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A Thesis Submitted in Fulfilment of the
Masters of Design

Goodness

De-signing the Nature and Culture of
New Zealand Milk Packaging Signs

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Abstract

By means of semiotic analysis and exploration of contextual analogies this paper interprets both historical and contemporary New Zealand milk signs and packaging since the 1800's and explains how these signs and simulacra, in a mergent urbanised society, evidence and express a battle of culture versus nature. It sees these signs as an exemplar of semiosis at play that explains the significance of their allegorical meaning in the culture. It also visually articulates children's responses to some fundamental elements of contemporary signs and with some pre-industrialised packaging examples arrives at one possible industrial generic packaging solution, using new, bio-degradable materials, that presents milk as it is – an industrialised product from nature, not as nature itself.

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Introduction

This thesis analyses New Zealand milk packaging since the 1880s, with particular attention given to the relationship between nature and culture in the packaging and its signs. Milk is a product of nature, yet one that is increasingly altered and mediated by industry. As the relationship between milk and nature changes, signs for milk provide evidence of changes in broader cultural attitudes to nature. These signs have been enmeshed in the visual culture of New Zealand since inception when dairying became the backbone of economic growth. Milk was a dietary staple for early settlers to New Zealand. With pre-1900 industrialisation, milk production began to exceed domestic needs. Exporting to Britain, made possible by refrigeration aboard ships, increased the financial incentive to produce milk for manufacture into cheese and butter. Seen below in image 1, Wellington Wharf, in 1915, was a well-established export dock for cheese and butter to Britain. With commodification came the first milk product brand identity. Early milk product brand identity served a number of functions within New Zealand. It signified local provincial identity, geographic location, the producer's cultural origins and consumer identity. But brand identity signs also revealed underlying cultural attitudes to nature. This thesis discusses the battle of culture to dominate over nature, a battle that continues to this day, played out through contemporary milk packaging and identity design.

In proposing culture be a part of, rather than apart from, nature a new generic milk packaging design is presented that embodies this concept. The design is a mass-produced packaging artefact of sustainable materiality that represents a symbiosis of nature and culture and displays decipherable visual signs as to the nature of the content and the content of nature. Moreover, as milk signs have traditionally been aimed at children or at adults feeding children, the design is informed by an ethical obligation



1: Wellington export dock for Cheese & Butter to Britain, 1915

to children, both in how the signs can be read and how they signify the contents within the package. The theoretical framework of this thesis is semiotic analyses typified by Levi-Strauss, Barthes, Williamson and Baudrillard. These theorists are used to read milk signs and also to understand the relationship between culture and nature implicit in semiotic theory. The design project included is the outcome of the research into the signs and packaging discussed here. Because the design is an outcome resulting from the research, the theoretical component of the thesis and its subsequent evaluation of milk signs form the first part of this thesis. This analysis includes a contextualisation of historical milk signs through an investigation of industrial packaging in New Zealand, followed by a discussion of historical New Zealand milk signs beginning in the 1880s and then an evaluation of contemporary milk signs. My design is also informed by responses contemporary children have to packaging and this designer's response to research into pre-industrial packaging. From such a contextual analysis comes the foundation for my design.

The literature review sets out the theoretical context of this thesis, looking at historic predictive cultural arguments around perceptions of nature and a discussion about why there is a contemporary cultural reinterpretation of nature that is different again. The semiotic analysis deciphers early New Zealand industrial signs, establishing culture in relation to nature and provides the context within which the following chapter deciphers early New Zealand dairy signs. Chapter three discusses contemporary milk signs in relation to culture. This is followed, in chapter four with an explanation of my motives for pursuing this topic and the cultural allegorical reality on which it is based. This leads into findings from research I conducted with children about what milk is to them and about what colour signifies. Following on from this is a discussion on domestic commodity packaging signs including the change in the meaning of the signs in a different context. Chapter five discusses the differences between the materiality of contemporary milk packaging signs, what they signify and what is implied in relation to nature. Next is a small case study on how pre-industrial packaging signs functioned. Lastly in chapter six the design rationale is explained and a solution offered that reconnects industrialised culture with nature.

Research Aims

New Zealand's cultural identity is dependent on material commodity artefacts to define culture and connect it with notions of nature. Food signs in particular have been and remain visual representations of New Zealand culture. Be it 'Marmite', 'Edmonds-Sure to Rise', 'Watties' and particularly, dairy products such as 'Fernleaf Butter' and 'Anchor Dairy Products'. Milk signs reflect, inform and form part of that identity. Milk packaging cartons and "jugs" for consumers are symbolic objects with ever-changing signs that fulfil social and psychological desires. Russell Belk (1997) described the recurring state as more constant than a need; consumers having an innate insatiable "desire to desire" (p.27) which is in constant cyclical flow.

Milk has been integral in forming New Zealand cultural identity. New Zealand milk is a product from nature; its industrialisation is embedded in national identity through the history of the country's economic growth, its usage and allied social conventions within New Zealand culture. Milk packaging signs inform cultural identity in relation to nature and reflect New Zealand cultural attitudes toward nature. This design investigation faces the dilemma of creating milk packaging and signs from nature for an industrialised culture that has commodified notions of nature, at the same time as acknowledging the physiological need present in all living things to be satiated. In aiming to stimulate a primal biological instinct to consume, issues of form, size, scent and colour are set into play. Here the nature inherent in culture becomes apparent because signification of culture and commodification are made secondary.

Mandatory functions of packaging are to carry, contain, stack, store, protect, sometimes infuse, display and communicate (through various sign strategies) the contents. The aim of this project is to fulfil the functions of industrialised packaging, compete with the plethora of simulacrum, signs of nature and other things, without resorting to a hyperreal nature. In other words, there is a need to communicate to consumers who have little or no first hand awareness of nature.

The Meaning Of Nature And The Nature Of Meaning

Part of the analytical framework of this thesis comes from a summary of works by John Fiske who in his book 'Introduction to Communication Studies' (1990) discussed what is now accepted doctrine - the early work on semiotics by logician C.S. Pierce (1839-1914) and linguist /philosopher F. de Saussure (1857-1913) that examined the relationship between a sign in relation to the object it referred to (the signifier), and the viewer (decipherer) to create the meaning of the sign (the signified). Pierce distinguished the interchangeability of the three in their interplay with each other. Primarily these theorists were discussing linguistics and were focused on the importance of the phoneme (the smallest phonetic unit that distinguishes one word from another) in relation to meaning of a word and in relation to the object being signified. Fiske's discussion continued with Roland Barthes, a French philosopher, who expanded on de Saussure's work, but focused more on the relationship between a visual sign (other than linguistics) and the decipherer of the sign. Barthes further distinguished a sign's primary, tangible meaning as its "denoted" meaning and the secondary meaning as its "connoted" meaning. The meaning of a sign, in Barthes' view, is determined by the decipherer, and is formed within a context of cultural reference. According to Barthes (1973) meaning is determined by the relationship between the sign and the external reality of the decipherer - a part of what is collectively determined by culture. Barthes examined the social and historical influences affecting culture and how the inferences within sign meanings reflect dominant cultural values. The dominant cultural values impacting on the dominated culture he termed "naturalised". Sign systems, Barthes argued, were referential of a dominant hegemony within consumerist culture. The semiotic frameworks outlined in Fiske's summary of Barthes' rationale, to decipher milk signs and their meanings, are used here to reveal our cultural perceptions of nature.

To understand cultural interpretations of nature, food and packaging, signs reference the anthropological study of pre-industrial cultures made by Claude Levi-Strauss who studied many tribal cultures, New Zealand Maori amongst them. The myths Levi-Strauss recorded, in 'The Raw and the Cooked. Introduction to a Science of Mythology' (1969), of South American forest tribes were interesting because they were oratory of abstract, seemingly nonsensical tales, but the objects and events connoted signs to the culture that allegorically taught, in memorable ways, survival within nature. A sign such as rotten wood, which was an unpleasant food source, could also signify an agreeable source, as rotten wood could be deciphered (depending on the context within the myth) as fuel for cooked food. The context of the object (rotten wood) changed the overall allegoric message in the meaning. A signifier within a myth had a different meaning entirely if the order and the juxtaposition of the objects and events were changed. As with Barthes' argument then, the cultural context provides the means for deciphering signs.

Levi-Strauss likened the myths of pre-industrial cultures to visual signs in contemporary culture. First evident from within his records is the innate human ability to create and decipher complex signs. His studies of cultures directly dependent on first hand experience and knowledge of nature for survival, revealed a common theme within their myths around gustatory consumption which Levi-Strauss defined as 'the cooked' and 'the raw.' He created binary graphs and mapped 'the cooked' (a metaphor for culture) and 'the raw' (a metaphor for nature). It is explained below in summary that pre industrial cultural definitions differed from contemporary distinctions.

RAW	COOKED
manufactured objects (for spiritual purposes)	utensils
of the rotten or mouldy	burnt
slow	fast
real (without embellishment)	human
snack	meal
unborn / newborn	corrupt / tainted
child and animal	pubescent girl / postpartum woman

By mapping the myths (which were a context for the objects and events) onto his grid, Levi-Strauss portrayed pre-industrial tribal perceptions of culture and nature as adversarial, when they were by definition symbiotic, interdependent first hand experiences with nature, their definitions of culture and nature intertwined, at times barely separable. This binary model prevalent in contemporary market research has its limitations, which is demonstrated in chapter four: domestic commodity packaging: a place in time. The question could be asked here as how much influence on the consumer the packaging designer has in their sign-making and inferences of meaning that link the consumer with the product. It is clear in the small investigation done in association with this design thesis that formative young minds, devoid of a close association with nature, instinctively attempt to make links and connections that explain their relation to culture and culture to nature. The time would seem right for a closer analysis of the details of such processes and the connections being made that link the product at hand with the natural. Judith Williamson also examined this relationship in *Decoding Advertisements – Ideology and Meaning in Advertising* (1978). She wrote, in connection to the relationship between culture and nature:

Man's relationship with nature is inevitably a dialectic one: it gives him his existence and yet he must work on it and struggle with it to survive. The complexity of this relationship is present equally in 'primitive' societies and in technologically 'advanced' societies like our own. (p.124)

Judith Williamson argues that there are instinctive drives within culture to change nature. Culture's dependence on nature, she notes, means nature must be "worked on" for survival and she likens pre-industrial cultural symbiosis with nature to contemporary culture's desire to dominate nature. Williamson also presents the idea that due to industrialisation, culture has become disconnected from nature and as a result has re-contextualised and recoded nature as the natural.

... change in society's view of 'the natural' no doubt stems from a change in material conditions – the importance of 'the natural' increases directly in proportion as society's distance from nature is increased, through technological development. (p.124)

Williamson argues that industrialised culture no longer sees nature as an adversary because nature has been mediated; power over nature had resulted in recoding nature as a romanticised, tame version of “natural.” Being so removed from nature, industrialised culture had only limited understanding of how nature functioned, as it had ceased to be directly meaningful in every day life.

Nature is the primary referent of a culture. It is the ‘raw material’ of our environment, both the root of all technological development and its opposition; that which technology strives both to improve and to overcome. If a culture is to refer to itself, therefore, it can only do so by the representation of its transformation of nature – it has meaning in terms of what it has changed. (p. 103) (emphasis added)

Williamson concluded that the more a culture changes nature, the more superior a culture sees itself over nature. Nature becomes the sign for nature, but as a sign it is only a constructed representation of the referent. Nature, to an industrialised culture, has values such as safe, convenient and predictable. Industrialised culture then understands nature to be an adversary under control.

Packaging and its signs have an all-pervasive influence on how the consumer, young or old, sees themselves in the product and its relation to nature. It is in a dreamlike state in which these cultural signifiers are consumed and made part of conversations the consumer has with themselves – a cow is not a cow, it is a symbol of nature. In this dreamlike state misconceptions and inaccurate assumptions are made. This need to understand a significant cultural icon in New Zealand culture is satisfied by the marketers’ methods of signifying representational signs inherent in the significance of milk in the culture. Following on from Williamson, Post Modernist theorist Jean Baudrillard, in his 1988 essay ‘Simulacra & Simulations’, argues that everyday signs in industrialised culture are unrelated to first-hand experiences: they lack context. They are not referential of a history or an environment, but of technology and are random, virtual, artificial and indecipherable. He described these signs as “simulacra”, arguing that they have produced a “mediatised” culture, made subservient to

a superior technology. Baudrillard argued that technology is the new dominant culture, with society transposed to become “raw nature” for technology. Baudrillard refers repeatedly to society’s loss of “reality”; the mediatization of consumers by way of visual exaggerations he calls “hyperreality”; resulting in a loss of a self-referential cultural reality. By the loss of reality Baudrillard means that culture no longer references first hand experience of nature but, rather, mediated arbitrary sources. This process is less than fully understood by the New Zealand consumer who buys into the belief they are made good by consuming the product before them which is inherently good – and that milk is raw and natural, when its packaging and accompanying signs, if read closely, say something different.

Levi-Strauss and Baudrillard place nature and culture as opposites and adversaries whereas Williamson denotes both interdependence and a desire for culture to dominate in the relationship. Fiske, too, when promulgating his structuralist methodology, reveals his adversarial character when arguing the benefits of his methodology used to decipher various theoretical semiotic models. Fiske stated:

It appears more functional; it can encourage us to improve our skills of communication, which will then enable us to impose ourselves on the world around us more effectively. It sees communication as a determinant, and improving communication as a way of increasing social control. (p.189)

Central to the argument of this thesis is the significance of the cultural allegorical meaning behind milk signs. The consumption of milk is an act of being good and made good by goodness. A cow is not a cow in the psyche of the human being. It is sometimes an archetype – an allegorical mother substitute in Freudian terms. Such symbolism, associations and implications utilised in signs and packages becomes part of the unconscious meanings consumers deduce about themselves. The inference is that sustenance and mother-nurturing contained within the packaging give comfort to the consumer who believes that nature is close at hand, even though milk is cooked, not raw, and is made something else.

Summary

Pre-industrial cultures without written signs were expert decipherers of signs in nature because their physical existence depended on this knowledge for survival. Their ability to create and decipher myths with complex meanings using denoted and connoted signifiers affirmed their "cultural" identities in relation to nature. It is clear signs informed and reflected the perspective that cultures were dependent on, if at times separate from, nature. Industrialised culture too has signs for a purpose. Contemporary signs have evolved to denote and connote meaning from a technological or increasingly removed perspective. In this way, signs are not only arbitrary abstractions (direct representations of referents or first hand experiences) but second level abstractions (signs of representations) where the referent is increasingly abstracted or mythicised. Contemporary culture is less dependent on nature first hand and so relies heavily on mediated representations of nature, such as 'the natural'.

To a culture sheltered from first hand experiences of nature, actions in nature have become indecipherable. Where life is planned and scheduled with controls created by the culture, nature is perceived as unpredictable and consequently the signs that reference nature do so on an almost conscious level, as threateningly adversarial toward culture. These mediated notions of nature create and reflect nature as an enemy of human endeavours. Contemporary culture displays measures of its perceived superiority over nature by signs that imply domination of nature. This is not only evident in popular culture, but also in the theorists who are cornerstones in the discussion of semiotic theoretical thinking, for they have launched their arguments from a perspective of nature being opposite and opposed to culture.

CHAPTER 2

Early New Zealand Milk Sign Semiotics

This chapter deciphers the meanings of early New Zealand industrial milk signs. The denoted meanings define a culture identifying predominantly with their places of origin, not with their local surroundings and not with an export destination. The connoted meanings of dairy signs record a culture signifying the battles with its primary adversary – nature. Image 2 depicts an example of early industrialisation. In a comparatively incomprehensible environment the settlers' survival, dependent on producing food, was reliant on their abilities or inabilities to decipher signs in nature. But there were other issues under-pinning settler attitudes about nature that prevailed beyond that of survival. Whilst settlers' cultural identities continued in the new environment despite the separation from their geographic origins, their self-identity was put into question by anthropologist Charles Robert Darwin's observations of nature.



2: Dairy Factory, Whangamomona, Taranaki, early 1900's

In his book 'The Preservation of Favoured Races in the Struggle for Life' (usually abbreviated to 'The Origin of Species by Means of Natural Selection' (1859), he argued that man evolved from primates and challenged the prevailing Christian belief that man descended from God. Although an anthropologist, his theories were taken at the time to be a scientific response to studying nature and set religion against science in passionate debate. Where was man in relation to nature? Throughout his written observations Darwin anthropomorphised nature, using human logic and simile to interpret nature's course. Darwin then argued that "nature's way" was brutal and adversarial; renowned for his phrase 'survival of the fittest', to mean the weak inevitably becoming extinct, instilling the notion that nature is inherently adversarial.

Charles Darwin first visited New Zealand in 1835. After the publication of his book he regretted the impact of his work on the indigenous people, as a consequence of the interpretations of the governing elite – prominent New Zealanders were Darwinists (Walker, 2001). By atoning moral, social, scientific, religious and political forums, the physical and spiritual needs of culture had affirmed a superior identity and other-ness by overpowering nature. There was rigorous public debate around Darwin's assertions that fuelled the culture to distinguish their 'otherness' from nature.

With the industrialisation of milk production, provinces competed independently for government funding and later for export returns. This began a need for signs to identify and differentiate producers. Although consuming milk from animals had been a centuries old practice, early New Zealand milk signs did not depict cows. For avoiding any possible connotations with the devil, the capacity for humans to ingest the lactation fluids of a cloven-hoofed cattle beast perhaps required signs that defined the boundaries between culture and nature. After all, consumers are what they consume. Raw milk altered into butter and cheese was sufficiently changed for it to become 'culture'. Cows denoted milk only when there was cultural intervention and when milk was an ingredient. To purchasers, milk signs were signifiers of the producer identity and the cultural influences affecting manufactured milk products. As milk signs had limited display (on delivery carts as livery, and building signage) purchase of raw milk product was influenced by the proximity of fresh milk supply and credit arrangements. Purchasers received information and affirmation of a cultural identity and, within that, a provincial identity through what milk signs signified and reinforced on a gustatory level; as the physical ingestion of a substance, mythically recoded. In early New Zealand, signs depicting cows were signification for raw nature. Bovine treatments: drenches, insecticides, medicines and dietary supplements, were a manmade improvement on nature, or antidote for 'failing nature', signified through various visual strategies in the generalist commodity retail shops of consumer society. Early packaging signs were constrained by print technology, the quality and characteristics of the applied surfaces, reference material and artistic ability.

Lea & Perrins Sauce, (Image 3) an imported product, widely advertised in newspapers, was a typical food packaging sign of the period. The Lea & Perrins Sauce bottle was glass, the usual packaging material for goods from Britain, from where most imported goods came, between 1860 and 1900. What was not usual was the bottle shape, known generically as a medicine bottle. The overall composition of the label graphics was centred – with patterned borders, also customary, and a composition of decorative bold display and italic fonts. There were etchings of scenes depicting the factory and geographic location of Worcestershire. The paper stock was used to create a third colour. The script signature “Lea & Perrins” was not an individual’s signature. The elements of the sign connoted a legal contract or paper-note money. The label signified a product that had been authenticated as genuine (not an imitation); the hand drawn script insinuated a signature, which in turn connoted a guarantee, as if it were a legal contract. Lea & Perrins Sauce assured consumers of authenticity and value through its signification of the authentic and money.



3: Lea & Perrins Sauce sold in what was known then as a Pharmaceutical bottle.

Lyle’s Black Treacle (Image 4) is similar to Lea & Perrins; with its centred composition, a name authenticating the product and decorative motifs juxtaposed with bold san serif display upper case typography. A gold band arched over an illustration of a lion, surrounded by bees. The Lion is the savage beast made noble because it is dead, a metaphor for culture celebrating conquest over ‘dead nature’. The Lion is also a metaphor for Africa, the origin of the raw sugar cane; a place perceived to be wild nature to be conquered by British culture. “Out of the strong comes forth sweetness”; – a signifier of a cultural truism that signified the life force of the savage beast contained in a tin of treacle. With Biblical reference, Samson kills a lion and later sees that a swarm of bees had formed a comb of honey in the carcass. Samson then turns this into a riddle: “Out of the



4: Typical Imported Packaging of the 1800’s, remains unchanged in 2007.

eater came forth meat and out of the strong came forth sweetness.” The eater is also a symbol for the British Empire and ‘treacle’ a metaphor for blood. The Lyle’s Black Treacle sign depicts a potent product with the rhetoric of homage to death as a superior state, and with a righteous glee in its portrayal of superiority over nature – hence the proposed consumption of this same idea.

