The use of values and social identity to investigate occupational culture

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Robyn Felicity Ward

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Abstract

The present study applies the concept of organisational culture to the culture of psychology in New Zealand. It examined, from a multiple cultures perspective, the existence of an overall, general culture of psychology, and as well as investigating the existence of subcultures in groups defined by specialty, role, and sex. The study also provided an opportunity to compare a more traditional approach to investigating culture (values) with a more novel approach (social identity). Members of the New Zealand Psychological Society (n = 174) completed two versions of a Work Values Survey and an Identification Scale as part of a membership survey. Results were analysed using Principal Components Analysis. Analysis of values showed that there was some similarity among psychologists when they considered psychology in general, and some differences when considering their specialty. Differences were also found between academics and practitioners, and males and females. Analysis of identification produced results similar to those of values when looking at specialties and roles, but no differences were found between males and females. The results were discussed in terms of their support for a multiple cultures view, their use to the New Zealand Psychological Society, and their support of the use of Social Identity Theory for investigating cultural complexity in occupations and organisations.

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1. Literature Review

1.1 Introduction

"From brain researcher to social scientist: They all answer to 'psychologist' "

This is the title of an article in the American Psychological Society's Observer (Conner, 2001). The article looks at how people working in such a diverse range of roles are united under the heading 'Psychologist'. It attempts to define those aspects of psychology that all psychologists share: an interest in the brain and mind, cognition, methodology, belief in the scientific method, and so on. With the increasing amount of specialisation in psychology, is there also a common core? This study looks at this question, through the use of the concept of occupational culture.

The present study investigates the occupational culture (values and identity) of psychologists belonging to the New Zealand Psychological Society (NZPsS), New Zealand's premier professional body for psychologists.

Occupational cultures, or professional cultures, are very similar to organisational cultures (Bloor & Dawson, 1994). They both have the same defining features such as values, norms, and beliefs (Van Maanen & Barley, 1984), but the setting in which the cultures develop is different. Organisations have both informal and formal structures

within which cultures and subcultures develop, such as different functions and roles, and the same can be said of occupations. For example, in psychology, there are a large number of different specialties (such as Educational, Industrial/Organisational, and Health) and psychologists also engage in different roles (such as academic and practitioner roles). As organisational and occupational cultures are so similar, and due to the fact that occupational cultures have received a great deal less consideration (Hofstede, Neuijen, Ohayv & Sanders, 1990), the literature used in this study includes both organisational and occupational publications. In fact, some of the current work on organisational cultures is influenced by the sociological work on careers and occupations (Ouchi & Wilkins, 1988). Therefore, it seems feasible to suggest that the reverse may also occur, where organisational culture literature is applied to occupations. Organisational theory has in fact been applied to occupations in the past, when Van Maanen and Barley (1984) used Schein's model of an organisation (1971, 1978, cited in Van Maanen & Barley, 1984), and applied it to occupational communities, to show that the two fields were similar. In further support of the use of organisational literature applied to occupations, Hofstede (2001) states that "Occupational communities may themselves become organizations (like institutionalized professional associations), and they sometimes define career paths." (p. 414).

Sackmann's multiple culture approach (1991) dictates that an organisation may have many subcultures coexisting with an organisation-wide culture. The present study applies this concept to the occupation of psychology. Is there an overarching

'psychological' culture, coexisting with subcultures, perhaps amongst specialties, between academic and practitioners, and between the sexes?

In order to investigate the occupational culture of psychology in New Zealand the traditional method of looking at values is incorporated alongside the concept of social identity. This study will provide an opportunity to compare the findings of a more traditional approach to assessing culture with a relatively new approach and investigate whether these two approaches yield similar results.

1.2   Organisational and Occupational Culture

1.2.1   Organisational Culture

Organisational culture is a concept that has been investigated extensively. Although the actual term 'organisational culture' did not become popular until the 1980s, the concept had been around for at least 50 years before that (Hofstede, 2001). Despite the wealth of research in the area, there is no one accepted definition of the term, and different authors have different opinions (Sackmann, 1991). Reichers and Schneider (1990) suggest that this confusion arises from the fact that 'culture' is a term originally used by anthropologists, not psychologists. It is used by a number of disciplines, including anthropology, sociology, social psychology, and organisational behaviour (Schein, 1990). It has been used by anthropologists in their study of ethnic

and national groups (Louis, 1983), as opposed to its use here, in relation to organisations and, further on, occupations.

Although researchers have used an assortment of definitions for culture, they share a common core of recurring themes, with different combinations applied by different researchers (Detert, Schroeder, & Mauriel, 2000). Definitions put forward by different authors include variables such as norms, values, beliefs, assumptions, artefacts, heroes, practices, rituals, symbols, and meanings (Hofstede et al., 1990, Hollway, 1991, Reichers & Schneider, 1990, Sackmann, 1991). Researchers also differ in their opinions of what constitutes the core of a culture. Some suggest values (Kotter & Heskett, 1992, Peters & Waterman, 1982), others suggest basic underlying assumptions (Schein, 1992), and still others suggest organisational practices (Hofstede, 1998). In a relatively new approach, Social Identity Theory (SIT) has been suggested as a way of investigating culture, as opposed to the variables already listed above (Hernes, 1997; This will be discussed in depth further on.). This small sample of variables shows that there are a number of ways that one can attempt to 'measure' culture.

The variables which will be used in the current study include values (as they traditionally constitute part of culture definitions, and are considered the core of culture by many researchers) and Social Identity (as it is a more recent approach to the investigation of culture).

1.2.2 Occupational Culture

Occupational cultures, or professional cultures, are very similar to organisational cultures (Bloor & Dawson, 1994), but have received a great deal less consideration (Hofstede et al., 1990). They both have the same defining features such as values, norms, and beliefs (Van Maanen & Barley, 1984), but the setting in which the cultures develop is different. People of the same occupation often do not work in the same physical location, or even in the same industry. People working for the same organisation are often in the same physical location, or at least have a lot of interaction with others in the same organisation. Given that people involved in the same occupation may often have little contact with others, how does a culture develop?

A professional culture can develop in the schools that people attend to become a member of an occupation. These schools will promote the norms and values expected by the profession, as well as professors and lecturers providing a concrete example of people in the occupation – what the people in the field are like, and how they behave. They become immersed in the profession, learning the occupation's language and so on. This initial 'socialisation' can be maintained through occupational members joining a professional body, thus keeping in touch with other members. All this suggests that a unique professional culture can easily emerge, and also be maintained despite the fact that members may work for a diverse range of organisations (Raelin, 1991).

There are a number of aspects of occupations which facilitate a unique culture or identity (Trice, 1993).

Members of the same occupation share specialist knowledge and expertise. This makes members feel special and different from those who do not possess that knowledge. A feeling that the expertise they possess is not easily learned by others often develops (Trice, 1993). Shared beliefs and values are especially likely when specialised training, away from those practising in the field, is required (e.g. university training for psychologists); when the socialisation process is lengthy, and the chances of actually being allowed to become a member of the occupation is uncertain (e.g. the need for extensive supervision before becoming registered as a psychologist); when there is pressure on members to behave in ways enforced by the occupation (e.g. Code of Ethics of psychologists' professional bodies).

Some occupations place extreme or unusual demands on members, which supports the formation of an occupational culture (Trice, 1993). For example, many psychologists who deal with human emotions are placed under a lot of strain, and many experience 'burnout' (Blackwell, 2000). It is these kinds of demands that may lead to a shared identity.

If members of the occupation see themselves in a favourable light, and see the work they do as worthwhile, and socially valued, an occupational culture will emerge (Trice, 1993). A social identity is more likely to emerge under these conditions, as a positive identity is more rewarding for individuals (Turner, 1999). Psychology can be

seen as a profession in which members attempt to help others in the community, and a socially valued service. Therefore psychology displays yet another aspect of an occupation that is likely to lead to an occupational culture.

Yet another force which can facilitate a group identity is an abundance of cultural forms (Trice, 1993). For example, the jargon of a profession, occupational 'heroes', and other aspects of the occupation that make it unique, lead to a more cohesive culture. This can certainly be applied to psychology, particularly when it comes to psychology's use of existing terms. A pertinent example here is the use of the word 'culture'. As mentioned above, this is originally an anthropological term, and is still viewed that way by the layperson. However, psychology has extended its use, as illustrated above.

1.2.3 Multiple Cultures – Homogeneity versus Heterogeneity

Theories about the homogeneity versus heterogeneity of organisational cultures have been put forward. Some have suggested the existence of a single culture, while others have suggested that subcultures also exist in an organisation (Trice & Beyer, 1993).

Early research in the area of organisational culture focused on culture as a single, unifying phenomenon, most likely due to its origins in anthropology (Sackmann, Phillips, Kleinberg & Boyacigiller, 1997). Peters and Waterman (1982) looked at values

and cultures of a number of large, successful American companies. They focus on culture at an organisation-wide level. This is illustrated by the following -

"Everyone at Hewlett-Packard knows that he or she is supposed to be innovative. Everyone at Procter & Gamble know that product quality is the sine qua non." (p. 76)

This quote illustrates the all-inclusive nature of their focus. They emphasise that *everyone* at these two companies think the same way, or share the same culture. They propose that it is a dominant and cohesive culture that is the mark of an excellent company.

Pettigrew (1979) and Schein (1983) also focus on a single culture for an organisation. They both suggest that entrepreneurs, or founders of organisations, create an organisational culture that is passed on to all other workers. These authors do not mention many other forces at work in shaping subcultures in an organisation. In fact, Schein (1983) asserts that newcomers to an organisation, with different beliefs and assumptions, will find a culture so strong that they will be unable to influence it at all, and will either give up and leave, or even be ejected. He does, however, acknowledge that as people rise up the ranks and come into positions of management, they may develop some new assumptions, although maintaining a core of the original culture. A change of culture for the entire organisation is implied, not the addition of any subcultures.

Ouchi (1981) is another author who viewed culture as a single entity, in his now famous book, *Theory Z*. He posited that culture consisted of values and practices that were shaped by owner/managers, and passed on to all new employees. He described a particular organisational culture – Type Z – that was embodied by a commitment to its workers, with honesty and trust highly valued. This type of culture was presented as the type held by successful organisations – again, no mention of subcultures is made. Culture is pointed to as the reason why Japanese companies performed so much better than American companies (Ouchi, 1981, Pascale & Athos, 1981).

Hofstede is a major contributor to the literature on culture, both national and organisational, with data originating from over 50 countries. His work with IBM, dating back as far as 1966, provided the basis for a large cross-national study (Hofstede, 2001). He looked at the same organisation (IBM) in a number of different countries, and found that there were considerable differences between the organisations in different countries. These differences were mainly amongst the values of each particular branch, even though the practices were essentially the same. He found five (originally four) dimensions along which the cultures differed, and which provide the framework for his subsequent research: Power Distance, Uncertainty Avoidance, Individualism and Collectivism, Masculinity and Femininity, and Long- versus Short-term Orientation.

When Hofstede investigated organisational culture within one country, he found that differences occurred mainly in practices rather than values – the opposite from what was found in the cross-national study. Most relevant to this study, is his finding that the

differences in occupations fall somewhere in between these two – that is, along both value and practice dimensions equally (Hofstede 2001).

Leading to the introduction here of the multiple cultures view, it is not entirely clear whether he thinks a different organisation-culture coexists with these subcultures, although the following excerpt seems to support this idea somewhat: "Some aspects of a culture can apply corporationwide, whereas others will be specific to smaller units." (p. 405).

Sackmann (1991) puts forward the view that an organisation can have many different subcultures, as well as an overarching, organisation-wide culture. Therefore, an organisation could appear to be culturally unified, but in fact have several underlying subcultures operating (Laurila, 1997). Schein (1990), in a review of the concept, also acknowledges that organisations may have many subcultures, and, if the organisation as a whole shares experiences, then an organisation-wide culture will also be present. People can be members of many different cultures, some being more salient than others at certain times. These subcultures may occur along dimensions such as functional domains and hierarchy. It has also been proposed that they may develop due to tenure, gender, role, and geographic location (Sackmann et al., 1997). This suggests that cultural groupings can reflect divisions other than the formal structure of an organisation (Ybema, 1997)

In an illustration of this 'multiple cultures' idea, Alvesson (1993) studied a psychology department in a university in Scandinavia, of which he was a member. He

discovered that there was a division amongst members of the department in terms of their allegiance to academic-scientific versus practical-psychological fields. Even though there is a large overlap in the knowledge shared by these two fields, the cultural differences were clear. Alvesson also noted some gender division, within the two fields. However, there was an overarching culture which all members of the department shared, one of tolerance, friendliness, caution, and avoidance of making demands. Therefore, the department was divided in terms of culture, and yet also united at the same time, as suggested by Sackmann (1991) and others supporting a multiple cultures view. Alvesson concluded that

"A person assuming the existence of a unitary and unique organizational culture would have no difficulty in finding empirical support for the view in the department. At the same time, a person believing in the existence of organizational subcultures would probably have found strong support for them." (p. 107).

Another study used both qualitative and quantitative data to look at unity and disunity existing jointly in an amusement park organisation (Ybema, 1997). This research combined differences found by looking at the organisation from different perspectives – unity, diversity, and ambiguity. The researcher found that differences often reflected groupings other than the formal structure of the organisation, such as shared interests and ethnicity. Other differences occurred between staff who had been with the organisation for a considerable length of time, with parochial ideas and

practices, and newer, professional employees. The study showed that although these differences existed, and sometimes caused conflict, there was also a level of mutual understanding between the groups, and areas of agreement, such as pride in their company's success. In this way, both unity and disunity existed in this organisation.

Deal and Kennedy (1999) also look at subcultures in organisations, but with a slightly different approach. They maintain that a cohesive, organisation-wide culture is the key to a successful company. They label organisations with many distinct subcultures as having "wounded cultures" (p. 232). So although on one hand they do speak about encouraging and enhancing subcultures, it would seem that this is only in an attempt to 'draw them back into the fold'. Subcultures are viewed as rogue entities that need to be pulled into line.

