habit of balanced adversary thinking. The public situations that I have mentioned give rise to corresponding mental processes which are modeled on the public procedures, as a shadowy movement on a ceiling is modeled on an original physical movement on the floor (Hampshire 2000A, p.9).

Plato’s description, ‘the soul conversing with herself’ points up the fact that (usually) in thinking there is no-one else there and there’s no actual talking going on. But “with herself” belies the fact that thinking is incipiently social, that the imagined interlocutor is necessarily someone else, otherwise it is not a conversation — although the someone need not be anyone in particular.

9.64 Second-order incepting and capitulation

As Vygotsky tells us repeatedly, our lives are speech-mediated. We are led around by other people’s inceptings-in-linguistic-form, and by our own. Our life activity is regulated and regimented by speech, our repertoire is organised under verbal headings. And speech adjusts — with extra qualifiers brought on — down even to the minutiae of our behaviour. It tracks our every move, captures it, and puts a handle on it so that our betters can drag or push it where they think fit.

Vygotsky seemed dubious (see my discussion on pages 182-183 above of the fourth ‘loose end’) as to whether it is speech by itself that the thinker ‘performs internally’ (incepts), or speech in association with, and plus, the hurly-burly of social activity that the speech is regulating. In Chapter Six I insisted that Vygotsky eat his vegetables, so to speak, and commit to saying that the surrounding activity is incepted too. But the

tendency to describe thinking as the incepting of just the speech is understandable. In effect, most thinking, at least to the extent we are aware of it, is just incepting the speech — the conversation, discussion, lesson, or whatever. The thinker is not directly incepting the concerting^{off} the ulterior activity, whatever it is. Rather, he or she is at *two* removes. What is directly incepted is the verbal transaction — the conversation, say — and it is this notional conversation that is (or would be) at the first remove from the concerting. Conversation (*qua* absent-referent referring, as earlier) is essentially the concerted covert incepting ('regulated' by overt linguistic incepting) of some concerted performance by the participants. The 'ulterior' concerted performance ultimately being incepted is often something of the type 'jointly witnessing something interesting', such as our ogling the Vice Chancellor's Maserati. When we *think* about the VC's Maserati, rather than talk about it, we (covertly) incept — that is, 'imaginatively enact' — not so much our joint witnessing of the thing (although we may incept this too) but more our conversation about it, our speech.

The existence of the public institution of (overt incepting by) speech, and the thoroughness with which our lives are hedged about and headed by speech, constitute a tremendous boon for the thinker. By concentrating on incepting just the speech, one can cruise (with an imaginary companion) anywhere in the repertoire, at any level of generality. The 'evocativeness' or action-readying effect which the speech has acquired, during a lifetime of having one's doings 'speech-mediated' by others, is sufficiently well-established by habit to function now as if impersonally and without effort on our part. We need only concentrate on formulating the speech. The 'activity-implications' of the speech will take care of themselves. That is, the relevant non-verbal areas of the repertoire will be 'readied', in the manner of incepting, without further effort on the thinker's part.

The ease this second-order incepting of concerted activity makes possible is akin to that of the King who, to reassure himself the citizenry is suitably subjugated needs only ask the Barons around the table. His domain is parcelled out and capitated under each of them. Thus the thinker need merely touch on the correct word, to be reassured that he or she is familiar with and (perhaps) ready for the ulterior concerted activity.

Much of this 'second-order incepting' story applies intact to 'communication-media' other than speech too. Rather than a conversation, the thinker might be incepting the drawing and joint contemplation of a picture or model, or be incepting the joint viewing

as if it is occurring in a theatre. Certainly graphic representing is one good way to overtly incept, and thus attain first remove from, some concerted behaviour — concerted perceptual behaviour in this case. But graphic representing as a means of overt incepting is cumbersome and requires accessories. The main beauty of speech, by comparison, is that it combines subtlety and versatility with marvellous ease of performance. This must translate also into the physical ease with which we covertly incept speech. Presumably, for efficient covert incepting, the peripheral musculature the ‘commencing-and-aborting’ is played in must be especially complex and subtle — as it is after all in the eyes and hands, as well as the larynx.

9.65 How realistic is thinking?

Generally, people’s thinkings are not accurate inceptings of actual (past, present or future) concertings and conversings — although they may be — but are, rather, somewhat casual inceptings of *hypothetical* or *possible* concerted doings. In many cases, whether or not such a conversation could ever actually occur is unimportant. When thinking is recreational, it probably does not matter whether the incepted social occasion is realistic or fantastic. The incepting may still give the satisfaction aimed at. However, when self-educative thinking is in question, the incepted social context will usually need to be reasonably close to the future reality. This is clearly the case with *Le Penseur* deciding how best to tell his son why he must not marry that particular girl. That is, in serious thinking as opposed to fantasy there is something riding on the performability of the action or interaction being incepted. If the possibility of an actual conversation in which the thinker’s contribution would fit, be understood and be appreciated is very small, then this makes that thinking fantasising.

To rescue thinkers from this plight it would have to be true that, for most thinkers at least, there is or will be such a conversation. Perhaps it is not far-fetched to posit an actually occurring conversation, one going on now, which is so patient and eclectic, and attended by such a variety and quality of thinkers, that everyone’s turn to be understood will come. We could call it ‘culture’. One must concede that this macro-conversation is fraught with delays. But at least, the macro-conversation is real. There is evidence for its existence. And by hard work we can add to this evidence. Neither not nor never being voiced makes one’s thoughts fantasies, at least not on that account alone.

If we look at a culture or group within a culture, and at ‘conversation’ (and/or ‘education’) as an on-going social institution within that culture or group, then the individual’s thinkings can be clearly seen as contributions to this on-going ‘conversation’ activity. Thinkings are preparations for participation. Preparation for participation in social activity, even solitary preparation, must count as participation. It may not amount to participation in the main event, but at least it is participation in an ancillary and equally social enterprise, namely, ‘preparing for the main event’.

If we pull back from the ‘cultural practice’ perspective and restrict our scrutiny to what the solitary individual is doing now, what physical performance he or she is currently demonstrating — then thinking’s social aspect will escape us. In the same way, the baby’s excitement at seeing the rattle will remain inexplicable unless we see this solitary encounter with the rattle in the wider context of the-baby-and-its-mother’s on-going concerted rattle play — that regular game. To understand the excitement, we need to imagine the person as a would-be participant in a game, and to do this we must ourselves, as he or she does, imagine participating. We cannot do this unless we have knowledge of the game — knowledge unobtainable from the person’s present bodily agitations alone.

In the same way, we cannot know, just by examining (supposing that we could) the complex pattern of subtle sensory-motor and motor musculature activations-and-inhibitions which P is bringing about by incepting this or that speech-act-addressed-to-Q, that P is readying him- or herself for such a speech act, or who (if anyone) is the Q who P is imagining as audience. It is conceivable that we might eventually learn to ‘read’ the physiological event, so that we could (sometimes) confidently infer from a certain physiological event to the nature of P’s inceptings, his or her thinkings. But, in order to do this, we would need background knowledge of exactly the above type. We would have to know what the physiology is typically like when P was contributing in such and such a way to such and such a social transaction, and what it is like when P is incepting this kind of contribution, and so on. We would have to know about the social practice first — including the participants, their roles, the distinctive speech, the goal state-of-affairs and any other accessories. And we would have had to have understood this practice — by empathising, that is, ourselves incepting participation in it. And we would have had to have observed P’s participation in this practice over a period of time. Having done all this, however, we would not need to look at the scanner screen to find out what P is thinking. We would already know.

9.7 *The four properties of 'mind'*

The colloquial mind metaphors disingenuously posit an entity called 'mind', having the following properties. (i) It either is or it inhabits a place inside a person's head. (ii) It is an agent or agency, which causes the person to behave in certain (usually rational) ways and to sometimes exhibit certain bodily agitations. (iii) It has a special 'cognising' and/or 'intending' or 'meaning' relation to things in the outside world. And (iv) it is non-physical or 'abstract'; for example, it cannot be directly observed. To what extent, if at all, do these properties of internality, agency, intentionality and non-physicality apply to the 'covert incepting of concerted activity'? If the four properties define the lay notion of the mental, how promising does 'the covert incepting of concerted activity' look to be as a candidate explication of this 'mental'?

9.71 *Internality*

Is 'doing X in the head' an apt metaphor for the action of incepting?

(1) The metaphor of incepting as the 'internal doing' of X is two-fold. First, the incepting of X is seen as (in some respect like) the doing of X. From the agent's first-person perspective, at least, that part of the metaphor fits. If the incepting is successful then, experientially, what it is like to incept X has *something* in common with what it is like to actually perform X. Certainly it does not have *much* in common with what it is like to perform X — for a start, one does none of the actual perceiving and moving which doing X requires. But there is something of doing X — and nothing of doing Y or Z, etc. — in the incepting of X. As far as metaphors are concerned, the presence of just a coracle of likeness on a sea of difference is an advantage. The feature F which the metaphor-user is referring to is that much more conspicuous. The 'incepting as doing' metaphor thus highlights, without our having to otherwise specify, just what it is incepting has in common with doing.

The second part of the two-fold metaphor is the 'internal' location of the above 'doing' of X. Seen from the mixed or alternating first-person and third-person perspective which characterises both sides of most everyday interpersonal encounters, this part of the metaphor is good too. Although P is in some etiolated sense 'doing' X, this doing cannot be observed by his or her interlocutor. To reconcile the resulting rhetorical infelicity — the idea that P is doing X but no-one can see him or her doing it — and to add a little

mock-plausibility to the ‘doing’ metaphor, the doing is metaphorically construed as sequestered doing. The story is: the doing of X is unobservable because it is being done somewhere private. P is doing X in his or her head, or ‘mind’. Thus, the internal doing metaphors for incepting (thinking) succeed in ostentating, and apparently reconciling, two important features of covert incepting — its arcane but essential likeness to actual doing, and its characteristic unobservability. In achieving this, the internal doing metaphors are apt and valuable. Their rhetorical value justifies invoking the ancillary fancy of ‘mind’ as the inner, and hence hidden, venue for the internal doing.

(2) There is another ‘internality’ metaphor at large in the vernacular and in philosophical writing. In this metaphor it is not the (fancied) doing of X that is being pictured as internally performed, but the (real) incepting — the thinking: imagining, remembering, intending, deciding, grieving, etc., as literally referred to. This metaphor also does useful referring work. Of course, the ‘internal’ metaphor as applied to the incepting grossly misconstrues the real situation, just as when it is applied to the X-ing — and in the same way any good metaphor grossly misconstrues the real situation. In this case, the real situation is that, although there is often not much to see, we literally do see P thinking, remembering, grieving, wondering, etc. She is doing it right there in front of us. Apart from the context, and what P says, the furrowed brow makes it obvious that’s what’s going on. And often there’s a whole lot more to see — covert incepting is not all covert or stiff-upper-lip. However, to say (metaphorically) that the incepting is being done ‘internally’ does serve to highlight the frequent dearth of overt movement — and this is a characteristic feature of covert incepting.

The metaphor of ‘unobservable because inner and thus hidden’ is much the same whether it is applied to the (fancied) doing of X or the (real) incepting of X. The literal truth is still that one sees this little of the action because there is this little to see. The subtlety and inconspicuousness of covert incepting is important to us. We depend a lot on others telling and/or showing us what’s on their minds, and when the inceptor chooses, his or her incepting can be pretty much entirely undetectable. It is when this privacy option is taken up that the metaphor of incepting as done in a hidden, private location one is not privy to comes into its own. The metaphor is in this reticence-by-choice context poignant, and a cultural achievement worth preserving.