Less savage than a lion, albeit a dead one, was the wide eyed, full-lipped, moko-mouthed, smiling Wahine (Maori woman) on New Zealand product Parker’s Hair Tonic (Image 5). Beneath was a shield: a signifier of authority, from which she seemed almost to rise. W. Parker, a pharmacist, promised consumers attributes from wild nature that were “beautifying” and “invigorating”. This signified the aspirations for the beauty and vigour of nature as obtainable by way of culture. The only asymmetrical aspect within the otherwise centred composition is the smiling Wahine, her head to one side, signifying disorder, framed between symmetrical tendrils of frond like like hair. The unstated meaning is a cultural bottling of nature, made superior, due to the cultural reinterpretation of nature as a scientific solution.

19th Century packaging design usually featured a centred, symmetrical composition (unless symbolising raw nature; then something would interrupt the symmetry). Colonial packaging signs (imported and local) reveal a culture imbued with fear and doing battle with nature. Signs sought to guarantee, to persuade, to establish a ‘reality’. Culture denoted the benefits of the product through aspirational images of nature suppressed and contained, and consuming the same. Signs of nature depicted nature as an unpredictable and formidable enemy that would be beaten into submission by its superior – culture.

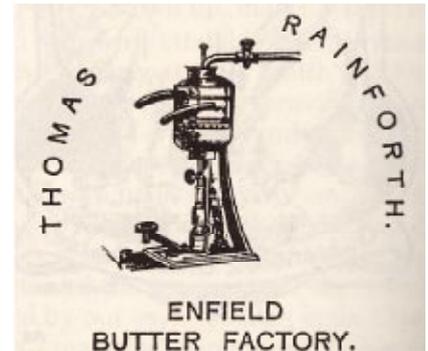


5: Parker's Hair Tonic

Deciphering Early New Zealand Dairy Signs

Levi-Strauss' structuralist theory mapped pre-industrial culture as in opposition to nature even though his findings indicated it was not quite so straightforward. However the validity of his argument is apparent where evidence of this opposition was prevalent: in the signs of industrialised culture. Early New Zealand milk signs are examples of this evidence, wherein the relationship between culture and nature is adversarial.

Research into cultural attitudes toward nature began with deciphering of the earliest recorded New Zealand milk signs. These were found in "Well Made New Zealand" written by Michael Wolfe (1987), who had searched the first company registers of business records in the National Archives to record early New Zealand graphic signs. The Enfield Butter Factory

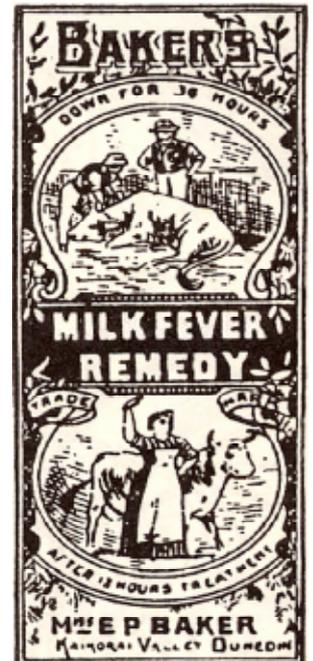


6: Milk is industrialised – Laval's Partnership with New Zealand milk begins

sign (Image 6) is an illustration of the Laval Separator. In the home, milk was left to stand for three days; over that time the cream would separate from the milk, the milk then separated into curds and whey. The curds were kept for cheese and butter and the whey was fed to the domestic rubbish disposal unit – the pig. Milk was considered a food and a dietary necessity with medicinal benefits; it was a raw ingredient used in cooking. Cream was a luxury according to Mrs Beeton, a home management authority of the day (Beeton, 1880. p.1713). In more populated areas, like Wellington, the milkman delivered same-day milk door to door by horse and cart, and transferred it into domestic jugs and billycans by way of "can and dipper". The filled domestic containers were placed into the kitchen "safe" (as domestic refrigeration was not available) – a kitchen cupboard that had five sides made of wire mesh. The cupboard extended outside, always on the shady side of the house, it was insect and vermin proof and always cool. If the milk was in a jug, it was covered with a bead weighted gauze and went onto the table as was. Separating milk was a time-consuming and labour-intensive process. The Laval Separator was first imported from Sweden in 1884 and

it furthered the industrialisation of milk significantly as it sped up milk separation and saved time and labour both commercially and in the home. And it was believed to be a more hygienic process. The milk sign here is 'industrialised superior milk'. The separator, and by extension the sign, is a cultural intermediary between nature and culture.

Baker's Milk Fever horse and cattle medicine (Image 7) was produced by Emily P. Baker, Kaikorai Valley, Dunedin, medicine manufacturer, 1897. Cows were first imported to New Zealand as domestic necessities for the supply of milk and meat and as beasts of burden: ploughing, carrying and transporting. Image 7 sign is a bovine medicine label, denoting a "before and after" scenario. There are two parts; the top has the caption: "down for 36 hours" and shows two men with the body language of concern and helplessness, standing over a prone cow in a confined area, framed by a horse shoe. The horseshoe was a symbol for luck and here, with the open end of the horseshoe positioned downward, the sign signified bad luck. The white caption on a black background that reads "milk fever" is directly underneath. The horseshoe open at the top, in the "good luck" position, frames the lower scene. The bottle of Baker's cure for milk fever is like a flag waved high, an expression of celebration, by a woman dressed in a milking apron, signifying the cow is well to milk. The culture was dependent on cows for prosperity, and cows represented the financial health of a culture dependent on it for survival. The overall signification is that nature inevitably brings bad luck, however Baker's brings good luck, and overcomes nature. Milk fever, if not treated within 12 hours, always resulted in the death of the cow. This sign identifies with purchasers by affirming the unpredictability of nature which requires the product to overcome nature.



7: Nature = Luck

The Trade mark – “H R Reynolds & Co., Ltd.” of Pukekura, Waikato Factory, 1886 (Image 8) was illustrated with an anchor of a type carried by ocean-going ships that moored temporarily in deep waters to supply and export goods. The sign had the initials of the owner Henry Reynolds either side. Encircled with a line and the word “Trade Mark” above and “Reynolds & Co., Ltd” below, it was divided with a cross pattee (R. Koch, 1955) which was a European heraldic symbol. As signs, ships and anchors represented diverse products sold within New Zealand because they were a metaphoric symbol for oceans as the “highways” that connected Britain with its colonies. This sign too signified export and connection with Great Britain. The format appears to have been an adaptation of a company seal, which connotes legal authorisation. The initials “HR” as well as the initials of Reynolds are perhaps a play on an abbreviation of His/Her Royal Highness to imply British monarchy. Factory owner Henry Reynolds adapted the anchor from a tattoo he saw on one of his factory workers. It is what Baudrillard later termed a simulacrum, because the original context bore no relevance to nature:– the milk, cheese or butter signified by this “trademark” had no connection to nature, only to export. The Anchor sign was a simulacrum that originated from the cultural identity of an individual who had probably been an ocean-going sailor and had no connection to milk other than working at the factory. Whether intentional or not, the sign means culture: food for export to Britain.



8. *The umbilical cord to Mother England*

The sign of Pioneer of Edendale Dairy Factory in Southland (1892), (Image 9) typographically integrated the words “Pioneer Factory” into a circlet design crown. The signification of the crown was love and loyalty for a topically beautiful and popular Princess, Alexandra of Denmark, Her Royal Highness the Princess of Wales, who wore this unique design of crown before she was made Queen in 1901. It was a sign of culture affirming



9. *Loyal*

consumer loyalty and a love for the Crown as they pioneered, breaking new ground in a battle with nature.

East Taieri Creamery 1893 (Image 10) was an Otago Dairy factory sign constrained by a rectangular border with 58 circles. At mid-point between "East" and "Taieri"; dotted lines make up a cross. There are four stars within the cross. Inside the border are three leaves in a vase with



10: *Culture Holds Water*

a shield on it obscured by the middle leaf. Denotation of location is prominent in the lettering.

This was important because up until 1876 New Zealand was divided into provinces that competed for funding for public works, railways and immigration, which caused intense parochial rivalry.

Even within Taieri boundaries there seems to have been some geographic delineation that defined different social status. Identifying a producer by a sign identified local inhabitants within, and

as, their province. The cross on the label is an Irish or Scottish Saltire, most probably Scottish as

many settlers who came to that area were from Scotland. In between the Saltire is the Southern Cross – a configuration of stars seen in the skies above New Zealand – which had been appearing

on the New Zealand flag since 1834. Industrialisation was represented by the border of circles

with dropped shadows to signify metal nails or rivets in regular repetition. The plaque and shield

are signs of authority and status. This indicates an emerging national identity, nature inherently

entwined with culture, combined with emergent rural industrialisation more subtle, but similar in

concept, to Image 11. The multi-furrowed plough, mechanical cultivators, threshing mills and the

Laval Separator were all operating in the district by this time as Shaw notes, 1977. Also important,

in the context of Image 10, the Taieri settlers drained

wetlands, "swamps", and cleared flax (a prolific native

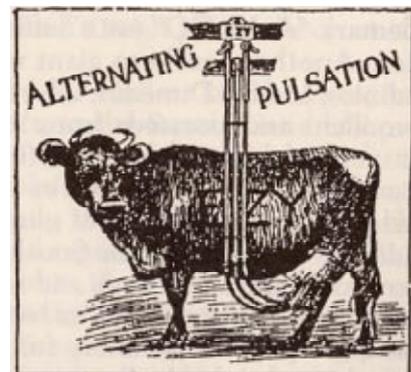
plant) in order to farm on soil rich plains. The vessel is

a metaphor for water contained. The three plume-like

broad leaves signify culture because they were not flax.

The foliage symbolised culture triumphing over nature

because cultivated flora replaced native flora (and



11: *1890's mechanical milking machine sign*

was here in water contained within a vessel). The Taieri Creamery sign signified industrialised farming that had contained and replaced nature.

The sign for the Eltham Co-operative Dairy Factory Company (Ltd), (1893) cheese and butter factory (Image 12) was a symmetrical image made up of simple lines and dots combined in a stencil style technique depicting a native Ponga and Flax. Below the image, an anagram "EERT" is followed by "Brand". Eert is the Dutch word for "Honours."



12: *Tree-eeT.*

The triangular shape suggested by the down-turned tips of flax and the white space around the flax denotes a ghostly Mount Taranaki, a dominant landmark seen from that geographic area. There are many unknown contextual aspects required to properly decode this interesting sign. Were the dairy owners Dutch? Does it imply honouring nature? Was EERT an acronym? Or was it "tree" spelt backward, as suggested by Wolfe (1987). When setting hot metal type, the letters must be placed back to front and upside down on the galley – could a mistake in the setting have caused a spur-of-the-moment decision? resulting in an acronym suggesting a group, and the group a connectedness between individuals that embody that group. The first localised provincial Dairy Farmers Collective was recorded in 1871. Collectives separated, sold and delivered milk within their locale under a common sign. The more conventional term was "Trademark." As a noun, "Brand" was a symbol for more than one product. The illustrated part of the sign was rendered in the stencil-style of a fire heated branding iron which, compared to the fine line quality of the typography, had a contrasting crudeness signifying nature. Overall the sign represented a network of stakeholders and many products sourced from an orderly (symmetrical) raw nature.

The Owaka Dairy Factory Co. Owaka, Otago, 1893 sign (Image 13) denotes a "modern" pedal harp with the pedals and the lower base of the sign removed. The original source of the image was probably from other print material, possibly a mail order catalogue, which was a common way for settlers to purchase items from Britain and America. The sign renders the Gaelic harp that appeared on the unofficial flag of



13: *Music doth soothe the Savage Beast*

Ireland in 1893. It was common knowledge that dulcet tones put the cows in a placid mood whilst being milked, just as it was believed that harsh voices could curdle milk. The idea of a refined cultural item such as a harp in a cow shed elevates the perception of the milk being culturally inspired/produced. The Owaka Dairy Factory Co. sign intimates, because of Irish music, the milk from raw nature made sweeter.

The sign for Pines Farm, Junction Road, 1893, near New Plymouth was registered to a William Paynter (Image 14). The sign was a crude hand-made stencil



14: Cultured Nature

that had Paynter's initials either side of shapes intended to signify a tree. The border formed a broken line triangular shape. Despite the raw look of the shapes, (an expression for nature), the underlying meaning was one of culture, because it depicts a Monterey Pine (*pinus-radiata*), a non-native species imported into New Zealand in the 1850s. The broken lines (Mt Taranaki?) that formed the triangle contained the tree, none-the-less. Other emblems of nature such as the Scottish Thistle, Irish Shamrock, Tudor Rose, Oak Leaves and Acorns also signified the empire. Signs that infer the export destination symbolised the cultural identity of the producer and consumer.

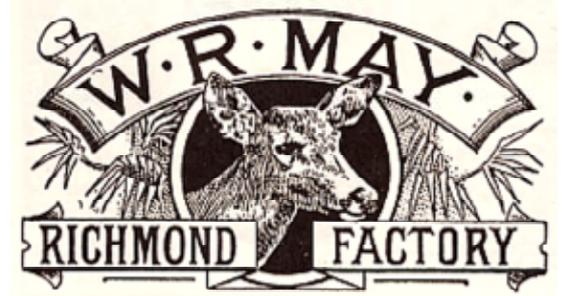
The Fern leaf butter and cheese sign for Canterbury Central Co-op dairy Company (Ltd), 1893 (Image 15) is an image of the tip of a fern frond or bracken, with a banner containing an acronym; CCCDC, the company's initials. In this sign the fern is in the style of a botanical study, a cultural intervention. Interestingly, signs with images of ferns were usually on the diagonal (the angle fern fronds grow), another indication here that here nature is realigned. The fern tip is emerging vertically but separate from a heraldic scroll.



15: Scientific Specimen

The fern is contained within a symmetrical frame with inverted corners that might signify a glass photographic plate or a tray. This sign is nature studied and contained by science.

The William R. May, Richmond Factory, Richmond, Nelson 1897 sign (Image 16) denotes an animal with a



16: *Gentrified Anthropomorphised Nature*

long, thin neck and large ears, with rings through both nostrils of its slightly pointed nose. The animal is the focal point of the sign. The head appears to be protruding through a circle of black. There are banners above and below the central circle, along with native flora, almost symmetrical on either side. Unlike most milk signs of the time, this one has a three dimensional quality, which is an added sophistication. "The Lord is my Banner" (Exodus 17.15) meant God is my safeguard. Thus, the "W.R. May" on the banner was signification of divine protection – more than a personal guarantee. New Zealand dairy farmers had been developing their herds from the early 1800's in order to increase milk production. The front pages of most newspapers advertised cattle sales. When listing heifers for sale, detailed genealogy was given. Overall, the composition appropriates a Royal or family coat of arms (or Crest) that connoted higher breeding. The juxtaposition of culture, with its symmetrical composition, is challenged by an image that asymmetrically breaks the encircling frame, signifies the cow as a high-bred champion, but still wild; nature breaking out of the symmetry. However, the rings through the nose signify that this nature is tamed. The heifer looks very much like a doe, too, and may have been a play on Richmond County, Surrey England, an area where deer free-roamed in Richmond Park, since 1625, there for royal hunting also signifying gentrification. The "May" sign is an anthropomorphism and perhaps a visual pun. This allegoric sign depicts a cow as a symbol for raw nature dominated by culture. There are connotations, too, from a consumer perspective, affirming the settlers' identity

as part of the greater British Empire, as loyal subjects: exporters to the motherland. The Richmond Factory inference is that of a superior product through anthropomorphism of the cow, overseen by 'divine guarantee' and historical gentrification.

Hartstone & Sons of Woodville, butter and cheese producers, 1899 (Image 17) denotes an object: a statue containing the words "The Glory of Man is his Strength." As an allegoric simile, this was a sign for man's struggle against a wild nature. In Greek and earlier Roman mythology, Hercules was a mythical man, descended from God, who made the world safe by conquering nature twelve times. Hercules is thus a metaphor for the settlers' struggles to survive and to be affluent, by overpowering nature. Another inference may have been referencing "Sir Hercules" – a nickname given to then Governor Hercules Robinson, a Darwinist who had an adversarial attitude toward the "soon to be extinct" Maori (Walker, 2001). Maori were considered by some settlers to be raw nature personified. Perhaps, also, due in part to a symbiotic lifestyle of first hand knowledge of nature, also, perhaps due to the ethnocentrism of the time and the myth of the "noble savage." This milk sign reflects the aggressively adversarial attitudes some settlers had to nature and a predominant need to survive economically amidst nature's raw vicissitudes; their pioneering conquest to dominate nature is of mythical proportions, and seen in the light of survival of the fittest.



17: *The Nature of the Beast*

Summary

Early New Zealand milk signs signified culture to consumers. Signs representing milk frequently denoted other things that consumers could decipher as signs of culture, rather than raw nature, because consuming milk as an act of culture affirmed consumers of their cultural identity. Most milk signs prior to 1900 denoted anything but cows; once milk was altered (cooked) into cheese and butter, cows became signs for a raw ingredient (Image 18). In other words the raw, or natural, depended on cultural signs for mediation, whereas the cooked, or culture, could reference nature as it was, by process, safely removed from it.

Whilst milk was a raw source of sustenance and an everyday dietary staple, milk signs denoted a province orientated, pro-industrial identity. Consumers affirmed their other-ness from nature (at a time when nature was considered something to overcome) through milk signs connoting the divine, political and economic right to dominate nature. Thus signs signifying culture could include “natural” objects that connected the individual to culture through signs of civilisation and the empire, such as an acorn, thistles etc. The further removed a product was from raw nature the more likely it was that the signs used referenced nature. The purer the product the more likely the signs were to denote culture.



*18: Examples of early 'Culture' Milk Signs.
Brand without a Cow = Milk = Ingredient (raw).
Brand with a cow = a product from culture (cooked).*

Contemporary Milk Packaging Signs Deciphered In Relation To Culture

This chapter deciphers the most popular domestic milk packaging signs in New Zealand today, explaining how New Zealand milk signs reveal much about the current relationship with nature, and argues that contemporary packaging signs still signify a culture in combat with nature.

Meadow Fresh Brand

“Meadow Fresh” (Image 19) is one of Fonterra New Zealand’s milk brands. Meadow Fresh brand of dairy products are sold daily within New Zealand. In the visual identity the Meadow Fresh typography and underline is light green below a composition of six yellow shapes denoting a splash and a sun. The two colour elements always appear together out of a white background. There are no meadows in New Zealand; “Meadow” is an English noun New Zealanders might have read in European fairytales. Urban New Zealand culture refers to a “pasture” or “paddock” and rural New Zealanders to a “flat”; or a “block”. The word “Meadow” references settler origins and infantilises the consumer. “Meadow” signifies nature as natural.



19: Meadow Fresh Brand Sign (2006)

Connotations of fresh occur in association with Meadow, implying sourced directly from the paddock and farm. An apple on a tree is “raw” – immediately after picking it becomes “fresh”. Fresh means “only just picked” yet the contents have been “standardised”. Standardised appears as part of the packaging sign. The word also suggests normality but actually refers to

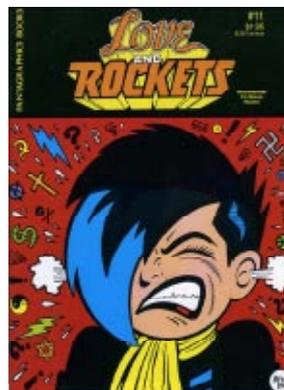
an alteration of the milk beyond mere Pasteurisation and homogenisation – standardised milk has fat and other content removed to a base level.

Variants (such as Fonterra’s Calci-Trim, Calci-kids, Trim, Balance, Mega Milk, Xtra etc) are products with added measures of milk powders put back into standardised milk. Under the Food Standards Act manufacturers need not inform consumers of the re-constituted content of the product because the base liquid is classified as milk.