Ouchi and Wilkins (1988) also put a negative spin on subcultures, when they describe researchers investigating "the problem of subcultures or lack of shared organization culture" (p. 237). It is interesting to note here that the presence of subcultures is equated with a lack of an overall organisational culture, which conflicts with the more recent multiple cultures view.

1.2.4 Methodology

Schein (1990) lists a number of ways in which organisational culture can be investigated. These include survey research, analytical descriptive, ethnographic,

historical, and clinical descriptive. Ouchi and Wilkins (1988) also describe a broad range of methodologies employed when investigating organisational culture, such as "linguistics, survey research, participant observation, ethnomethodology, and symbolic interaction." (p. 239).

Schein (1990) suggests that a combination of ethnographic and clinical descriptive methods is the most appropriate way to investigate the concept of culture. However, these two methods have some drawbacks, which Schein (1990) acknowledges. Ethnographic approaches are time consuming and expensive, and a very large number of cases are needed before attempts can be made to make generalisations from the research to other organisations. The clinical descriptive approach requires that the researcher be a practitioner also, working within the organisation, with access to higher levels of management and the information, such as policies, that originate there. The researcher needs to be actively involved in helping the client with problems in their systems, so that it is in the client's best interest to make available even sensitive information. This means that this method is unavailable to the majority of researchers. Therefore, it seems that, although these two methods are purported to be the optimal way to study organisational culture, limitations of the situation in which the research is taking place may render other methods more appropriate.

As well as situational limitations dictating methodology, there is some debate over the appropriateness of quantitative versus qualitative methods in the study of organisational culture. Some argue that quantitative methods have no place in this area, whereas others support the use of multiple methods in understanding this concept (Ouchi

& Wilkins, 1988). Although not often reported, many of those who prefer the statistical testing of data have said that the area of organisational culture has "become the refuge of the untrained and the incompetent, who will degrade this new field if they are not rooted out." (Ouchi & Wilkins, 1988, p. 244).

The current study employs the use of survey research, with statistical hypothesis testing. This is due largely to the situational limitations of the study, where the population being investigated is large, and scattered over a wide area geographically.

1.3   Values

Researchers have defined values in a number of different ways. Rokeach (1973), an important figure in the study of values, defines a value as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence." (p. 5).

Knežević (1999), as part of the Work Importance Study, states that "Values are usually defined as a set of generalized beliefs about what is good, desirable or right." (p.421). However, both of these definitions refer to general beliefs, and although these definitions are most certainly relevant, more specific definitions of work values, as being studied here, have been put forward. In a study of both basic individual values and work values, Ros, Schwartz and Surkiss (1999) assert that

"Like basic values, work values are beliefs pertaining to desirable end-states (e.g. high pay) or behaviour (e.g. working with people). The different work goals are ordered by their importance as guiding principles for evaluating work outcomes and settings, and for choosing among different work alternatives. Because work values refer only to goals in the work setting, they are more specific than basic individual values. But the work values usually studied are still quite broad; they refer to what a person wants out of work in general, rather than to the narrowly defined outcomes of particular jobs." (p. 54)

The current study is looking, as an indication of culture, at work values of psychologists. A study of Australian medical students investigated their motivation for joining the profession, using the Rokeach Value Survey. Results were characterised by motivation to help people, dealing with challenges, and the opportunity to exercise skill and competence (Feather, 1982). In relation to the current study, a comparison of values was made with that of psychology students. Correlating the two gave a Spearman *rho* of .95 for the terminal values in the Rokeach Value Survey, and .94 when instrumental values were considered. This suggests that medicine and psychology students hold very similar values relating to work, that is, that psychology students are also motivated by helping people, dealing with challenges, and the opportunity to exercise skill and competence.

As already mentioned, values are being used here to assess the culture of psychology: whether there is one, homogeneous culture, or whether several subcultures co-exist with an overarching culture. Research into values suggests that there may be some divisions.

Gender differences in work values have been found in a number of studies, although there are also suggestions that work values are becoming 'androgenised' (Abu-Saad & Isralowitz, 1997).

Gender differences amongst Australian medical students were investigated with regards to reasons for studying medicine, and value priorities (Feather, 1982). Differences between the sexes were predicted to be based upon sex-role orientations, developed through childhood socialisation. That is, males were more likely to endorse values that were instrumental and individualistic, and females were more likely to endorse values implying an expressive, interpersonal orientation. Analyses of reasons for making a decision to study medicine indeed reflected these divisions. Males assigned higher importance to reasons such as achieving high status and making a lot of money, while females gave more importance to reasons such as working with people and improving society. Again, when looking at values (using the Rokeach Value Survey), priorities given to values again reflected the gender division as predicted.

Another study, looking at gender as a determinant of work values, indeed found differences, but not always in the direction predicted (Abu-Saad & Isralowitz, 1997).

The authors based their predictions on the implications for gender differences of Holland's theory of vocational choice (1973, cited in Abu-Saad & Isralowitz, 1997). That is, men would place greater emphasis on values such as achievement, prestige, high income, and career success, and women would place greater emphasis on values such as social relations and aesthetics. Looking at a general sample of Israeli university undergraduates, women scored higher than men on only four of 11 traditionally 'female' values in their measure, and in fact men scored higher on one 'female' value, ample leisure. With regard to traditionally 'male' values, men scored higher than women on only two of a possible 14 values, and women scored higher than men on two of these also – development of knowledge and skills and intellectual stimulation. The researchers also looked at specific departments within the university. Most relevant to the current study is the humanities and social sciences. In this faculty, females scored higher than the males on 13 of the 25 values, including seven of the traditionally male values. This was explained by the fact that of the occupations emerging from this department, a large number are dominated by women in Israel, with women in high positions. Therefore, women in the faculty are likely to place a high emphasis on career success, leading to the gender differences in work values. Therefore, gender differences will not necessarily emerge along the lines often predicted by sex-role orientation (as in Feather, 1982), or at all.

1.4 Social Identity Perspective

Social identity has been defined as "that aspect of a person's self-concept based on their group memberships... a person's definition of self in terms of some social group membership with the associated value connotations and emotional significance" (Turner, 1999, p. 8). Hernes (1997) proposes using the social identity perspective as a way of looking at organisational culture. The reasoning for this is "that organizational culture and group membership are related concepts – that is, that the values, beliefs, and norms of people in organizations can be explained by their identifications with the groups in which they are members." (p. 343). This perspective encompasses Social Identity Theory (SIT) and Self-Categorisation Theory (SCT).

1.4.1 Social Identity Theory

SIT is an integration of propositions (Tajfel and Turner, 1979), described as "an approach to the social psychology of intergroup relations that take into account social realities as well as their reflection in social behaviour through the mediation of socially shared systems of beliefs." (p. 36).

SIT has been tested in a minimal paradigm. Turner (1975) found that simply being categorised as a member of a particular group was enough to produce inter-group differentiation. That is, subjects' identity as a member of that group became relevant in that situation. As this phenomenon operates so readily in a minimal paradigm, it is not

surprising that people develop social identities for all sorts of groups to which they feel they belong in their real lives. SIT proposes that, as people often evaluate themselves in terms of in-group memberships, those social identities need to be positive ones. That is, the in-group needs to be differentiated positively from out-groups. Turner (1999) describes this as "a psychological requirement" (p. 8), suggesting a positive social identity is essential to a positive self-identity. This would suggest that negative experiences by the group would lead to an individual dropping that particular social identity. This conflicts somewhat with the view that a social identity means that a person shares in a particular group's successes *and* failures (Ashforth & Mael, 1989). However, the same authors also suggest that a social identity leads members to believe that the in-group deserves its successes, but not its failures, and the opposite is perceived for the out-group. In addition, they give an example of a way in which a group can give a negative distinction a positive spin – "We're not popular because we avoid playing politics" (p. 24).

SIT proposes that social behaviour occurs along an interpersonal-intergroup continuum. That is, in any given situation, an interaction between two (or more) people may be determined by their individual characteristics (interpersonal) or their affiliations with a group (intergroup). Which of these will occur is determined by an interaction between psychological and social factors. Where a group holds a 'social change' ideology (where they believe that any benefits to the group will only come from collective action) and group structures are seen as fairly inflexible and fixed, an intergroup exchange is more likely. That is, in situations where members believe they

cannot easily move from one group to another, and where the boundaries between groups are pronounced (Tajfel, 1979). If there is more of an 'individual mobility' mentality, an interpersonal exchange is more likely (Turner, 1999).

1.4.2 Social Categorisation Theory

In a reflection of the interpersonal-intergroup distinction, SCT makes a distinction between social identity and personal identity. Social identity refers to categorization of one's self in terms of social group membership, and personal identity refers to categorization of one's self in terms of personal attributes (Turner, 1999). It suggests that sometimes, a person's social identity will be salient to the extent that his or her personal identity does not play a part in guiding behaviour and interactions with both group members and non-group members. This can be thought of as a sort of "self-stereotyping and the depersonalisation of self-perception." (Turner, 1999, p. 11). This leads to increased perceptions of both in-group and out-group homogeneity. This depersonalisation is what leads to group behaviour. Which identity will be salient at any given time depends on a number of variables, including the context of the comparison (what is going on at the time), motives of the individual, and their values and expectations (Turner, 1999). SCT also proposes that there are different levels of self-categorization, as opposed to a continuum, and that in certain situations, both personal and social identities will be salient. It is the degree to which either identity is activated that will determine whether a persons behaviour is guided by "individual differences or collective similarities." (Turner, 1999, p.11).

1.4.3   Organisational and Occupational Identification

1.4.3.1 Organisational Identification

Organisational identification is a specific type of social identity (Mael & Ashforth, 1992). People will differ in how much they identify with the organisation they belong to, and the degree to which the characteristics defining the organisation also define that person (Dutton, Dukerich, & Harquail, 1994). Ashforth and Mael (1989) have applied SIT to organisations. In keeping with a 'multiple cultures' view, these authors also suggest that individuals may have multiple identities in an organisation – with the organisation, with workgroups, departments, and so on. They also distinguish organisational identity from organisational commitment. Organisational commitment is defined as "a person's a) belief in and acceptance of the organization's goals and values, b) willingness to exert effort on behalf of the organization, and c) desire to maintain membership." (p. 23). On the other hand, they assert that an identity can exist independently of acceptance of the organisation's values, and without putting any effort into achieving the organisation's goals. This concurs with findings of Turner's (1975; described above) that simply being assigned to a group will facilitate the development of a social identity. However, Ashforth and Mael (1989) do concede later in their article that identification with an organisation can lead to internalisation of the group's values and beliefs, and homogeneity of attitudes and behaviours. This seems to support Hernes' (1997) assertion that social identity is one way of approaching the study of complex organisational cultures. In fact, the word culture also creeps into the work of

Ashforth and Mael (1989). They describe organisations as having 'identities', and that the identity is "reflected in shared values and beliefs" (p.27). An organisation with a salient, stable, and consistent identity is then described as being synonymous to an organisation with a strong culture.

Ashforth and Mael (1989) list a number of antecedents and consequences of social identification in organisations. Antecedents include the distinctiveness of the organisation's values and practices, the prestige of the organisation, the salience of out-groups, and factors traditionally associated with group formation (such as similarity, liking, proximity and so on). Consequences include selection of activities fitting with the identity and support of the organisation, increased cooperation, cohesion, altruism towards group members, and loyalty to and pride in the organisation. Dutton et al. (1994) agree, stating desirable outcomes of strong organisational identification as "intraorganisational cooperation or citizenship behaviours." (p. 240). Organisational identification can also lead to internalisation of the organisations goals and beliefs (as already described) and can also reinforce the very antecedents of identification – the group comes to be perceived as more prestigious, evaluated more positively (in-group bias), and distinct from out-groups (Ashforth & Mael, 1989, Dutton et al., 1994). Therefore, organisational identification appears to be desirable, in that it will benefit the organisation in many ways.

1.4.3.2 Occupational Identification

One of the defining aspects of an occupational community is the social identity shared by its members (Van Maanen & Barley, 1984). This occupational (or professional) identity reflects the kind of work that people do, and is often central to an individual's self-image. An occupational identity can be fostered by specialist knowledge, high involvement in the work being done, perceptions of the social worth of the job, and shared experiences by members. These factors are essentially the same as the forces that Trice (1993) posits shape occupational culture (described above). Here again is evidence for the use of a social identity approach to assessing occupational culture, as the two terms 'identity' and 'culture' appear to be used synonymously here.

1.4.4 Multiple Identities – Homogeneity versus Heterogeneity

Just as multiple cultures can exist in an organisation, multiple identities may exist in an occupation. Ashforth and Mael (1989) suggest this, and subsequent research has supported this.

van Knippenberg and van Schie (2000) studied the importance of work-group identification (WID) relative to organisational identification (OID). Most of the previous work on organisational identification focused on the organisation as a whole, without acknowledging that organisations are complex, and may generate more than a simple single identity. The authors suggested that WID would be stronger than OID, as

these groups are smaller, and members are likely to have more in common with one another. Following from this hypothesis, they proposed that, as identification is related to organisational behaviour, WID would be more strongly related to organisational behaviour such as intentions to quit, motivation, involvement, and job satisfaction, than OID. To assess the degree of identification two almost identical versions of the same measure were used – they differed in their reference to either the work-group or the organisation. After statistically checking to see that the two versions did in fact measure different identifications, results showed that WID was indeed significantly stronger than OID. Results also supported their second hypothesis, that WID is more strongly related to measures of organisational behaviour than OID. A number of conclusions can be drawn from this study, but most important to this discussion is the conclusion that people can have more than one identity within an organisation.

Research investigating organisational identification among virtual workers could conceivably be applied to identification in an occupation. Virtual workers belong to an organisation, but work in isolation, dispersed geographically, often with no face-to-face contact with colleagues. Members of an occupation also often do not work with others in the same profession, and are dispersed over wide geographical areas, but still belong to the occupation, nonetheless.