(3) There is a third variant of the internality metaphor. Paradoxically, this metaphor serves best when the incepting is far from discreet, when there is plenty of evident bodily agitation — and the fact that P is incepting something, and even the nature of the something, is obvious to all present. This metaphor is devised from and for the third-person (rather than either the pure first-person or the common mixed first- and third-person) perspective on incepting. Rather than empathising, the observer is for the moment viewing the inceptor P almost as a medical practitioner might. P's bodily agitations, protestations, etc., are seen as the outer manifestations of some inner disturbance.

When people have emotional outbursts, say, the attitude we adopt is akin to that we adopt when we hear someone belch, or hear his stomach gurgling, or feel the baby's kick through the stretched skin of the woman's stomach. We go into amateur medical mode. In the case of the emotional display, the inner cause we infer is not anything the person is deliberately doing. It is not under the person's control. It is not anything like incepting that is postulated as the inner cause here. What is inferred is, rather, some involuntary *disruption* of normal thinking. We infer some mishap in there, to cause the behavioural 'spillover' we observe. Lakoff & Johnson 1980 are right to point to the number of 'inner pressure causing outburst' metaphors in this vicinity.

It might be thought that the quasi-medical stance is in fact appropriate — and that the idea of an internal disturbance causing the outer agitation is literally true. That is, it might be assumed that it is an internal *physiological* phenomenon causing the blushing, trembling, smirking, the frail voice, or what. But the bodily agitations which may accompany thinking (or hearing bad or good news, etc.) are most simply and naturally attributed to careless, clumsy or incompetent covert incepting. And an incompetent and clumsy performance of an action is no more a physiological phenomenon than a polished and easy performance is.

The quasi-medical implication is a product of the kind of metaphor being employed. The person who, in order to 'explain' someone's agitated demeanour, employs phrases like *her heart filled with gratitude*, *fear gripped his vitals* or *grief overcame her*, is not thinking of physiological phenomena. The inner cause being imputed in these versions of the internality metaphor — the 'general subject matter' — is still a 'mental' phenomenon rather than a bodily one. It is an excess of 'inner feeling', say. The metaphor is of a mental phenomenon as a medical or quasi-medical condition. It should not be taken literally.

9.72 Agency

The agency metaphor specifies the nature of the ‘internal’ phenomenon underlying thinking. It suggests we have in our heads an impersonal agent or mechanism, or an instrument used by the person, which — whatever it is — is responsible for our thinking. How apt is this ‘inner impersonal agent’ idea to our everyday inceptings?

Firstly, incepting is something we do so often and so effortlessly (usually), that it does seem almost as if it is not us doing it, but some other, impersonal agency. Or, it is as if the incepting happens ‘automatically’. The ideas of an impersonal agent or a mechanism doing our thinking for us at least capture these aspects. Secondly, incepting — *qua* ‘thinking’ — is a distinctive and well-defined area of the repertoire. It is at least rhetorically plausible to posit a special faculty for thinking, or a special ‘instrument’ we use for it. This idea is as fitting in its way as the agency or instrument metaphors in things like *he employed his powerful arms to good effect*, or, *she plied her lavish charms*.

Although lay folk have been reticent about what work the internal agent does, psychologists and philosophers have revealed details. The agent perceives, and so receives information about, things in external reality. It interprets this information and stores some of it for future use. On the basis of present and past information, the agent makes decisions for action. It then issues commands to the body to act in accord with those decisions. Is anything in this picture apt to features of incepting’s practical functions?

A typical sequence showing the way incepting interacts with full performances of actions might go as follows. Person P ‘between actions’ will nevertheless be performing perceptual behaviour. If perceptual behaviour presently being performed has in the past been performed in the course of (as part of) action X, then action X is likely to be incepted this time too. Alternatively, action X is already being incepted and current perceptual behaviour is increasing the activation level of the X-incepting. The incepting serves to ready and prime the X response, yet to hold it in abeyance until conditions are optimal for full performance. The version of X being incepted may also be modified by synthesis with any other compatible behaviours the incepting of which may be triggered by current perceivings. Eventually, either perceptual behaviour will accrue which triggers a full performance of X, or appropriate perceptual behaviour will not accrue, in which case the option of doing X is abandoned, and P starts incepting something else.

So, overall, incepting functions as a buffer or clutch, enabling gradual preparation and well-timed, appropriately modulated delivery of behaviour. The job of incepting is as much to ensure behaviour is not undertaken prematurely as to incite or trigger it. The holding back is at least as important as the priming. If this is roughly what does happen, if we do do something called incepting, and our inceptings do intervene in the behaviour stream much as above — then, how good is the ‘internal information processor’ as a metaphor for this? Clearly a lot of theoretical work needs doing before this question can be convincingly answered. However, any special merits of the information processing metaphor are not immediately apparent. I repeat that the information processing idea is not widely accepted in the vernacular. That is, thinkers themselves tend not to use it.

For a major part of incepting’s function — the monitoring and guiding of actions in progress (i.e., thinking what one is doing) — there are no dedicated figures of speech in the colloquial vocabulary. There are only plain verbs of thinking — words like *minding*, *attending*, *looking out*, *watching*, *anticipating*, *thinking ahead*, *remembering to*, etc.

9.73 Intentionality

With some reservations, ‘intentionality’ can be described as a relationship which mental states (and linguistic items and perhaps other things) bear to things in the external world. The mental state (or whatever) is somehow ‘about’ or ‘directed towards’ the thing in the world. The relatedness of mental states to things in the outside world is expressed in the grammar of mental terms. One is afraid ‘of’ something, interested ‘in’ something, grateful ‘for’ something, fascinated ‘by’ something, in love ‘with’ someone, one’s beliefs are ‘about’ things, one attends ‘to’ something, one is astonished ‘at’ something, and so on. An essentially similar ‘aboutness’ or ‘directedness’ quality is held to be a feature of all linguistic items. Searle 1983 gives these examples of mental states that either ‘essentially are’ or ‘can be’ intentional states:

...belief, fear hope, desire, love, hate, aversion, liking, disliking, doubting, wondering whether, joy, elation, depression, anxiety, pride, remorse, sorrow, grief, guilt, rejoicing, irritation, puzzlement, acceptance, forgiveness, hostility, affection, expectation, anger, admiration, contempt, respect, indignation, ~~intention~~, wishing, wanting, imagining, fantasy, shame, lust, disgust, animosity, terror, pleasure, abhorrence, aspiration, amusement and disappointment (Searle 1983, p.4).

For Searle, the basic question about intentionality is —

What exactly is the relation between Intentional states and the objects and states of affairs that they are in some sense about or directed at? What kind of a relation is named by *Intentionality* anyhow and how can we explain Intentionality without using metaphors like *directed* ? (*ibid.*).

As well as the metaphors of directedness and aboutness, metaphors of indicating, meaning, pointing to, aiming at or relating to are sometimes employed.

Intentionality cannot literally be a relation between a mental state and a thing in the world. In my account talk of ‘mental states’ must be figurative. The putative ‘states’ are definable only in terms of dispositions to act in certain ways — specifically, dispositions to incept certain kinds of action. In every case, a basically actional concept (best expressed by a verb of thinking) is rendered, via nominalisation of the verb, as a ‘thing’ concept, i.e., a ‘state’. Two things cannot literally be related if they are not in the same ontological ball park. The intentionality relation is claimed to hold between a ‘mental state’, which is only rhetorically an entity — it is in fact a logical construction out of acts of incepting — and, on the other hand, a *bona fide* thing in the world. The figure of speech, or mistake, whereby a rhetorical fiction is talked of in the same breath as a real thing — hence *she came home in a flood of tears and a sedan chair* — is ‘catachresis’.

Even if the idea of a relation between mental states and their objects in the world is metaphorical, or otherwise figurative, it might still be apt of some aspect of incepting. Is there anything about the incepting of concerted activity that is aptly characterised in terms of a relation between the person (or the act of incepting) and something in reality?

All incepting of concerted activity, all thinking, involves incepted *referring*. Firstly, most thinking is incepted conversation, and the basic form of conversation is absent-referent referring. Philosophers ask whether mental (‘attitude’) or linguistic aboutness is basic. I am saying that the aboutness of referring sessions (*qua* social transactions) is basic. For example, conversational aboutness is basic. Secondly, the concerting of any activity requires some referring. The referring need not be verbal. However, at least the accessories of the action being concerted need to be jointly attended to by the participants — and some act of attention-directing, that is, some concerting of perceptual behaviour, some referring, is integral in the proceedings. Therefore, the incepting of any concerted activity involves the incepting of referrals.

As well as being a necessary condition of thinking, the incepting of referrals is a sufficient condition. Referring is a species of concerted activity, and its incepting is a species of thinking. Thinkings are perhaps not propositional attitudes but attitudes to things in the world — ‘attitudes’ in the sense of ‘action-coloured’ referrals to things. Thinking is the incepting of a referral to something in the context of some (concerted) action with respect to that something. The referral is if you like ‘coloured’ by the action that is contemplated *vis à vis* the referent. Anyway, it is true that all thinkings involve incepted referrals. And it could well be this feature of thinking — and no fancied quality of ‘mental’ phenomena — that gives the notion of ‘intentionality’, this metaphor of thinking as ‘aimed at’ things in the world, whatever credibility it has.

Searle thinks mental states possess primary or ‘intrinsic’ intentionality, and that of linguistic items is derived from our mental states. He gives as a reason for thinking this,

...that infants and many animals that do not in any ordinary sense have a language or perform speech acts nonetheless have Intentional states. Only someone in the grip of a philosophical theory would deny that small babies can literally be said to want milk and that dogs want to be let out or believe that their master is at the door (Searle 1983, p.5).

He adds that one of the “...reasons why we find it irresistible to attribute Intentionality to animals even though they do not have a language” is that, in the case of the dog, say, “...we cannot make sense of his behaviour otherwise” (*ibid*). On my view too, it is true that intentionality, or at least directed thought, is possible without speech — and true that this means that the original source of intentionality cannot be speech. It is true because referring need not (in practice or by definition) involve speech. Any active, cooperative intervention, such as showing a picture, pointing, or just swivelling one’s gaze, which succeeds in drawing the other’s attention to something one’s own attention is already on, and thus accomplishes the concerting of the relevant perceptual behaviour, will count as an act of referring (within a referring transaction considered as a whole). So, while thinking necessarily involves incepted referring, it does not necessarily involve incepted speech. However, my view is that animals, and infants before they learn to participate in referring sessions, because they cannot refer, and thus cannot incept referrals, cannot think — that is, cannot want, anticipate, believe, surmise, be angry *that* anything, or any of the others either.

9.75 *Non-physicality*

Following Reid, I suggested earlier that, for the lay person, the expressions *the mind* and *in the mind* might connote ‘abstract’ and/or ‘non-physical’ — in the sense of ‘unobservable’ or ‘not to be found in the world’ — as a kind of metaphor for the figurative nature of mind talk. A ‘pretend’ entity is metaphorically pictured as a real but terminally ephemeral one. Reid’s further implication is that philosophers have interpreted this piece of common wisdom too literally, and given unwarranted ontological respectability to ‘mind’. Possibly, Reid and I are too optimistic about the level of lay sophistication about figurative speech, and too pessimistic about philosophers’. At any rate, whether or not it is sociolinguistic fact that *abstract* and/or *non-physical* are used to mean ‘figurative figment’, this metaphor with this import could not apply to the act of incepting *per se*. Although references to incepting and descriptions of it may be figurative, there is nothing figurative about the subject matter of those references and descriptions. The act of incepting, unlike the entity ‘mind’, is no kind of rhetorical figment. Incepting is literally an action we perform. My account may be quite false, but it is not figurative.