The colour white signifies pure, clean, hygienic milk. Yellow (sunshine) represents calcium, rich flavour and brightness. The green represents fresh grass on hills growing live cow food. The typestyle imitates fluid and the natural. The sun is a life source and often used as a cliché to represent morning, which has associations for the consumer of health and the natural origins of the milk. The overall composition is a cliché of a childlike composition of New Zealand countryside with the sun emerging from behind green, rolling hills. The fluid, splash-like strokes and droplets infer milk, movement and an energetic spontaneous quality expected of the natural. The combined composition of droplets is a characterisation of the sun having the visual impact of known graphic novel signs for extreme emotion as in a comic speech bubble of expletives (Images 20 and 21). Meadow Fresh brand infers British and, to an infantilised consumer, nature anthropomorphised.



20: Speechless emotion comic novel circa 1950's



21: Speechless emotion comic novel 2006



22: Meadow Fresh Milk Variant Packaging

Meadow Fresh Milk Packaging Variants

The print quality of Meadow Fresh milk packaging variants has a loose registration style that infers the industrialised product is unsophisticated and raw nature. Six of the seven milk variants show domestic vessels. The contents are contained twice – once in the packaging itself and again in the vessel illustrated. As it spills and splashes on the verge of chaos the implication is of wild unpredictable nature – only just, or mostly, contained. The packaging illustrations tilt on a diagonal axis adding to the chaotic effect associated with nature. Consumers thus participate in a hyperreality that dramatises a familiar, every day ritual as the consumption and hence the defeat of wild nature – the consumer is the participant in this implied conquest over nature. The product variants defined for consumers are Calci-Trim, Family, Balanc(ed), Trim and Farmhouse. This combination of words and phonemes in Calci-Trim and Calci-Kids infer scientific modification and improvement because the abbreviation of calcium becomes a code. Calci-Trim packaging (Image 22a) is predominantly yellow to represent extra calcium, nature, and less fat, contrary to first-hand referencing, as raw milk is yellow with fat. Calci Trim has 400mg /200ml of added calcium compared with Calci-Kids at 350mg/200ml. Children may receive more calcium by drinking Calci-Trim.



22a.

The concept of Trim (Image 22b) is made credible by the emphasis in the design on mathematical percentages of the milk content. The product design thus identifies the purchasing consumer as attaining scientifically enhanced nature.

Farm House packaging (Image 22c) does not emphasise the point of difference that it is not standardised. The slowness of the pour, however, suggests a slower, rural (natural) lifestyle to consumers who generally perceive themselves as time-poor. The dark violet (a colour traditionally representing luxury and quality) infers creaminess. The milk depicted on the package illustration is, when compared with the other illustrations of milk variants, splashing out more slowly, implying a thicker milk containing more cream. The rotundness of the jug suggests abundance and more fat in the milk through the greater use of yellow. The grey is a nostalgic, once delivered to the front gate (Image 24). The product promises the consumer a natural and old-fashioned lifestyle.

Balance (Image 22d) light blue signifies weaker than the norm, referencing back to the darker blue Family milk. In the Trim milk illustration the white (innocent), condensed font reversed out of the light green (raw) background depicts an illustration of the home baking – and a potentially guilt-free trade-off for high fat snacks. Calci-Kids signifies a milk formulation specifically and especially beneficial to children – including Choco Zoom (Image 23). It is the only variant that depicts the consumer. The children in graphic novel style, have taken on the characteristics of the milk inferred on other variants – where by the human has taken on graphic characteristics usually associated with wild nature, with eyes wild and unpredictable; a kind of reverse anthropomorphism. Alongside is an anthropomorphised dog, also with wild, hyper, and disproportionately large eyes. Together these infer the unpredictability associated with nature. The product illustrates the consumer as full of nature.



22b.



22c.



22d.



23: Calci-Kids Choco-Zoom milk jug (2007)

Meadow Fresh milk packaging and signs present as a mediator between culture and nature – milk as raw ingredient, a drink depicted in a vessel and a food, depicted as an ingredient on the packaging (a container) thus; is contained twice. Meadow Fresh packaging reassures by creating a drama, then minimising it. Inferred in the drama of the milk spilling from common table vessels is the colloquialism: “No use crying over spilt milk”, which implies milk is a non-precious and abundant product and for this reason there is enough to spill. “What’s that got to do with the price of milk?” is another once-common retort, meaning milk was so inexpensive it is insignificant. The consuming of the unpredictable in the events of the ordinary and everyday metaphorically empowers culture over nature. Consumers are comforted – nature is harnessed, plentiful and conveniently rendered trouble-free. The inference being that nature is insignificant and inexpensive. It also represents nature as troublesome and unpredictable, but (mostly) harnessed.

Hence Meadow Fresh consumers are the sloppy but heroic participants in a precarious once-upon-a-time everyday mini drama, whenst nature – the unpredictable and badly behaved – threatens to upset the day, but is not only contained, but consumed, by the easy going hero who takes a little of the wild side in their stride. They are the conquerors who will face any misfortune in their (a bit more exciting) day, in one gulp. The essence of the cultural character depicted is of a desire for power over the chaos created by nature.



*24: 2 pints of
pasteurised
'silver-top' milk*

Naturalea Brand

“Naturalea” (Image 25) is a product in the Meadow Fresh brand suite of products. Naturalea is close to a re-spelling of naturally which implies nature made comprehensible. Naturally also is a word used as a response when something is the obvious. The typography of Naturalea packaging is a mixture of a nostalgic font brand identity and a sans serif font to represent modernity. The pale blue and green patterns suggest cow markings and a mild taste. The cream coloured paperboard stock implies the rawness of the product as it differs from other milk because it is non-standardised and organic. Organic is mentioned three times on the front face of the carton alone. This is a raw version of natural. Organic in this instance is the new raw. The cow is anthropomorphised – a head and shoulders portrait in a style reminiscent of Victorian, black cut-out paper shadow miniature portraits. The white counter-space of the cow is suggestive of a human shoulder with a daisy behind the ear. The demeanour of the cow is passive and vacant. Phonetic New Zealand speakers read two syllables “Natural” and “Lea”, which implies the cow’s name is Lea. The name (Lea) originates from Hawaii. The sign with the cow with the flower has associations with Polynesian beauty (Image 26). More than 14% of New Zealand population are Polynesian (Statistics New Zealand, 2008). In Polynesian culture a flower behind the left ear signifies single, available and by implication fertile. Naturalea thus claims to be natural, raw-ish milk from nature and Polynesian convention is used to represent the new, passive and desirable natural – as industrialised culture moves further from first-hand experiences of nature it seeks new ways to signify nature in new product lines, and to mute it. Naturalea’s Polynesian anthropomorphised cow is, by the Williamson definition, the new natural. Polynesian is a minority culture within a wider cultural context that is absorbed into and consumed by the dominant culture. Organic too is the new natural. Culture thus desires raw nature through signs that reference known and quaint convention.



25: Naturalea carton packaging (2007)



25.



26: Lea (2007)

Anchor Brand

“Anchor” is New Zealand’s oldest milk brand identity and another from the Fonterra stable. An anchor in various forms has been recognised since 1886 as a sign for dairy products locally and throughout the export world. In Image 27 the contemporary symbol is more angular and geometric than its curvaceous original. The lozenge is a stamp functions (as did the original), which authenticates, and in turn is an endorsement of the contents as reliable and traditional with the added assurance of cultural familiarity. An anchor in this context has become a mediatised metaphor for fixed and dependable – the red, white and blue together a visual link with the colours of the New Zealand and British flags. A proportionately greater amount of white suggests the hygienic and pure. The red “Anchor” uses typographic strategies suggestive of command, urgency and strength. Blue provides the traditional, sterile, clean, and connotes the cold required to keep milk palatable to consumers. Anchor brand has become an icon of sorts in New Zealand, signifying officialdom by referencing history, tradition and longevity in a tone that reassures consumers of solidity, certainty and authority.



27: Anchor Brand sign (2007)

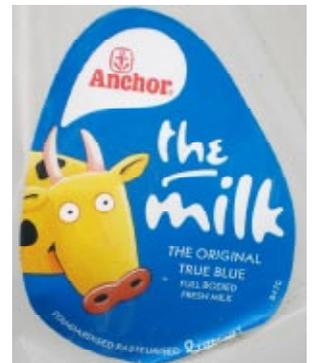


28: Anchor Milk Packaging Variants

Anchor Milk Packaging Variants

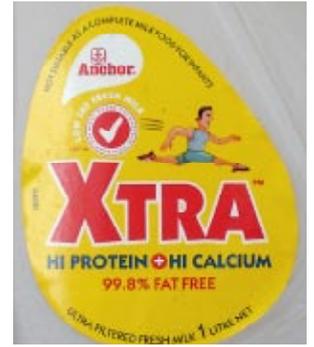
The Anchor artefact in the accompanying (Images 28 and 29) is a unique deviation from the conventional commodity bottle-shape of its less distinctive competitors (Image 28). The bottles have an integrated handle, coloured screw-on caps and stick on paper labels that mirror the brand speech bubble. The bottle also embodies the notion of the brand shape. The bottle form is asymmetric, and represents the natural, especially in comparison to other more market dominant shapes. The amorphous speech bubble/droplet/splash shape of the bottle is ergonomically considerate and suggestive of a sensory amalgamation with the natural. Consumers are encouraged to perceive themselves as natural and consequently what they are consuming is also natural. It has an embossed anchor near the base of the front facia, hidden under the label, acting as a “signature” of authenticity and reassurance. The brand is the product and this resonates with the consumer.

The Anchor variant known as “the milk” (Image 29) is nostalgically reminiscent of the blue-top milk that came in quart, pint and half pint glass bottles when milk was known simply and colloquially as the milk. The name references the traditional. The lowercase letterforms have a passive child-like irregularity which suggests the imperfection and randomness associated with modern signs for nature. The typestyle is globular, as though it were milk. Humour is set up through the juxtaposition of an anthropomorphised yellow cow speaking the brand name authoritatively as though it were a talking head on television – momentarily in the frame, with a smiling bucolic demeanour. The by-line “original true blue” is an expression used for honesty and again references the blue foil-top variant introduced in glass bottles. A rather stupid looking cow in childlike graphic novel illustration style, talks authoritatively at consumers.



29: *The Milk* (2007)

“Xtra” milk variant is a texting-style abbreviation that signifies it is technology superior and youth-coded. There is also the connotation of “X” – “marking the spot.” The white “plus” sign out of a red circle is technology (a button) like a Red Cross in reverse – together a metaphor for rescue and approval – the heart foundation tick a further authorisation of healthiness. The illustration of a thin, leaping, genderless runner in comparatively small scale juxtaposes the other graphic elements. The yellow background is everything – an environment of xtra-ness. This packaging sign has no associations with nature or the natural. The overall message is of consumers, here dwarfed by a technological rescue pack (Image 30 previous page).



30: Xtra (2007)

“Mega” (Image 31) is contemporary child-speak meaning a lot or huge. The caricature of a muscly, masculine, childlike, dim-witted bullock is not the producer of the milk but the recipient. There is intended irony in a young bull being the metaphor for milk. The implications is that – via Anchor – the milk is his mum’s and it has made him strong. The consumer is the orange bullock. The orange colour denotes an excited energy. The natural is made present through the goodness of mother’s milk. Mega infantilises the consumer in a caricature of youthful, wild enthusiasm (a perception of nature as we have often seen) and applies these attributes to the product at the same time it connotes the product as the same. The Anchor brand depicted here is matriarchal and nurturing.



31: Mega (2007)

Super Trim (Image 32), once again is a caricature of the natural: a small weak, smiling sun with a predominantly pale green colour background, to suggest the very light (no fat) consistency and taste of the milk. The typographic style is geometric in character and light in weight. The red colour again visually links Anchor with the heart foundation tick and lower calories. Here an exaggeratedly super-weakened nature is made beneficial to the consumer.



32: Trim (2007)

Thus Anchor consumers are bit players – their role played out amidst infantilised caricatures of a Simpson-esque, globular world whilst “ingesting” commanding orders from huge, anthropomorphised cattle, tiny runners and a weakened sunshine. The caricatures are hyperbolised; consumers know they are not real and are entertained as they join in and consume the game. The essence of the depicted cultural characters inherent in the allegory is the desire to be accepted, to do the right thing, from a tone mollified by humour – and the battle culture has with nature continues unabated.

Farmgate Brand

“Farmgate” is the New World supermarket chain’s own brand milk, sold solely in high density Polyethylene bottles (HDPE). The two words, run together, are restrained – symbolically a gate which restrains the movement of cows (nature) and a boundary proffered by the manufacturer – put in place between nature and culture. Overall, the colours are green and blue to represent sky and land – nature. The underlying composition of the label is a grid, with specific messages within each section. The top right quadrant has four (New Zealand flag) stars and a graduating blue tint. The word “farmgate” is in white reversed out of the blue background. The composition speaks of white middle class New Zealand as well as of outside (nature) in an optimistic new dawn of a future new day. The lowercase typography for farmgate, milk, fresh, litre, net and Pasteurised speaks in a non-authoritative passive voice. The lower right quadrant is a barcode – connoting mass production. The lower left has scientific information about the milk and the top left has the numeral “2” and the word “fresh” almost as a headline alongside two “fresh” young children. The children are happy, Caucasian and appear well fed and content.



33: Farmgate Brand sign (2007)



33: Farmgate Brand Packaging (2007)

They are dressed and groomed in a subtly old-fashioned, non-contemporary style. They have the demeanour of being related, which suggests family. The word Homogenised over the chin of the laughing boy denotes a child happy to consume this version of milk. The children are the foreground to a blurred background that is dreamlike and of nature. Farmgate here implies the children's protection and, significantly, their separation from nature.

Homogenised and Pasteurised are a further scientific assurance: farmgate is nature managed by cultural intervention (Image 33).

Culturally coded colours are again evident. Farmgate colours follow Meadow Fresh signs' colour codes (Image 22): Yellow for calcium enriched, dark violet for full-cream non-homogenised, light blue for low-fat milk and dark blue for milk without powdered milk additives. The products "Slim" and "Extra Slim" are referential of both the consumer and the product.

Farmgate nutritional information follows the layout style indicated in the New Zealand food standard guidelines for providing nutritional information on packaging. The contents are listed far to the left and the quantities far to the right with no visual link between left and right, making it difficult to line up the two. In critiquing this sign it is irresistible not to mention that the nutritional information has a distinct counter space within the body of the copy unintentionally denoting a head and shoulders profile of a dog (Image 38). The skyward – looking children, bathed in warm mid-day sunshine on a dreamlike background, look toward the new day and wait expectantly. The purchaser fulfils the wait by literally buying into his or her own childhood dreams and familial aspirations – culture yearns for a future that is safe, loving, optimistic, pristine and orderly. Again nature is contained and restrained and made safe through the auspices of the industrial. The design elements are less concerned with branding and more conservative but the same theme remains.



34: Farmgate Calcium Enriched (2007)



35: Farmgate Slim Milk (2007)



36: Farmgate Extra Slim (2007)



37: Farmgate Full Cream Milk (2007)
38: New Zealand 45c Stamp (2006)

Meadow Fresh Organic & Anchor Anlene

“Meadow Fresh Family Organic” (Image 39) design shapes are asymmetric and repetitive, implying both a simplified landscape of trees silhouetted on a hillside and a branch with leaves. The dark and the light shapes are evenly balanced. The sign is suggestive of magical fun and organic (non-threatening) nature. Its opposite sign-strategy is Anchor Anlene (Image 39). In this instance Anchor is not fun. Anchor “fun-ness” is replaced by the authoritative science of pharmaceutical visual language. The photographic treatment brings realness to the design but Anlene is not real milk. It is a “milk drink”; a legal description required when a product has less of its raw ingredient than its other additives. Anlene is science. It is industrial – nature is conquered by intelligent humans.



39: Organic & Scientific Milk (2007)

Discussion

The confusion and profusion of signs in everyday New Zealand milk packaging reflects a culture that sees itself in child-like caricatures and mini-dramas that represent reconstituted nature as “the natural.” Milk signs humour, contradict and obfuscate innate contradictions – the farm and the cow are just down the road and the product is the authentically raw – a false assurance that little about milk has really changed. Through contemporary milk signs culture is seen seeking a connectedness with nature, believing the act of consumption will affirm that which no longer is. The reconstitution of the cooked as the natural distances the consumer from the source whilst proclaiming the opposite. The natural has been replaced by the Organic and here the battle is seemingly less intense; organic can be straight from the cow, scientifically enhanced. In reality not much has changed.

Since the beginning milk packaging and signs have stood in place of nature, subverted nature to culture, and continue to subvert it still further. Milk has always been a prominent metaphor for nurture, close to the cultural roots of New Zealand identity. We accept and have come to expect milk signs promoting the tenuous claim that in a modern socio-economic system milk is raw. This sleight-of-hand requires a consumer embedded in a culture, with a child-like understanding of nature. Baudrillard’s (1988) prophecy in part is realised, for a culture imbued with technology and distanced from the product’s source cannot decipher the visual clues. Although industrialised packaging and product is clearly mass produced and unnatural, culture as expressed in the signs and packaging discussed is blind to this truth, preferring to believe to be true that milk is as raw nature. More recently, contemporary milk packaging signs reflect a shift from this desire to dominate nature to the desire to merge with it.

De-Signing

Having set out the theoretical context used to inform my subsequent critique of early and contemporary milk signs, the following chapters provide the background to the design element of the thesis. In this section I explain my motives for pursuing this topic. I then discuss findings from research I conducted with children concerning what milk signifies to them and what certain colours signify. This is followed by a discussion on issues surrounding domestic commodity packaging signs and materiality, resulting in the need for packaging to reflect the content of the product. A brief discussion of the content and packaging of milk follows. Finally, I include a case study of pre-industrial Japanese packaging that exemplifies the ethical and aesthetic principles that inform my design practice.

Cultural Context – A Point In Time

The deciphering of graphic signs began unawares in 1962 with first hand experiences that promised a brave new world of wonder and excitement through packaging colour, shape, tactility, construction and graphics. My family was part of the urban drift and lived in a stark, clay covered satellite suburb of Porirua East (Image 40) where food was limited and came from the new Four Square store, with on its sign a friendly white-aproned expert, pencil behind the ear, ready to advise the hapless shopper of the best buys (Image 41).

The only mediated visual stimulation prior to the arrival of television



40: Porirua East 1960s.

was packaging graphics (and imagination; listening to the radio). Although food packaging denoted contents and the promise of quieted hunger pangs, packaging signs connoted other things. A new box of Weet-Bix the hope of a gift – those two small shiny cards inside – of things exotic and mysterious like never before seen deep-sea creatures. There were possible trades with schoolmates – playing swaps to build the whole set and an address to write to for their free album. The Weet-Bix box also became a model, to construct with only glue (made with flour and water) and scissors.

The half pint of milk with its silver foil top, displayed graphics of red and green holly as Christmas and summer holidays grew nearer with their break from the routine of schoolwork. Inside was pure milk, straight from the cow, that we just knew was good for us, in a hygienic glass serving-size bottle. It was warm from sitting in the sun, at school and refrigerator-cold after school. We drank this in a glass, dunking a Griffin's Gingernut biscuit. Frosty Joe, a part of every endless summer, was a lucky kid I'd have liked to have had as my friend, because he was really happy and had as much ice cream as he liked. Although these early memories indicate my entry into deciphering graphic signs, the academic study of signs and their meanings in cultural context is relatively new.