Wiesenfeld, Raghuram, and Garud (2001) present an exploratory study on the relationship between virtual work and organisational identification. As the authors point out, most of the predictors of organisational identification found in previous research on traditional workers (e.g. contact with the organisation, visible indicators of

organisational membership) are far less available to virtual workers. Due to the number of positive consequences of organisational identification (Ashforth & Mael, 1989), a strong identity is likely to be desired by an organisation. If a strong organisational identity is to be developed in virtual workers, different predictors must be looked at. Wiesenfeld et al. (2001) look at need for affiliation and work-based social support. They found that both of these predictors are significantly positively related to organisational identification. They also found that work-based social support moderates the relationship between need for affiliation and organisational identification. That is, even if an individual is low on need for affiliation, if work-based social support is high, organisational identification will still be high.

This has implications for occupational groups. Need for affiliation is an internal, individual construct, and therefore cannot be easily changed. However, work-based social support is something that can easily be altered. As this moderates the relationship between need for affiliation and organisational development, it suggests that low need for affiliation can be overcome. If occupations can enhance identity among members, it follows that they too can benefit from the positive consequences of organisational identification, such as increased cooperation, cohesion, altruism, and loyalty.

Although not looking at multiple identities, McGowan and Hart (1990) investigated differences in professional identity formation between males and females. They discuss a number of theoretical issues which may explain this difference. They propose that different developmental experiences have an effect not only on personal identity, but also professional identity. They organise these into three areas – relational

focus, distance versus intimacy, and contextual decision-making. The first refers to women having difficulty in putting their own needs before others. The second area, distance versus intimacy, which involves women having trouble distancing themselves from relationships, even when they may be destructive, at a high cost to themselves. The third area, contextual decision making, referring to the fact that women are more likely than men to consider others when making decisions. Women are likely to develop quite a different professional identity to men, one that encompasses these developmental differences. In short, men's identities are more likely to include a personal, career orientation, while women's are more likely to include the concerns of others. McGowan and Hart (1990) suggest that both males and females could benefit by adopting some aspects of the other sex's identity.

1.5 Hypotheses

The questions being investigated relate to the theory of organisational culture put forward by Sackmann (e.g. 1991, 1997). Sackmann proposes that an organisation can have both an overarching culture, and many subcultures, co-existing. As we are applying organisational theory to the occupation of psychology, this suggests that psychology will have both an overarching culture, and many subcultures, co-existing. Specific hypotheses that will be tested are as follows

The researcher could find no specific research on differences in values that related to specialties within an occupation. However, on the basis of Sackmann's (1991)

assertions about multiple cultures (that there can be one overarching culture co-existing with many sub-cultures), combined with the fact that values are considered the core of an organisation's culture by many researchers (e.g. Peters and Waterman, 1982), the following predictions are made.

1 a.   That patterns of values will be the same amongst different types of psychologists when asking them to focus on psychology in general.

1 b.   That patterns of values will differ amongst different types of psychologists when asking them to focus on their specialty in psychology.

van Knippenberg and van Schie (2000) studied the importance of work-group identification (WID) relative to organisational identification (OID), and found the two to be different. This can be likened to a specialty versus general psychology. That is, the area a psychologist spends the most time on is their specialty, but they are still members of the profession of psychology. Combined with Sackmann's (1991) assertions about multiple cultures (that there can be one overarching culture co-existing with many sub-cultures), the following predictions are made.

2 a.   That patterns of identification will be the same amongst different types of psychologists when asking them to focus on psychology in general.

2 b.   That patterns of identification will differ amongst different types
        of psychologists when asking them to focus on their specialty in
        psychology.

Although this research focuses primarily on organisational culture differences as they relate to different specialties in psychology, two other areas will be touched upon, to see if differences exist.

Alvesson's (1993) work in a university psychology department showed that there were two definite subcultures coexisting within the one departmental culture. This involved the split between the more academically oriented psychologists, and the more practically oriented psychologists. Based on this, the following prediction is made:

3 a.   That patterns of values will differ between academic
        psychologists and practitioners.

When looking at identification as a psychologist, John (1985) points out major differences between academics and practitioners. The two take on different identities to suit the needs of the situation they find themselves in. For example, the need for funding in universities may lead to psychologists emphasising their identities as scientists, whereas for practitioners, the opposite can be true. For example, some practitioners bemoan the fact that a scientific knowledge base does not help students

learn effective methods of practice (Morgan, 1983, cited in John, 1985). This leads to the following prediction.

3 b. That patterns of identification will differ between academic psychologists and practitioners.

Research by Feather (1982) with medical students shows value differences between males and females, along traditional sex-role orientation lines. For this reason, differences are predicted here between males and females.

4 a. That patterns of values will differ between male and female psychologists.

McGowan and Hart (1990) suggest that developmental differences between males and females will lead to differences in professional identity formation. This leads to the following prediction.

4 b. That patterns of identification will differ between male and female psychologists.

Hernes (1997) puts forward a case for using social identity theory in the investigation of complex organisational cultures. If values (the more traditional variable

being used) and identity (a novel approach) are both assessing the same thing – culture – they should give similar results. Therefore, the following prediction is made.

     5.   That results from analysis of values and identification will give similar results.

Method

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2. Method

2.1 Participants

Participants were members of the New Zealand Psychological Society (NZPsS). All classes of membership were surveyed (member, fellow, associate fellow, subscriber, and student subscriber). As questionnaires were sent out by the NZPsS, and not the researcher, exact numbers of questionnaires sent out were not available. Approximately 750 questionnaires were sent out, and 174 were returned (96 female, 52 male, 26 missing), giving a return rate in the region of 23%. Questionnaires returned by members made up 73.6%, with student subscribers the next largest group at 14.4%. Fellows (7.5%) and associate fellows (4.0%) made up the remainder of the sample (missing data = .6%). The largest ethnic group reported was Pakeha/New Zealand European (47.1%) with a diverse range making up the remainder. Respondents reported a wide variety of primary roles, from Clinical psychologists (making up the largest single group, 29.3%), to Industrial/Organisational psychologists (7.5%), to one respondent who stated his primary role as consciousness studies. Responses from practitioners outweighed those from academics (54.6% versus 23.6% for primary role).

2.2   Procedure

An extensive consultation process was entered into with members of the NZPsS, as the survey was also intended as an exploration of the needs of the Society. An advertisement was placed in '*Connections*', the Society's newsletter, advising members of the upcoming survey, and inviting their comments on anything they felt needed to be addressed. After the initial draft of the questionnaire was completed, the Executive and Council of the Society were approached, and representatives invited to comment. After these suggestions had been incorporated, consultation with the National Standing Committee for Bi-Cultural Issues (NSCBI; a committee of the NZPsS) began. It was suggestions from this committee that were included in the Values Scale, and other parts of the survey not used in this study.

Staff at the National Office of the NZPsS sent out questionnaires to all members. A freepost envelope was provided for returning the questionnaire. An information letter was included outlining the purpose of the study, use of results, and participants' rights (see Appendix 1). A letter from the current president of the Society was also included, urging members to respond, as results would benefit the Society. Due to the anonymity of response (for ethical reasons) it was felt that this would not place inappropriate pressure on members.

A period of three months was allowed for the return of questionnaires. Reminders were placed in '*Connections*' in the months following the posting. An opportunity to pick up a copy of the questionnaire was also provided at the Society's Annual Conference, for those who may have lost their original copy, but still wanted to respond.

After the three-month period allowed, data from returned questionnaires were entered into SPSS (version 10.1) and analysed.

2.2.1 Use of a Postal Survey

A mailed questionnaire was used in this study for a number of reasons. One of the most important considerations was the geographical scattering of potential participants and the size of the population. To canvas members in any other way would have involved considerably more cost, both financially and time-wise. However, this was not the only consideration.

Participants were required to respond in an open, honest manner, giving personal opinion in some sections of the questionnaire. As these questions related to the NZPsS, and responses could potentially be derogatory towards the organisation, participants needed to be afforded total anonymity. This protected participants and reduced the chance of any response bias caused by participants responding in a socially desirable manner. The mailed questionnaire also allowed participants to take their time answering

questions, some of which may have required some deliberation (Frankfort-Nachmias & Nachmias, 1996).

One of the major drawbacks associated with the use of a postal survey is a potentially low response rate (Frankfort-Nachmias & Nachmias, 1996, Mangione, 1998, Robson, 1993). A number of techniques were employed in an attempt to maximise the response rate. The survey was supported by the respondents' professional body, as expressed in the letter from the current President of the NZPsS, which accompanied the survey. Advertisements about the upcoming survey were placed in '*Connections*', as described above. An attempt was made to keep the length of the questionnaire down, so as not to negatively affect the motivation of participants to respond. A freepost envelope (addressed to the researcher at Massey University, *not* to the NZPsS) was provided to facilitate return of the questionnaires. Follow-up reminders about the survey were place in '*Connections*', and also at the Society's Annual Conference (again, described above). All of these measures are included by Frankfort-Nachmias and Nachmias (1996) in their description of strategies for improving response rates.

2.3   Measures

2.3.1   Demographic Information

This section contained information relevant to the current study, along with some information intended for use only by the Society (see Appendix 1). Categories for

primary and secondary roles are those used in the new supervision for registration scheme. These categories were developed recently (in 2000) by the NZPsS, in collaboration with the Psychologists Board.

2.3.2 Work Values Survey

Work values were assessed using a measure derived mainly from the work done towards the Work Importance Study (WIS), involving psychologists from 17 countries, under the leadership of Donald Super (Loo & Thorpe, 2000).

The measure used in this study (see Appendix 3) included simply the 19 dominant values associated with work, rather than including a number of statements for each, as length of the questionnaire, and subsequent motivation of respondents, was of some concern in this study. Other studies done as part of the WIS have reported 20 or 21 dominant values (with a number of statements representing each dominant value; e.g. Loo & Thorpe, 2000, Šverko, 1999). However, the 19 used were chosen as they have been used with a population of social workers (Knežević, 1999), who could perhaps be expected to have somewhat similar work values.

Factor analysis of these values has produced five factors, or value orientations: Orientation towards Self-Actualisation, Individualistic Orientation, Social Orientation,

Utilitarian Orientation, and Adventurous Orientation (Šverko, 1999). Loo and Thorpe (2000), describe the five factors as Personal Achievement and Development, Social Orientation, Independence, Economic Conditions, and Physical Activity and Risk. These two versions appear to be essentially the same. A principal components analysis of data pooled from 10 countries (Australia, Belgium, Canada, Italy, Japan, Poland, Portugal, South Africa, United States, and Croatia) on 18 values also gives five factors (explaining 59.4 per cent of variance). The factors, and the values loading on them were as follows:

1. Utilitarian Orientation (Achievement, Advancement, Authority, Economics, and Prestige).

2. Orientation Toward Self Actualisation (Ability Utilisation, Personal Development, Altruism, with Achievement, Aesthetics and Creativity loading in some samples).

3. Individualistic Orientation (Lifestyle, Autonomy, with Creativity and Variety loading in some samples).

4. Social Orientation (Social Interaction, Social Relations, with Variety and Altruism loading in some samples).

5. Adventurous Orientation (Risk, with Physical Activity and Physical Prowess loading in some samples).

(Šverko, 1995).

Validity and reliability studies were carried out on a number of populations in different countries. Internal consistency was assessed for each value (three items

representing each). This is not so relevant here, as this study does not use a number of items to assess each value. However, Cronbach's alphas generally proved good internal consistency (most over .65), although some did go down as low as .32, which is of some concern (Casserly, Fitzsimmons, & Macnab, 1995, Lokan & Shears, 1995, Nevill, 1995). Test-retest reliability was also calculated in Canadian and American populations. Canadian correlations ranged from .53 to .82 for the different values, and results from the United States were mostly over .70 (Casserly et al., 1995, Nevill, 1995). Canadian populations also provided a chance to assess alternate form reliability, as versions in French and English were available. The median correlation found was .74 (range .62 to .88; Casserly et al., 1995).

Correlations with scales from Taylor's Work Quiz and Pryor's Work Aspect Preference Scale (WAPS), in Australian populations, indicate construct validity (Lokan & Shears, 1995). Casserly et al. (1995) also assert that their findings show convergent and discriminant validity for this measure, proving construct validity.

A number of items were added to make the scale more culturally relevant to the Aotearoa/New Zealand setting. A senior Maori academic at Massey University, with great mana/standing in the Maori community, was consulted, and items 2, 12, and 18 added as a result of this process. The new items were also endorsed by the NSCBI. It was deemed that these were important work values in the setting of this research, and that not having them in the scale would result in missed or incomplete information.

2.3.3 Identification Scale

The measure used was a combination of two existing identity measures (see Appendix 4). Items 1, 3, 5, 7, 9, 10, 11, 12, 13 and 14 came from Mael and Tetrick's (1992) Identification with a Psychological Group Scale (IDPG; see Appendix 5). The original scale measured organisational identification, and the wording was modified slightly to suit the purposes of the current study. The scale has two factors: perceived shared experiences (IDPG-SE, items 1, 3, 5, 7, 9, 10 in the current study) and perceived shared characteristics (IDPG-SC, items 11, 12, 13, 14). The first factor assesses the degree to which respondents feel they share in the experiences, successes, and failures of, in this case, psychology and psychologists. The second factor assesses the degree to which respondents feel they share the attributes and characteristics of a 'typical' group member. Although Mael and Tetrick (1992) do not mention how respondents rated the items, earlier versions used a 5-point Likert-type scale (Mael and Ashforth, 1992).