Anyway, the inapplicability of the above sense of ‘non-physical’ to incepting does not count against incepting’s candidacy for the role of ‘what mind talk is about’. This sense of *non-physical* only nominally qualifies ‘mind’. The attribution of non-physicality to ‘mind’ is disingenuous. If I am right, the statement is really intended as a comment about mind *talk*.

The only other even vaguely plausible way one could take ‘mind is non-physical’ is as a way of referring to and construing the unobservability of thinkings. This would be an alternative to the ‘unobservable because hidden inside’ metaphor. We would now be asked to believe that the reason why thinkings are unobservable is that they occur in an immaterial medium or place. However, I don’t think this idea has any currency outside philosophy. Even within philosophy, it seems to have only Descartes as champion.

APPENDICES
&
BIBLIOGRAPHY

APPENDIX ONE: The stock mind metaphors

I have included expressions in the list that follows if they contain the noun *mind* (or the adjectives *mental* or *minded*) and they are, according to my intuition, part of current colloquial English. Although many will not be found in dictionaries or thesauri, most of the expressions are in fact frequently used. Many could justifiably be called clichés. At any rate, I claim to have heard each of them used on more than one occasion. As well as being used in the context of these customary metaphors, the word *mind* is sometimes used in ordinary speech within original, *ad hoc* metaphors. There is always the possibility that any given do-it-yourself effort will become a fixture in the language. If the referring work it does is necessary often enough, it will. However, all the metaphors in my list are of the hand-me-down kind, ones already proven indispensable and/or sufficiently attractive or efficient as metaphors to earn a place in the vernacular.

The list is interesting because, for one thing, it is so long. Before making the collection, I would never have thought there are so many, so hackneyed, expressions involving the noun *mind*. Seen as a group the metaphors are clearly an impressive descriptive and heuristic resource. They provide a large number of apt, memorable, ready-made ways of characterising aspects, varieties, and logical constructions on, the different kinds of thinking. The expressions are mostly dead metaphors, yet, as I argued in Chapter Two, this does not mean they are not metaphors or that they are literal expressions. Another interesting feature is the sheer variety of ways ‘the mind’ is pictured — not just as a place (whether arena or container) and/or agent, but as a thing acted on, a mechanism, an instrument, a structure, an object, and so on. The first list groups the metaphors according to their subject matter — that is, what variety of thinking the metaphor is being used to describe. The second list catalogues them on the basis of what kind of entity they picture ‘the mind’ as being.

My ‘exclusive use’ claim in Chapter Three is that — new metaphors aside — the noun *mind* seldom occurs in everyday speech except as part of one or other of these metaphors. I think the list is reasonably complete. If it is, it provides an empirical test for the exclusive use claim. Are there any colloquial uses apart from those listed here?

If my Chapter Three ‘metaphorical origin theory’ is true, whatever concept we have of ‘the mind’ must have come to us by way of the metaphors. The opposing view is that

the word *mind* is the name of something which we are acquainted with, and have formed a concept of, independently of the metaphors. According to this assumption, which I disputed in 3.6, the mind metaphors are figurative descriptions of ‘the mind’, or at least figurative references to it, but they are not essential to our concept of it. Having a reasonably complete list of the ways *mind* is commonly used is helpful in deciding which view is more plausible. We can ask whether there is anything in our concept of mind — anything we ‘know about’ the mind — which is not already explicit or implicit in the colloquial metaphors. If there is not, then the story I tell may be the right one. On the other hand, if there are substantial and literally true things that can be said about the mind which owe nothing to the metaphors, or at least are not preceded in them, then the ‘opposing’ assumption is more likely to be true. That is, in the latter case it would be more likely that *mind* really is the name of something, which the metaphors are merely figurative characterisations of. Of course, my own view is that the metaphors below fully and exclusively constitute, with no residue, our ‘concept of mind’.

Mind metaphors grouped according to subject matter

Attending

it concentrates (focuses) the mind wonderfully
 have (set, put, focus, fix, keep) one’s mind on (the job in hand, higher things)
 he turned his mind to other things
 engage (exercise, occupy) the (her) mind
 (something to) occupy the mind
 her mind was occupied with other things
 mind-rivetting
 pay no mind to
 have (keep) uppermost in (my) mind
 have (keep) in the (fore-)front of his mind
 give her mind (over) to
 his mind turned to thoughts of
 too many things going on in my mind
 his mind was too active (for sleep)
 thoughts crowded (into) his mind
 out of sight, out of mind
 empty her mind of (all thoughts of...)
 he put (shut) it out of his mind

crossed (entered, came into, passed through) his mind
 flashed on his mind that
 prominent in his mind
 I came away with one image impressed on my mind
 impressed on (fixed in) his mind that
 it made a big impression on my mind
 my mind wandered
 absent-minded, absent-mindedly
 her mind was elsewhere (far away)
 it took my mind off my troubles
 I've got a lot on my mind right now
 a weight (load) off (on) her mind
 she withdrew (retreated) into her own mind
 his mind was distracted by
 my mind was racing
 running in (through) my mind
 one-track mind
 mind-set
 it couldn't be further from my mind
 the last thing on my mind

Understanding

get clear in my mind
 get my mind around it
 penetrate his mind
 tried to impress on her mind that
 my mind went (is a) blank
 the suspicion (certainty) grew in his mind that
 couldn't get clear in my mind whether
 couldn't get it clear in my mind
 his mind was confused
 her mind couldn't grasp that
 mental block

Intending

set his mind on (a red one)
 to have one's mind set on...
 in my own mind (I wasn't so sure)
 be in two minds
 to be of one mind

of similar (the same) mind
 like minds (-minded)
 great minds think alike
 have it in one's mind to
 to know one's own mind
 make up your mind
 change one's mind
 what do you have in mind?
 what's on your mind?
 a mind of her (its) own
 be of a mind to
 have a (good, half a) mind to
 being minded to (do X)
 his mind said yes but his body said no (& vice-versa)

Opining

speak one's mind
 give him a piece of my mind
 to (in) my mind
 keep an open mind
 he closed (shut) his mind to the possibility
 his mind was closed to the possibility
 she poisoned his mind against them

Being of a certain disposition

frame (cast, turn, state) of mind
 peace of mind
 has a brilliant (twisted, warped, dirty, suspicious, sick) mind
 the criminal mind
 you could see his mind ticking over
 that's how his mind works
 high- (bloody-, dirty-, broad-, narrow-, open-, closed-, clear-, small-, dull-, simple-,
 single-, fair-, public-, civic-, petty-, feeble-, strong-) minded
 qualities of mind, mental qualities
 set (put) one's mind at rest (ease)
 calm (ease) your mind
 an enquiring mind
 she showed great strength of mind
 he was reconciled to it in his mind
 his mind was composed

a win-at-all-costs mentality

travel broadens the mind

mental outlook (defective, deficiency, patient, illness, disease, disorder, health, breakdown, collapse, exhaustion, problem, condition, tenacity, toughness, fortitude, ability, burden, capacity, equilibrium, state, attitude, stability, condition, retardation, suffering, torment, pain, cruelty, abuse, torture, powers, activity)

Remembering

burden his mind with

if I cast my mind back to when

have (bear, keep) in mind

what springs (comes) to mind is

nothing springs (comes) to mind

it brings (calls) to mind...

try and call to mind...

reminded of

it puts me in mind of...

(kept, stored) at (in) the back of her mind

something in the back of my mind kept saying...

still fresh in his mind

it went clean out of my mind

(I, all the other things I had to think about) put it right out of my mind

it slipped my mind

to make a mental note (promise, etc.)

be mindful of

it stuck (lodged) in her mind

her mind kept repeating (returning to)...

she kept returning to the scene in her mind

replaying the episode in his mind

over and over in his mind

(his words) echoed in my mind

couldn't get it out of his mind

one-track mind

she had just one thing in mind

it preyed on his mind

it weighed on her mind

Imagining and fancying

(all) in his (the) mind

he got (took) it into his mind (head?) that

her mind seized on the idea that
 to see (picture) in one's mind
 see in my mind's eye
 see (have) a mental image (picture)
 conjure up (evoke) a mental image (picture) of
 an image (picture) rose (formed) in her mind
 it rose up before (in) my mind
 mind filled with notions of

Communicating

mind-games
 mind reader
 her mind was an open book
 she read my mind
 I saw into his mind
 she was playing with his mind
 mental telepathy
 a meeting of minds

Cogitating

set my mind to work
 apply (devote) his (whole) mind to
 if you put your mind to it
 what was going through (going on in) his mind ?
 too many things going on in his mind
 his mind was too active (for sleep)
 going over it in my mind
 tossing up in my mind whether to..
 turning it over in my mind
 you could see his mind ticking over
 you could see it ticking over in his mind
 it kept turning over (revolving) in my mind
 I weighed things up (compared the two, went over it again) in my mind
 the mysterious workings of her mind
 the inner recesses of her mind
 doing mental arithmetic
 his mind was working overtime
 workings of his mind
 mastermind (noun)

(In)ability to think

my mind was in a turmoil (tizzy)
 his mind was playing tricks on him
 it affected his mind
 be (go) out of her mind (with)(anxiety, grief, etc.)
 are you out of your mind?
 lose his mind
 not in his right mind
 of sound (unsound) mind
 his mind is gone
 his mind's grasp (hold) on reality
 her mind is (still) good (sharp, active, clear)
 his mind was clouded by (thoughts of, grief)
 her mind was unbalanced
 mentally unbalanced
 his mind was unhinged (destroyed) by
 her mind couldn't cope
 he has the mind of a child
 he has a mental age of ...
 she went (was a bit) mental
 his mind snapped/cracked (under the strain)
 in your tiny mind
 a mind like a steel trap
 it boggles the mind (the mind boggles)
 it blew my mind
 mindless
 eager young minds
 improve your mind
 mind-expanding (-altering, -blowing, -boggling, -numbing, -bending)
 presence of mind
 mind control
 mind-power
 she has a good mind

Anticipating

his mind ran on ahead
 mentally prepared
 she prepared her mind (his mind was prepared)
 mental rehearsal
 rehearsed it in my mind

***Mind metaphors re-grouped according to what they imply
'mind' is***

Mind as agent or agency

my mind was racing
 his mind turned to thoughts of
 her mind seized on the idea that
 my mind wandered
 her mind couldn't cope
 his mind was playing tricks on him
 her mind kept repeating (returning to)...
 his mind ran on ahead
 has a suspicious (sick) mind
 burden his mind with
 calm her mind
 fair- (feeble-) minded
 mental attitude (activity, tenacity, fortitude, ability, burden)
 eager young minds
 mind-games
 his mind said yes but his body said no (& vice-versa)
 his mind was prepared
 strength of mind (mind power, mental control)
 her mind seized on the idea that
 her mind turned to thoughts of
 his mind couldn't cope
 his mind couldn't grasp that
 a meeting of minds
 mind over matter
 his mind urged him on
 her mind was elsewhere
 her mind could not concentrate
 his mind was distracted
 her mind's hold (grasp) on reality was
 his mind had lost touch with reality
 call to mind
 to my mind it appears that
 he had a sick mind
 a trained mind.
 mentally prepared

Mind as venue or arena in which person acts

going over it in my mind
 turning it over in my mind
 get clear in my mind
 make a mental note (promise, etc.)
 picture (see) in one's mind
 conjure up (see) a mental image
 see in my mind's eye
 she kept returning to the scene in her mind
 doing mental arithmetic
 mentally calculating
 rehearsed the procedure in my mind
 prepared in my mind
 be in two minds
 in her mind she was counting the minutes
 she knew in her mind that
 she re-lived the episode over and over in her mind
 in my mind I'm going to Carolina
 she mentally undressed him
 he withdrew into his own mind
 in her mind she was privately thinking that
 contemplated in her mind.