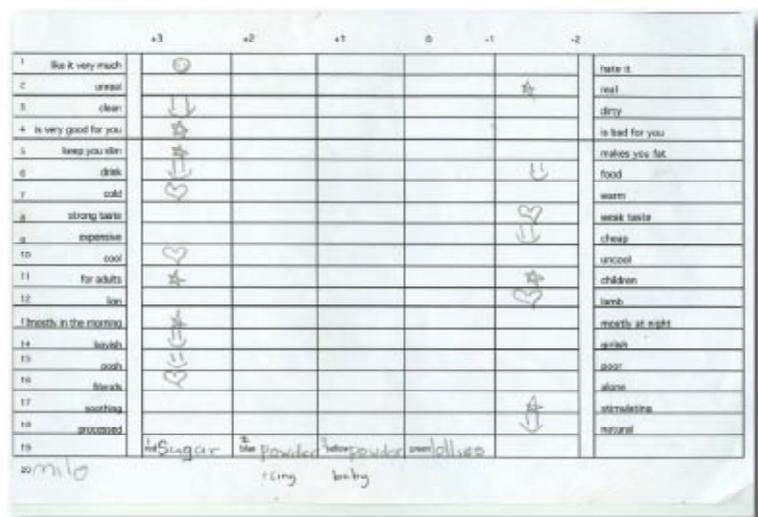


41: Four Square Sign

Children's Views

Contemporary milk packaging signs are a paradox that contradicted my perceptions of milk, this has been the reason for my interest in analysing them. I wondered what value milk had for mediatised children from the same low socio-economic group as mine, but who have not received free milk daily at school. I researched what milk meant to them and what they understood

from milk packaging signs. My first research explorations used models and examples of questionnaires used in the 1960's to inform the designs of the time – these were designs I was surrounded with as a child and they consequently informed some of my perceptions about milk. Through a binary, numeric graph, the 1960's research model plotted statistics of consumer perceptions of a product. Once gathered, the statistics helped designers to create designs to counter negative perceptions about a product and to strengthen product and consumer-perceived benefits. Initial designs were then retested and refined. Subsequently modifying two questions slightly to update and colloquify the language, I adopted Scope International's methodology as recorded by Dr. Jean-Paul Favre, 'Richtige Farbe - Erfolgreiche Packung', (p.65) in 1969 used for new milk packaging in Switzerland. Interested to find out what this child sector of New Zealand consumer culture's perceptions were about colour and taste in relation to milk, I provided thirteen ten-year-old children at a Naenae state primary school, (the poorest urban children in the lowest decile rating in the Wellington region), with Favre's questionnaire, and asked them to indicate their answers on their own A4 sheet. The test was voluntary and anonymous. I asked them to rate what they thought about milk. Their answers were predominantly at the extremities of the graph. It is interesting to note the way the children signified their answers: with symbol signs, such as stars and happy faces that reflect the degree of agreement, rather than the numeric scale (Image 42).



42: Research Questionnaire

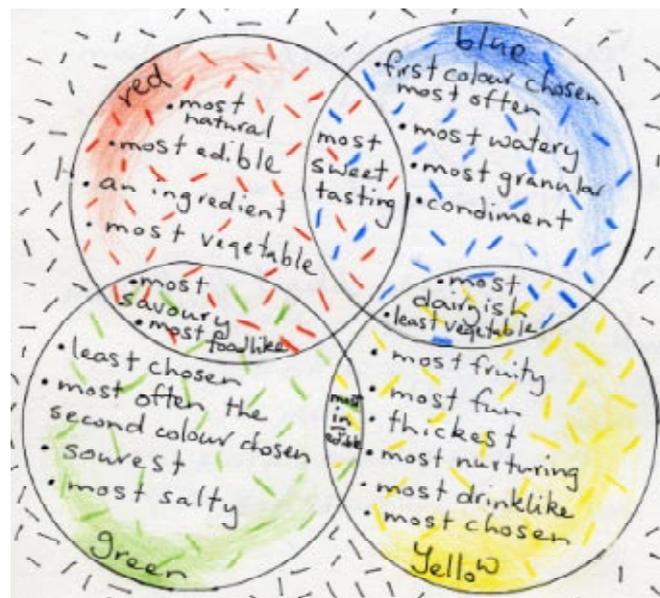
Children liked milk, thought it clean, real, healthy, and that it kept one slim. More preferred it cold to warm, and most thought it had a mild taste and was almost equally for both children and adults. Milk had the persona of a lamb, rather than a lion. Most had milk in the morning and about half in the evening as well. It was equally “boyish” and “girlish”. They thought it “posh” (as aspirationally appealing). Milk consumption was a social or individual activity. It could be soothing and stimulating. It was natural (See Appendix). When asked what flavours went best with milk the most popular choices were banana, strawberry and chocolate. The participants were shown two-dimensional images of four different coloured packages with unreadable typographic signs, (Image 43), (the actual size 2 x A4 landscape). This followed Scope Internationals 1969 process to gather statistics on what colour signified in different cultures. I asked the children what was in the box. Their responses were as follows: the red box signified – water, plum, salt, milk powder, strawberry, “Raro” (an orange flavoured drink), tomato sauce, soup, sugar, lollies or “Milo” (a milk chocolate drink). The blue box signified milk, blueberry, sugar, water, icing powder (sugar), a toy, flour. The yellow box signified juice, banana milkshake, ice cream, orange, cheese, baby powder, book, lemon. The green box to them implied cat biscuits, lime, lime stuff, Weetbix, yoghurt, salt, apple, “v” vegetable, lollies, money.



43: Research Images of Packaging Colour Questionnaire

Summary

To summarise meanings – the red packaging was most appetising, associated with sweet tastes and solid textures. Green was the least satisfying – signifying sour, sharp or strong, salty, most food-like and savoury (equally with red, but least appetising). It was the most sour and most salty and equal to yellow as being the most inedible. It was most frequently the second colour chosen. Yellow represented a sweet dietary additive. Boys most associated yellow with milk. Yellow signified drink-like for most children, and was considered also the most natural, nurturing and edible. Yellow was also fun, fruity, the most dairy-like (with blue), had the thickest consistency and was the most nurturing. It was the most evenly chosen colour for first, second, third and fourth choices. Yellow signified the widest range of meanings for children. Blue was relatively neutral. Girls, more than boys, associated blue with milk. Blue signified fluid, sweet, granular, condiment and edible. It also signified dairy product equally with yellow. Blue was the colour (equal with red as the sweetest) that most signified watery, and was responded to first, most often in the colour test. One in six children relied upon milk as food, rather than as a drink.



44: Visual Summary of Questionnaire (2004)

Household Commodity Packaging – Domestic Danger

An aspect of the relationship between milk packaging and children that disturbed me, was the ability of commodity packaging forms to mislead the consumer about what is contained. Domestic commodity packaging signs rely upon the retail environment to provide the consumer context with which to decipher sign meaning. Taken away from this context, the signs become incoherent. Milk signs have become indecipherable simulacra when in a non-retail context and as a result, do not provide for the health and safety needs of children. What signs communicate may alter with a change of context, even though the signs remain the same. Alarmingly, milk packaging shares similar signs in its materiality, size, shape, colour, typography, imagery and construction to many other mass-produced commodity products, both edible and toxic. (Image 45). This poses a serious risk for young children who may mistake a plastic jug of dishwashing powder for milk. Children are being poisoned from consuming detergents (NZNPC, 2004). 615 New Zealand children read packaging signs of toxic product as food or drink between June 2002 and March 2005. To decipher a sign for a detergent or milk a child would have to be able to read, and this most cannot do until they are at least five years old.



45: 615 New Zealand children in 2.5 years misread packaging signs of toxic product as food or drink. These images illustrate the non-reader deciphering context (2005)

International Literacy Association findings in the first New Zealand (a task based) survey conducted in 1996 revealed the majority of adult Maori, Pacific Island and other minorities are struggling to effectively achieve such tasks as reading a bus timetable or follow packaging instructions because they do not have the minimum literacy level required (M.O.E., 2008). It is disturbing to note that milk packaging resembles the contemporary packaging design for both edible and toxic products – just the simulacra Baudrillard described. Packaging designs are instigated by the producer priority to compete for consumer attention at point-of-sale and can be rendered visually indecipherable in a home context. On a kitchen bench, the packaging signs shown in Image 44 appear to be similar, especially from the pre-reader’s perspective. Three-dimensional packaging form and two-dimensional graphic signs, along with the context in which the packaging is situated, instruct the consumer as to artefacts’ intended uses or applications.

From the Non-Reader’s Perspective

What follows is a critique of every day consumer commodity signs deciphered from the non-reader perspective, to provide some context for new milk packaging design. “Morning Fresh” (Image 46) has a sipper top that suggests a drink, rather than a dishwashing liquid. The saturated orange colour (in conjunction with the green) is suggestive of a sweet, orange tasting consumable. The red Coca Cola – like “swoosh” and the glass on the label also suggest a drink, similar to “Meadow Fresh” milk, and it is a drink-size bottle. In contrast consider the actual orange drink. The orange juice packaging form (Image 47) is a comparatively large and heavy form, ergonomically prohibitive to lift and pour. The depiction of “real” orange colour on



46: Morning Fresh (2005)



47: Citrus Tree (2005)

the label is visible but unappetising because it is juxtaposed with dark green - a colour children associate with savoury or vegetable, as demonstrated, a taste experience often avoided. There is a printed texture of oranges but this is cropped beyond recognition, without scale or context. Such ambiguities heighten the threat posed.

“Finish” (Image 48) has a blue top that is fast-flow and cup-like and it has the same blue of the most common milk cap colour. The product is ammonia based dishwashing powder and is highly toxic. Alongside, at the top of the handle, is a shape that repeats like a child’s building blocks. A glass is pictured; again reinforcing a perception of drink-ability. The yellow colour may create the idea of banana flavour to children. There is a “lolly” (sweet) over the dot of the “i” of finish.



48: finish (2005)

The poorest children, who are often responsible for purchasing their own dietary needs (Scragg, 2005), rely on a collage of packaging signs that are non-referential. When a “roll-on” deodorant package design is reappropriated to contain a confection called “Brainlicker” (Image 49), adults may not decipher such a meaning, regardless of the packaging forms, but children do. Children reference first-hand, packaging forms that are generic for other products. In this case the “Brainlicker” candy is indistinguishable from roll-on deodorant, except for the signs on the packaging – neither of which literally reference the product within, other than a sour taste inferred by the lime green colour.



49: Brainlicker: (2005)

In an article for Consumer magazine, Bev Frederikson (2005) reported on child poisoning. She explains that children have access to highly corrosive substances. Pouring these into their mouths can cause irreparable damage as the substances may but actually be look like milk but are dishwashing powder. They look like milk because milk is packaged like many commodity products that are non-consumable. In the same article

I was quoted as pointing out that for non-readers milk packaging was indecipherable from some detergent packaging. Since then Consumer (2007) has reported the work of the injury prevention service of Starship Children’s Health, “Safekids”, which has forced a reduction in the levels of highly corrosive dishwashing powders and is drafting regulations to improve dishwashing powder labelling and packaging requirements. The tragic consequences of packaging design simulacra will most likely persist until producer driven research provides designers with professional objectives. The situation cannot easily be resolved by making minor adjustments, for fear of losing sales. Poison statistics indicate children looking for something to drink are deciphering the visual language of toxic product packaging forms, colours, symbols and combinations of these, as often more appetising than consumable commodities. In addition, commodity product packaging such as milk is constantly changing so for the non-reader, recall of a recognised set of packaging signs may be obsolete. (see Images 50i to 50xvi).



50i-xvi : Packaging Signs change all the time (2002-2007)

As the spectrum of contemporary commodity packaging artefacts do not have a unique form for a specific type of product, new milk packaging for children is needed to differentiate them. By signifying flavour etc. through relevant colour use, in a combination that addresses usability in a unique and unmistakable way, and through size, shape and accessibility providing unmistakable differentiation.

Packaging Materials

In exploring the signification of culture in relation to nature by way of milk signs it is also necessary to investigate the physical properties of milk packaging artefacts. Milk containers are partially transparent, which causes milk to be exposed to light. The material is porous and there is air below the cap. Air space and light contribute to rapid degradation. Vitamins leach through the packaging within a matter of a few hours (Cladman, (1998), Haisman, (1992). The content of the milk as listed on the packaging may be now, with a shelf life of eight days or more, displayed in florescent lit fridges, what the content values might be.

Consumers are being lead to believe, through school programmes and packaging promotions, that milk cartons are biodegradable because of campaigns to swap native seedlings for empty used cartons. The idea of the “swap” implies the exchange of two things of equal value, however this is not the case with HDPE milk cartons. HDPE can be reused. Reheated it becomes a black substance used for such things as out-water underground plumbing pipes and seedling trays but this process makes the material actively toxic. This packaging remains unchanged in landfill. It is a recent practice to use HDPE liners to seal off toxins in landfills, rather than have them break down,

therefore the non-biodegradability of HDPE is presented as a consumer benefit. Future milk packaging needs to not only signify a return to nature and care for the environment but also be adapted to deliver on this.



51: "Meadow Fresh Seedling Swap Meadow Fresh Seedling Swap Free Native Seedling Bring in any Meadow Fresh Milk packaging to participating garden centre and nurseries on SATURDAY 7th and SUNDAY 8th August 2004 and we will swap it for a FREE Native Seedling! Visit www.meadowfresh.co.nz to find the participating garden centre or nursery closest to you...There are also some useful recycling tips to help you care for our environment". (2004)

The National Packaging Covenant

The New Zealand Ministry of the Environment signed the New Zealand Packaging Accord in 2004. It proposed shared responsibility between consumers, industry and government, for managing the environmental impact of consumer packaging waste. The aims set out to inform consumers, and to assist them to make decisions about purchases – influenced by the recovery and disposal practices required in the life cycle of the spent materials.

Packaging designers in future will be expected to consider the environmental impact of what they create because there will be costs attached to products arising from the cost of packaging disposal. In Japan, producers are responsible for recycling costs of their packaging. A different model in Germany (since 1991 the – “Ordinance on the Avoidance of Packaging Waste”) involves the consumer being taxed per item purchased, this has, according to the RMIT(2005), had major impact on packaging design in Germany. The New Zealand Accord currently is a voluntary agreement, with onus on payment by the producer. Some materials mentioned in the Accord are glass, paper and plastics. There is no aim to reduce the disposal or recycling of composite packaging such as milk cartons, that are plastic and paper. The Covenant is a self-regulatory agreement relevant to suppliers of raw packaging material, packaging manufacturers, processors, packaging users, brand owners, producers, retailers, wholesalers, governments and consumers. All, say the Accord, are responsible for minimizing adverse environmental consequences from production and waste. Brand owners in the future, if not signees of the voluntary Covenant, will compulsarily be covered by the National Environment Protection Measure (NEPM). The NEPM will require them to recover their products’ consumer packaging. NEPM will require that the energy from packaging disposal is recovered, or the packaging be reused or recycled. In future consumers will be informed adequately about how the packaging will be dealt with. The question thus posed for future milk packaging is whether it is possible to package milk in a container that (i) does not leach content value (ii) is biodegradable (iii) conforms with the National Packaging Covenant, and (iv) does not confuse as to its content.

Pre Industrial Packaging

Pre-Industrial packaging is hand-made from nature first-hand, and packages both raw and cooked materials (products). Industrialised culture must manage packaging production on an entirely different scale day to day.

Could industry manufacture a functional, natural packaging system for milk?

Historically, the study of packaging per se, has tended to be scattered throughout other disciplines (such as psychology, philosophy, fine arts, sociology and advertising) – seen as a metaphoric symbol, rather than on its own merits; as artefacts that reflect the values of a culture. Records of pre-industrial, biodegradable, every-day packaging artefacts have been very sparsely documented. But Mr H. Oka fortunately, saw the beauty of the deminishing pre-industrial food-packaging designs of Japan and recorded these regional signature design objects in *How to Wrap Five Eggs* (1967). The book offers an insight into what was possible in packaging design in a particular pre-industrial culture. The culture it examines was dependent on nature and reflected first-hand knowledge of nature.

Two categories Levi-Strauss defined as of cultural significance were “utensils” (physical tools with functions) and “manufactured objects” (of spiritual significance). In contemporary milk packaging the utensil is the milk container. The “manufactured object” is equivalent to the values and meaning the culture has attached to milk – a piece of the allegorical. On a physical level and on a psychological level, then, packaging artefacts that function between the consumer and the food in a seamless interaction.

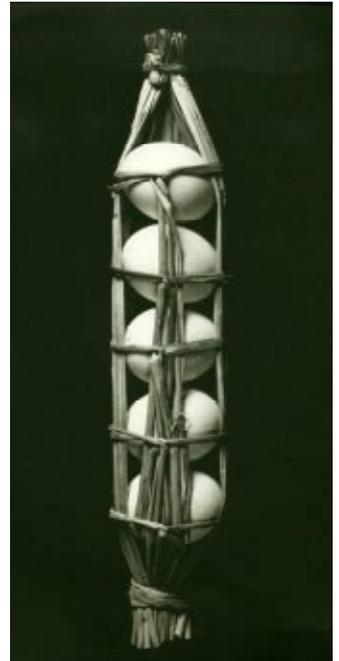
The pre-eminent collections recorded by Mr Oka in 1967, and the later 1975 sequel *How to Wrap Five More Eggs* evidence functional, beautiful symbols displaying Japan as having a close culture/nature relationship.

These artefacts signify a culture that created objects that were transparent in their construction, function and communication: the artefacts were in harmony with culture. This section deciphers pre industrial packaging in a contemporary context.

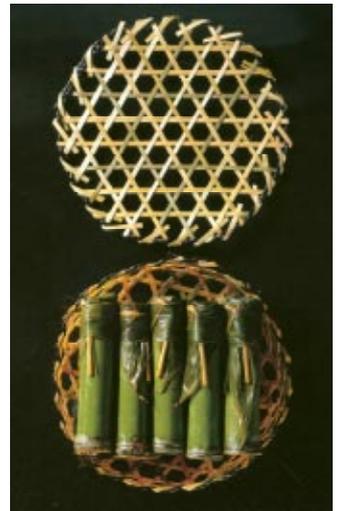
The packaging shown in (Image 52) was packaging that stacked, protected, displayed, hung, contained and carried five eggs. It was made from rice straw, a readily available material at the point the eggs were gathered. The bulk of the straw was at the base where the weight stress is greatest. Each egg had outer protection from impact as the straw twists at the extremities of the eggs. The top fastening is a pocket of protective air and also is the carrying handle as the object was not freestanding. The colour, texture and odour of the rice straw informed of the freshness of the eggs.

Sasa no shizuku (bamboo leaf dewdrop) (Image 53) had many functions; like a contemporary “six pack” it held five hollow bamboo segments each containing a drink made of dark purple Azuki bean, sugar and water. The consumer removed the leaf wrapped at the top of the bamboo and then punctured the lower membrane base and sucked the rising contents. The woven trays and contents were placed in a cold stream (or running water) to keep cool. The visual effect of the dark shiny violet against the wet, fresh green colour must have provided consumers with sensory pleasure. They were sold by a confectionery company in Kyoto.

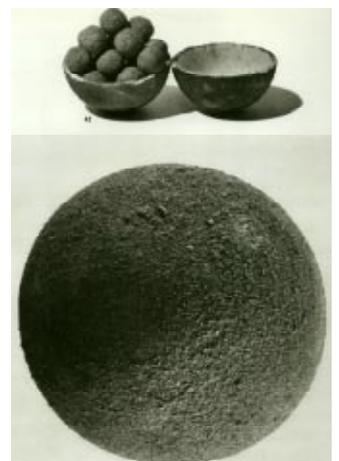
The Kyoto sweet, Shinsei mame, (Image 54) was considered an ancient and traditional confection, believed to have been invented by a Buddhist monk centuries earlier. It was a “cooked” (manufactured object) that symbolised through shape and manufacture, a spiritual wholeness and completeness. This circular ball was an edible sphere that formed two symmetrical bowls on opening. The inside held the same edible confection, repeated on a smaller scale.



52: How To Wrap Five Eggs. Oka, H. (1967).



53: Azuki bean confection/ drink



54: A (cooked) Spiritual food & object

An area known for its long winters and heavy snow was symbolised by a miniature snowshoe made of bamboo, straw rope and dyed paper. The traditional textile pattern identifies it being from Ojiya in the Niigata Prefecture (Image 55). The symbols identify the contents as vegetables pickled in soybean paste.

Image 56 shows a folded kumazasa leaf and a crystal-like layer of pectin preserve called Sasa ame: the leaf not only wrapped the preserve but also infused it with a eucalyptus type flavour. Pre-industrial Japanese packaging utilised available materials in nature to package raw and cooked products.

The age of the packaging indicated the freshness of the product. Some packaging signified geographic location, the uniqueness of a region, [prefecture] such as the climate, local produce and geographic location and features. Some packaging celebrated seasonal changes. The packaging also signified beyond utilitarian function, as exemplars of unique and diverse provincial identities that wrought unique designs, displaying the skill and ingenuity of the maker's allied social functions and habits. The packaging created was beautiful and informed by first hand knowledge of nature. The consumer of the product would interact with nature (the packaging form) that was a part of a culture also part of nature. Consideration for the implications of these examples gave me the inspiration to create packaging design that changed the relationship between packaging nature and packaging culture.