Internal reliability of this scale has been established in a number of studies, using a number of different populations. Mael and Ashforth (1992) report a range of alpha coefficients of .81 to .89 from a number of studies (using five and six item versions of the scale) obtained using populations such as managers, army personnel, employed business and psychology students, and college alumni (all North American populations). The six-item measure has also been used with populations in companies from Italy and Korea with similar internal reliability results (Cronbach's alpha .86; Bergami & Bagozzi, 2000). Internal reliability for the 10-item length scale was assessed using

undergraduates, with a coefficient alpha of .76 (Mael and Tetrick, 1992). Using a different sample of university students, the alpha coefficients for the two factors were .81 (IDPG-SE) and .66 (IDPG-SC). The lower internal consistency for the second factor may be explained by the fact that item 10 (14 in the current study) did not have a very high loading in the factor analysis (.19). The correlation between the two factors was .38. This same study also established discriminant validity for the IDPG, showing it to be distinct from a similar construct, organisational commitment, as measured by the Organizational Commitment Questionnaire (OCQ).

The two different versions of the identification scale used in this study differ in their focus – one focuses on the respondents' identity as a psychologist in general, and the other on the respondents' identity as a specialist. The use of two almost identical versions of the scale is modelled on previous research using the IDPG (although shorter versions). Studies have looked at organisational versus work-group identification (van Knippenberg & van Schie, 2000), and also investigated organisational versus professional identification (internal reliabilities of the two versions were .84 and .82 respectively; Mael, Waldman, & Mulqueen, 2001).

The remaining items (2, 4, 6, 8, 15, and 16) came from an Identification Scale used to assess respondents' identification with their school (Karasawa, 1995, Karasawa, 1991) (see Appendix 6). The original items were rated on a 13-point scale, from -6 to +6, using descriptors appropriate for each item. Wording of these items was modified

slightly (to make them relevant to the population used), and the rating scale reduced to a 5-point scale, as it was being mixed with IDPG. This scale also has two factors. The first four items (15, 6, 2, and 4 in the current study) assess identification with group membership, and the last two items (16 and 8) assess identification with in-group members. The statistics available relating to this scale are not as comprehensive as those for the IDPG. This scale was chosen because initial analysis suggested it would have high face validity with respondents.

In two studies by Jackson and Smith (1999), alpha coefficients for the scale were .74 and .77. For the two factors, alpha coefficients were higher for the first factor in both studies (.74 versus .53, and .76 versus .41). Convergent validity for the scale was shown by significant intercorrelation with two other group identification scales (mean r = .70). However, there was some concern over discriminant validity, as two group cohesion scales were significantly related to this and all other group identification scales studied (.42 to .78). There was also a relationship to allocentrism (.33 to .42).

2.4   Analysis

Internal consistency for each of the scales was calculated using Cronbach's Alpha. Descriptive statistics for both scale totals and items were also computed.

Z scores were used to evaluate normality of distributions, and to identify univariate outliers (as suggested by Tabachnick & Fidell, 2001). In the identification scale used, all items were distributed normally, while in the other scales, the greatest

number of items with some skew was five (Work Values Survey – Version B). As such a small number of the items were skewed, the decision was made *not* to transform any of the data. It was felt that by transforming only some of the data, and thus changing only some of the relationships in subsequent analyses, a true picture of the data would not be obtained. No univariate outliers were identified. Internal consistency of the scales was evaluated using Cronbach's Alpha. Cases with missing data in a particular scale were deleted from that analysis.

Testing of the hypotheses used Principal Components Analysis (PCA). PCA was used as a classification system in the analysis of patterns of values, identification, and beliefs. For each scale, PCAs were run on a number of different subgroups. A priori criteria were used in the decision of how many factors to extract in each case (specific details in Results section). In cases where there was more than one version of the scale, both were analysed. The resultant factors for different subgroups were compared with each other to identify any differences in patterns. In the interpretation of results, a general principle was adopted of suppressing items loading around .3 or less, as this is the minimal level acceptable for practical significance (Hair, Anderson, Tatham & Black, 1998). In this research, we were not interested in differences between scale totals, but in the *patterns* of values and identification.

Results

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3. Results

3.1 Initial Analyses

3.1.1 Internal consistency

Internal consistency of the scales ranged from .62 to .88[1], evaluated using Cronbach's Alpha (see Table 1). These are all above the lower limit deemed acceptable (.60; Hair, Anderson, Tatham & Black, 1998).

Table 1.
Internal consistency (Cronbach's Alpha) for each scale

Scale	N	α
Work Values Survey – A	157	.88
Work Values Survey – B	154	.85
Identification with a Psychological Group – A	152	.67
Identification with a Psychological Group – B	146	.71
Identification Scale – A	160	.62
Identification Scale – B	154	.64

3.1.2 Descriptive Statistics

3.1.2.1 Work Values Survey

In both versions of the Work Values Survey (WVS), the five values rated the highest, and the five rated the lowest, were the same (although in a slightly different order; see Appendix 7). The five values rated most important by psychologists were Commitment, Ability Utilization, Altruism, Autonomy, and Achievement. The five values rated least important were Physical Activity, Aesthetics, Risk, Prestige, and

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[1] As explained in 3.3.1, the Identification Scale (Karasawa, 1991) is not used in hypothesis testing. This means that the range of internal consistencies for the scales used in hypothesis testing is .67 to .88.

Authority. This suggests initially little difference between the values psychologists hold about psychology in general and their specialty in psychology.

3.1.2.2 Identification with a Psychological Group

In the Identification with a Psychological Group (IDPG) scale, the two items rated the lowest remained the same across the two versions (see Appendix 8). However, the two items rated the highest changed. Psychologists disagreed most often with the statement "I act like a typical psychologist to a great extent" (item 6), and then with "When someone criticises psychologists, it feels like a personal insult" (item 1). In version A (general psychology) the item most often agreed with was "I don't act like a typical psychologist" (item 8), followed by "I have a number of qualities typical of psychologists" (item 9). In the version A (specialty in psychology), item 9 was agreed with most often, followed by "I'm very interested in what others think about psychologists" (item 2). It is interesting to note here that item 8 falls much further down the list (from 1st to 5th), suggesting people are less likely to disagree with acting like a psychologist in general, than acting like a psychologist of their particular specialty.

3.1.2.3 Identification Scale

In the Identification Scale (Karasawa, 1991), the two items rated both top and bottom were the same over both versions of the scale, in the same order (see Appendix 9). Most often agreed with were the statements "I often acknowledge the fact that I am a psychologist" (item 2), followed by "There are many psychologists who influence my thoughts and behaviour" (item 5). Most often disagreed with was "Most of my friends

are psychologists" (item 6), followed by "I feel good if I am described as a typical psychologist" (item 3).

3.2   Values

3.2.1   Analysis

For each analysis, five factors were extracted, in accordance with results from the Work Importance Study (e.g. Knežević, 1999, see Method section). Although three items had been added to this scale, they would not be expected to form an independent factor, and in fact did not when six factors were extracted. For these reasons, only the original number (five) of factors was extracted. An orthogonal (varimax) rotation was employed, as the analytical procedures used in orthogonal rotations are better developed than those used in oblique rotations, which are still subject to some controversy (Hair et al., 1998).

3.2.2   Specialties – Clinical and Others

This comparison used both versions of the Work Values Survey

3.2.2.1 Work Values Survey – Version A

This version of the WVS asked respondents to indicate values they felt influenced their decisions to become a psychologist, in general (see Appendix 3). It was hypothesized that when looking at different specialties, values for this version would be the same – that is, there would be an overarching culture of psychology. Due to small

numbers of respondents, only the clinical specialty contained sufficient numbers to perform a Principal Components Analysis (PCA). Therefore, all other specialties were combined into one group – 'others' – and compared with clinical psychologists (Clinical N = 46, Others N = 111). The following PCAs, displayed in Table 2[1], show that patterns of values were not identical for the two groups, although there were a number of similarities.

Table 2.
Factor loadings for specialty groups (clinical versus others) on the WVSA

	1		2		3		4		5	
	C	O	C	O	C	O	C	O	C	O
Advancement	.82	.76								
Economics	.72	.79								
Prestige	.71						.77			
Authority	.53						.83			
Achievement	.50									.53
Being useful	.49									.56
Risk			.73	.78						
Physical activity			.72	.75						
Cultural Ability Utilization			.72	.63						
Aesthetics			.61	.73						
Working conditions		.76	.53							
Creativity					.80	.58				
Autonomy					.79	.73				
Participation in decisions				.63	.56					
Variety					.52	.70				
Social interaction							.83			.50
Life-style						.66	.65			
Personal Development							-.55			.36
Ability Utilization							-.50			.55
Social relations							.48			.48
Commitment									.86	.79
Altruism									.82	.81
Variance Explained (%)	22.8	6.4	11.4	10.9	11.1	8.6	9.0	31.8	8.5	5.3

WVSA = Work Values Survey – Version A, C = Clinical group (KMO = .49, variance explained = 62.7%), O = Others group (KMO = .80, variance explained = 63.0%)

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[1] In all tables containing results of PCA analyses comparing two groups, factors are sorted according to the group displayed in the left of the two columns. This choice is arbitrary. If any item loaded over .5 on more than one factor, both loadings are displayed. Loadings in bold are the highest loadings. The variance explained by each factor is also included. KMO-MSA figures are also included in each table. All these figures, except for one (.49, see Table 2), are .5 or over, indicating appropriateness for factor analysis (Hair et al., 1998).

Factor 1   Economics and Advancement are the defining values for this factor in both groups. This factor appears to represent values relating to one's status as a psychologist, things that the profession will bestow upon its members. In the clinical group, Authority and Prestige also load strongly. It is interesting to note here that Authority and Prestige make up an independent factor in the 'others' group.

Factor 2   Risk and Physical Activity are the defining values for this factor in both groups. The two groups also have Aesthetics and Cultural ability utilization in common here. The mean responses to all of these values are ranked very low out of the 22 values looked at (Risk, Aesthetics, and Physical Activity are ranked lowest), which indicates that this factor may represent values that are not important to those choosing psychology as a career. This seems sensible, as the profession does not afford much opportunity for physical activity, and risk tends to be minimal.

Factor 3   In this factor, Autonomy, Creativity, and Variety appear in both groups. This factor seems to represent values that relate to role activities as a psychologist. These could be construed as aspects of the job relating to job satisfaction. As Life-style also loads for the others group, these job satisfaction values can also be seen to relate to life satisfaction.

Factor 4   This factor is entirely different for each of the two groups. The clinical factor is defined by Social interaction, while the others factor contains Prestige and Authority (found in factor 1 in clinical).

A) Clinical group: the values loading on this factor can mostly be found in factor 5 in the others group. The values here appear to represent aspects of the occupation relating to life-style – that is, values such as social interaction and social relations are positively related to life satisfaction. Interestingly, Personal development and Ability utilization load negatively. This could perhaps be explained by the fact that high personal development and ability utilization are associated with a high workload, which impacts negatively on life-style.

B) Others group: this factor suggests that Authority and Prestige are not related to Economics and Advancement as they are for clinicians. An example that illustrates this is I/O psychologists. These psychologists are often highly paid, but they do not necessarily receive recognition as *psychologists* as such, due to the areas they work in. For example, they may be employed in the Human Resources field, and often be seen as managers rather than psychologists.

Factor 5   This factor has quite a number of different values loading in the others group, although Commitment and Altruism define the factor for both groups. This factor seems to represent values that psychologists deem very important, as, apart from the social values, all other values loading here are ranked 8th or above by psychologists.   The fact that

Commitment and Altruism load alone for clinicians suggests that they hold a special importance.

3.2.2.2 Work Values Survey – Version B

This version of the WVS asked respondents to indicate values they felt influenced their decisions to choose their specialty in psychology (see Appendix 3). It was hypothesized that when looking at different specialties, values for this version would be different – that is, there would be subcultures within the discipline of psychology. Due to small numbers of respondents, only the clinical specialty contained sufficient numbers to perform a Principal Components Analysis. Therefore, all other specialties were combined into one group – 'others' – and compared with clinical psychologists (Clinical N = 47, Others N = 107). The following PCAs, displayed in Table 3, show that, although there were again some similarities in patterns of values, there was much more difference here than in version A.

Factor 1   Achievement and Ability utilization define this factor in both groups. Participation in decisions also features in both groups on this factor. However, other values present in this factor for each group are different, loading onto a number of different factors in the opposite group. This factor seems to represent job activities to a certain extent, though more so for clinicians.

Factor 2   Physical activity, Risk and Cultural ability utilization appear in both groups on this factor. However, the strongest loading values are different for each – Cultural ability utilization and personal development for

clinicians, and Physical activity and Aesthetics for others. This factor is similar to factor 2 in version A (unimportant values), although more so for the others group. It is interesting to note that Personal development and Economics load on this factor for clinicians, indicating that these values are not important to them in choosing their specialty.

Table 3.

Factor loadings for specialty groups (clinical versus others) on the WVSB

	1		2		3		4		5	
	C	O	C	O	C	O	C	O	C	O
Ability Utilization	.75	.67								
Achievement	.73	.69								
Creativity	.72							.63		
Autonomy	.69							.71		
Participation in decisions	.66	.46								
Prestige	.35									.83
Cultural Ability Utilization			.78	.51						
Personal Development		.40	.66							
Physical activity			.63	.83						
Risk			.56	.67						
Economics			.44							.65
Social interaction					.81	.78				
Social relations					.77	.77				
Authority					.74					.71
Advancement					.41					.71
Life-style							.87	.59		
Working conditions				.52			.64			.51
Variety							.61	.72		
Aesthetics				.77			.60			
Commitment		.57		.56					.82	
Altruism						.54			.81	
Being useful									.76	.50
Variance Explained (%)	21.8	8.6	12.5	9.6	11.2	5.5	8.5	7.6	8.0	28.2

WVSB = Work Values Survey – Version B, C = Clinical group (KMO = .50, variance explained = 61.9%), O = Others group (KMO = .78, variance explained = 59.5%)

Factor 3   Social interaction and Social relations define this factor in both groups. However, the other values loading for each group give quite a different

picture. Authority and Advancement are related to these social values for clinicians. This makes sense in that their social interactions are with clients, over whom they naturally have some degree of authority. It is also their ability in these social interactions that leads to advancement in their careers. For others, Altruism is related to the social values.