Mind as organ, instrument or repository used by person***Organ* —**

exercise her mind
 has a mind of his own
 she has a sound (sick) mind
 he has a disease of the mind
 mental condition
 apply (devote) her mind to
 set my mind to work
 give her mind (over) to
 mind-numbing.

***Instrument* —**

get my mind around it
 engage her mind
 apply my mind to
 use your head (brains)

put your mind to work on the problem
 I focussed my mind on
 have his mind set on a red one
 have (set, put, focus, fix, keep) one's mind on (the job in hand, higher things)
 focusses the mind wonderfully
 it slipped my mind.

Repository (container, receptacle) —

occupy her mind
 kept it at the back of his mind
 keep it in mind
 have in mind
 bring to mind
 have (keep) uppermost in (my) mind
 have (keep) in the (fore-)front of his mind
 mind filled with notions of
 broad-minded, open-minded, small-minded
 couldn't get it out of my mind
 empty your mind of all hope of
 he closed (shut) his mind to the possibility
 the inner recesses of her mind
 I saw into his mind
 penetrate his mind
 running in (through) my mind
 too many things going on in my mind
 thoughts crowded into his mind
 out of sight out of mind
 crossed (entered, came into, passed through) her mind
 prominent in his mind
 in my mind (on my mind)
 what do you have in mind? (revealed what she had in mind)
 still fresh in his mind
 it went clean out of my mind
 it rose up before (in) my mind
 mind filled with notions of
 it stuck (lodged) in her mind
 (his words) echoed in my mind
 mental furniture
 a white wedding in mind

Mind as an autonomous mechanism

that's how her mind works
 you could see his mind ticking over
 put my mind to work
 the mysterious (inner) workings of his mind
 his mind raced
 mental block
 one-track mind
 mental process
 it blew my mind,
 his mind was unhinged by.

Mind as thing acted on, by person or other influence

he made up his mind
 she changed her mind
 she changed his mind
 give him a piece of my mind
 make up your mind
 couldn't get it out of his mind
 mental torment (pain, cruelty, abuse, torture)
 it affected his mind
 set (put) one's mind at rest
 it weighed on her mind
 it preyed on his mind
 her mind was deranged by
 she poisoned his mind against them
 my mind was in a turmoil (tizzy)
 tried to impress on her mind that

Mind as object possessing impersonal physical qualities

his mind snapped (cracked) under the strain
 has a brilliant (twisted, dirty) mind
 mental capacity (equilibrium, attitude, stability, state, condition, retardation, deficiency)
 mind-expanding (-altering, -blowing, -boggling)
 of sound (unsound) mind
 high- (bloody-, dirty-, broad-, narrow-, open-, closed-, clear-, small-, dull-, simple-)
 minded

Metaphors prescribing various other things for 'mind' to be

fertile mind

single-minded

of one mind

in two minds

mind-reader

her mind was an open book

great presence of mind

his mind is gone

her mind is still good

have a (good, half a) mind to

frame (cast, turn, state) of mind

be of a mind to

pay no mind to, springs to mind, it boggles the mind

Sundry other uses of the word mind***Typical philosophical (attempted 'literal' or 'technical') uses***

the mind, mentation, mentality

mental (vs. physical or social) world (life), mind and body

mental phenomenon (function, state, activity, event, process, object, entity, content)

mental representation

the concept (idea, myth) of mind

the philosophy of mind

mind over matter (a power controlling the body)

Modern uses of mind as a verb

mind the baby

mind out!

mind out for (the baby, the step, etc.)

mind the step (how you go, what you say, your back (eye, Ps and Qs, manners), etc.)

if you don't mind

do you mind?

I don't mind

never mind

mind your own business

mind (that) you (don't forget to) water the plants

remind

mind you

mastermind (verb)

Obsolete meanings of the verb to mind (ex. Oxford English Dictionary)

(Sometimes in constructions: *to mind of*, *to mind on*, *to mind upon*, *to mind towards*, etc.)

to remind, admonish, exhort (someone);

to remember, recollect, bring to mind, think of (something past or absent);

to bear in mind, be aware of, have in one's memory, take care to remember;

to mention, record, pray for, remember in a will;

to heed, perceive, notice, have one's attention caught by, attend to;

to intend, contemplate, aim at, plan, provide for;

to wish, desire, be inclined to;

to care for, like, value, wish for;

to direct or apply oneself to, concentrate on, practise diligently.

Obsolete usages of the noun mind, with meanings (ex. OED)

to fall or run to mind (re. a person P) — to occur to P's recollection

to be (go, pass) out of mind — to be forgotten

to set out of mind — to forget, ignore

to put P in mind of — to remind P that or suggest to P that

of good mind — of happy memory

to have mind of (on, upon, how, that) or *to take mind to (upon)* — here 'mind' is the action or state of thinking about something, or the thought of something

out of mind — more than one can calculate (hence *trees out of mind*, *time out of mind*)

against the mind of P — against P's judgement or wishes

to fulfil one's mind, *bring one's mind to pass*, *have (obtain) one's mind* — achieve one's aim, satisfy one's desire

for one's mind's sake — to gratify one's whim

to be of diverse (many) minds — to vacillate

to be in (of) mind to, or *to be of great mind (of good mind, in a good mind) to* (do X) —

to be disposed to, or to intend to do X

to bring P in mind — to persuade P

to have a mind to or *bear good mind to* — to be favourably disposed towards, have a liking for, wish to possess

P is whole of mind (in good mind) — P is quite sane (for legal purposes)

Note: Some of the above obsolete uses of the noun seem more like formal nominalisations than like my 'metaphor-based accessory nominalisation'. It is a question of whether, in expressions like *to have mind of*, or *to be of mind to*, or *out of mind*, the surrounding words (*to have*, *to be of*, *out of*) are metaphorical or not. I agree it is pushing the envelope to say they are. And this is probably true also of some modern usages — marginal ones like *to be of a good mind to* and *to have a mind to* — which are very similar to some of the obsolete ones above. However, it is also clear that the

nominalisation is somewhat more than formal. The ‘mind’ being referred to in each case is more than a pure ‘doing’ — that is, more just an episode or state of minding (intending, desiring, thinking of, etc.). It has pretensions to thinghood. And I can only think that these pretensions are inspired by the accompanying words — that is, *having* and *being in* and *good*, and so on. Meaning number 18 which the OED gives for the noun *mind* is: ‘The cognitive or intellectual powers, as distinguished from the will and emotions’. Among the quotations given in illustration of this meaning are the following, both of which embody in my opinion an exquisite equivocation of verb and noun senses. The first is from Disraeli: “Blue eyes, lit up by a smile of such mind and meaning”. The second is from Ouida: “...there can be no mind in an imitation”. Is it minding (in a broad sense) that is being referred to, or a thing called mind?

As I mentioned in the text, the idea of a ‘faculty’ responsible for a class of actions, is already a step towards accessory nominalisation. The idea of a dedicated agent and/or venue is nascent in ‘faculty’.

Reid is quoted in illustration of philosophical definitions of III, 17. Reid insists that at least this noun use of *mind* has been clearly separated from any verb role: “We do not give the name of mind to thought, reason, or desire; but to that being which thinks, which reasons, which desires” (Reid 1785, I, ii, 42). However, the lexicographer is not so sure, and comments (in a passage I also quoted as an epigraph to Chapter Three): “Unfortunately the word mind has been almost universally employed to signify both that which thinks and the phenomena of thinking”.

The entry for mind in The Oxford Dictionary of English Etymology

mind maind memory (surviving in phr. *in m.*, *to m.*, *time out of m.*); thought, purpose, intention; mental faculty. XII. Early ME. *mind(e)*, with dial. vars. *münd(e)*, *mend(e)*, later *meende*; aphetic of *imind*, etc. : — OE. *gemynd*, corr. to OHG. *gimunt*, Goth. *gamunds* memory : — Germ. **gamundix*, f. **ga-* Y- + **mun-*, weak grade of the series **men- *man- *mun-* : — IE. **men- *mon- *mn-* revolve in the mind, think. Other Germ. derivs. are: OFris. *minne*, OS. *minnea*, OHG. *minna* (G. *minne*) love; ON. *minni*, Goth. *gaminþi* memory (: — **gamenþjam*); OE. *manian* remind, exhort, advise, *ge-munan* (present *geman*) remember, OS. *far-munan* deny, despise, Goth. *munan* (present *man*) think, believe, *muns* thought, OE. *myne* (: — **muniz*) memory, desire, love. Hence **mind** vb. REMIND; remember, give heed to XIV; (dial.) perceive, notice XV; contemplate XVI; be careful about XVIII. ¶ The IE. base was very prolific; many derivs. are given in the articles AUTOMATON, COMMENT, DEMENTIA, MANIA, MATHESIS, MEMENTO, MEMORY, MENTAL, MENTION, MENTOR, MNEMONIC, MONITION, REMEMBER, REMINISCENT

APPENDIX TWO: Perceiving as a species of action

Perceptual imagining — such as visualising (‘seeing mental images’) and ‘hearing in the mind’s ear’ — is an important aspect or variety of thinking. My theory is that thinking is the incepting of activity. For such as visualising and hearing in the mind’s ear to be component in thinking they too would have to be the incepting of activity. The only realistic candidate activity is ‘perceiving’ — in the case of visualising, seeing, in the case of hearing in the mind’s ear, hearing, and so on. Thus, I really need perceiving to be a species of action or activity. Furthermore, to justify the story I told about perceptual behaviour and referring in Chapters Eight and Nine, I also need to show that perceptual behaviour is learned behaviour, that it is amenable to being concerted, that it is amenable to being managed or ‘mediated’ by speech, and that our perceptual abilities are normally acquired in sessions of ‘speech-mediated concerted perceptual behaviour’.

One or two preliminary considerations tend to the conclusion perceiving is an action. We do commonly imagine perceiving things: we can remember what things looked like, anticipate what they would feel like, conjure up sights and sounds in imagination, etc. If imagining is incepting, as I say it is, the fact that we do commonly imagine perceiving things shows that we can incept perceivings. Since it is only actions and activities that may be incepted, if perceivings are incepted then perceivings must be actions or activities. And there is another *prima facie* reason for thinking that perceiving is a kind of action. I suggested in Chapter One, 1.6, that it is good circumstantial evidence that thinking is a species of voluntary (in principle) action that it would never be logically odd for a person to either make or comply with a request to perform or desist from any given act of thinking (imagining, calculating, fancying, etc). Application of the same criterion puts perceiving provisionally in the action bag too. You can sensibly request people to perceive or desist from perceiving. It is quite usual to, by dint of trying, feel or not feel the pain, hear or not hear the interruptions, see or not see the roughness of the finish, taste or not taste the oak, etc. You can request someone to ‘see the way the lines all converge here’ and ‘see the camel behind the palm’. And there are things like *See this wart here...*

One apparent barrier to an actional account is Ryle’s achievement theory of perception. According to Ryle, perception verbs “..do not stand for performances, or ways of being occupied” (Ryle 1949, p.151). That is, “..perceiving is not bringing anything about. It is getting something or, sometimes, keeping something, but it is not

effecting anything. Seeing and hearing are neither witnessed nor unwitnessed doings, for they are not doings” (*ibid*, p.267). He says that *see* and *hear* (although perhaps not *touch*, *feel*, *taste* and *smell*) are used only to report achievements, and never to report the active strivings of which the achievements are the outcomes. Perceivings are achievements only, never active doings, and my term *perceptual behaviour* cannot apply to anything.