55: Ojiya Promotion



56: Pectin leaf wraps & flavours the preserve

Design Process

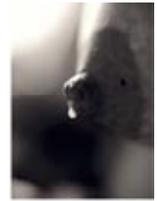
If design is ecologically responsive, then it is also revolutionary. All systems – private capitalist, state socialist and mixed economies – are built on the assumption that we must buy more, consume more, waste more, throw away more, and consequently destroy Life-Raft Earth. (Papanek, p. 200).

Research into the social and environmental consequences of the economic scale of milk packaging uncovered a series of design dilemmas that threatened my optimism of creating a worthwhile design other than more toxic packaging for the landfill. The packaging design that resulted from the research came from congress with nature; the notion that human culture might measure its identity/worth by how it rates itself alongside nature; as part of one symbiotic entity, harnessing industry as a tool to support nature, rather than as a separate entity proclaiming its superiority by abusing the very nature culture depends on for survival. New milk packaging, to function to serve the consumer, must, as did pre-industrial packaging, be as a utensil – a mediator between the cooked (consumer) and the cooked (milk). Inspired by pre-industrial Japanese packaging, I was excited to find a material developed by Tara Mc Hugh, a chemist for the United States Department of Agriculture (Rojas-Grau, 2006) who whilst researching new ways to use fruit and vegetable produce that was otherwise unsuitable for individual sale made a thin film by drying pureed fruits on Teflon plates. The film forms without any need for chemical intervention – the natural sugars provide the flexibility in the film and the carbohydrates provide the structure. This is the material I propose as an inner “packaging”. It is 100% edible, providing necessary added natural dietary nutrients as well as protection for milk from light and air (www.foodtechsource.com). It is 100% sustainable as it uses fruit that cannot be easily sold otherwise and it is 100% biodegradable as it is 100% from nature. For the prototype, however, I have made the packaging out of flexible resin to simulate the fruit wrap.

Physically the packaging artefact needed to be ergonomic, accessible and safe for consumers. It needed to carry and contain the milk, protect it from light and air, be stackable, be easily and safely disposable, perhaps infuse the product with added dietary benefits and taste experiences, display the milk, and communicate the content in a persuasive manner, avoiding any connotations of rawness. It's form needed to be an obviously manufactured object understood and acceptable to mediated culture, yet also reignite the relationship with nature, inspiring an instinctual response through touch, smell, colour, size and shape, first hand. In short, to nurture the nature within the consumer but not infantilise.

Child poisonings indicated pre-reading illiterate but visually literate children read packaging form as indicative of content; the current milk packaging is indecipherable for some. The new milk packaging design thus became a uniquely recognisable shape and an individual serving size to avoid confusion (which was resulting in more children becoming poison victims). This design addresses a primary motivator for this research. Here is a product that is nutritious and appealing to New Zealand children. It is persuasive in its play value, its honesty and its value in quashing hunger pangs.

The conical shape is a non-threatening twist on the familiar, edible ice-cream cone. The cone is a combination of the straight lines that occur in industrialised forms (non-existent in nature) and the curves that are in all forms of nature. The tip end of the new package is a call to action to bite, as though a piece of fruit. It is also a call to action that appeals on an innate mammalian level – to suckle – a less industrialised aesthetic of contemporary water bottles. The tactile characteristics may be described as responsive, or in industrial-speak, interactive. The shape allows for various size hands to manage easily. The conical shape provides multiple opportunities for play in the ways it may be consumed – sucking from the up-turned cone or drinking and chewing from the down-turned direction. The total volume of the artefact is 200mg, in keeping with unit serving guidelines,



contents descriptors, and bulk packing, transportation and display environments at point of purchase. The conical shape may be stacked easily without wasting expensive airspace. To manufacture, the fruit wrap would be made as a continuous tube, like (intestines used to make sausage skin twisted at one end, turned inside-out – the thickness variable, weighted at the base for strength and stability – filled and then twisted at the top, before being encased in the heat sealed clear glaccine film outer wrap, or in units of five or ten school lunch days. Colour is a signifier of flavour in food packaging. Existing milk packaging colour is coded for fat content rather than flavour. In the milk packaging, as part of this thesis, colour is flavour, as it is the actual fruit – apricot hue for apricot fruit, a bluish hue for blueberry, and a pinkish red for strawberry. Research found many ambivalent milk drinkers (Wham, 2000) who thought milk an insipid but not unpleasant taste. The signs of this new product are that the milk is infused with the edible, packaging flavour. The outer packaging acts as a hygienic barrier. The biodegradable glassine film (www.communisis.com) similar to sweet wrappers. It is noisy and shiny, a contrast experienced between the gloss of the glaccine and the soft, tactile, matt surface texture of the package. When opened, the aroma of the product is released. In a landfill situation its volume is comparatively minimal. The prototype is made of cellophane and simulates glassine.

The research findings indicated children had a mixed response as to what colours taste like. Some children associated colours with particular brands. The brand identification revealed their first hand experiences with the packaging; with answers such as “cat food” and “baby powder”. Some colours set off a child’s desires; a toy, a book. Yellow signified milk most often, indicating children were most familiar with calcium-added milk products; this in turn indicating the household shopper’s trusting awareness of stated levels of calcium in the product. Many children bought the family milk from the local dairy. One child identified himself as the boy on the Anchor Xtra milk jug –being good and helpful and doing the right thing for his family, at the same time as feeling small and alone with his Mum sick and unable to get up in the morning.

The internal structure of the package may be cell-like (similar to inside an orange), making consumption easier. Or, it could be a spiral (similar to the structure inside a shell) to slow the milk and be less likely to spill (see workbook for working drawings). More fruit packaging would, beneficially, provide more favourable dietary fibre (the sugar content modified) and although there is perhaps too much for a child to consume, it is biodegradable waste. My final packaging models are orange for apricot, red for strawberry and blue for blueberry. The supplied mock-up is Raspberry, a treat fruit for poorer children. I believe there ought to be a yellow package as well – banana flavoured. Because children expect yellow to signify banana food, I would consider packaging yoghurt inside a yellow vessel, to fulfil their expectations they have deduced from their semiotic decipherings.

The selected typefaces provide a juxtaposition of a humanist font – Cooper Black – with a geometric font – Futura Condensed. Cooper Black has the curvaceous fullness of nature, inferring milk as wholesome nature, while Futura Condensed provides the factual voice of science. Cooper Black also has a “squishiness” that alludes to the nature of the packaging experience. The typographic content is informative and succinct. The overall design relies on the juxtaposition of an obviously playful product alongside a non-emotive font to provide a balanced tone. The content description on the outer glaccine is divided into information about the fruit wrap first, in bold headline. Then the description is repeated with bold emphasis on the milk when the milk contents are described.

The glossy brand sign that appears at around 72pt on the matt surface of the product was a decision made as part of the design process. It is an intrinsic part of the product and cannot be removed, providing an indelible identification that projects pride and authenticity – “bite” is a reassurance, instructing consumers as to what to do when faced with this new product. The brand offers identification should there be line extensions such as yoghurt. The brand is on the product. It is also a potential marketing tool for promotional strategies (see workbook concepts). There is a tight wrap and a loose wrap design solution.



65: Final Milk Packaging Design Concept (2007)

- Delicious, Edible, Nutritious, Biodegradable, Sustainable, Fun, Economic, Stack-able, Display-able.

Artefact Summary Analysis

The design overall is a practical and appealing novelty. The volume of the artefact is comparatively small but this is intentional as the nutrients and fibre contained within the fruit wrap itself, plus the milk content, total an industry standard 200 milligram unit – 100 milligrams of milk and 100 milligrams of fruit and fibre. The conical shape is ergonomically easy for even tiny hands. The cone can be bitten from either end, slurped, sucked and chewed with the consumer consequentially really interacting with the packaging and the contents as though it were a fruit. A cone pointing down is a relatively familiar object. Pointing up the cone has an asymmetric twist that suggests and encourages interaction. The smooth and flexible texture invites play.

Research told me children did not like green but liked blue in relation to milk and as a sign for nature. Red food too was attractive to them, as was yellow to a lesser extent. Chocolate could be another favourite. The colours (and flavours) of the cones could change depending on the availability of the fruit in that season. The scent of the fruit released on opening the airtight glaccine outer is an appealing gustatory cue. The clear glaccine is a noisy confectionery experience announcing the expectation of something sweet inside. The words, which pre-readers could only guess at, infer the milky substance inside. But if the packaging were generic and unique in colour and texture this would further inform the consumer of the expected flavour. The glaccine packaging prevents contamination and is sustainable and biodegradable. Although the aesthetic of the loose glaccine is appealing a tighter outer wrap could be more practical (Image 65).

As a unique form it has shelf presence even as singles. But in units it is possibly strong enough to stack. With units of five, there is enough to easily

provide a daily snack for a school week. It fits with the “5+ a day” healthy eating advice given to children in schools, although cost is not a factor I have explored. It would be fairly obvious if the product were not fresh, encouraging the retailer to care for and replacing outdated stock. The fruit wrap is just small enough to fit in a conventional lunchbox. The internal structure remains unresolved it being still in part a concept only at this stage which needs further work to address issues such as pour speed and spillage along with many other matters. (See work - book page samples for more exploration). I have a suspicion that the packaging may work better as a container for yoghurt. Also unresolved is the method of connecting units of 5 together to create a shelf presence (see workbook exploration and image below). The sample models do not fully express the subtlety and beauty of real colours from real fruits. I am pleased the product has no symbol signs – it is intended to be a sign itself.



65: Final Milk Packaging Design Concept (2007)

Conclusion

In many areas designers must learn how to re-design (Papanek. p.81)

Semiotic analysis of New Zealand milk signs and packaging from 1800 to the present day has provided a necessary framework for deciphering the underlying relationship between culture and nature. Milk is a product from nature, however the industrialisation of milk has been enmeshed uniquely into the social conventions, perceptions and economic growth of New Zealand culture. The historical context of New Zealand milk signs and what they signified, and the signification of contemporary milk signs, have given context for the development of the design brief and resulting milk packaging artefact.

By applying the theoretical frameworks of Strauss, Baudrillard, Barthes, Williamson and Pierce, the thesis deciphers early signs, revealing a paradoxical relationship of domination by culture over nature – its right to do so unquestioningly. Early New Zealand milk signs reflected a transposed culture fearful of untamed nature and battling against it. In an emergent, largely regionalised industry, nature was resignified as symbols for culture. The raw product was inferred, rendered not visible and presented as improved by technology, sweetened by music, made superior by breeding and contained and rendered harmless by science; in some instances also represented by symbols of empire, loyalty, monarchy, brute strength or more latterly simply not nature – improved.

Deciphering contemporary New Zealand milk signs revealed a culture still overwhelmingly expressing a domination over nature: nature now reassigned as 'the natural' with remnants of past signs; still visual threads in a new time context. Semiotic analysis of contemporary milk signs also included the wider context of competitive commodity artefacts and signs which became simulacra when taken out of the retail environment, becoming indecipherable from toxic substances to non- readers.

Contemporary milk signs and packaging paradoxically also reflect culture with a new desire to merge with nature through signs signifying raw nature in people, authoritative anthropomorphised cows, wild children, cartoon characters that infantilise the culture – the new expression of raw nature moving beyond natural to organic.

Milk packaging artefacts do little more than contain the product for transportation and display. The packaging materials, from a non renewable resource, are non biodegradable and unable to protect the nutritional values of the milk beyond a few hours. The size of the packaging is a difficult prospect to manoeuvre for some consumers. The new raw renders the consumers' association with nature even more distant and alienated.

My aim in this thesis was to design milk packaging that would denote attributes connoted in contemporary milk packaging signs, with secondary meaning; signifiers pertinent to the nature of the product and not inferring too close an association with the natural. The milk packaging design concept is a physical object that is an industrialised aesthetic, yet merges culture with the experiential of nature first hand in the context of industrial reality. Referencing pre-industrial packaging design provided direction for a new generic approach to mass produced packaging artefacts as signs. The functions of the milk packaging artefact were extended beyond the industrial requirements of contemporary packaging functions of containment, ease to fill, transportation, and display of milk. Extending the design brief involved addressing cultural allegory and repackaging to address the materiality and disposal. The design solution is unmistakable to decipher, even for non readers. It provides additional nutrition by protecting milk from light and air degradation and providing added nutritional value, appealing taste and scent. It is one possible solution to the central issues – this thesis explores and exposes, and thus its aesthetic references attributes from nature, culture and industry. It comes from a renewable resource. The milk packaging design concept of this thesis is some proof that it is possible to not dominate nature. A packaging object that signifies what it is, through an industrialised aesthetic, by breaking the allegoric inferences, enables consumers to decipher the product as it is – industrialised milk with a twist of nature.

Appendices

Questionnaire

	+3	+2	+1	0	-1	-2	
1 like it very much	⊙						hate it
2 unreal						☆	real
3 clean	⇓						dirty
4 is very good for you	☆						is bad for you
5 keep you slim	☆						makes you fat
6 drink	⇓					⇓	food
7 cold	♡						warm
8 strong taste						♡	weak taste
9 expensive						⇓	cheap
10 cool	♡					☆	uncool
11 for adults	☆					♡	children
12 lion						♡	lamb
13 mostly in the morning	☆						mostly at night
14 boyish	⇓						girlish
15 posh	⇓						poor
16 friends	♡						alone
17 soothing							stimulating
18 processed						⇓	natural
19							

20 milk

icing baby

¹red Sugar

²blue powder

³yellow powder

green lollies

	+3	+2	+1	0	-1	-2	
1 like it very much	☺					☺	hate it
2 unreal						☺	real
3 clean						☺	dirty
4 is very good for you	☺						is bad for you
5 keep you slim	☺						makes you fat
6 drink	☺						food
7 cold	☺						warm
8 strong taste						☺	weak taste
9 expensive						☺	cheap
10 cool	☺						uncool
11 for adults	☺					☺	children
12 lion				☺			lamb
13 mostly in the morning	☺					☺	mostly at night
14 boyish	☺					☺	girlish
15 posh						☺	poor
16 friends	☺					☺	alone
17 soothing						☺	stimulating
18 processed						☺	natural
19	☺ gr. soup	☺ blue milk	☺ yellow cheese	☺ green vegetable			

20 Chocolate

	+3	+2	+1	0	-1	-2	
1 like it very much		✓					hate it
2 unreal						⊕	real
3 clean	⊕	⊕					dirty
4 is very good for you		⊕					is bad for you
5 keep you slim						⊕	makes you fat
6 drink						⊕	food
7 cold	⊕						warm
8 strong taste	✓						weak taste
9 expensive						✓	cheap
10 cool	✓						uncool
11 for adults				✓			children
12 lion						✓	lamb
13 mostly in the morning	✓						mostly at night
14 boyish				✓			girlish
15 nosh	✓						poor
16 friends	✓						alone
17 soothing	✓						stimulating
18 processed						✓	natural
19	red	blue	yellow	green			
	lollies.	toy.	book	money.			

milo

	+3	+2	+1	0	-1	-2	
1 like it very much	✓						hate it
2 unreal				✓			real
3 clean	✓						dirty
4 is very good for you	✓						is bad for you
5 keep you slim	✓						makes you fat
6 drink	✓						food
7 cold	✓						warm
8 strong taste	✓						weak taste
9 expensive						✓	cheap
10 cool	✓						uncool
11 for adults	✓					✓	children
12 lion						✓	lamb
13 mostly in the morning				✓			mostly at night
14 boyish	✓					✓	girlish
15 posh	✓					✓	poor
16 friends	✓						alone
17 soothing						✓	stimulating
18 processed						✓	natural
19							

20 Chocolate and Strawberry
 juice flavoured

red water
 blue milk
 yellow Juice
 green Cat biscuits

	+3	+2	+1	0	-1	-2	
1 like it very much	✓						hate it
2 unreal						✓	real
3 clean	✓						dirty
4 is very good for you	✓						is bad for you
5 keep you slim	✓						makes you fat
6 drink	✓						food
7 cold	✓						warm
8 strong taste	✓						weak taste
9 expensive						✓	cheap
10 cool	✓						uncool
11 for adults	✓					✓	children
12 lion	✓						lamb
13 mostly in the morning	✓						mostly at night
14 boyish	✓					✓	girlish
15 posh	✓						poor
16 friends						✓	alone
17 soothing						✓	stimulating
18 processed						✓	natural
19	red plums	blue/blackberries	yellow Bananas	green ² lime			

20 Strawberry or chocolate

	+3	+2	+1	0	-1	-2	
1 like it very much							hate it
2 unreal	☆					☆	real
3 clean	☆						dirty
4 is very good for you	☆						is bad for you
5 keep you slim	☆						makes you fat
6 drink	☆						food
7 cold			☆				warm
8 strong taste						☆	weak taste
9 expensive						☆	cheap
10 cool	☆						uncool
11 for adults	☆					☆	children
12 fun	☆						lamb
13 mostly in the morning	☆						mostly at night
14 hoivish						☆	girlish
15 posh	☆						poor
16 friends	☆						alone
17 soothing	☆						stimulating
18 processed						☆	natural
19	red	blue	yellow	green			

20 chocolate

red salt & sugar
 blue 1 sugar
 yellow 1m, 1k
 green 1 week bags

	+3	+2	+1	0	-1	-2	
1 like it very much	😊						hate it
2 unreal	😊						real
3 clean	😊						dirty
4 is very good for you	😊						is bad for you
5 keep you slim	😊						makes you fat
6 drink	😊						food
7 cold						😊	warm
8 strong taste	😊						weak taste
9 expensive						😊	cheap
10 cool	😊						uncool
11 for adults	😊					😊	children
12 lion	😊						lamb
13 mostly in the morning	😊						mostly at night
14 boyish	😊					😊	girlish
15 nosh	😊						door
16 friends						😊	alone
17 soothing						😊	stimulating
18 processed						😊	natural
19							

20 chocolate, strawberry

red milk powder blue milk yellow ice cream green yogurt

	+3	+2	+1	0	-1	-2	
1 like it very much	✓						hate it
2 unreal							real ✓
3 clean			✓				dirty
4 is very good for you	✓						is bad for you
5 keep you slim		✓					makes you fat
6 drink	✓						food ✓
7 cold	✓						warm ✓
8 strong taste							weak taste ✓
9 expensive							cheap ✓
10 cool			✓				uncool
11 for adults	✓						children ✓
12 lion							lamb ✓
13 mostly in the morning	✓						mostly at night ✓
14 hoivish	✓						girlish ✓
15 posh	✓						poor ✓
16 friends	✓						alone
17 soothing	✓						stimulating ✓
18 processed							natural ✓
19	red ² Scary	blue ¹ milk	yellow ⁴ & drink ³ Banana	green ³ lime			

20 Banana

	+3	+2	+1	0	-1	-2	
1 like it very much			☆			⊙	hate it
2 unreal						⊙	real
3 clean	⊙						dirty
4 is very good for you						☆	is bad for you
5 keep you slim	☆						makes you fat
6 drink	⊙						food
7 cold		☆					warm
8 strong taste						⊙	weak taste
9 expensive						☆	cheap
10 cool		⊙					uncool
11 for adults	☆					☆	children
12 lion	⊙						lamb
13 mostly in the morning						⊙	mostly at night
14 boyish						☆	girlish
15 gosh	☆						poor
16 friends						⊙	alone
17 soothing	☆						stimulating
18 processed						⊙	natural
19	red 4 caroe	blue 1 sugar	yellow 2 milk	green 3 salt			

20 banana

	+3	+2	+1	0	-1	-2	
1 like it very much	☺						hate it
2 unreal						☺	real
3 clean	☺						dirty
4 is very good for you	☺						is bad for you
5 keep you slim	☺						makes you fat
6 drink	☺						food
7 cold	☺					☺	warm
8 strong taste						☺	weak taste
9 expensive						☺	cheap
10 cool	☺					☺	uncool
11 for adults	☺					☺	children
12 lion	☺					☺	lamb
13 mostly in the morning	☺					☺	mostly at night
14 boyish	☺					☺	girlish
15 posh	☺					☺	poor
16 friends	☺						alone
17 soothing	☺						stimulating
18 processed						☺	natural
19	red water	blue Milk	yellow orange	green APPLE	0		

20

②

①

④

③

	+3	+2	+1	0	-1	-2	
1 like it very much		X				X	hate it
2 unreal						X	real
3 clean			X				dirty
4 is very good for you		X					is bad for you
5 keep you slim			X				makes you fat
6 drink	X						food
7 cold	X						warm
8 strong taste				X			weak taste
9 expensive			X				cheap
10 cool	X						uncool
11 for adults			X			X	children
12 lion			X				lamb
13 mostly in the morning			X				mostly at night
14 boyish			X				girlish
15 posh				X			poor
16 friends			X				alone
17 soothing		X					stimulating
18 processed						X	natural
19							