Factor 4   This factor is identical to factor 3 in version A in the others group, although there are changes to the size of the loadings, and the order of magnitude the values follow. In the clinical group, Life-style and Variety also feature, but they are related to Working conditions and Aesthetics. This factor represents a job/life satisfaction orientation in both groups, even though the values are somewhat different.

Factor 5   The final factor for the two groups is entirely different.

A) Clinical: Commitment, Altruism, and Being useful make up the final factor for the clinical group. This factor seems to represent the clinicians' orientation towards clients, which would be expected to be different from many of the other specialties.

B) Others: Prestige, Authority, Advancement, Economics, and Being useful all feature here. This is very similar to the status as a psychologist factor (factor 1) in version A. It is interesting to note that Being useful loads onto this factor in both groups, although they really are very different factors. One interpretation might be that the other values

associated with this in the others group is what allows them to be useful to others.

3.2.3 Role – Academic and Practitioner

Version A of the WVS was used to assess differences between academics and practitioners (see Appendix 3), as version B was specifically aimed at specialties. Principal Components Analyses were run for both groups, extracting 5 factors. It was hypothesized that there would be some differences in value patterns as these are two quite different roles within the profession (Academic N = 34, Practitioner N = 88). The following PCAs (see Table 4) show there is some difference between these two groups in patterns of values.

Factor 1   This first factor is defined by Commitment and Altruism. In the practitioner group, these two values stand alone, suggesting they are important on their own. However, in the academic group, a large number of other values are associated. This suggests that these values may be important to academics, but only in association with a host of other values.

Factor 2   Aesthetics, Risk, and Physical activity define this factor for both groups. Cultural ability utilization also loads onto this factor in both groups. This again seems to be a conglomerate of values of little importance to psychologists. It is interesting, however, that Participation in decisions and Being useful also load onto this factor in the practitioner group. These two values do not seem to fit with the others.

Table 4.
Factor loadings for role groups (academic versus practitioner) on the WVSA

	1		2		3		4		5	
	A	P	A	P	A	P	A	P	A	P
Altruism	.75	.85								
Commitment	.75	.78								
Being useful	.70			.45						
Ability Utilization	.66							.70		
Achievement	.63							.43		
Personal Development	.62					.39				
Participation in decisions	.56			.55						
Risk			.88	.71						
Physical activity			.87	.71						
Aesthetics			.82	.74						
Cultural Ability Utilization			.59	.56						
Prestige					.86					.58
Economics					.77	.82				
Advancement					.71	.85				
Working conditions					.64	.57				
Authority					.56					.50
Creativity							.76	.74		
Autonomy							.75	.71		
Variety							.72	.51		.51
Social interaction									.86	.63
Social relations									.80	.67
Life-style							.57		.61	.61
Variance Explained (%)	37.8	6.6	13.8	24.3	8.2	10.9	7.9	8.7	5.8	7.7

WVSA = Work Values Survey – Version A, A = Academic group (KMO = .69, variance explained = 73.5%), P = Practitioner group (KMO = .63, variance explained = 58.2%)

Factor 3   Economics, Advancement, and Working conditions all load fairly highly on this factor in both groups. Prestige and Authority are associated with these values for academics, whereas Personal development is included in this factor for practitioners. This again seems to be a factor relating to status as a psychologist.

Factor 4   Creativity and Autonomy define this factor in both groups. Ability utilization and Achievement also load here for practitioners, while they loaded onto factor 1 for academics. This appears to be a job satisfaction factor, associated with job activities.

Factor 5   Social interaction, Social relations and Life-style all define this factor in both groups. Three additional values load in the practitioner group (Prestige, Variety, and Authority). This represents a life satisfaction factor, with the social aspects of being a psychologist related to life-style.

3.2.4   Sex – Male and Female

Version A of the WVS was used to assess differences between males and females (see Appendix 3), as version B was specifically aimed at specialties. Principal Components Analyses were run for both groups, extracting five factors. It was hypothesized that there would be some differences in value patterns as previous research indicates some gender differences in values (Male $N = 48$, Female $N = 87$). The following PCAs (see Table 5) are quite different.

Factor 1   Commitment and Altruism define this factor for both groups. However, it is the other values that load for each group that make this factor interesting. For males, Social interaction and Social relations are associated with the two defining values. This represents a holistic view of the profession. Ability utilization, Personal development, and Achievement load onto this factor in the female group. This reflects an

emphasis on more specific aspects of the job, as opposed to the holistic view of males.

Factor 2   Although the two groups have Autonomy and Variety in common, these appear to be two quite different factors. The other values loading in the male group appear to relate to job activities, suggesting this is a job satisfaction factor for males. The other values loading in the female group, although also relating to job activities to some degree, are associated with Life-style, suggesting this is a life satisfaction factor for females.

Table 5.
Factor loadings for sex groups (male versus female) on the WVSA

	1		2		3		4		5	
	M	F	M	F	M	F	M	F	M	F
Altruism	.85	.71								
Commitment	.85	.72								
Social relations	.77		.50							
Social interaction	.74		.60							
Ability Utilization		.65	.75							
Autonomy			.70	.64						
Creativity		.34	.69			.38				
Achievement		.53	.58							
Variety			.58	.59						
Participation in decisions			.58			.69				
Physical activity					.80	.74				
Risk					.71	.81				
Aesthetics					.68	.71				
Cultural Ability Utilization					.66	.68				
Being useful					.43					.51
Working conditions							.81	.60		
Economics						.52	.72	.78		
Advancement							.66	.69		
Life-style				.80			.36			
Prestige									.79	.65
Authority									.77	.77
Personal Development		.61							.51	
Variance Explained (%)	27.9	9.8	13.4	8.6	8.3	27.5	7.9	8.4	6.6	6.2

WVSA = Work Values Survey – Version A, M = Male group (KMO = .62, variance explained = 64.2%), F = Female group (KMO = .74, variance explained = 60.5%)

Factor 3   Physical activity, Risk, and Aesthetics define this factor for both groups, with Cultural ability utilization also loading in both groups. Being useful is associated with these values in males, which suggests that this value is not very important to males in their decisions to become psychologists. For females, Participation in decisions and Creativity also load. It is interesting that Creativity is grouped with these other values that seem unimportant. Economics also loads above .50 here for females, although its major loading is in factor 4. This suggests that, to some extent, economic considerations are not important to females.

Factor 4   Economics, Advancement, and Working conditions load onto this factor in both groups. These values are associated with Life-style in males, suggesting that the aspects of the job that they derive their life satisfaction from are 'reward' type values.

Factor 5   Prestige and Authority define this factor for both groups, but again, it is interesting to look at the other values each group associates with these. Personal development loads onto this factor for males, suggesting that these 'power' values are associated more with personal motives. In females, Being useful is associated with these values, suggesting that these 'power' values are associated more with altruistic motives in females. That is, having prestige and authority allow females to be useful to others, while they allow males to develop personally.

3.3   Identification

3.3.1   Analysis

Items in the Identification Scale (see Appendix 4) came from two sources – Mael and Tetrick's (1992) Identification with a Psychological Group (IDPG; see Appendix 5), and Karasawa's (1991) Identification Scale (see Appendix 6).   An initial PCA was performed to see if the two factors identified in each of these scales were similar – that is, did a PCA reveal just two factors in the combined scale.   This analysis showed that the two were in fact quite dissimilar, and so the two original scales were treated separately.

IDGP – In these analyses, two factors were extracted in accordance with previous results using this scale (e.g. Mael & Tetrick, 1992, see Method section).   Both orthogonal (varimax) and oblique (oblimin) rotations were run, as the two factors might be expected to have some degree of correlation.   As there was no meaningful difference between the two results, the varimax results were used.   As already stated (3.2.1) the analytical procedures used in orthogonal rotations are better developed than those used in oblique rotations, which are still subject to some controversy (Hair et al., 1998).

Identification Scale   – In these analyses, two factors were extracted in accordance with previous results using this scale (e.g. Karasawa, 1991, see Method section). Both orthogonal (varimax) and oblique (oblimin) rotations were run, as the two factors might be expected to have some degree of correlation.   There was no meaningful difference between the two results.   Unfortunately, the results showed that this

Identification scale was not factorable in any meaningful way. Scree plots showed a continual slope, rather than levelling off at any point, suggesting that the respondents in this research treated the items as separate, rather than as any sort of cohesive set. Because of this, only results from the IDPG items were interpreted and reported here.

3.3.2 Specialties – Clinical and Others

This comparison used both versions of the IDPG

3.3.2.1 IDPG – Version A

This version of the IDPG Scale asked respondents to indicate how strongly they identified with being a psychologist, in general (see Appendix 5). It was hypothesized that when looking at different specialties, patterns of identification for this version would be the same – that is, there would be an overarching culture of psychology. Due to small numbers of respondents, only the clinical specialty contained sufficient numbers to perform a Principal Components Analysis. Therefore, all other specialties were combined into one group – 'others' – and compared with clinical psychologists (Clinical N = 48, Others = 104). The following PCAs (see Table 6) show that patterns of identification were almost identical for the two groups.

Factor 1   "When someone criticizes psychologists it feels like a personal insult" (item 1) and "If a story in the media criticized psychologists, I would feel embarrassed" (item 7), are the two defining items for this factor, in both groups. This factor contains items that correspond to respondents'

feelings about being a psychologist. These items are more emotive than others. "When I talk about psychologists, I usually say 'we' rather than 'they'" (item 3) loads here for clinicians.

Factor 2   "I have a number of qualities typical of psychologists" (item 9) and "I act like a typical psychologist to a great extent" (item 6) define this factor. This factor contains items that correspond to respondents' attributes or behaviour as a psychologist. "When I talk about psychologists, I usually say 'we' rather than 'they'" (item 3) loads here for others.

Table 6.
Factor loadings for specialty groups (clinical versus others) on the IDPGA

	1		2	
	C	O	C	O
1. When someone criticises psychologists, it feels like a personal insult	.81	.78		
7. If a story in the media criticised psychologists, I would feel embarrassed	.67	.81		
2. I'm very interested in what others think about psychologists	.65	.50		
4. Psychologists' successes are my successes	.61	.50		
5. When someone praises psychologists, it feels like a personal compliment	.55	.76		
3. When I talk about psychologists, I usually say 'we' rather than 'they'	.33			.54
9. I have a number of qualities typical of psychologists			.82	.70
6. I act like a typical psychologist to a great extent			.73	.76
10. The limitations associated with psychologists apply to me also			.49	.58
8. I don't act like a typical psychologist			-.46	-.70
Variance Explained (%)	29.5	15.3	16.8	33.7

IDPGA = Identification with a Psychological Group – Version A, C = Clinical group (KMO = .62, variance explained = 46.3%),
O = Others group (KMO = .72, variance explained = 49.0%)

3.3.2.2 IDPG – Version B

This version of the Identification Scale asked respondents to indicate how strongly they identified with being a psychologist, with reference to their specialty (see Appendix 5). It was hypothesized that when looking at different specialties, patterns of identification for this version would be different – that is, there would be subcultures within the discipline of psychology. Due to small numbers of respondents, only the clinical specialty contained sufficient numbers to perform a Principal Components Analysis. Therefore, all other specialties were combined into one group – 'others' – and compared with clinical psychologists (Clinical N = 48, Others N = 98). The following PCAs (see Table 7) show that patterns of identification, although not *very* different, were more different than version A of the IDPG.

Factor 1   In the clinical group, factors are essentially the same as in the first version, but items on factor 1 in version A become factor 2 here, and vice versa. The items loading onto this factor remain the same (except that item 3 no longer loads above .3 on either factor), although the size of the loadings, and the order of magnitude for each changes. "I act like a typical psychologist to a great extent" (item 6) and "I have a number of qualities typical of psychologists" (item 9) define the factor for clinicians. There are much bigger differences for the others group. Items 9 and 10 (attributes of psychologists) no longer load with this factor, meaning this is almost a purely behavioural factor for the others group. "I don't act like a typical psychologist" (item 8) and "I act like a typical psychologist to a great extent" (item 6) define the factor for the others group.

Table 7.
Factor loadings for specialty groups (clinical versus others) on the IDPGB

	1		2	
	C	O	C	O
6. I act like a typical psychologist to a great extent	.89	.74		
9. I have a number of qualities typical of psychologists	.82			.62
8. I don't act like a typical psychologist	-.78	-.88		
10. The limitations associated with psychologists apply to me also	.48			.48
5. When someone praises psychologists, it feels like a personal compliment			.76	.79
7. If a story in the media criticised psychologists, I would feel embarrassed			.72	.82
4. Psychologists' successes are my successes			.71	.61
1. When someone criticises psychologists, it feels like a personal insult			.65	.71
2. I'm very interested in what others think about psychologists			.55	.64
3. When I talk about psychologists, I usually say 'we' rather than 'they'		.41		
Variance Explained (%)	31.9	11.6	17.9	42.3

IDPGB = Identification with a Psychological Group – Version B, C = Clinical group (KMO = .62, variance explained = 49.7%), O = Others group (KMO = .77, variance explained = 53.9%)

Factor 2   Again, this factor is identical to version A for clinicians, but different for others, as described in factor 1. "When someone praises psychologists it feels like a personal compliment" (item 5) and "Psychologists' success are my successes" (item 4) define the factor for clinicians. This more emotive factor now also contains items pertaining to the attributes of psychologists for the others group. "If a story in the media criticized psychologists, I would feel embarrassed" (item 7) and "When someone

praises psychologists it feels like a personal compliment" (item 5) define the factor for the others group.

3.2.3 Role – Academic and Practitioner

Version A of the IDPG was used to assess differences between academics and practitioners (see Appendix 5), as version B was specifically aimed at specialties. Principal Components Analyses were run for both groups, extracting two factors. It was hypothesized that there would be some differences in identification patterns as these are two quite different roles within the profession (Academic $N = 32$, Practitioner $N = 85$). The resulting PCAs (see Table 8) show there is some difference between the two groups, although it is not large.