However, Ryle himself concedes that the verbal point is not hard and fast: “...we very often borrow achievement verbs to signify the performance of the corresponding task activities, where the hopes of success are good” (*ibid*, p.149). And in fact, most perception verbs (like *touch*, *feel*, *smell*, etc.), like most action verbs generally, are equally at home referring to task performance or achievement. Exclusively achievement verbs, like *perceive* itself, are the exception in the perceiving area, as exclusively achievement verbs are exceptions in other action areas. A more important consideration is that — as I argued in Chapter Five, 5.4, in connection with Ryle’s refraining theory — achievements logically imply prior strivings, that is, they are by definition the outcomes of active performances. Even verbs used exclusively for referring to achievements logically imply prior task-performances. Thus, Ryle’s verbal point does not tend to show that there are no ‘active strivings’ associated with perceiving. On the contrary, the fact of perceptual achievements shows there must be perceptual strivings. What Ryle does show is that the verb *perceive* has been earmarked for the achievement-registering role and, if we want a name for the strivings side, it should not be *perceive*. However, there is no reason why we should not call the strivings in question ‘the performing of perceptual behaviour’. Ryle himself talks of our ‘applying perception recipes’.

The most commonly held view is that perception is (not an activity but) a special kind of ‘cognition’ or ‘cognitive relation’ — a relation between a perceived thing in reality and the mind or brain of the perceiving person. Cognition of the perceptual variety is the outcome of a process which, in its modern description, is a causal transaction between an item in the external environment, and the person’s brain. The story is approximately as follows. Information about the external item (in the form of reflected light, sound waves, mechanical perturbation or resistance, ambient molecules, etc.) physically contacts the sense organs of the perceiver and gets coded into patterns of receptor neuron firing. In this form it is communicated into the brain. Once inside the brain, the coded information is analysed and classified and possibly stored. It then enters consciousness and perceptual cognition occurs — that is, the person becomes conscious what he or she is perceiving.

On the basis of the cognition, the brain then issues instructions (again in the form of patterns of neuron firing) to relevant muscles — to contract, etc. — and the person thus makes a behavioural response to what is perceived. The ‘perceiving’ stage of the process is identified either with the inputting into (and analysis by) the brain of the relevant sensory information, or with the ensuing relation of cognition between the person and the perceived thing — or, perhaps, with a phenomenological state (of consciousness) which accompanies the cognitive relation. The physiological process, the cognitive relation and the state of consciousness may all be in some sense the same event. At any rate, perception is not an action of the person.

My qualms about this ‘cognitive process’ view of perception are much the same as my qualms in Chapter One, 1.6, concerning the cognitive process view of thinking. My main reservation is as follows. The vocabulary we must use to specify perceivings (or thinkings) is the vocabulary of everyday actions. To be accurate, a description of what I see (on a sample occasion) would have to be couched in such terms as — ‘a cheap but underweight in-lamb two-tooth, probably worth buying’. To understand the terms in which the perception must be expressed, we require to understand the vocabulary of the activity (here stock-buying) which the perception occurs in the context of. To do this we must employ an ‘empathic’ or ‘participant’ heuristic. In order to know what perceiving is occurring, we must ourselves be familiar with what is being perceived, and we must use the same referring expressions as the perceiver would, and ourselves imagine perceiving (if not actually perceive) what the perceiver is perceiving. By contrast, in order to specify ‘cognitive processes’ (especially if these are physiological phenomena) we need to employ an objective and scientific vocabulary — and this vocabulary, by virtue of being incompatible with an empathic or participant heuristic stance, is incommensurable with our everyday action vocabulary. We do not and cannot have a vocabulary that would be amenable to both subject matters. The ‘cognitive process’ of perception view is thus not so much unconvincing as unstateable.

Perceptual activity theory

It is accepted by most philosophers and psychologists of perception that the person has some active role to play in perceiving, at least in enabling the perceiving process to get under way, or expediting it. The person is not *entirely* a passive experiencer, although he or she is primarily that. Some writers emphasise the perceiver’s active contribution,

saying that it is essential. One authority is Thomas 1999. He provides a useful adumbration of, and an extensive bibliography for, what he calls ‘perceptual activity’ theory. I will adopt this term in what follows. The best exposition of the perceptual activity theory is the whole of Neisser 1976. All the writers I have read on this issue (only some of them cited by Thomas) say much the same things. They include Mead 1938 (see below), Collingwood 1938 (especially p.197), Ryle 1949 (pp.218-219 and 228-234 on ‘perception recipes’), Hebb 1958 (p.180), 1968 (pp.469-70) and 1980 (pp.117-118), Merleau-Ponty 1962, 1963 (see below), Gibson 1966, Noton & Stark 1971A and 1971B, Neisser 1985, Mingers 1995 (pp.198-200) and Sacks 1995 (note to p.111). Trevarthen 1984 (pp.329-332 and 336-346) presents an account of how infants acquire active perceiving skills, with the assistance of their caregivers. Mead 1938 summarises the factual basis of the perceptual activity theory as follows.

The process of sensing is itself an activity. In the case of vision this is most evidently the case. Here the movement of the eyes, the focusing of the lens, and the adjustment of the lines of vision of the two eyes require a complicated activity which is further complicated by the movements of the eyes which will bring the rays of light coming from all parts of the object upon the center of clearest vision. The process of perceiving an object through the eyes (and this may be called the normal perception, since our perception through other organs of sense is so largely mediated through the imagery of vision itself) is thus an activity of considerable proportions. The perception by the hand is also one that involves such movement in the exploratory processes of hand and fingers and the movements of the skin. Hearing involves at least the fixing of the head (and the whole body as the basis for the movement of the head) and the innervation of the minute muscles which stretch the eardrum. Smelling involves the drawing of the air over the olfactory surfaces by means of the processes of inspiration plus the placing of the head in such a position as to make the smelling most effective. Tasting, in so far as it is to be distinguished from tactual perception, involves the bringing of the fluids of the mouth in continually changing contact with the taste buds through the processes of mastication (Mead 1938, pp.3-4).

The difference between the traditional view of perception and the perceptual activity theory is well located by the keyboard metaphor which Merleau-Ponty elaborates in the following passage.

A keyboard is precisely an apparatus which permits the production of innumerable melodies, all different from each other depending on the order and the cadence of the impulses received; the extent to which the metaphor of the keyboard has been used in the physiology of the nerve centres is well known. An automatic telephone is even more clearly an apparatus which responds only to

excitants of a certain form and modifies its responses according to the spatial and temporal order of the stimuli. But do the constellations of excitants act on the organism as the fingers of the pianist act on the instrument?

....The organism cannot properly be compared to a keyboard on which the external stimuli would play and in which their proper form would be delineated for the simple reason that the organism contributes to the constitution of that form. When my hand follows each effort of a struggling animal while holding an instrument for capturing it, it is clear that each of my movements responds to an external stimulation; but it is also clear that these stimulations could not be received without the movements by which I expose my receptors to their influence... When the eye and the ear follow an animal in flight, it is impossible to say 'which started first' in the exchange of stimuli and responses. Since all the movements of the organism are always conditioned by external influences, one can, if one wishes, readily treat behaviour as an effect of the milieu. But in the same way, since all the stimulations which the organism receives have in turn been possible only by its preceding movements which have culminated in exposing the receptor organ to external influences, one could also say that behaviour is the first cause of all the stimulations.

Thus the form of the excitant is created by the organism itself, by its proper manner of offering itself to actions from the outside. Doubtless, in order to be able to subsist, it must encounter a certain number of physical and chemical agents in its surroundings. But it is the organism itself — according to the proper nature of its receptors, the thresholds of its nerve centres and the movements of the organs — which chooses the stimuli in the physical world to which it will be sensitive... This would be a keyboard which moves itself in such a way as to offer... such and such of its keys to the in itself monotonous action of an external hammer (Merleau-Ponty 1963, pp.12-13).

One recent textbook, Schiffman 1996, distinguishes seven different kinds of eye movement (other than eye opening and closing) employed in visual perceiving. First is *accommodation*, whereby changes in the shape of the eye-ball (effected by relaxing or contracting the ciliary muscle) serve to optimise definition of the retinal image. The remaining movements are all functions of (selective, coordinated and modulated contraction and/or relaxation of) the six oculomotor muscles. The second kind of eye movement is *saccades*. These are jerky motions of the eye, of about 50 milliseconds duration and covering between 3 mins and 20 degrees of visual angle, as the gaze is moved from one fixation point to another. Schiffman reports that there are normally 1-3 saccades per second, occupying about 10% of viewing time. Hochberg thinks it is more like four, which at 50 milliseconds would give 20%. He says that,

...in order to perceive any extended object or scene, the eye must direct the very narrow region of detailed vision (the fovea) at different places, so that different parts of the object are seen in succession by the same part of the eye at a rate of about four discrete glances per second (Hochberg 1987, p.289).

Noton and Stark 1971A and 1971B have demonstrated that people employ particular patterns of saccades, particular inspection techniques, depending on the nature of the object or scene being inspected. Hebb 1968, p.469, is very interesting on this point too. Patterns of saccadic eye movements are perhaps the best candidates for Ryle's 1949 'perception-recipes'. Researchers classify the production of oculomotor saccades along with other learned voluntary motor tasks. One learns how to visually inspect or 'read' particular scenes and objects as one learns other strategies and tactics of movement.

The third eye movement kind is *pursuit* movements, which are slow and smooth compared to saccades. Pursuit movements track objects moving in a stationary environment. They keep the moving object in view and preserve a more or less static image of the object on the retina. Pursuit movements are usually employed in conjunction with movements of the head and/or trunk. A fourth class of eye movements, *vestibulo-ocular* movements, are dedicated to compensating for (and fine-tuning) pursuit movements *vis-à-vis* head and body movement — again to stabilise gaze direction with respect to the object. Whenever the head or body moves with respect to a fixated object, the vestibulo-ocular movements maintain the fixation. For example, if the object is stationary and the head is moved to the right, to keep the object in view the eyes will move to the left. Fifth are *vergence* movements. These move the eyes toward or away from each other, in the horizontal plane, so as to keep both eyes centrally fixated on an object moving towards or away from the viewer. Incompetent vergence movements result in double vision. Sixth, there are *miniature* eye movements. They are extremely subtle, tremor-like movements. Schiffman says they are involuntary. If miniature movements are artificially eliminated, parts of the viewed object will start appearing and disappearing. Hebb 1980 (pp.98-102) thinks this is due to receptor neurons on the retina (and/or optic nerve and/or visual cortex interneurons) becoming fatigued and going into latency. The miniature movements serve to share the firing burden among adjacent receptors. Hebb (*ibid*) also thinks there is some cortical modulation of miniature movements — so that they can be brought under voluntary control. He speculates that such 'trained-up' cortical intervention (as is evident in biofeedback learning, and perhaps all learning) must be necessary if infants are to learn to distinguish continuous lines from interrupted ones.