20

Barana + Sugar

red tomato sauce

blue low fat

yellow creamy laddus

green normal

one with calcium because milkshake

will be

"V" energy drink

	+3	+2	+1	0	-1	-2	
1 like it very much	★						hate it
2 unreal						★	real
3 clean	☹☹						dirty
4 is very good for you	★						is bad for you
5 keep you slim	☹☹						makes you fat
6 drink	★						food
7 cold	★					★	warm
8 strong taste							weak taste
9 expensive						☹☹	cheap
10 cool	☹☹						uncool
11 for adults	★					★	children
12 lion						☹☹	lamb
13 mostly in the morning	☹☹						mostly at night
14 boyish	☹☹					☹☹	girlish
15 posh	★						poor
16 friends	★					☹☹	alone
17 soothing	☹☹						stimulating
18 processed	☹☹						natural
19							

20 milkshake - strawberry

red milk blue milk yellow milk green milk milk

Participant Response Quantitative Graph

	+3	+2	+1	0	-1	-2	
1 like it very much	3(4) 5(6) 7(8) 11(12)	10(9)	2			6(9) 7(8) 10(11) 2(1)	hate it
2 unreal	12			7(11)		7(8) 4(3) 3(13) 8(1)	real
3 clean	1 2 3 (4) 6 (8) 11 12 13		5(9)		10		dirty
4 is very good for you	1 3 (4) 5 6 7 (10) 11 12 13	8(9)				2	is bad for you
5 keep you slim	1 2 3 (4) 6 (8) 11 12 13	5	9	7	8	8	makes you fat
6 drink	1 2 3 (4) 5 11 12 13		0		8	5	food
7 cold	3(4) 5 6 8 9 (10) 13	2	1(7)		12 13 6 5 3		warm
8 strong taste	8 11 12 13			9	7 6 8 5 4 2 1		weak taste
9 expensive			9	7	6 8 5 4 3 2 1		cheap
10 cool	1 3 (4) 6 7 8 9 (10) 11 12 13	2	5		10 9 6 8 5 2 1		uncool
11 for adults	1 2 3 (4) 5 8 9 11 13		7(8) 9		10 9 6 8 5 2 1		children
12 lion	1 2 8 6 13			10	11 8 7 5 4 3		lamb
13 mostly in the morning	1 3 (4) 5 8 6 7 8 9 (10) 12 13		7(8) 9	11	10 9 7 6 8 5 2 1		mostly at night
14 hoity	3 (4) 5 8 6 10 11 12		7(8) 9		11 10 6 8 5 3 2 1		girlish
15 posh	1 2 3 (4) 5 8 6 8 11 12 13		7	9	11 10 6 8 5		poor
16 friends	1 (4) 5 8 6 8 10 11		7(9)		13 12 10 3 2		alone
17 soothing	1 2 3 5 8 6 7 8	9			13 12 11 10 5 4		stimulating
18 processed	3				7 11 12 2 1		natural
19	red	blue	yellow	green			

O = boys

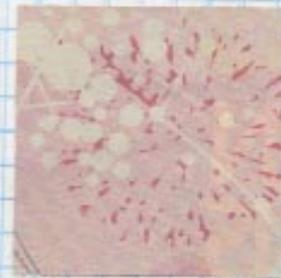
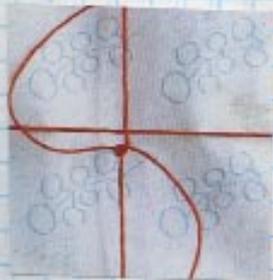
STATISTICS OF ANSWERS

	Red	Blue	Yellow	Green
SWEET	6	6	5	2
SOUR	0	0	1	4
SALTY	1	0	0	2
SAVOURY	3	1	1	3
WATERY	3	7	5	2
THICK	2	0	4	1
GRANULAR	3	4	1	2
EDIBLE	13	12	11	11
INEDIBLE	0	1	2	2
INGREDIENT	3	2	0	1
CONDIMENT	2	3	0	1
DAIRY	2	6	6	2
NURTURING	11	11	12	4
FUN	5	5	9	6
NATURAL	13	12	11	8
FRUIT	2	1	5	4

Workbook



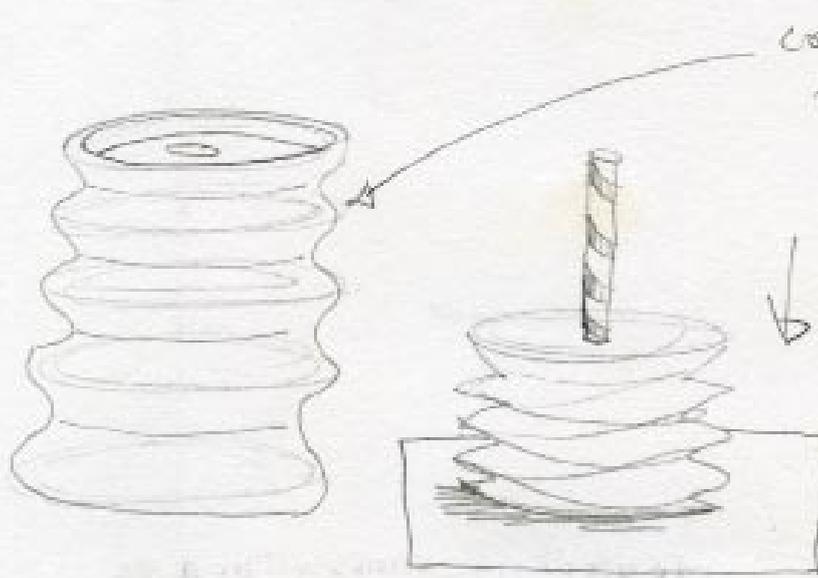
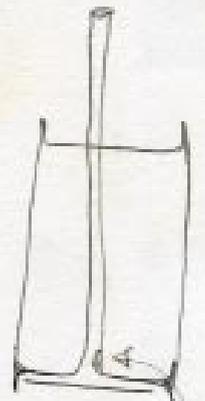
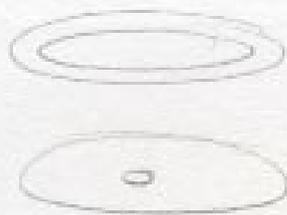
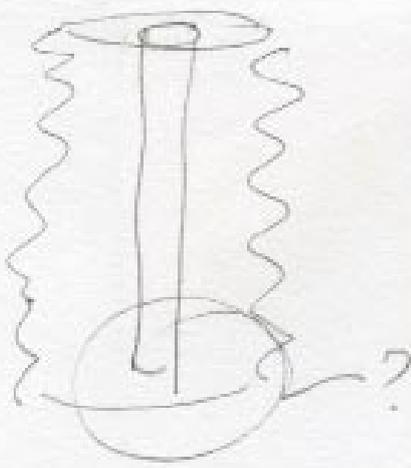
boys ♪
chocolate



girls ♡ strawba



this is the coolest
(milk) packaging!



corrugations
for shaking

hole



would
squirt milk
can't leave
air either?



vanilla
milk
chocolate
milk
caramel



only fits
per section



holes
get
smaller
can only
punch
straw
thru when
consolidated

safe, variety



hole

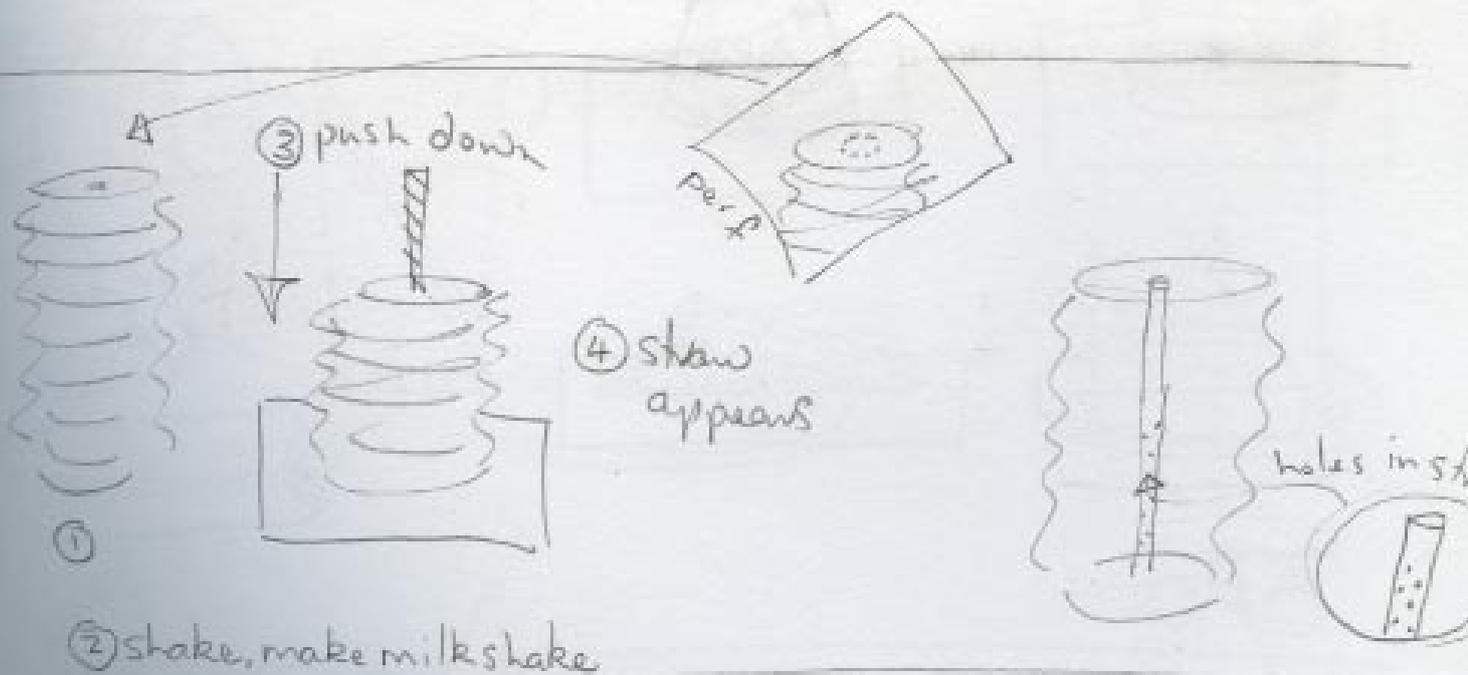
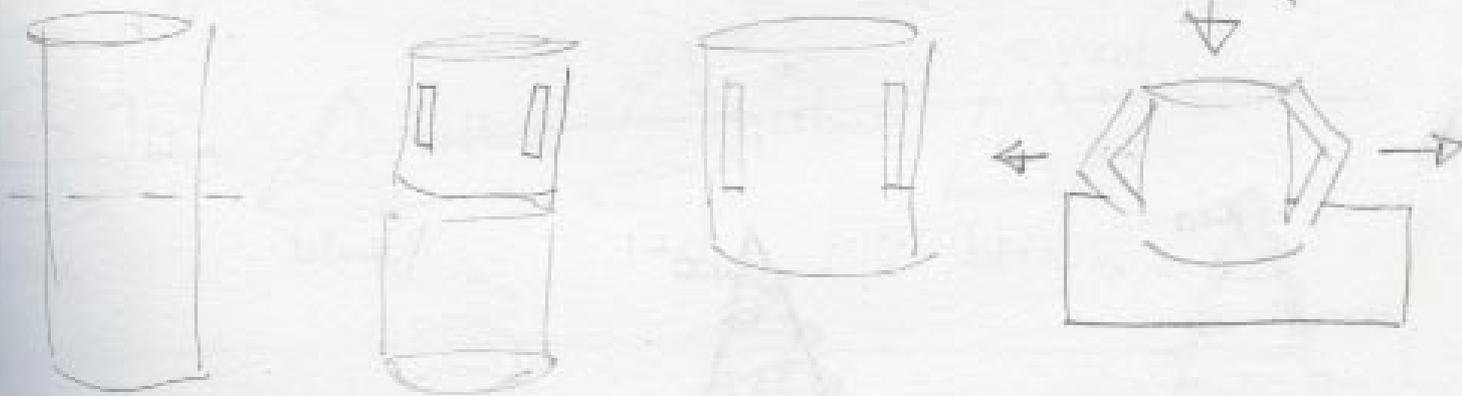
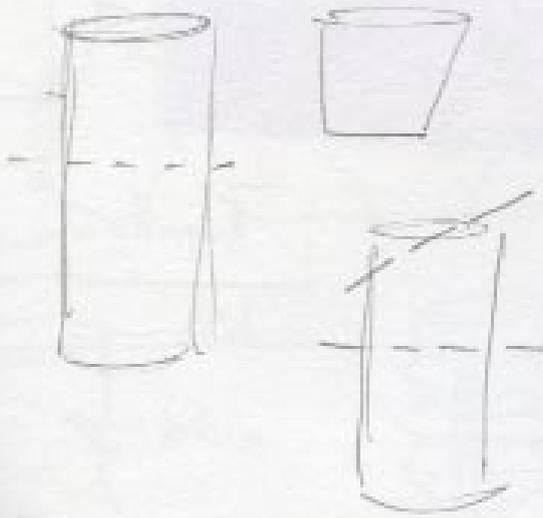


strawberry

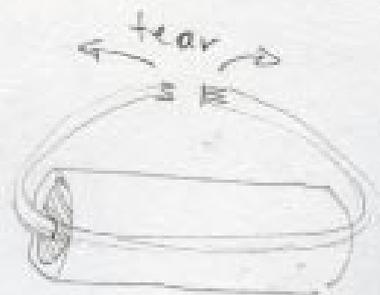
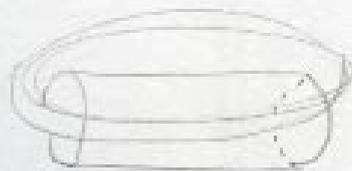
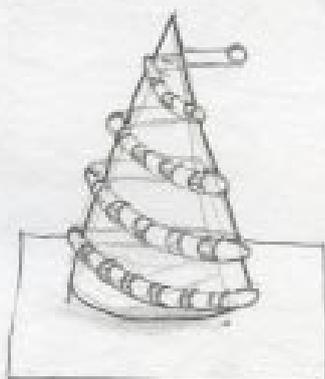
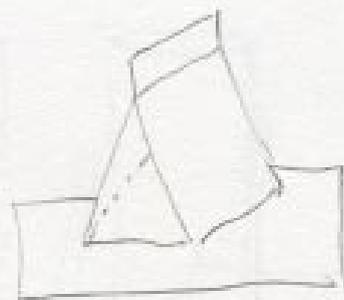
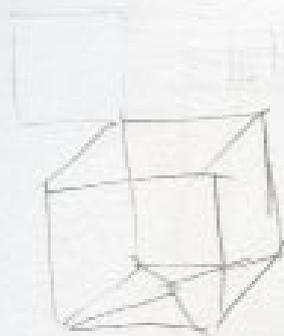
plain milk

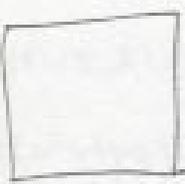
chocolate

holes get smaller
! piped filling

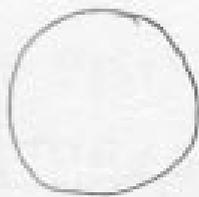


fun, movement, surprise, safe

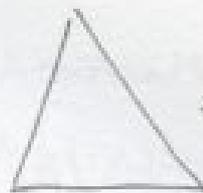




= blue



= red



= yellow

(Kandinsky)



red

blue



red

blue
yellow

blue
red



yellow

red

(Grewstner)



blue

blue



yellow

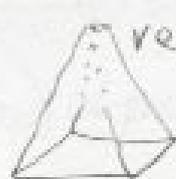
blue



red

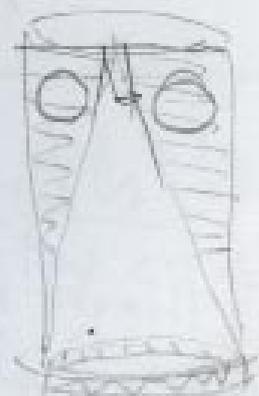
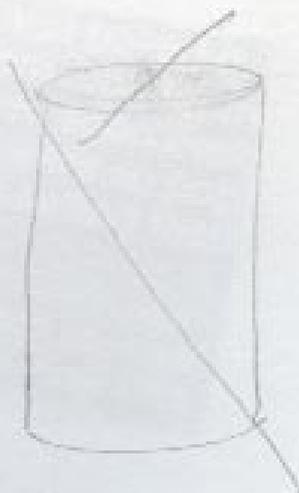
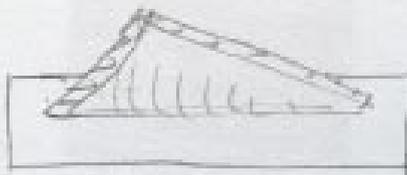
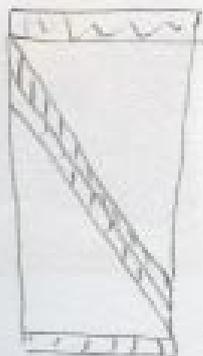
yellow

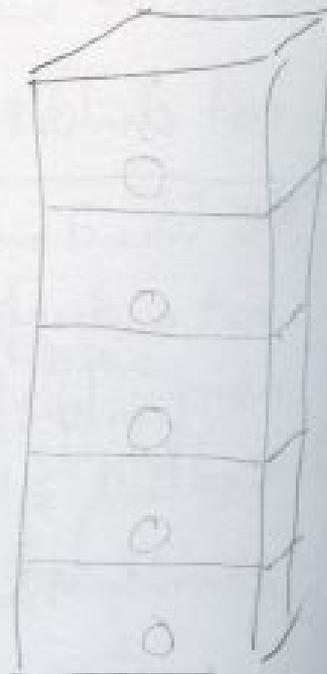
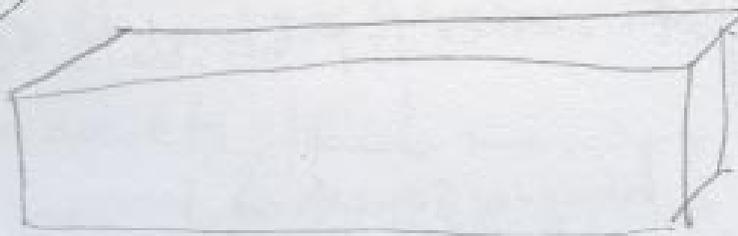
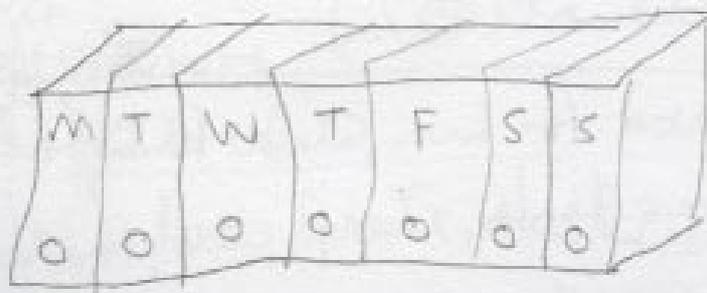
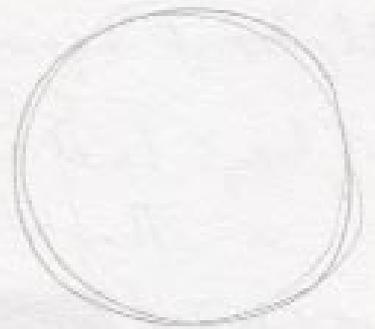
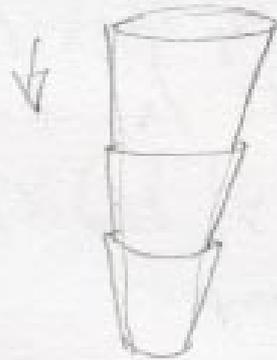
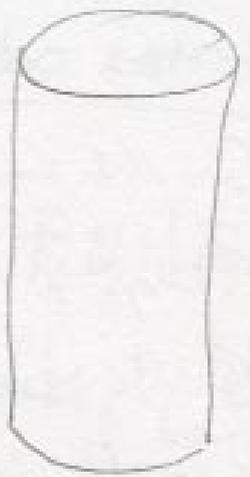
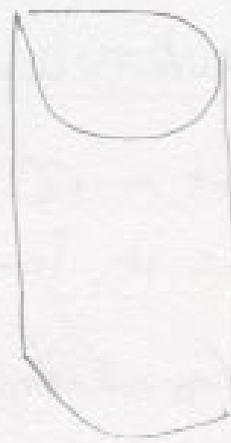
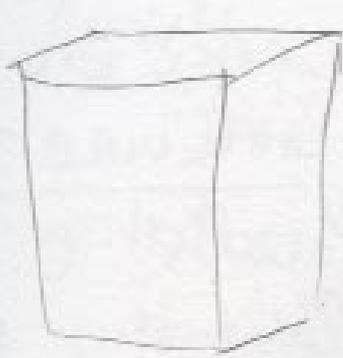
red