Factor 1   In the Practitioner group, this represents the attribute items and behavioural statements. The two behavioural items ("I act like a typical psychologist to a great extent" (item 6) and "I don't act like a typical psychologist" (item 8)) define the factor for the practitioners. However, in the Academic group, some of the more emotive statements also load. The two attribute items (9"I have a number of qualities typical of psychologists" (item 9) and "The limitations associated with psychologists apply to me also" (item 10)) define this factor for the academics. "Psychologists' successes are my successes" (item 4) also personal compliment"), which tend to load on the other factor in other analyses, load here for academics. They represent positive feelings about being a psychologist (they refer to mutual success and compliments).

Table 8.
Factor loadings for role groups (academic versus practitioner) on the IDPGA

	1		2	
	A	P	A	P
9. I have a number of qualities typical of psychologists	.77	.61		
10. The limitations associated with psychologists apply to me also	.75	.52		
4. Psychologists' successes are my successes	.74			.65
6. I act like a typical psychologist to a great extent	.71	.78		
5. When someone praises psychologists, it feels like a personal compliment	.67			.74
8. I don't act like a typical psychologist	-.62	-.71		
3. When I talk about psychologists, I usually say 'we' rather than 'they'	.49	.35		
2. I'm very interested in what others think about psychologists			.83	.46
1. When someone criticises psychologists, it feels like a personal insult			.69	.81
7. If a story in the media criticised psychologists, I would feel embarrassed			.50	.82
Variance Explained (%)	41.0	15.6	14.4	30.4

IDPGA = Identification with a Psychological Group – Version A, A = Academic group (KMO = .70, variance explained = 55.4%),
P = Practitioner group (KMO = .78, variance explained = 45.9%)

has a high loading. Items 4 and 5 ("When someone praises psychologists, it feels like a

Factor 2   This factor represents the more emotive items in the Practitioner group. "When someone criticizes psychologists, it feels like a personal insult" (item 1) and "If a story in the media criticized psychologists, I would feel embarrassed" (item 7) define the factor for practitioners. In the Academic group, the items loading are also emotive statements, although fewer, as explained in factor 1. "I'm very interested in what others think

about psychologists" (item 2) defines this factor for academics. Two main points render these factors quite different for academics and practitioners. Firstly, items 4 and 5 load onto different factors. Secondly, the defining statement for academics in factor 2 is not one of the more emotive ones. Therefore, in this case it is not some much *how many* items that load differently that show a difference between academics and practitioners, but *which* items load differently.

3.3.4   Sex – Male and Female

Version A of the IDPG was used to assess differences between males and females (see Appendix 5), as version B was specifically aimed at specialties. Principal Components Analyses were run for both groups, extracting two factors. It was hypothesized that there would be some differences in identification patterns as previous research indicates some gender differences in values (Male $N = 45$, Female $N = 88$). The resulting PCAs (see Table 9) show little differences.

Factor 1   In the male group, a very similar pattern emerges to that seen in version A of the specialties and roles analyses (emotive items). "When someone praises psychologists, it feels like a personal compliment" (item 5) and "Psychologists' successes are my successes" (item 4) define this item for males. The female group is not a lot different, although two of the items in the male group ("When I talk about psychologists, I usually say 'we' rather than 'they'" (item 3) and "Psychologists' successes are my

successes" (item 4)) load on the second factor for the females. "If a story in the media criticized psychologists, I would feel embarrassed" (item 7) and "When someone criticizes psychologists, it feels like a personal insult" (item 1) define the factor for females.

Table 9.
Factor loadings for sex groups (male versus female) on the IDPGA

	1		2	
	M	F	M	F
5. When someone praises psychologists, it feels like a personal compliment	.85	.70		
4. Psychologists' successes are my successes	.75			.50
1. When someone criticises psychologists, it feels like a personal insult	.72	.77		
7. If a story in the media criticised psychologists, I would feel embarrassed	.71	.80		
2. I'm very interested in what others think about psychologists	.43	.62		
3. When I talk about psychologists, I usually say 'we' rather than 'they'	.39			.49
6. I act like a typical psychologist to a great extent			.83	.79
8. I don't act like a typical psychologist			-.70	-.67
10. The limitations associated with psychologists apply to me also			.62	.52
9. I have a number of qualities typical of psychologists			.55	.71
Variance Explained (%)	30.8	16.5	17.1	32.9

IDPGA = Identification with a Psychological Group – Version A, M = Male group (KMO = .64, variance explained = 47.9%), F = Female group (KMO = .71, variance explained = 49.4%)

Factor 2   Again, the male group shows the pattern of values displayed in version A of the specialties and roles analyses (attributes and behavioural items). "I

act like a typical psychologist to a great extent" (item 6) and "I don't act like a typical psychologist" (item 8) define the factor for males. As already said, in the female group, items 3 and 4 load here. "I act like a typical psychologist to a great extent" (item 6) and "I have a number of qualities typical of psychologists" (item 9) define the factor for females.

3.4 Comparisons

The comparison of results obtained when analyzing values as opposed to identification shows some similarity, but they are by no means identical. As this is a matter for interpretation rather than statistical testing, this will be talked about in detail in the Discussion.

Discussion

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4. Discussion

4.1 Summary of Findings

4.1.1 Values

In agreement with Sackmann's (1991) multiple cultures approach, the hypotheses that patterns of values will be the same amongst different types of psychologists when asking them to focus on psychology in general, and that patterns of values will differ amongst different types of psychologists when asking them to focus on their specialty in psychology, were given some support by the results. Examination of PCAs of the WVSA and WVSB showed that there were more differences found between the two groups ("clinical" and "others") when asking respondents to focus on their specialty, than when asking them to consider psychology in general. That is, although there were some differences in the WVSA between clinicians and others, these were not so notable as the differences apparent when comparing clinicians and others on the WVSB. When this result is considered in combination with the view that values are the core of organisational culture (Peters and Waterman, 1982), and a large component of occupational culture (Hofstede, 2001), this suggests that there is an overarching culture in New Zealand psychology, coexisting with at least one set of subcultures. The overarching culture is characterised by factors of values representing: very important values, such as Commitment and Altruism; unimportant values, such as Risk and

Physical Activity; values relating to job activities such as Autonomy, Variety, and Creativity; and values relating to one's status as a psychologist, or what the profession can bestow upon members, such as Advancement and Economics.

Looking at the subcultures of clinicians and others, there are only two factors where the defining values are the same: one factor is a job activity factor, with values such as Ability utilization and Achievement, and the other is a factor defined by the two social values, Social interaction and Social relations. What was a factor relating to values that are unimportant to psychologists remains similar in the others group, but changes markedly for clinicians, to include values such as Personal development and Economics. Another striking difference is the disappearance of the status factor for clinicians, although it appears in the others group, including values such as Prestige, Authority and Advancement. A factor that appears only for clinicians combines Commitment, Altruism, and Being Useful.

When comparing value patterns of academics and practitioners in psychology, Alvesson's (1993) study of a university psychology department suggested that the two would form different subcultures. Again referring to the idea that values are a large component of culture, the prediction was made that these two groups would have different patterns of values. The factor structures produced showed a number of differences between the two groups, although not nearly so obviously as the differences between specialties. This suggests that although the results certainly do not refute the hypothesis, support for it is only tentative. One interesting difference is in the factor representing values that are unimportant to psychologists. Although the factor is quite

similar in both groups, Participation in decisions and Being useful load onto this factor for practitioners. It is unclear why practitioners should associate these two values with the others in this factor. As practitioners could conceivably be said to spend more time in the business of helping others (in whatever field that may be) than academics, it seems particularly strange that Being useful loads here. Another difference worth noting is in the factor that appears to represent those values relating to life-style or life satisfaction. In academics, the two social values are positively associated with life-style. This is also true of practitioners, but the fact the Prestige and Authority also load here leads to somewhat of a different interpretation. It is more likely in fact that these two values are associated with this factor by their relationship to the social values, rather than life-style. This makes sense particularly when considering practitioners in the clinical and counseling areas, where their social interactions are with clients, over whom they naturally have some degree of authority. In fact, a similar factor does appear in the clinical group, suggesting these two may be linked (see Factor 3, section 3.2.2.2).

When comparing the sexes, it was hypothesised that patterns of values would differ between male and female psychologists (4a). This is a result both of the assertions about multiple cultures, and Feather's (1982) study of medical students concluded that males and females place an emphasis on different values in their decision to pursue a medical career. The current study asked a very similar question, but to psychologists rather than medics. The differences in value patterns between males and females were striking, even in cases where the same values defined a factor. Again, this

result supports the existence of subcultures in psychology. One particularly interesting difference is in the factor defined by Authority and Prestige. In the male group, these two values are associated with Personal development, suggesting that these two 'power' values are associated with more personal motives. However, in the female group, they are associated with Being useful, suggesting that Authority and Prestige are related to more altruistic motives. This implies that having prestige and authority allow females to be useful to others, while they allow males to develop personally. Another place where a subtle but important difference occurs is in what has traditionally been the status factor in the previous analyses within this study. Both males and females associated Economics, Advancement, and Working conditions, but males also associated life-style. This suggests that the aspects of the job that they derive their life satisfaction from are 'reward' type values. In the female group, life-style was associated with the social values, as well as some job activity values. This shows two very different areas of the profession from which males and females derive life satisfaction.

4.1.2 Identification

Results from the Identification Scale (Karasawa, 1991) relating to the hypotheses did not prove to be of use. Previous research (Karasawa, 1991) identified two factors in this scale. As was explained in the Results section, this scale was not factorable in this study. An examination of the scree plots generated showed that they had a continual slope, rather than levelling off at any point, which is usual in a Principal Components Analysis of a factorable scale. This suggests that respondents did not associate these

items together in any meaningful way, or alternatively, that they identified in terms of all these items, independently from each other. As such, results from the identification scale discussed only refer to the IDPG scale.

van Knippenberg and van Schie's (2000) study of work-group identification (WID) relative to organisational identification (OID) showed that the two are different, and both exist to certain extents in an organisation. Applying this to the profession of psychology (OID) and specialties within psychology (WID), it was hypothesised that patterns of identification will be the same amongst different types of psychologists when asking them to focus on psychology in general, and that patterns of identification will differ amongst different types of psychologists when asking them to focus on their specialty in psychology. Factor structures for version A of the IDPG, comparing a clinical and other group, were almost identical (only one item difference). The first factor represented an emotive factor, which included a lot of statements regarding how psychologists felt about psychology and psychologists. Examples of these include "When someone criticizes psychologists it feels like a personal insult" and "If a story in the media criticized psychologists, I would feel embarrassed". The second factor represented behavioural items, and items about attributes of psychologists, such as "I have a number of qualities typical of psychologists" and "I act like a typical psychologist to a great extent". Only Item 3 swapped between the two groups - "When I talk about psychologists, I usually say 'we' rather than 'they'". This can be explained by the fact that this statement could conceivably be viewed as either emotive or behavioural. However, when looking at results from version B of the IDPG, more

differences were found (three items different). Here the differences lay in the others group. The statements relating to attributes of psychologists ("I have a number of qualities typical of psychologists" and "The limitations associated with psychologists apply to me also") were associated with the emotive factor, leaving a small, behavioural factor ("I don't act like a typical psychologist" and "I act like a typical psychologist to a great extent", with "When I talk about psychologists, I usually say 'we' rather than 'they'").

One interesting thing to note here is that the factor structure was the same for clinicians in both versions of the scale. This suggests that clinical psychologists identify in the same way whether they consider themselves as a psychologist in general, or as a clinical psychologist. Following Hernes' (1997) assertions that social identity can be used to study culture, these results go some way to supporting the view that there can be one overarching culture in psychology (general) as well as different subgroups (specialty). However, the differences between these two versions are not so striking as for values, so only a tentative conclusion can be drawn.

Investigation of the identity of the psychologist showed that there are major differences in the way the academics and practitioners identify as psychologists (John, 1985). This led to the hypothesis that patterns of identification would differ between academics and practitioners, which was supported by the analysis of the IDPG. Although only a small number of items loaded differently when comparing patterns of identification between academics and practitioners, examining these differences does suggest some notable differences. The pattern of identification remained the same as

that obtained when investigating the existence of an overarching culture. However, for academics it was quite different. Two of the more emotive items ("Psychologists' successes are my successes" and "When someone praises psychologists, it feels like a personal compliment") moved to load with the behavioural/attribute factor. The fact that one of the less emotive items defined the second factor ("I'm very interested in what others think about psychologists") suggests that we may tentatively conclude that the two groups are, in fact, different in their pattern of identification.

Research into professional identity formation has suggested that developmental differences between males and females will lead to differences in professional identity formation (McGowan & Hart, 1990). Therefore, it was hypothesised that patterns of identification would differ between male and female psychologists. The comparison of factor structures between males and females on the IDPG showed little differences. Although the number of items that were different is the same as for the comparison of academics and practitioners, it is *which* items they are which lead to the conclusion that there is little difference between males and females. One of the items is Item 3 ("When I talk about psychologists, I usually say 'we' rather than 'they'"), which, as already explained, could conceivably be viewed as either emotive or behavioural, and so load on either factor. The second item of difference is Item 4 ("Psychologists' successes are my successes"), which is certainly more emotive in nature. However, with only one item that really discriminates the two factor patterns, the conclusion that there is no real difference in the identification patterns of males and females was drawn, and the hypothesis rejected.

4.1.3   Comparison of Values and Identification Results

Comparing the results of analyses involving values and identification with different groups tests the hypothesis that results of analysis from values and identification will give similar results (5).

When looking at specialty groups versus psychology in general, both the assessment of patterns of values and identification gave similar results.   Factor structures of clinicians and other psychologists were more similar in version A of the Work Values Survey than version B. Comparisons of these two groups were also more similar in version A of the IDPG than version B.   However, as already noted, the differences were not considerable in the second version of the identification scale. Therefore, although there does seem to be some support for Hernes' (1997) use of social identity theory for investigating culture, the fact that the results from value patterns and identification patterns are only somewhat similar means that it is tentative at best.