Finally, Schiffman lists *mixed-mode* movements. These are simply coordinated combinations of some or other of the above movement types. And this is how we are moving our eyes most of the time. For example, tracking a moving object in depth requires coordinated saccadic, smooth pursuit and vergence eye movement, not to mention head movement. Schiffman insists that eye movements are learned, and learned over a long period. He says that “Efficient eye movements involve skilled muscle movements that appear to improve with practice” (Schiffman 1996, p.107) and he cites research which showed that

...eye movements of preschool children 4 and 5 years of age differed from those of adults in a number of ways that affect efficient vision. For example, the children could not easily maintain steady fixation. When instructed to fixate on a small, bright, stationary target in an otherwise darkened room, their line of sight was extremely unstable. Their eyes darted about, scanning an area 100 times larger than would a typical adult in the same condition. In addition, when tracking a moving target, the children had difficulty controlling the timing of their saccades, and, unlike adults, they could not anticipate any change in the direction of the target’s movement, even when the change was predictable; in fact, ...about 200 msec elapsed before the children changed the direction of their eye movements (*ibid*, pp.107-108).

And Schiffman concludes by mooted the possibility that,

...as with the acquisition of skilled motor habits in general, preschool children have not yet learned efficient oculomotor control and, accordingly, have not yet acquired the specific motor skills necessary to perform effectively. It is reasonable to assume that developing efficient eye movements is a skill acquired gradually, with practice and experience extending well beyond the preschool years (*ibid*).

Educative vs. practical perceiving

Roughly speaking, our everyday perceiving is done either in the context of *practical* actions — as when, whilst showering, I feel the shower water getting hotter or colder and move to adjust it, or as when I notice a letter inversion in the word I have just written — or it is done in the context of dedicated *educative* activity. ‘Educative activity’ is a different kind of context for perceiving. Here, the activity surrounding the perceiving is designed primarily to facilitate the perceiving. That is, it creates opportunities for the kind of ‘micro-level’ perceptual behaviour (like the various eye movements) mentioned above. Educative activity is such as — walking out to the mail box to see if the newspaper has

arrived, conducting a scientific experiment, sending a submersible TV camera down to film a sunken ship, dissecting a frog in a Zoology Practical, and going to your first football match to see if you enjoy it. Educative activity is dedicated to facilitating performance of smaller-scale perceptual behaviour, which in turn enables perceptual ‘achievements’ (of which more anon).

Another feature of educative activity is the typical presence of another person (in teacher or pupil role), so that the perceiving is concerted, and the typical use of speech to expedite the concerting. The perceiving one does in the course of learning the name of a given flower, say, is ‘educative’ perceiving. And the perceiving one does in the course of picking a selection of those flowers is ‘practical’ perceiving.

The distinction between educative activity and the micro-level perceptual behaviour is perhaps largely a matter of degree, and is often difficult to draw. Is tracking the bird with binoculars ‘educative activity’, or is it just part of the micro-level ‘perceptual behaviour’? The distinction between practical activity (in which perceiving is instrumental) and educative activity (intended primarily to facilitate perceiving) is often difficult to draw too. Is testing the shower water before getting in a part of one’s showering, or a separate preliminary activity? Is editing whilst writing part of the writing? However, a theoretical separation between these two kinds of macro-actional setting for perceptual behaviour is worth having.

The nature of the perceptual achievement

It would be conceded by almost everyone that perceiving does occur in the context of people’s action and activity — practical and educative — and that the nature of the activity has a bearing on the nature of the perceiving. And it would be generally conceded that the smaller-scale perceptual behaviours, such as sense-organ-wieldings, are also genuine actions and activities, which also have an important bearing on what kind of perceivings occur. However, most would also believe that the subsequent perceptual achievement, to which the word *perceiving* directly refers, is not itself the upshot of an action but of an impersonal process. That is, perception is not strictly an ‘achievement’ (of a person) at all, but a physiological and/or phenomenological *event*. Activity of the person facilitates the perceptual process but does not constitute it.

Even the most radical of the perceptual activity theorists would believe also that the

thing in the external world which is perceived has some important role in the bringing-about of the perceptual event. Merleau-Ponty's ivorys, however energetically and provocatively they are thrust out, still require to be tinkled *by something*. The traditional theory of perception has it that the perceiver is an entirely passive recipient — of sensation, stimulus information, etc. — but the perceptual activity theory shows only that the *entirely* is wrong. It is still conceded that the perceiver is passive in some respect. As a result of perceptual activity something is *received* from the environment. Even if it is taken, it is received. Perception implies commerce between person and thing.

One influential perceptual activity theorist talks about investigative movements which “accomplish the pickup of stimulus information”, and how we “obtain stimulation from the environment” which constitutes “input to the nervous system” (Gibson 1966, pp.32-33). Neisser summarises Gibson's view as being that “...the perceiver directly picks up the information that the world offers him” (Neisser 1976, p.9). Neisser himself uses expressions such as “the special kinds of information that motion makes available”, “available stimulus information”, “information about spatial arrangement can be picked up” (*ibid*, pp.108, 109, 114 respectively). Neisser also allows himself to say things like “Sounds *inform us* about events. While vision and touch enable us to explore stationary environments, hearing *tells us* only about movement and change” (*ibid*, p.155, my italics). According to both Gibson and Neisser, despite the importance of perceptual activity, the perceiver is still in the business of ‘receiving information from the environment’.

To my mind, the notions of ‘stimulus’ and ‘information’ — as prerogatives of ‘the environment’ or ‘external reality’ — are obviously figurative. *Stimulus*, as Gibson notes, derives from a Latin verb meaning ‘to goad’ or ‘spur into action’. *Information* presupposes an action of informing, communicating, or active imparting by an agent. The associated idea of ‘input to the nervous system’ seems also to be figurative. It posits some agent out there, putting things into our brains via our sense organs. These appear to be metaphors. Although they are no doubt indispensable for everyday purposes, it is interesting to hold them in abeyance for a time.

My suggestion is that perceiving can be entirely explained as an action or activity of the person and that, in addition to the large-scale practical or educative activity and the small-scale perceptual behaviour, there is only its upshot, the perceptual achievement. I suggest that the perceptual achievement is simply — the perceiver's performing or

incepting the correct verbal accompaniment to the perceptual behaviour in question. By 'the correct verbal accompaniment', I mean the correct 'referring expression' — things like *look at that car, there's a small black dog on the lawn, the anterior dorsal peduncle bifurcates here*, and so on. As Quinton 1965 concludes,

...there is no reason to say that descriptions of experience are or ought to be our standard. Our empirical knowledge already has a basis and as good a one as we can obtain. It is to be found, as we should expect, in those situations in which the use of our language is taught and learnt (Quinton 1965, p.526).

I said in Chapter Nine that solo perception is a developmental sophistication, and streamlining, of what I called 'verbally-mediated concerted perceiving' or 'referring'. Solo perception is, as it were, an attempt to reproduce, on one's own, a fully concerted form of the perceptual behaviour in question. The 'success' of any perceptual behaviour consists only in whether or not it is capable of being concerted. I am putting forward 'accuracy of verbal accompaniment' — to be established by simple corroboration — as a criterion for determining whether the perceiving is in fact able to be concerted. Only if a given piece of solo perceptual behaviour elicits or would elicit similar verbals from both (all) parties — has it succeeded. Then and only then is it confirmed that perception *qua* achievement has occurred.

APPENDIX THREE: Physiological abbreviation theory

The physiological abbreviation (PA) theory is introduced in the thesis on pages 129-131.

What kind of abbreviation?

PA theorists are vague about the nature of the abbreviation relation between the two physiological events — the correlates respectively of the action performance and the imagining of the action performance. Annett describes the original ‘abbreviation’ idea of Washburn, Pavlov and Jacobson as an idea which “...emphasises the continuity of overt and covert [imagined] action, the latter being simply a scaled-down version of the former and which includes motor output and some kinaesthetic sensation” (Annett 1996, p.67). However, in the broad picture emerging from recent studies, much of the brain neural activity (and regional cortical blood flow) correlated with action X is actually duplicated, more or less undiminished, in imaginings of action X. It is thought to be this similarity in brain phenomena which produces similarities in the muscle and gland activation (and other autonomic indices) occurring on the motor (output) periphery during both action and imagining. As Currie 1995 says, “The Simulation of Vision Hypothesis [his PA-type model as applied to vision] insists not merely on the sharing of central processing by vision and mental imagery; ...it argues a fundamental similarity between the *outputs* of both processes” (Currie 1995, p.34).

Several kinds of mechanism have been suggested to explain how, despite the similarity of brain activation, the motor output ends up being only vestigial in the ‘imagining’ case. I canvass some of the options below — general or specific regional inhibition of motoneuron firing, simultaneous contraction of opposing muscle groups, etc. Recommendations as to how we should picture the abbreviation-inhibition process have been many and varied — as witness the number of different terms employed by the authors I quote at the beginning of this chapter. The metaphor of ‘simulation’ is perhaps the most favoured modern term. The term was first mooted by Monod 1972, pp.145-7. Other concepts of simulation, Currie’s for example, are derived from ‘simulation theory’ — a recent theory about how we identify others’ actions and mental states. Simulation theorists propose a computer analogy whereby, during simulation, a normally ‘executive’ program gets to be run ‘off-line’. In similar vein, Annett 1996 refers to the “decoupling of representational and executive functions in motor imagery” (Annett 1996, p.69).

I have formulated the conclusion of the PA argument as a simple abbreviation relation. If we wanted a version which accommodates the fact that brain activity may be the same (in imagining and action), we can say something like: ‘during imagined performance of an action, much the same sort of thing goes on inside the person’s head as during actual overt performance, but the physiological phenomena occurring in the rest of the body are greatly abbreviated (often almost to zero) versions of those that occur during actual performance’.

Hume distinguished perceiving (having ‘impressions’) and imagining (having ‘ideas’) in terms of the relative “vivacity” (Hume 1960, p.86) or “force and liveliness” (*ibid.*, pp.1&96) of the former. By 1910, Washburn is saying that

The precise nature of the physiological process which underlies a tentative movement, and the precise difference between this process and that underlying a full movement, it would be useless to conjecture. Is there simply a difference in the amount of nervous energy sent along a given motor pathway to the muscles, a less amount producing the very slight contractions of tentative movements; or do full movements require the action of more neurons than tentative movements do? (Washburn 1910, p.58).

Abbreviation effects could be due to such down-modulation of the neural traffic as Washburn speculates, that is, either lower firing rates on relevant pathways or the involvement of some sub-set only of the relevant pathways. Or, abbreviation effects could be due to the intervention, into a normal ‘executive’ neural firing program, of inhibitory impulses. This is what Hofstadter is speculating, when he says the following.

It may be that imagery is based on our ability to suppress motor activity. ...If you imagine an orange, there may occur in your cortex a set of commands to pick it up, to smell it, to inspect it, and so on. Clearly these commands cannot be carried out, because the orange is not there. But they can be sent along the usual channels towards the cerebellum or other sub-organs of the brain, until, at some critical point, a ‘mental faucet’ is closed, preventing them from actually being carried out. Depending how far down the line this ‘faucet’ is situated, the images may be more or less vivid and real-seeming. Anger can cause us to imagine quite vividly picking up some object and throwing it, or kicking something; yet we don’t actually do so. On the other hand, we feel so ‘near’ to actually doing so. Probably the faucet catches the impulses ‘at the last moment’” (Hofstadter 1979, pp.364-5).

This view, of motor firings nipped in the bud, appears to be Jeannerod’s ‘first hypothesis’ in the following.

A first hypothesis states that simulating a movement is the same thing as actually performing it, except that performance is blocked. An alternative hypothesis states that mental simulation is limited to rehearsing early stages of action, well ahead of execution. Whereas the first hypothesis generates specific predictions (e.g., one should expect finding in motor imagery physiological correlates similar to those measured during real action), the second one is mostly a default hypothesis (Jeannerod 1995, p.88).