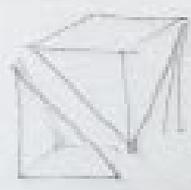
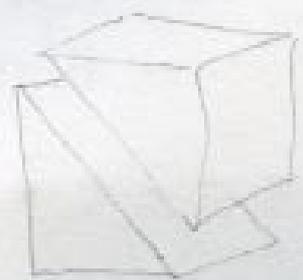
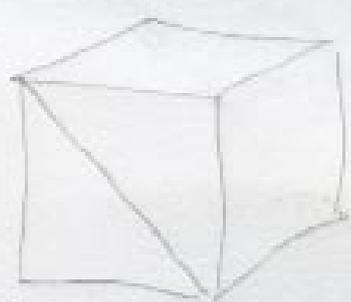
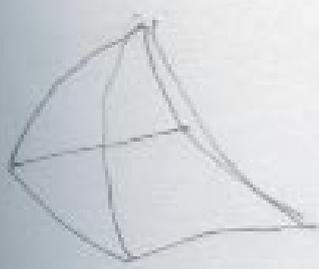
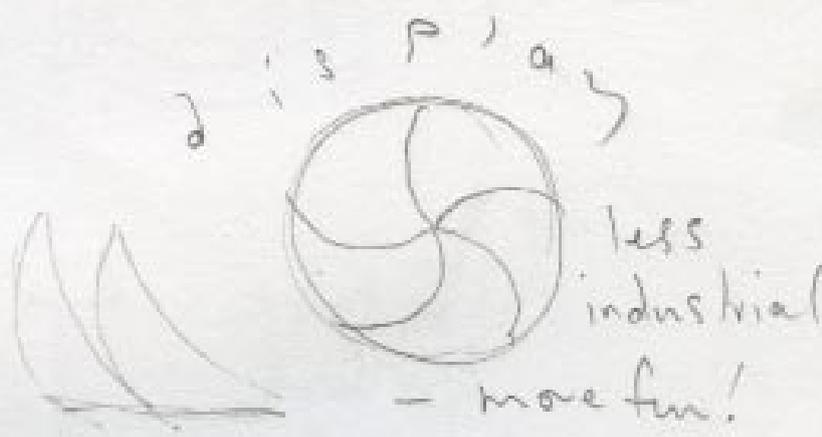
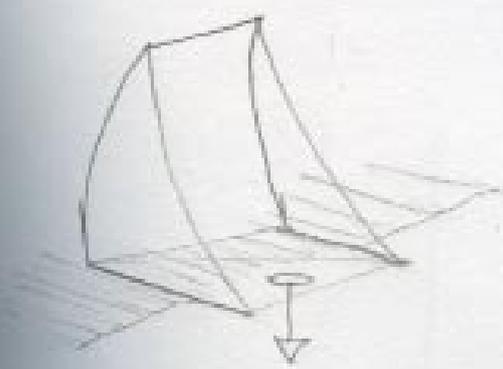
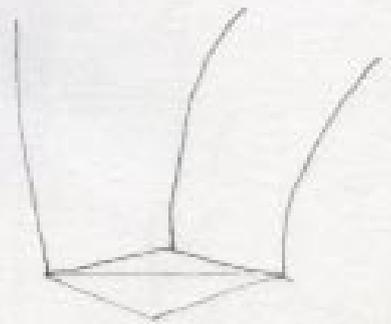
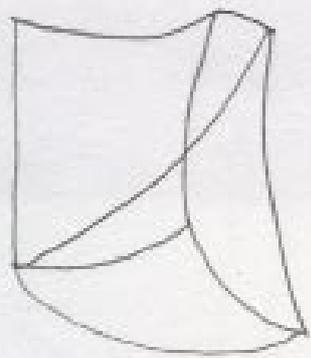


red

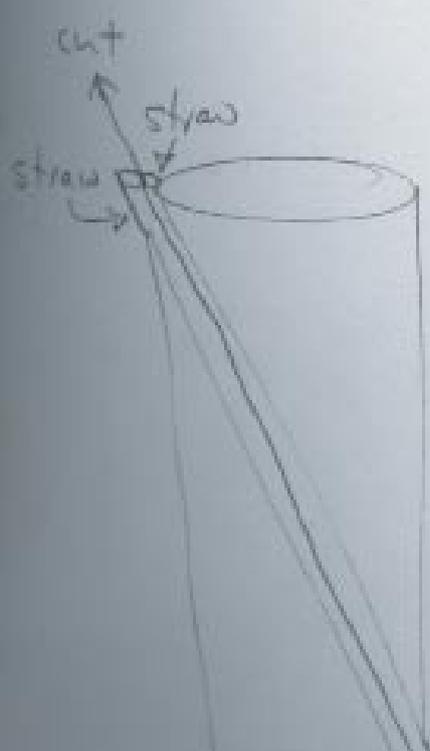
blue





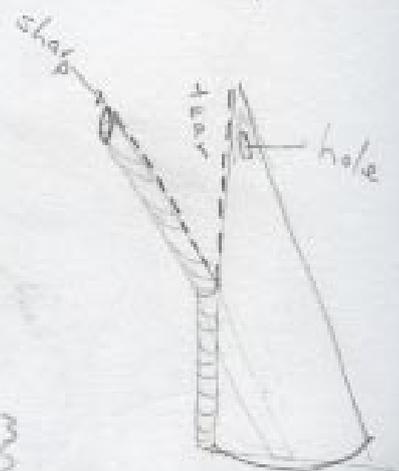
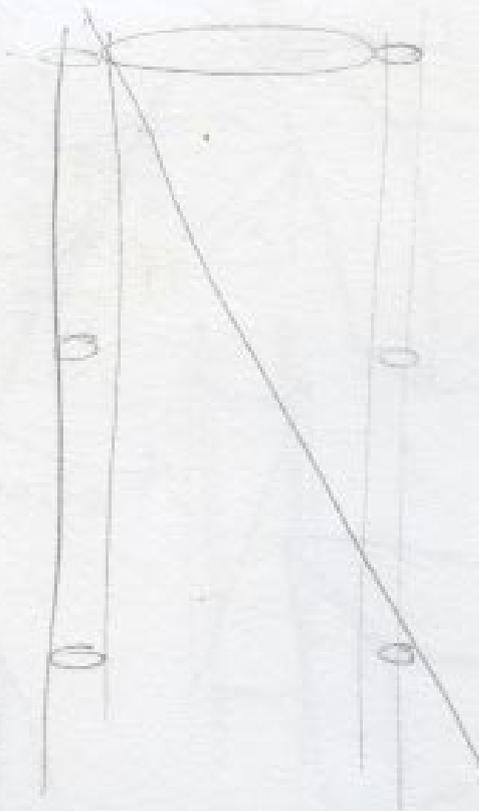
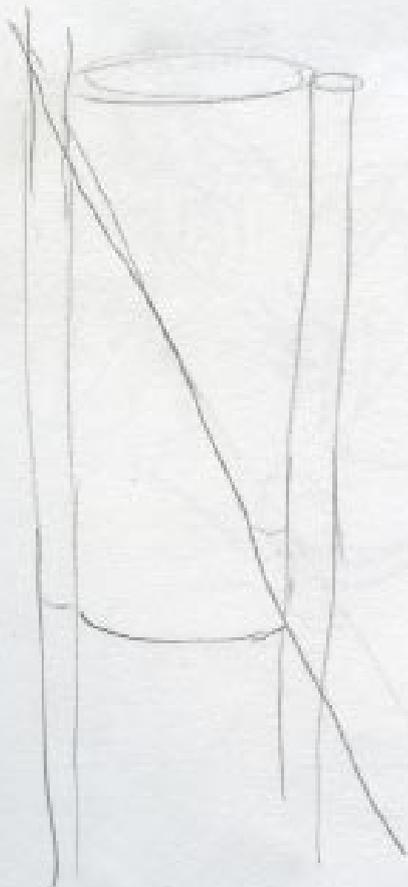
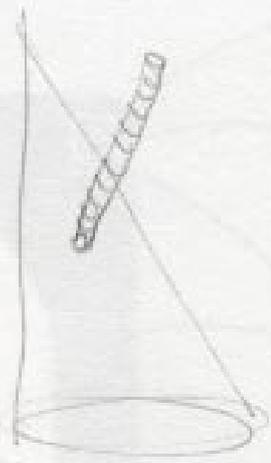
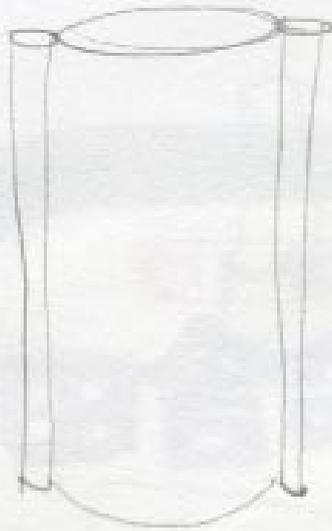
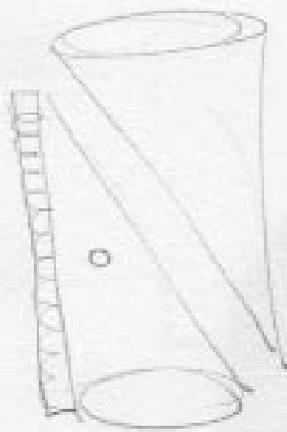


this could work!



straw?