In the comparison of academics and practitioners, the analyses of values and identification were also similar. In this case comparing factor structures for academics and practitioners showed some differences for both the WVS and the IDPG, although in neither case were the differences as striking as when specialty subgroups were examined. Because the results are so similar in these analyses, they add further support for the use of social identity theory for investigating culture.

Contrary to these first two similarities, when comparing male and females, the analyses of value patterns and patterns of identification gave different results. The factor structures for males and females in the WVS were quite different. Even when the same values defined the factor for both sexes, the other values loading showed that the factors were in fact quite different. In contrast to this, patterns of identification for males and females were very similar. There were only two items of difference. Therefore, the hypothesis that the analysis of values and identification would give similar results was not supported when investigating differences between males and females. As such, these results do not support the use of social identity in the investigation of complex cultural settings.

When looking at these three areas in combination (specialty, role, and sex), the hypothesis that the analysis of values and identification would give similar results was supported in one case (role), refuted in another (sex), and very tentatively supported in the last (specialty). Unfortunately, this means that the evidence is equivocal on this hypothesis, and no firm conclusions can be made either for or against it.

4.2   Implications

4.2.1   Multiple Cultures

As recognised in the summary of the main findings, the results tend to support the multiple cultures view – that an organisation/occupation can have an overarching

culture coexisting with subcultures. Using a more traditional component of organisational/occupational culture (values) gave more solid support to this view than a more novel approach (social identity), where results were equivocal. Looking at psychologists' values when they related to psychology in general, and then to their specialty, showed that the values were more similar in the first comparison than they were for the second. Looking at patterns of identification with psychology in general and then with psychologists' specialties showed more similarity in the first comparison. However, the differences in the second comparison were still not large. Because some of the results support the view, while others do not, it is important to look at why. This may be because social identity is in fact not a good way to assess culture. As already discussed, the results supporting its use are equivocal, and so the results of comparisons of identification should be interpreted with care. All of the results using value comparisons do support the multiple cultures view, and this is the reason the conclusion has been drawn that there is support for this view in these results.

One reason why this study lends important support to this view is that a lot of the previous research into the area has been qualitative, rather than quantitative (e.g. Alvesson, 1993, Laurila, 1997). Schein (1990) endorses this more qualitative route to investigating culture. However, as pointed out by Ouchi and Wilkins (1988), it is important to use multiple approaches in studying this area (or any area for that matter), in order to see that the predictions made can be supported no matter how the subject is studied.

Although not part of the aims of this project, it is interesting to look at the implications of the results here to a practical New Zealand situation. Sackmann (1997) discusses the importance of understanding the existence of multiple cultures for businesses and organisations. This study highlights the importance of this in an occupation or profession. As Hofstede (2001) highlights, "Occupational communities may themselves become organizations (like institutionalized professional associations)" (p. 414). This is true of psychology in New Zealand, where more than one professional organisation exists. The largest and most diverse of these is the New Zealand Psychological Society (NZPsS), from whose membership the respondents to the current study were drawn. The NZPsS was formed to give support and guidance to its members. On it's website, the Society lists its primary roles as:

"- Representing psychologists to the public, the media and the Government.

- Providing professional support and development to psychologists.

- Encouraging the maintenance and improvement of professional standards.

- Providing ethical guidance to members.

- Safeguarding the high ethical standards of the profession.

- Promoting and supporting biculturalism in the profession.

- Informing the public about psychology and psychologists" (NZPsS, 2001, ¶ 3)

To be able to fulfil a lot of these roles, it is important for those running the society to understand the complexity of the culture of psychology in New Zealand. The

results of this study suggest that an overall culture of psychology exists as well as subcultures relating to specialty, role and sex. To some extent, the Society already acknowledges the differences amongst psychologists with a number of different divisions (e.g. I/O, Counselling) or institutes (e.g. Clinical). These divisions have been the topic of some debate – there is concern that departmentalisation of the Society may lead to too much fragmentation, to the point that there is no use for the Society to exist as a whole. However, the results of this study suggest this is not necessarily true. Although subcultures do exist in psychology, there is one overarching culture that exists at the same time – that is, there is a similar pattern of values and identification when people consider themselves as a psychologist in general. This suggests it is important for the Society to promote psychology in general as a profession, as well as to support different subgroups in their particular needs. For example, the first of the roles of the Society listed above is representing psychologists to the public, the media, and the government. The results of this study suggest this representation needs to be on two levels – the overall profession of psychology, and at a subgroup level, representing different specialties, and also different roles such as academics and practitioners. The second role, supporting professional development, also needs to be at two levels. Identification as a psychologist in general needs to be fostered, as well as the specific needs of subgroups attended to. This already happens to some extent, with papers at the Annual Conference aimed at specialist subgroups, along with papers that appeal to a wider, general psychological audience.

4.2.2 Social Identity Theory

As outlined in the introduction, Social Identity Theory has been proposed as a way of investigating complex organisational (or occupational) culture (Hernes, 1997). Hernes (1997) believes that the values and beliefs which people share in an organisation (the culture) can be explained by their identification with groups to which they belong.

This study sought to compare the investigation of occupational culture using a more traditional measure of culture (values) with identification, which is a newer approach. If the two gave similar results in the areas investigated, it would support the use of social identity theory for understanding cultural complexity in occupations/organisations. As already described in the summary of findings, the support for this approach is equivocal. That is, the results here cannot be said to strengthen or weaken the case for the use of social identity when investigating culture, particularly occupational culture, in the future. However, the results do suggest this area would usefully be studied in the future, to clarify the use of social identity in investigating complex cultural settings.

4.3 Limitations

This study limits its attention to two major measures for assessing occupational culture. Although these variables provide some information about occupational culture,

there are a number of other variables that could have been used, such as beliefs, assumptions, rituals, symbols, and so on. The choice of values as a variable was based on the fact that many authors suggest these are the core of organisational culture. However, others believe that other variables, such as assumptions and practices are the essence of organisational culture. Therefore, the decision to use values was somewhat arbitrary, although based on previous research. If different ways of investigating occupational culture had been used, obviously different results may have been obtained.

One limitation of the present study is that the survey included only members of the NZPsS, which means that a number of psychologists in Aotearoa/New Zealand were not canvassed. Moreover, the sample was self-selecting, so there was no control over randomness of the sample, nor whether it was representative of New Zealand psychologists in general.

The sample size was of some concern. The return rate was somewhat disappointing (23%), leaving a small sample of only 174 subjects. The analyses performed (PCA) ideally need a larger sample, and in fact some of the smaller groups analysed (as low as 32) are not really conducive to factor analysis. This is reflected in low Measures of Sampling Adequacy for some of the groups. Although the minimum limit is prescribed as .50 (Hair et al., 1998), and only one of the MSAs was below this (.49), higher sampling adequacy would have increased the strength with which interpretations could be made. As it was, care needs to be taken when drawing conclusions from the factors structures produced.

Contributing to the small sample size available for analysis was the fact that many respondents chose not to answer demographic questions relating to sex (14.9%) and ethnicity (18.4%), and even questions about whether their primary role was as an academic or practitioner (21.8%). This cut a large number of respondents from specific analyses straight away. This is one of the weaknesses of a postal survey, where there is no control over which questions respondents do or do not answer. Unfortunately no single ethnic group, other than Pakeha/New Zealand European, was large enough to use in statistical analyses of subgroups. It was particularly disappointing that insufficient respondents identified as Maori, and that Pakeha/Maori bicultural analyses could not be performed.

4.4   Directions for Future Research

As already mentioned in the limitations, values and identity are only two of many variables that could be employed to study occupational/organisational culture. As such, results could perhaps be attributable to the specific variables studied, rather than culture as a whole. Future research should use different variables, such as beliefs, assumptions, or practices, to see whether the same results are achieved when investigating the same areas. This would strengthen the inferences about the nature of the occupational culture of psychology.

As already discussed, the results supporting the use of social identity in the investigation of culture are equivocal. As there is some support for it (similar results to values comparisons with specialty and role groups), this is an area that needs to be investigated further to clarify the relationship of social identity to culture in this kind of setting.

The results of the current study show that there does seem to be a need for a more in-depth, qualitative study of different subgroupings, where results can be meaningful without being dependent on large numbers. For example, when examining specialty groups in the present study, only clinicians represented a large enough group to analyse, and all other specialties had to be grouped together. This was not the intention of the researcher, and as such, restricted the information produced. If methods of investigation were not so dependent on large sample sizes, other specialties could be investigated, such as education, health and I/O psychologists.

There is in fact a second part of this study underway, which will look at qualitative responses from members about their needs and wants with regards to the NZPsS. This second part also looks at where New Zealand psychologists see the future of psychology, 25 years hence, and will be compared with responses by British psychologists. These more qualitative aspects may provide a chance to investigate further the multiple cultures phenomenon.

Although a common and obvious suggestion for future research, the size and composition of the sample used does need to be addressed here. In order to employ

statistical testing with more confidence, a larger sample is required. This study was backed by the NZPsS, whose members were being asked to respond as part of a membership survey, and endorsed by its president. A disappointing return rate suggests that future researchers will need to be more inventive in their approach to lifting response rates. It also suggests that the reasons for such a return rate could be investigated. As this study was part of a wider membership survey, does it suggest that members of the NZPsS do not care a great deal about the future of the Society, or is it that psychologists are simply too busy to respond? The fact that only NZPsS members were canvassed means that the results cannot necessarily be generalised to the whole of New Zealand psychology. Currently, a thorough list of psychologists in New Zealand is not availabe, as many are not registered, for example, very few psychologists working in education (universities and other tertiary institutions) are registered. With the passage of the Health Professionals Competency Assurance Bill, there is the possibility that in the future all psychologists will be listed on the New Zealand Register. This would enable a more comprehensive sample to be accessed in the future.

Differences between ethnicities could not be investigated in this study, due to the small number of respondents who were not Pakeha/New Zealand European. Hofstede's (2001) work with IBM over a number of years indicated that national culture played a large part in defining the organisational culture of IBM branches in different countries, in terms of values, even though all branches adhered to the same practices. This suggests that the national cultural setting in which psychology exists in New Zealand would have some effect on the culture of psychology. The bicultural nature of

Aotearoa/New Zealand is distinctive, and comparisons between Maori and Pakeha would aid understanding of this biculturalism. That is, is the culture of psychology in New Zealand affected by the national cultural setting, or is it more international, transcending the cultural divisions in New Zealand?

This study does not employ statistical significance testing. Rather, factor structures resulting from Principal Components Analyses were used as a means of classification. The emerging factor patterns and structures were then used to investigate differences and similarities between the subgroups of psychology and within psychology as a whole. Although many members of the scientific community hold statistical significance testing to give more support to any conclusions drawn from results, this did not suit the needs of this project. However, this does not mean that this area should not be explored further using different kinds of analysis. The findings of the current study can act as a starting point for future research that does test the significance of any differences between groups being investigated.

4.5   Conclusion

In summary, the current findings provide support for the proposition that there is an overarching culture of psychology in New Zealand that coexists with subgroups, including specialty, role and sex groupings. The comparison among these groups about the values they hold showed differences in all the cases, and a similarity when asked

about psychology in general. When the same comparisons were made with identification, the results were less certain, and in one case (sex), displayed a result that was contrary to that in the values assessment.

The results are equivocal in their support for the use of Social Identity Theory in the investigation of complex cultures, in particular, occupational or professional cultures. Of the three comparisons made with the results of the values assessment, one actually contradicted those results (comparing males and females), one showed definite similarities (comparing academics and practitioners) and one showed tentative similarities (comparing clinicians and others). Nonetheless, this is an important contribution to this relatively new approach to the study of culture.

From these results, we can an organisational model or cultures and subcultures can indeed be applied to a profession or occupation like psychology. This suggests that the work on multiple cultures in organisations can be used in the investigation of occupational cultures in the future. It also has implications for the way psychologists are understood and supported by their professional body in New Zealand. Such support needs to distinguish and be made relevant not only to the generic psychological culture, but also to the subcultures in psychology that have emerged from this research.

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Appendices

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6.1   Appendix 1

INFORMATION SHEET FOR PARTICIPANTS

My name is Robyn Ward and I am completing a Master of Science in psychology at Massey University. My supervisors are Cheryl Woolley (Senior lecturer) and George Shouksmith (Professor Emeritus), who are both based in the School of Psychology at Massey University, Palmerston North.

This study is looking at the culture of psychology in New Zealand. Some research in this area suggests that there should be one homogeneous culture, while other research suggests that there will be many smaller sub-cultures. More recently, studies have suggested that these two may co-exist, with an overarching culture that is different to all of the sub-cultures. Values and social identity of psychologists will be examined to see whether patterns emerge to support any of the aforementioned scenarios. The wants and needs of the members of the Society are also sought, along with their thoughts on the future of psychology, to help the Society provide an effective and worthwhile service to its members. These will also be examined to see if any patterns emerge along the same divisions as for the values and social identity.

To do this, I require the help of psychologists in the data collection. I am inviting all members of the New Zealand Psychological Society to take part in this study. I have used a list of the membership of the Society to contact you and invite you to participate in this study.

This study will involve you completing the attached questionnaires and mailing them to me in the envelope provided.

• Your participation is voluntary and you may decline to participate.

• You may withdraw from this study at any time.

• You can refuse to answer any particular questions at any time.

• You may ask any questions about the study at any time during participation.

• Any information you provide will be anonymous and your reply will not be identifiable as yours in any way. Raw data will only be seen by the researcher.

• You will be given access to a summary of findings of the study when it is concluded.