One fact that would seem to count against the default hypothesis is the undeniable fact of so much actual, relevant, but greatly diminished, muscle activity during imagining — as recorded by Jacobson's early electromyograph (EMG) and its descendants. The inhibition does seem to operate, as Hofstadter says, 'at the last moment', and produce 'spillover'. Jeannerod says,

...the fact that muscular activity is only partially blocked during motor simulation (as shown by residual EMG) emphasises the delicate equilibrium between excitatory and inhibitory influences at the motoneuron level and suggests that motoneurons are close to threshold (*ibid.*).

Settling for this 'same as for execution but with inhibition of motoneurons' view still leaves us with what Jeannerod calls "...the problem of the mechanism and locus of motor inhibition during motor simulation" (*ibid.*, p.91). At what point is the motoneuron firing inhibited, and how? Partly as a result of his participation in the research, which I describe later — by Bonnet *et al.* 1997, on how the imagining of actions 'modulates the excitability of spinal reflex pathways' — Jeannerod finds a difference in the mechanisms corresponding to 'simulation' (imagining without commitment to imminent action) and 'preparation' (imagining with commitment to imminent action).

We know that during preparation inhibition occurs at the segmental spinal level: hence the decrease of spinal reflexes during the preparatory period and their re-increase shortly before the movement starts. The pattern of spinal excitability during motor simulation, with a marked increase in T-reflex, is thus closer to that of real action rather than that of preparation. The mechanisms by which the motor command is actively inhibited should thus differ for preparation and simulation. In the former case, the movement would be blocked by a massive inhibition acting at the spinal level to protect motoneurons against premature triggering of action. In the latter case, the excitatory motor output would be counter-balanced by another, parallel, output from other (non-primary) motor cortical areas, which would only partially polarise the motoneurons (*ibid.*, p.91).

This advances the earlier speculations of Decety *et al.* (including Jeannerod) 1993 —

It has been shown that mental simulation of movements activates the same cortical and subcortical areas as those involved in motor preparation... Based on this functional similarity, one could speculate that the process of mentally simulating movements represents an explicit [conscious?] counterpart of the normally implicit [subconscious?] process of preparing or planning movements. In other words, mental simulation would involve the same mechanisms as preparation except that, in the former case, execution mechanisms would be partially or totally blocked (Decety *et al.* 1993, p.561).

Another specific variant of the ‘nipped in the bud at the motor periphery’ idea is the idea that during imagining, a person might simultaneously contract opposing muscle groups. Decety *et al.* 1993, pp.551& 557-559, consider this possibility but exclude it on the grounds that such opposing contractions would require the muscle to do work and, using nuclear magnetic resonance spectroscopy, they were able to rule out any increase in the metabolism of relevant muscles during imagining. (But see Jeannerod 1994).

I have not been able to find research specifically dedicated to determining whether any *receptor* (as opposed to motor) neuron firing is reliably correlated with imagining. Washburn based her theory of sustained ‘tentative movements’ on the idea that one tentative movement could result in (vestigial) firing of kinaesthetic receptors which would in turn (via cortical pathways laid down when the action was learned) trigger enough motor firing for the next tentative movement to take place, and so on. And there is also speculation about the possibility of induced visual receptor activity in visualising. Some of the findings that Zikmund 1972 reviews, including the theorising of Hebb 1968, encourage Zikmund to speculate that not only is actual-vision optokinesis duplicated in visualising, there may also be, especially during visual hallucinating and vivid visualising, limited actual visual receptor firing, on the retina, induced by feedback arising from the optokinesis. He suggests that

Vivid visual images or visual hallucinations involve a component of retinal stimulation which is mediated by hypothesised centrifugal impulses from the brain structures activated when a visual image arises. When the retinal elements are excited, retino-eye-movement feedback mechanisms give rise to OKN [optokinetic nystagmus, = scanning movements of the eyes] in the same way as they do during visual perception (Zikmund 1972, p.380).

The possibility of feedback-induced receptor firing is intriguing. If demonstrable, such induced receptor firing might help to explain why imagining is sometimes difficult for the subject to distinguish from perceiving. This obviously happens in hallucinating. But as

well, as Hume says, "... it sometimes happens that our impressions are so faint and low, that we cannot distinguish them from our ideas" (Hume 1960, p.2). This latter was famously demonstrated by Perky 1910. In her experiment, subjects confronting a blank silk screen were asked to try and visualise a (picture of a) banana on the screen, and report when their attempt was successful. Unknown to them, a faint actual image of a banana was projected on to the screen from behind and its intensity gradually increased. By the time the subjects reported successful 'visualising', the actual image was clearly visible on their side of the screen. Another kind of case that seems to indicate induced receptor activity is when one witnesses another person suffer some injury — stub a toe, say — and oneself experiences pain (and subsequent tingling) in the relevant body-part.

At the motor end, as well as the great array of vestigial muscle and gland activity, there are sometimes other more mysterious phenomena. In West 1962, facing p.113, there is a photograph of an arm covered in vivid rope weals. The caption reads: "These marks appeared spontaneously when a patient who had been tied up relived the episode in her imagination" (West 1962, pp.113, 192-3).

As far as I am aware, there are no recent findings which significantly advance or modify Jeannerod's 1995 account, based on the results reported (late) in Bonnet *et al.* 1997, of where and how motor inhibition operates. That seems to be the best picture we have as yet as to the nature of 'abbreviation' — or 'simulation', 'anticipatory activity', 'incipient activity', etc. However, it is still worthwhile to review a small sample of recent research findings, if only to get an idea of the range of actions and physiological correlates that have been looked at.

Before we get on to recent findings, we should see how limited was the range of muscle activity Jacobson studied. In 1930 I, 'Imagination of movement involving skeletal muscle', the action performed and imagined was flexion of the right biceps, and the physiological correlate, recorded by electromyograph, was electrical discharge recorded from muscle fibres in the locale of the action, with considerably lower voltages recorded for the imagining case. In 1930 II, 'Imagination and recollection of various muscular acts', the actions imagined included such as lifting a 10 pound weight, hitting a ball, removing a shirt, reading a paper, rowing a boat, and a great variety of others. Only the EMG correlates of imaginings were recorded, not those of actual performance. Location of the relevant musculature was presumably achieved by intuition. In 1930 III, 'Visual

imagination and recollection', the actions (both performed and imagined) were directing the gaze right or left and up or down. Electric potentials were recorded on EMG via electrodes inserted into ocular musculature near the eyeballs. The EMG records were similar for actual and imagined eye movement. In 1930 IV, 'Evidence of contraction of specific muscles during imagination', again only the EMGs for imagining of the action (steady flexion of the right biceps, or lifting a 10 pound weight with the right arm) were recorded. Control procedures — getting S to relax the right arm, or imagine the left arm doing the work — gave no readings from the electrodes in the right arm. In 1931 V, 'Variation of specific muscles contracting during imagination', electrodes were placed on both biceps and ocular muscles. The instruction to imagine bending the right arm was correlated with EMG readings from either or both. Jacobson inferred two 'manners' of imagining, visual and motor. In 1931 VI, 'A note on mental activities concerning an amputated limb', a subject with no left arm was asked to imagine arm flexion using the left arm. Typical EMG recordings for 'imagined performance' were taken from the right arm and from the left stump. The subject could not both relax the right arm and imagine using the left. Finally, in 1931 VII, 'Imagination, recollection and abstract thinking involving the speech musculature', electrodes were inserted in the tongue and/or lower lip and EMG recordings were taken while various acts of speaking were both performed (*sotto voce*) and imagined. As well, subjects were asked "to think of abstract matters such as 'eternity', electrical resistance', 'Ohm's law' [and] 'the meaning of the word *incongruous*' ...". Results conformed well to expectations, with readings for imagined speech occurring reliably, but registering significantly lower voltages than those for actual whispered speech.

Restak 1979 summarises experiments by Davidson and Schwartz 1977 which show that EEG (electroencephalograph) readings correlated with two different kinds of action may be identical to those taken when the respective actions are imagined.

EEG studies show that attention to a flashing light will alter the brain waves recorded from the visual areas. If the subject then switches to finger-tapping, the alteration will appear in the sensory motor regions. At this point the subject can be taken to a quiet room and told to 'imagine' an interval of flashing light followed by an interval taken up with finger tapping. The EEG results in the 'imagined' part of the experiment are identical with the results obtained when the subject actually watches the flashing light or taps his fingers. ...Merely imagining that we are doing something can bring about brain activation similar to what happens when we are actually doing it! (Restak 1979, p.328).

Farah 1988 and 1995 has reviewed research on vision/visualising topics — including research on brain-damaged patients and measurements of regional brain activity in normal subjects — and has concluded that visual (occipital) cortex, which we already know is active during visual perception, is selectively activated during visualising:

To sum up the relevant neurophysiological literature, two measures, EEG and ERP, have been used in a variety of experiments involving imagery. In all cases, imagery activity was localised to the occipital regions. Furthermore, in a subset of this body of experiments..., control conditions were included which allow us to assess the cognitive specificity of these electrophysiological effects, and in each case they were associated with visual imagery activity *per se*. The electrophysiological evidence is thus in agreement with results from a very different methodology, regional cerebral blood flow, in implicating occipital activity during imagery. Across a variety of tasks, it has been found that imagery engages visual cortex, whereas other tasks, many of which are highly similar except for the absence of visual imagery, do not (Farah 1988, p.312).

EEG recording techniques and scanners for imaging regional blood flow may already be familiar to the reader. ERP in the above is ‘event-related potentials’. This term means that the ‘event’ — the subject’s performance or imagining of some action — is reliably ‘related to’, or correlated with, micro-voltage electric potentials recorded from electrodes placed in salient bodily sites. These sites are usually in the brain, but Jacobson’s EMG is also an ERP recorder. The recorded micro-electric potentials evidence neuron firings in the vicinity. Typically, in the research Farah reviews, subjects are presented with simple graphics or asked to visualise them, and records are taken of concomitant potentials at occipital (and control) sites in cortex.

Decety *et al.* 1991 measured heart rate and rate of pulmonary ventilation correlated with running at various speeds on a treadmill (and also pedalling at different rates) and found that, as the speed of running or pedalling increased, so did these physiological indices. Heart and breathing rates recorded during imagined running or pedalling were found to vary in the same way — depending on what speed of running or pedalling was being imagined. As expected, the absolute amounts of this autonomic activity were consistently greater with real exertion rather than imagined. For example, the heart and respiration rates of a subject imagining running at 12 kph were the same on average as those recorded when the subject is actually walking at 5 kph. Thus the abbreviation hypothesis was supported, at least as far as these two peripheral variables are concerned. However, Jeannerod 1994, p.193, infers that, as autonomic functions like breath volumes

and heart rates are not subject to voluntary inhibition, their modulation during imagined effort can only be due to the operation of unrecorded cortical mechanisms common to both actual and imagined exercise.

Deshaumes-Molinaro *et al.* 1991 and 1992 made simultaneous records of six autonomic phenomena — electric potential, resistance, temperature and blood flow of the skin, and heart and breathing rates — of a group of expert archers and marksmen. These phenomena were measured both during ‘concentration’ prior to shooting, during actual shooting episodes and during imagined shooting back in the laboratory. The records of the six variables were almost identical in all three contexts. Again, if Jeannerod is right, because we are dealing with autonomic phenomena, we should expect any abbreviation effects to be due not to inhibition but to autonomic system control mechanisms in cortex. The experiment design — the fact that the concentration period is distinguishable from the ‘real shooting’ only for the instant during which the arrow or bullet is released — would by itself ensure similar readings during concentration and real shooting. However, the similar readings for the six phenomena during real and imagined shooting seems again to support the basic physiological abbreviation hypothesis. Curiously, it was found that, the better the archer/marksmen, the more similar were the records (for the six phenomena) in the three different scenarios.

Lang *et al.* 1994 used positron emission tomography to measure regional blood flow in the median cingulate gyrus and frontal (eye field) structures of both cerebral hemispheres in three groups of subjects. The first group executed voluntary side-to-side eye movements, making the movement as large and fast as was comfortable. The second group imagined making these eye movements. The control group did nothing. In contrast with the control group, the experimental groups both showed significant increase in blood flow in the areas measured, correlated with performance of their respective tasks.

Bonnet *et al.* 1997 measured motoneuron excitability (readiness of motoneurons to fire) as a correlate of weak or strong downward pressure on a pedal with the left or right foot, and as a correlate of the imagining of these various actions. The excitability of the relevant motoneurons was measured via the amplitude of two monosynaptic spinal reflexes, T-reflex and H-reflex. The results were that increase in relevant motoneuron excitability, only slightly less than that occurring during actual exertion, was found to be correlated with imagined exertion. Results depended on laterality in that only the (left or

right) foot specified for the actual or imagined exertion showed the motoneuron excitability increase. The level of increase was also found to be proportional to the strong or weak strength of pressure (actually or imaginatively) applied. Although the amplitudes of the T-reflex and H-reflex both increased in parallel with the other variables as expected, the H-reflex amplitude showed less increase than the T-reflex. Results were corroborated by EMG recordings taken directly off the muscles. That is, the EMG records rose or fell in parallel with the T-reflex and H-reflex amplitudes.

Koukounas and Over 1997, in Australian-published research, measured penile tumescence of young men whilst they first watched an erotic film clip, and later whilst they reproduced in imagination the events depicted in the film. Tumescence was consistently greater during actual viewing than during imagining. No control level of arousal was established. Level of subjective arousal (elicited by questionnaire) was found to covary with measured penile tumescence.

Although my sample of research is small compared with the huge amount of recent research germane to the physiological abbreviation hypothesis, both the range of physiological correlates investigated and the level of provisionality of results could be fairly well represented in my sample. Certainly, the PA hypothesis has not been conclusively verified. Without a clearer notion of what kind of similarity and/or abbreviation would count as full confirmation, and without scanners capable of simultaneously recording a vastly greater range of physiological correlates than I have mentioned, there is reason to doubt that the hypothesis ever will be verified.

The function of the abbreviated response

Consistently, abbreviation theorists' preferred explanation of the function of the abbreviated response (i.e., imagining) with respect to actual performance has been that the former constitutes a sort of *preparation* for, or *priming* of, the latter. This is so whether there is a considerable delay between the imagining and the action, or little or none. It is the latter scenario being contemplated by de Laguna in this summary of Washburn's early speculations.

When the act that is in progress is relatively simple, as, for example, in the case of so-called sensori-motor action, the initial distance stimulus, *e.g.*, the sight of the tempting food, not only sets up the reaching-out-and-grasping reaction, but it also makes the mouth water and the digestive juices flow before the food is

actually in the mouth. That is to say, it excites in anticipation the final stage of the complete act which is originally determined by the contact-stimulus of the food itself. It is as if the animal began eating the food from the moment he caught sight of it. The advantage of this tendency to anticipate the final stage of an act is not merely to prepare the organism, but *to reinforce the course of action that has been initiated and to assure its being carried to completion* (de Laguna 1963, p.175, her italics).

From the beginning of an organised course of behaviour, such as constitutes a complete act, the later stages are anticipated in the form of tentative movements, *i.e.*, slight movements, which, if completed, would constitute the consummation of the act in progress. Being incomplete, they tend to stimulate the sensory centers in functional connection with them. This sensory excitation then acts through other functionally related motor centers to control movements which are earlier elements in the organised series making up the complete act. The tentative movements which play this important role are by no means confined to the muscles of the limbs or other external organs directly concerned in the consummation of the act. As Washburn points out, the tentative movements taking place in the internal organs, which determine in so large a measure the 'attitude' of the organism — and, we may add, are so intimately related to the affective state — are of fundamental importance (*ibid*, p.178).

Neisser's version of the priming hypothesis is that —

If images are anticipations, they should facilitate subsequent perception. Perceptual readiness is not a minor by-product of visualising, but its essence. ..This has often been shown; a particularly striking demonstration was recently devised by Michael Posner and his colleagues [see Posner 1973]. A subject who has just seen a given letter, say A, will identify another A as the same letter more quickly if it appears in exactly the same form as before, but more slowly if it now appears in lower case. A similar facilitation occurs even when the subject is not shown but merely *told* what the coming letter will be, so that he can imagine it in advance (Neisser 1976, pp.144-5, my insert).

Research into dreaming follows a similar format to that of other PA research. Sleeping subjects exhibiting REM (rapid eye movements) are woken and invariably found to have been dreaming, while those woken during N(non)REM sleep do not report dreams. Subjects report the content of their dreams, and these reports are matched against records of the eye movements made during the same period. Some similarity is speculated (and sometimes partially verified) between the kinds of eye movements which the subject would make were he or she actually experiencing what was being dreamed, and the eye movements actually recorded during the dream. One influential researcher, Berger, cites an ontogenetic theory according to which "...REM sleep provides endogenous afferent

stimulation necessary for structural differentiation and maturation of the central nervous system during fetal and neonatal life, when brain growth is maximal” (Berger 1973, p.414). The idea here is of a kind of oculomotor ‘babbling’ stage, in the womb. He also mentions a phylogenetic theory which proposes

...that REM sleep first evolved in the mammal to serve a ‘sentinel’ or vigilance function necessary for survival from attack by other species. ...that REM sleep provides periodic cortical arousal throughout sleep preparatory to the brief awakenings which usually terminate REM periods, so that the animal has sufficient ‘critical reactivity’ to adequately ‘test’ the environment for dangerous elements (*ibid.*).

Then Berger proposes his own theory — an application of the standard PA view, that imagining ‘primes’ learned actions prior to performance. His theory is

...that REM sleep provides a mechanism for the establishment of the neuromuscular pathways involved in voluntary conjugate eye movements in both phylogenesis and ontogenesis; and that throughout mammalian life REM sleep furnishes periodic innervation of the oculomotor system during extended periods of sleep, in order to maintain coordination of binocularly coordinated eye movement into subsequent wakefulness. The degree of fine neuromuscular coordination necessary to execute voluntary conjugate scanning movements and disjunctive fixational movements of the eyes in the higher mammals exceeds that of any other muscle system. During NREM sleep the eyes adopt a resting position, most frequently divergent upward. ...Because of this lack of innervation of the oculomotor system during NREM sleep and the plasticity of the central nervous system under conditions of use and disuse..., it is suggested that were it not for the intrusion of periods of REM sleep throughout extended periods of NREM sleep, the central facilitation necessary for coordination of eye movements might be temporarily lost on awakening (*ibid.*, p.416).

Hebb 1949, p.229, thought that interneuronal synapses in cortex need to be fired (or will fire spontaneously) at some minimum subsistence level in order to remain viable. Berger says that something similar is true of the cortical circuits which coordinate eye movement.

The concept of ‘mental practice’ is important in modern sports training. Annett cites Richardson’s founding definition of ‘mental practice’ as “the symbolic rehearsal of a physical activity in the absence of any gross muscular movements” (Richardson 1967) and adds that this rehearsal is “used for the purpose of acquiring or maintaining a skill, usually as a supplement or an alternative to overt physical practice” (Annett 1995, p.66). Mental practice does seem to work. As Neisser reports,

Imagined movements... have a real effect on subsequent overt behavior. Indeed imagined movement is often carried out deliberately in an effort to improve proficiency in a skill. Many athletes are convinced that 'mental practice' of this kind improves their performance, and a number of experimental studies substantiate that opinion. ...In recent experiments at Cornell, Nigro (1983) has demonstrated that mental practice can lead to substantial improvement in the accuracy of throwing darts or bean bags at a target. Nigro's experimental subjects made 24 real throws, then 24 imaginary throws, and finally 24 more real throws. The amount of improvement between the first and third blocks was substantially greater in these subjects than in controls who received no imagining trials (Neisser 1985, p.104).

Grouios 1992 compared the effect of mental and actual practice on improved performance in a simple visual reaction time test. He used 100 male sports participants, in two groups, each having practice sessions 40 times per day for 14 days. One group actually practised the reaction task, the other merely imagined it. A third group, acting as control, did not practice actually or mentally. Subsequent performance on the task by the 'imagers' was much better than that of the control group, and almost as good as that of the 'actual practice' group.

Jones & Stuth 1997 reviewed an extensive literature and concluded: "Mental imagery has been found to be effective when used for such tasks as skill acquisition ...mental imagery has been found an effective adjunct to, and replacement for, physical practice" (Jones & Stuth 1997, p.101). How does it work? Annett finds that mental practice "...may have an effect on performance through controlling states of arousal or by focusing attention or by priming different neuro-muscular systems for action" (Annett 1995, p.80). Jeannerod opts for the kind of 'synaptic facilitation' effect proposed by Hebb 1949.

How can the benefit of motor images on motor execution be explained? As no movement occurs, the first explanation is that of a purely central effect. Increased traffic in neural circuits could be responsible for improving synaptic efficacy in critical parts of the system, such as, for example, in the cerebellum or basal ganglia. This would result in increasing the capacity of the system for tuning motoneuronal populations or sharpening coordination between agonistic and antagonistic muscle groups (Jeannerod 1995, p.91).

Jeannerod adds — in a double bow to Hebb (on account of both the 'cortical loop' idea to explain persistence of imaginings, and 'synaptic facilitation') — that "...the postulated persisting activation of central loops during motor imagery represents a possible substrate for improving synaptic efficacy in the circuits which are rehearsed" (*ibid.*, p.96).

However, it is also possible that the muscles themselves are affected, and made more efficient. Jeannerod 1994 cites other, somewhat ambiguous research findings.

There are only a few data on changes in the motor system during motor preparation. Mellah *et al.*'s (1990) experiments in the monkey showed that a small proportion of biceps motor units were active during the preparation period for a flexion of the arm preceding the instruction to move. These units, which had a low threshold and a low discharge rate, stopped firing shortly before the movement began. This preparatory muscular activity, it was suggested, played an important role in a subsequent movement, increasing the stiffness of the muscle and reducing its time constant in responding to the phasic command...

Mellah *et al.*'s (1990) report of 'covert' muscular discharges during motor preparation seems to accord with Jacobson's (1930) observations on motor imagery and muscle discharges but not with Yue and Cole's (1992) and Decety *et al.*'s (1993) finding of muscular quiescence. The two sets of data can in fact be reconciled: according to Mellah *et al.* (1990), the muscle fibres that fire during preparation belong to deep muscles whose activity escapes detection by surface EMG. In addition, they are likely to be from the slow tonic group, a fiber type with a low metabolic rate, undetected by NMR. Hence perhaps similar muscular activity could also be observed during motor imagery if the appropriate recording technique were used. It is still true, however, that incomplete inhibition (as a consequence of instructions or a subject bias) could likewise account for these muscular discharges (Jeannerod 1994, p.191).

Summary

My impression is that physiological abbreviation theorists are looking at acts of incepting — but their view is distorted by their assumption that what they are seeing is not an action of the person but an involuntary physiological process. To reconcile this assumption with the fact of the action in progress, responsibility for the action must be farmed out among various anatomical and physiological 'agents'. This requires a descent into metaphor. Attempts to describe actions in physiological terms are anyway ironic if, as seems to be the case, our knowledge of our own actions is epistemologically prior to, and (at least potentially) more immediate, thorough and secure than our knowledge of physiological processes.

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