Please feel free to contact me if you have any questions or queries. My email address is █████████████████ Cheryl Woolley can be contacted on ███████ █ ████, and George Shouksmith on █████ ████████

Kind Regards

Robyn Ward
Researcher

6.2   Appendix 2

Demographic Information

1   How long have you been a member of the NZPsS?

0-5 years		21-25 years	
6-10 years		26-30 years	
11-15 years		31+ years	
16-20 years			

2   Sex   M   F   3   Ethnicity_____

4   Branch membership and membership of any specialist divisions

Branches		Divisions/Institutes	
Auckland		Clinical Institute	
Waikato		I/O	
Central Districts		Counselling	
Taranaki		Education and Child	
Wellington		Community and Social	
Nelson/Marlborough		Special Education	
Canterbury			
Otago			

5   Current status

Member	
Fellow	
Associate Fellow	
Subscriber	
Student Subscriber	

6 Please indicate in the first column which of the following best describes your **primary** role as a psychologist? In the second, indicate your **secondary** role. Please do the same for your role as an academic or a practitioner.

Aviation		Aviation	
Child Clinical		Child Clinical	
Clinical		Clinical	
Community		Community	
Counselling/Psychotherapy		Counselling/Psychotherapy	
Criminal Justice		Criminal Justice	
Developmental		Developmental	
Educational		Educational	
Forensic		Forensic	
Health		Health	
Industrial/Organisational		Industrial/Organisational	
Neuropsychology		Neuropsychology	
Sports		Sports	
Other (specify)		Other (specify)	

Academic		Academic	
Practitioner		Practitioner	

6.3   Appendix 3

Work Values Survey

In the original questionnaire, two copies of the survey were included, one with the leader to version A, and one with the leader to version B.

Version A
Please rate the following values on their importance in making your decision to become a psychologist.

Version B
Please rate the following values again on their importance deciding on your primary role as a psychologist (as indicated by you in the demographic information).

		Not important			Very important	
1	Ability utilization (the opportunity to make full use of one's abilities, skills and knowledge).	1	2	3	4	5
2	Cultural ability utilization (the opportunity to make full use of one's cultural abilities, skills and knowledge).	1	2	3	4	5
3	Achievement (the visible results of work and the related satisfaction with the successful completion of a task).	1	2	3	4	5
4	Personal development (the opportunity for personal development and self-realisation).	1	2	3	4	5
5	Participation in decisions (participating in decisions relative to the work process).	1	2	3	4	5
6	Aesthetics (creating and enjoying the beauty of one's surroundings).	1	2	3	4	5
7	Creativity (inventiveness, creating new methods, objects or ideas).	1	2	3	4	5
8	Autonomy (independent action, initiative in solving problems and decision-making).	1	2	3	4	5
9	Life-style (the ability to behave in a special way, in accordance with one's own standards and convictions).	1	2	3	4	5
10	Variety (changes in the way of achieving one's functions and roles in life).	1	2	3	4	5
11	Altruism (helping others achieve their functions and roles in life).	1	2	3	4	5
12	Commitment (to improving life circumstances of others and helping individuals, groups, and peoples to realise their goals).	1	2	3	4	5
13	Social interaction (contact with other people and social groups).	1	2	3	4	5
14	Social relations (achieving mutual understanding in relationships with the people one works with).	1	2	3	4	5

		Not important			Very important	
15	Working conditions (good physical conditions in which to work).	1	2	3	4	5
16	Economics (satisfactory financial results).	1	2	3	4	5
17	Advancement (satisfactory opportunities for career advancement and promotion).	1	2	3	4	5
18	Being useful (in response to an identity with a particular community and its goals).	1	2	3	4	5
19	Prestige (enjoying one's social status and reputation).	1	2	3	4	5
20	Authority (the opportunity to influence the opinions and actions of other people).	1	2	3	4	5
21	Risk (accepting the danger involved in one's actions).	1	2	3	4	5
22	Physical activity (the opportunity to develop one's body).	1	2	3	4	5

6.4   Appendix 4

Identification Scale

In the original questionnaire, two copies of the survey were included, one with the leader to version A, and one with the leader to version B. This is to illustrate the way respondents saw the identification scale. However, separated versions of the two scales that this combines are provided in Appendices 5 and 6 to increase ease of understanding in the results section.

Version A
Please rate each statement on the 5-point scale in terms of how strongly you agree or disagree that it is relevant to you as a psychologist in general.

Version B
Now, please rate these statements in terms of their relevance to you as a psychologist in your primary role (as indicated by you in the demographic information). For example, 4) I often introduce myself as a *clinical* psychologist.

		Strongly Disagree			Strongly Agree	
1	When someone criticises psychologists, it feels like a personal insult	1	2	3	4	5
2	I feel good if I am described as a typical psychologist	1	2	3	4	5
3	I'm very interested in what others think about psychologists	1	2	3	4	5
4	I often introduce myself as a psychologist	1	2	3	4	5
5	When I talk about psychologists, I usually say 'we' rather than 'they'	1	2	3	4	5
6	I often acknowledge the fact that I am a psychologist	1	2	3	4	5
7	Psychologists' successes are my successes	1	2	3	4	5
8	Most of my friends are psychologists	1	2	3	4	5
9	When someone praises psychologists, it feels like a personal compliment	1	2	3	4	5
10	I act like a typical psychologist to a great extent	1	2	3	4	5
11	If a story in the media criticised psychologists, I would feel embarrassed	1	2	3	4	5
12	I don't act like a typical psychologist	1	2	3	4	5
13	I have a number of qualities typical of psychologists	1	2	3	4	5
14	The limitations associated with psychologists apply to me also	1	2	3	4	5
15	It would be accurate if I was described as a typical psychologist	1	2	3	4	5
16	There are many psychologists who influence my thoughts and behaviour	1	2	3	4	5

6.5   Appendix 5

Identification with a Psychological Group Scale

In the original questionnaire, two copies of the survey were included, one with the leader to version A, and one with the leader to version B. See Appendix 4 for the layout of the Identification scale in the original questionnaire.

Version A
Please rate each statement on the 5-point scale in terms of how strongly you agree or disagree that it is relevant to you as a psychologist in general.

Version B
Now, please rate these statements in terms of their relevance to you as a psychologist in your primary role (as indicated by you in the demographic information). For example, 4) I often introduce myself as a *clinical* psychologist.

		Strongly Disagree				Strongly Agree
1	When someone criticises psychologists, it feels like a personal insult	1	2	3	4	5
2	I'm very interested in what others think about psychologists	1	2	3	4	5
3	When I talk about psychologists, I usually say 'we' rather than 'they'	1	2	3	4	5
4	Psychologists' successes are my successes	1	2	3	4	5
5	When someone praises psychologists, it feels like a personal compliment	1	2	3	4	5
6	I act like a typical psychologist to a great extent	1	2	3	4	5
7	If a story in the media criticised psychologists, I would feel embarrassed	1	2	3	4	5
8	I don't act like a typical psychologist	1	2	3	4	5
9	I have a number of qualities typical of psychologists	1	2	3	4	5
10	The limitations associated with psychologists apply to me also	1	2	3	4	5

6.6   Appendix 6

Identification Scale (Karasawa)

In the original questionnaire, two copies of the survey were included, one with the leader to version A, and one with the leader to version B. See Appendix 4 for the layout of the Identification scale in the original questionnaire

Version A
Please rate each statement on the 5-point scale in terms of how strongly you agree or disagree that it is relevant to you as a psychologist in general.

Version B
Now, please rate these statements in terms of their relevance to you as a psychologist in your primary role (as indicated by you in the demographic information). For example, 4) I often introduce myself as a *clinical* psychologist.

		Strongly Disagree				Strongly Agree
1	It would be accurate if I was described as a typical psychologist	1	2	3	4	5
2	I often acknowledge the fact that I am a psychologist	1	2	3	4	5
3	I feel good if I am described as a typical psychologist	1	2	3	4	5
4	I often introduce myself as a psychologist	1	2	3	4	5
5	There are many psychologists who influence my thoughts and behaviour	1	2	3	4	5
6	Most of my friends are psychologists	1	2	3	4	5

6.7   Appendix 7

Descriptive Statistics – Work Values Survey

Table 10.
Descriptive statistics for Work Values Survey – Version A

	N	Minimum	Maximum	Mean	Std. Deviation
Commitment	171	1	5	4.4	.9
Ability Utilization	170	1	5	4.2	1.0
Altruism	171	1	5	4.1	1.1
Autonomy	170	1	5	4.1	1.0
Achievement	170	1	5	3.9	1.0
Personal Development	171	1	5	3.9	1.1
Variety	169	1	5	3.8	1.0
Being useful	169	1	5	3.8	1.1
Life-style	170	1	5	3.7	1.1
Creativity	169	1	5	3.7	1.1
Social relations	165	1	5	3.5	1.1
Social interaction	170	1	5	3.4	1.1
Participation in decisions	168	1	5	3.3	1.3
Advancement	169	1	5	3.2	1.2
Economics	170	1	5	3.1	1.1
Cultural Ability Utilization	171	1	5	2.9	1.3
Working conditions	170	1	5	2.9	1.2
Prestige	170	1	5	2.9	1.1
Authority	169	1	5	2.8	1.1
Risk	170	1	5	2.5	1.2
Risk	170	1	5	2.5	1.2
Aesthetics	169	1	5	2.1	1.1
Aesthetics	169	1	5	2.1	1.1
Physical activity	169	1	5	1.7	1.0
Physical activity	169	1	5	1.7	1.0
Total	157	26	104	73.7	12.8

Table 11.
Descriptive statistics for Work Values Survey – Version B

	N	Minimum	Maximum	Mean	Std. Deviation
Ability Utilization	165	1	5	4.3	.8
Commitment	166	1	5	4.3	.9
Achievement	165	1	5	4.2	.9
Autonomy	165	1	5	4.1	.9
Altruism	165	1	5	4.1	1.0
Being useful	166	1	5	4.0	1.0
Personal Development	165	1	5	3.9	1.0
Variety	164	1	5	3.9	1.0
Creativity	165	1	5	3.9	1.1
Participation in decisions	164	1	5	3.7	1.1
Life-style	165	1	5	3.6	1.2
Social relations	162	1	5	3.6	1.1
Social interaction	166	1	5	3.5	1.1
Cultural Ability Utilization	165	1	5	3.2	1.3
Advancement	164	1	5	3.2	1.2
Economics	164	1	5	3.1	1.1
Working conditions	165	1	5	3.0	1.2
Authority	163	1	5	2.9	1.1
Prestige	165	1	5	2.9	1.1
Risk	164	1	5	2.5	1.2
Aesthetics	165	1	5	2.3	1.2
Physical activity	165	1	5	1.7	1.0
Physical activity	165	1	5	1.7	1.0
Total	154	38	103	75.9	11.7

6.8   Appendix 8

Descriptive Statistics – IDPG

Table 12.
Descriptive Statistics for IDPG – Version A

	N	Minimum	Maximum	Mean	Std. Deviation
I don't act like a typical psychologist	162	1	5	3.4	.9
I have a number of qualities typical of psychologists	165	1	5	3.4	.8
The limitations associated with psychologists apply to me also	165	1	5	3.3	1.0
When I talk about psychologists, I usually say 'we' rather than 'they'	169	1	5	3.3	1.1
I'm very interested in what others think about psychologists	169	1	5	3.2	1.0
Psychologists' successes are my successes	171	1	5	2.7	1.1
If a story in the media criticized psychologists, I would feel embarrassed	171	1	5	2.6	1.2
When someone praises psychologists it feels like a personal compliment	169	1	5	2.6	1.0
When someone criticizes psychologists, it feels like a personal insult	171	1	5	2.3	1.0
I act like a typical psychologist to a great extent	164	1	5	2.2	1.0
I act like a typical psychologist to a great extent	164	1	5	2.2	1.0
Total	152	19	41	29.2	5.0

Table 13.
Descriptive statistics for IDPG – Version B

	N	Minimum	Maximum	Mean	Std. Deviation
I have a number of qualities typical of psychologists	158	1	5	3.4	.9
I'm very interested in what others think about psychologists	160	1	5	3.3	1.1
The limitations associated with psychologists apply to me also	156	1	5	3.3	1.0
When I talk about psychologists, I usually say 'we' rather than 'they'	161	1	5	3.3	1.2
I don't act like a typical psychologist	155	1	5	3.2	1.0
If a story in the media criticized psychologists, I would feel embarrassed	158	1	5	2.8	1.2
Psychologists' successes are my successes	160	1	5	2.7	1.1
When someone praises psychologists it feels like a personal compliment	161	1	5	2.7	1.1
When someone criticizes psychologists, it feels like a personal insult	161	1	5	2.6	1.2
I act like a typical psychologist to a great extent	157	1	4	2.5	1.3
Total	146	10	45	29.9	5.8

6.9   Appendix 9

Descriptive Statistics - Identification Scale (Karasawa)

Table 14.
Descriptive Statistics for Identification Scale – Version A

	N	Minimum	Maximum	Mean	Std. Deviation
I often acknowledge the fact that I am a psychologist	171	1	5	3.6	1.1
There are many psychologists who influence my thoughts and behaviour	171	1	5	3.4	1.1
I often introduce myself as a psychologist	169	1	5	2.8	1.2
It would be accurate if I was described as a typical psychologist	164	1	5	2.3	.9
I feel good if I am described as a typical psychologist	170	1	5	2.3	.9
Most of my friends are psychologists	169	1	5	2.0	1.0
Total	160	7	25	16.2	3.6

Table 15.
Descriptive statistics for Identification Scale – Version B

	N	Minimum	Maximum	Mean	Std. Deviation
I often acknowledge the fact that I am a psychologist	160	1	5	3.6	1.1
There are many psychologists who influence my thoughts and behaviour	162	1	5	3.4	1.1
I often introduce myself as a psychologist	160	1	5	3.0	1.3
It would be accurate if I was described as a typical psychologist	157	1	4	2.5	.9
I feel good if I am described as a typical psychologist	161	1	5	2.5	1.0
Most of my friends are psychologists	161	1	5	2.0	1.0
Total	154	7	25	17.1	3.8