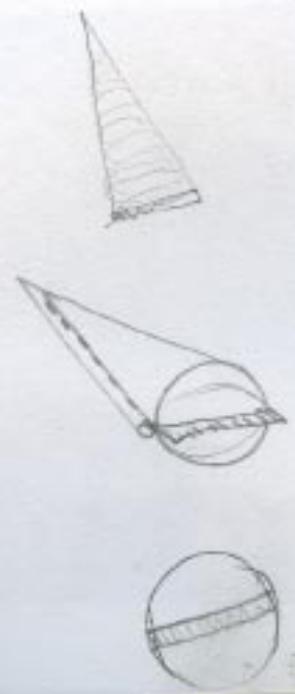




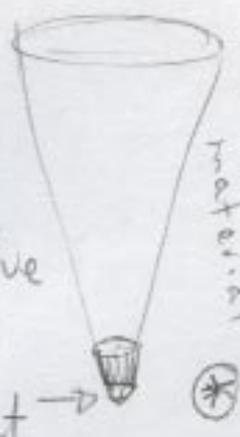
~~~~~



-distinct-own-  
 packaging  
 boys milk  
 girls milk  
 morning milk  
 before bed milk



what if it  
 had a 1  
 way valve  
 - when you  
 squeeze it  
 milk comes out

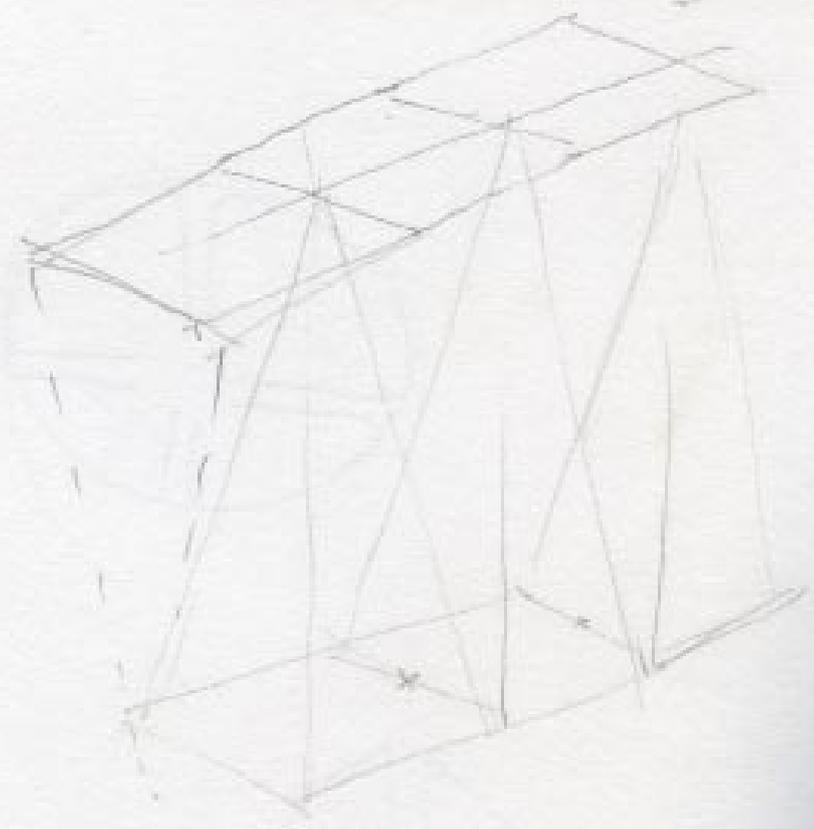


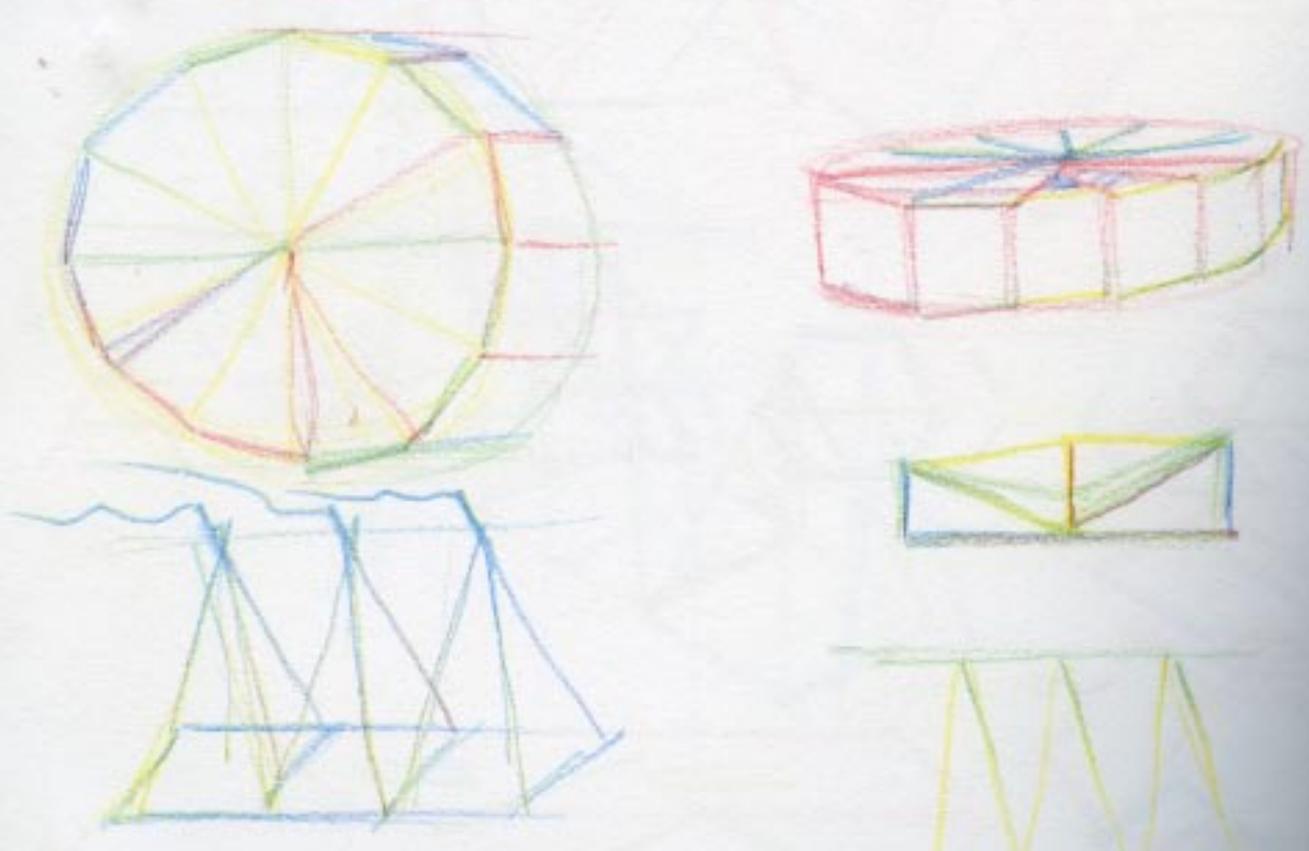
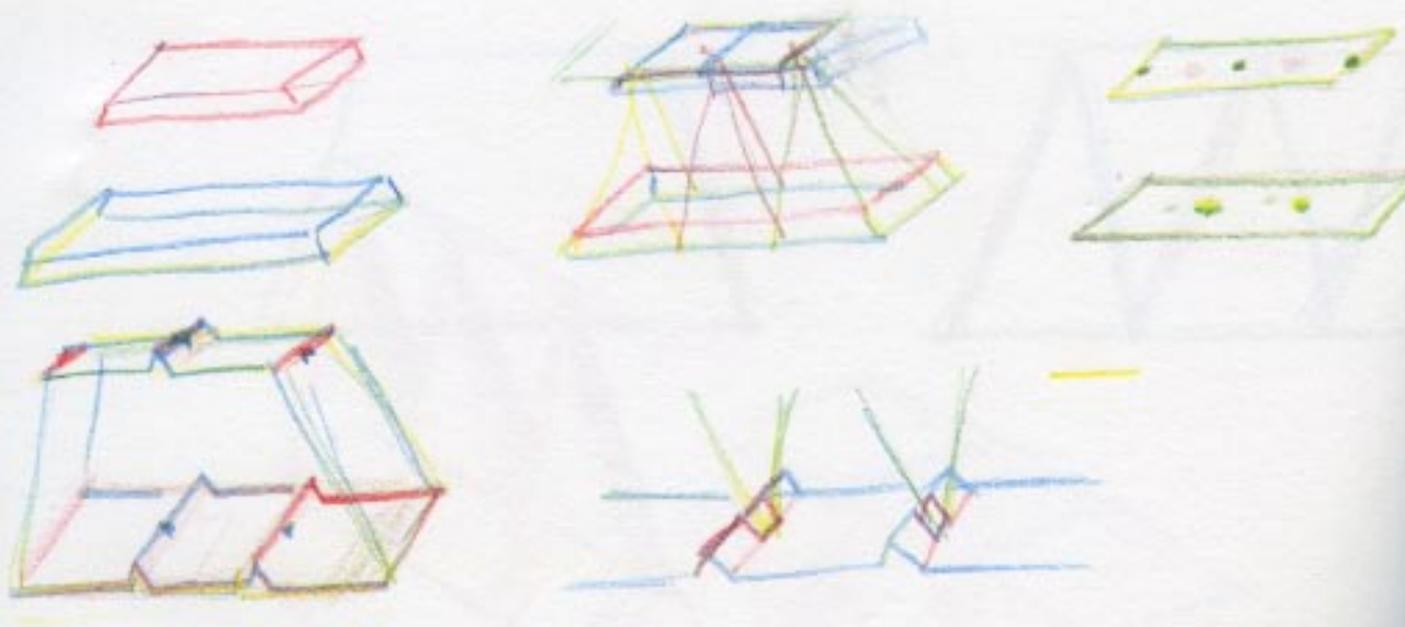
how to increase  
 material



the interesting thing is -  
 in so industrialised -  
 the above requirements  
 were made by adapting  
 milk - which was  
 an ingredient in the  
 process. Now it needs  
 to be pre-prepared









● = edible/sweet

◆ = inedible ● = savory/sour

▼ = inedible

|   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ |
| ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |

▼ = dead



4



3



2



1

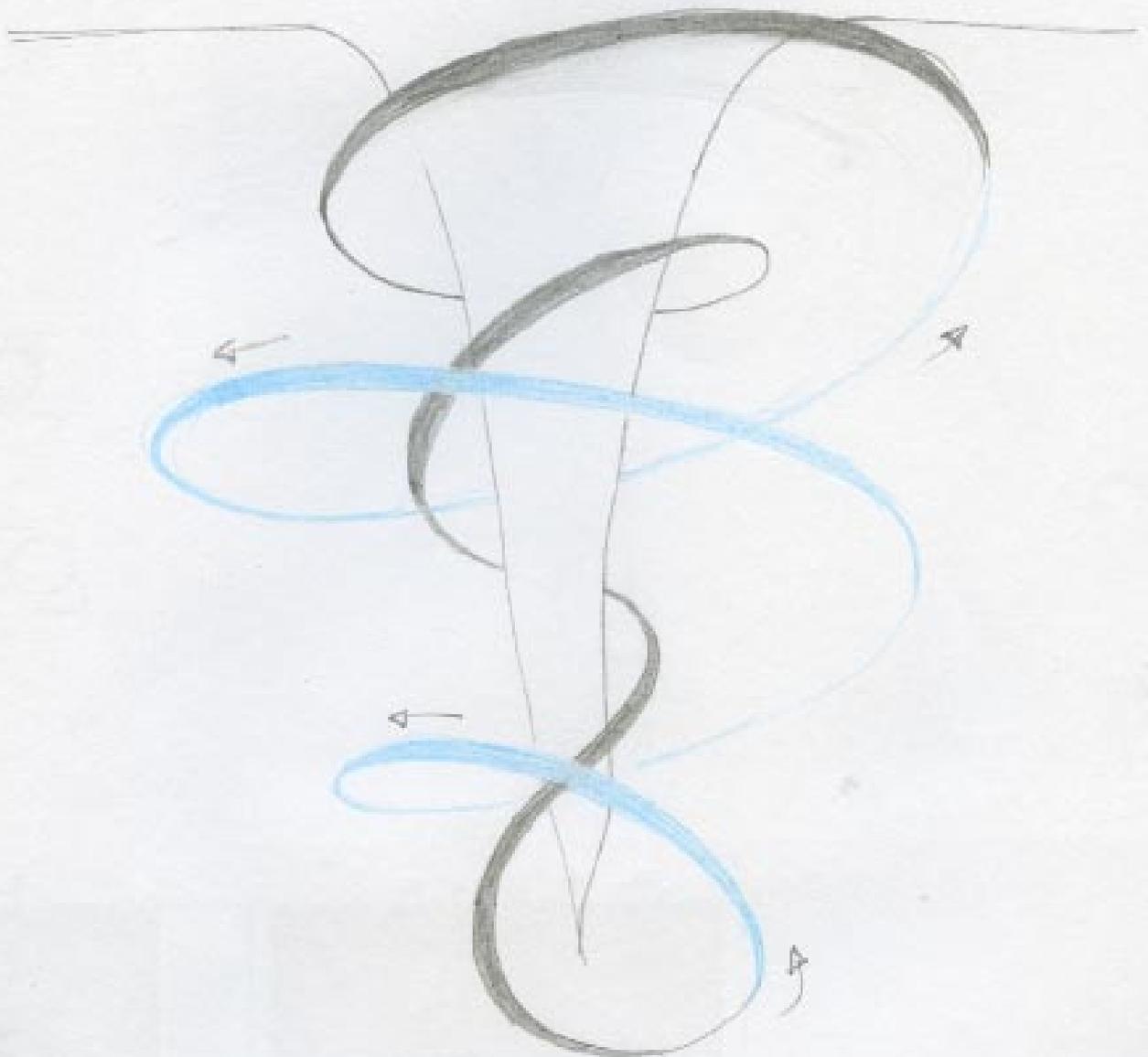


Disregard sea  
al look like  
sweets!



'Water around a whirlpool moves in spirals'

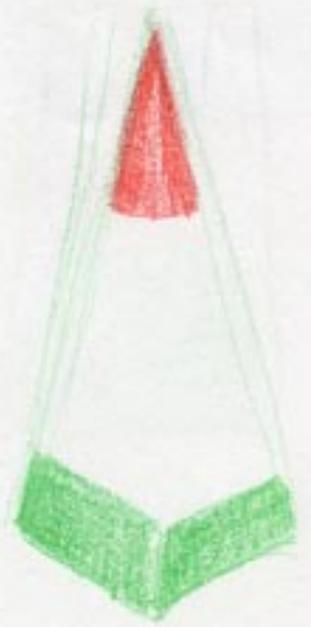
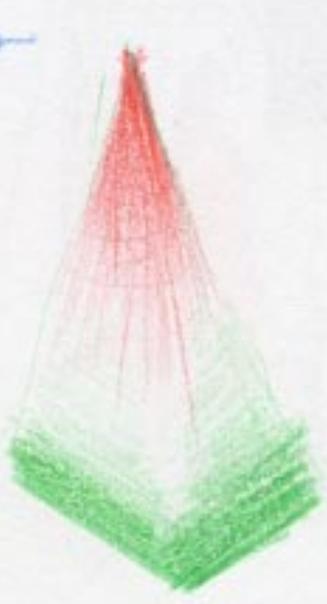
P. 144  
schwän



nutrition  
↑

energy

↓  
lemon



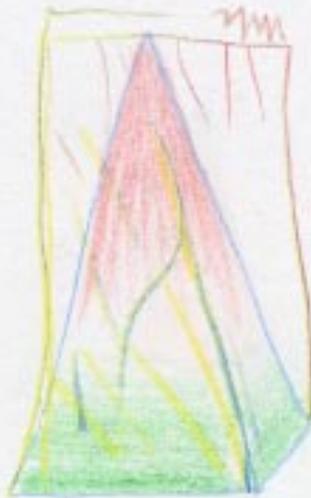
rippness  
↑  
↓  
firmness



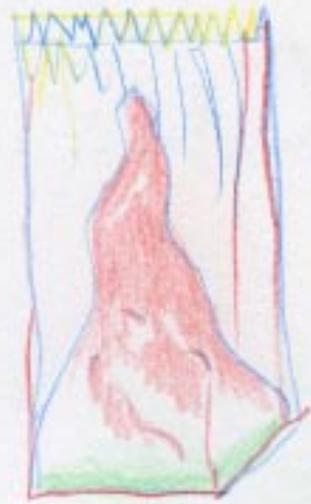
clear film wrap



raw



rawish



ripening



ripe



stake



drink

ripe → stake → drink → dis



sweet



sour

sweet



sour

savory



sour

salty



sour

sweet

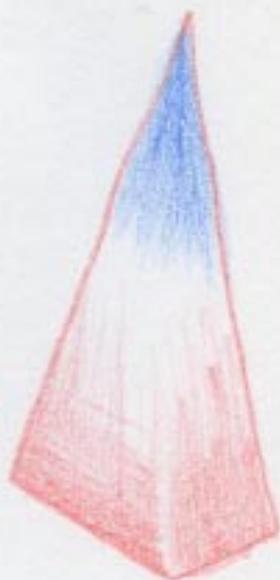
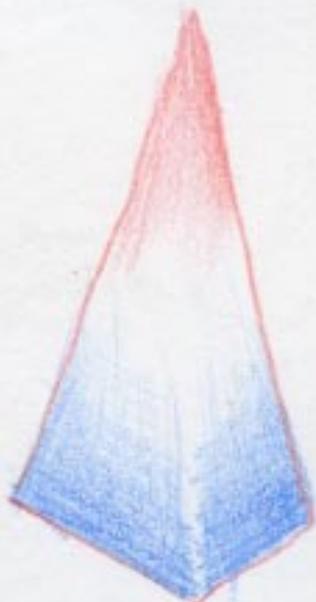
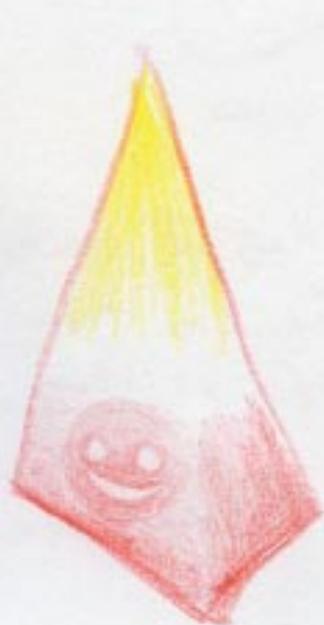


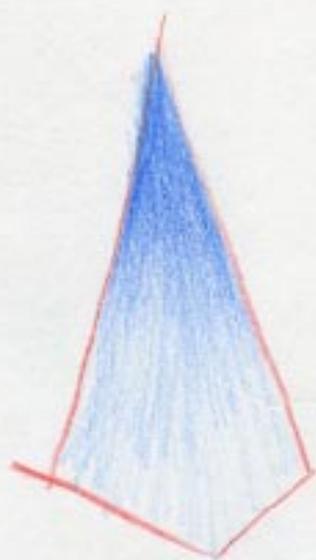
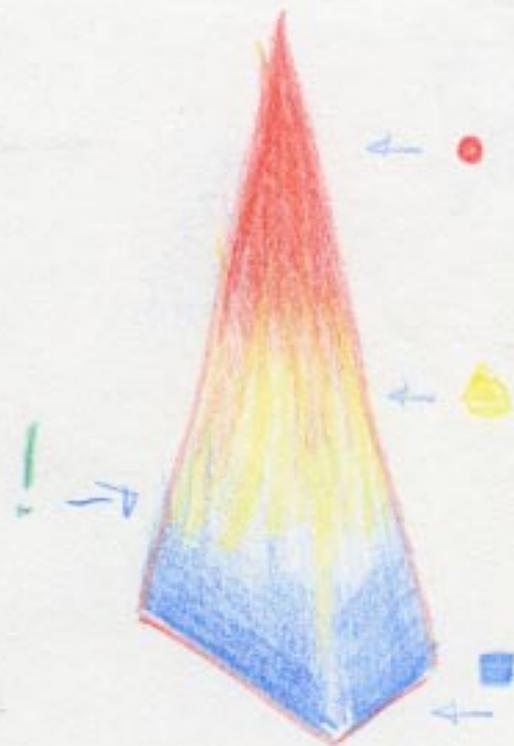
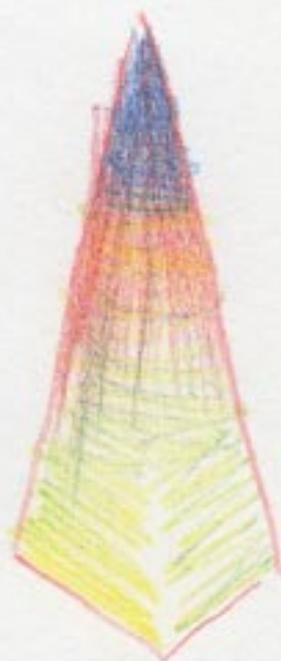
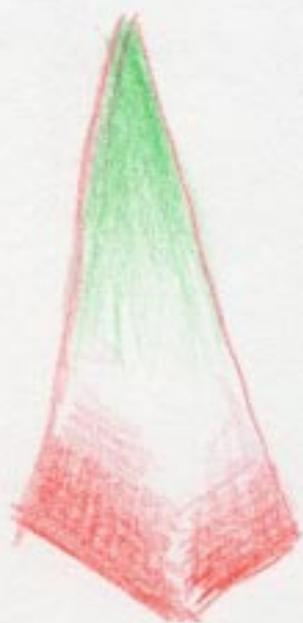
savory

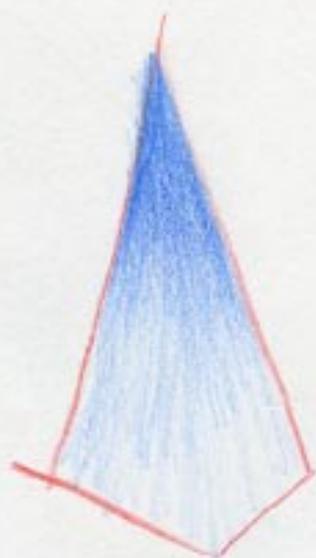
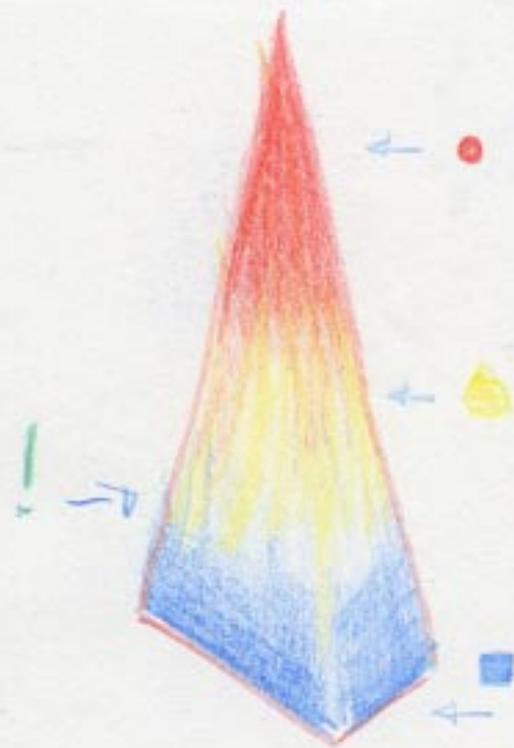
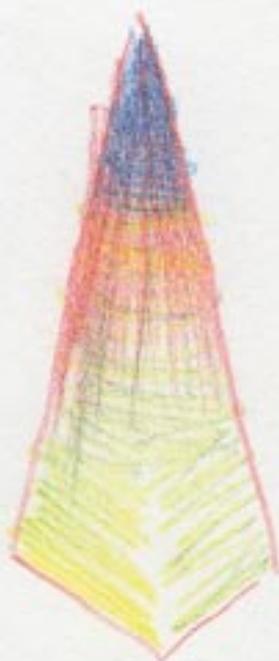
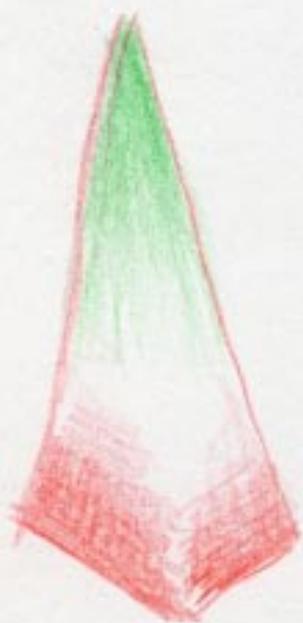
edible



fun







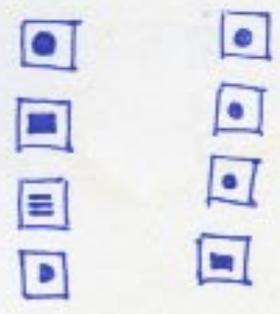


0 1 2 3

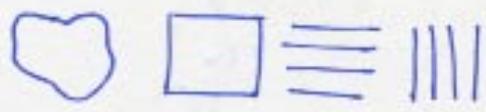
\* □ consumable value  
 \* □ disposal value

⏟  
 a scale

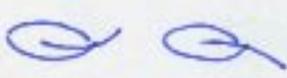
● = nature  
 ■ = not nature



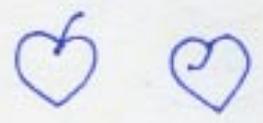
- the more there  
 the more it has



|||| = man made (vined)

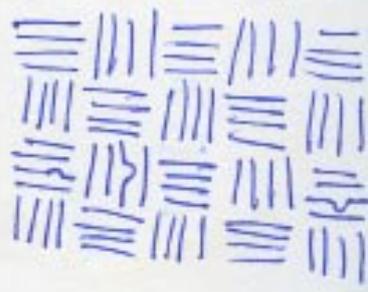


≡ = nature (drawn)



|||| = inedible

≡ = edible

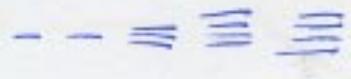
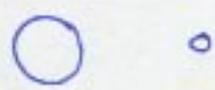
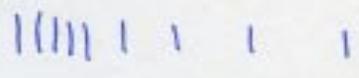
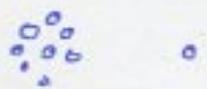


○ not  
 ▲ a little

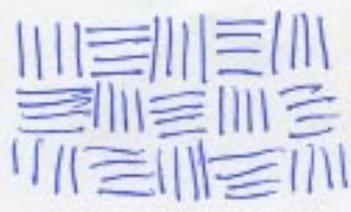
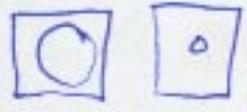
|||| = non biodegrade

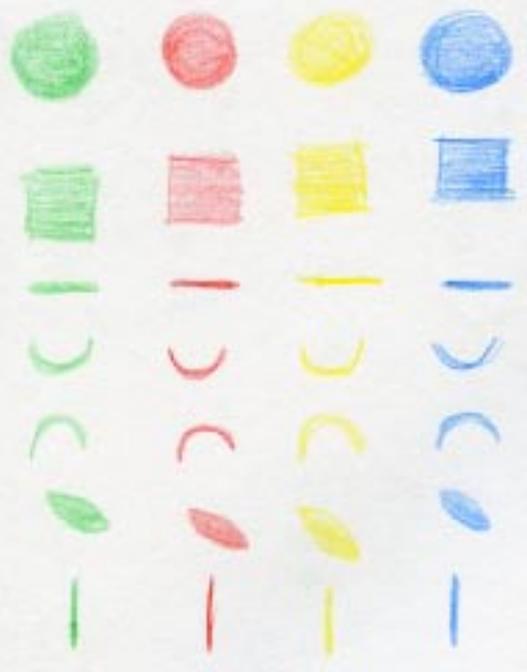
≡ = biodegrade

sustainable - finite  
 biodegradeable - not biodegradeable  
 recyclable - not recyclable  
 edible - inedible



sweet - sour  
 type of vitamins  
 animal - non animal  
 raw - cooked



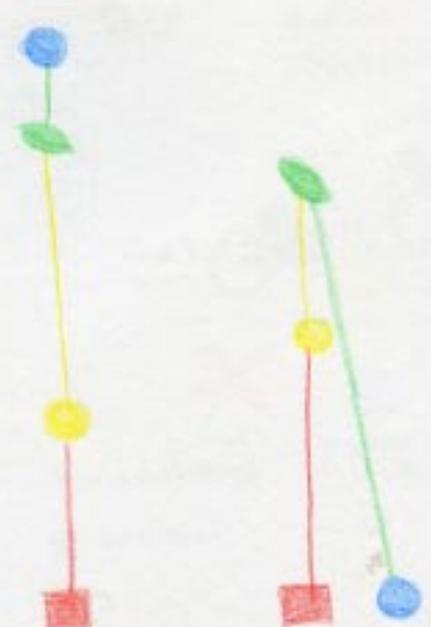


colours (tastes)  
 shapes (nature/culture)  
 numerals (culture)  
 position (

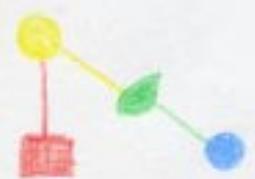
• top: point/leaf  
 □ base: mass/most

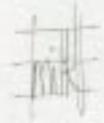


1  
 2  
 3  
 4  
 5  
 6  
 7  
 8  
 9  
 0

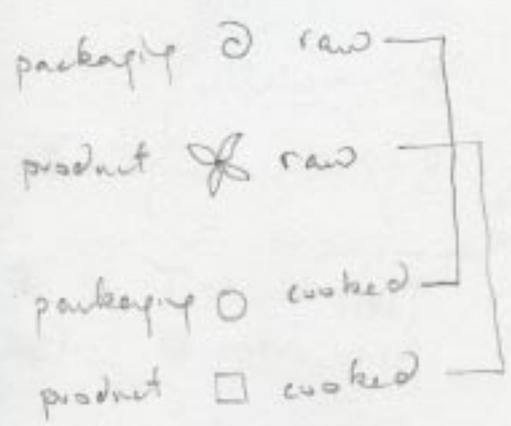


sky  
 land





brand  
product  
→ descriptor  
benefits



pod

- product
- enter
- disposal

milk

milk

milk

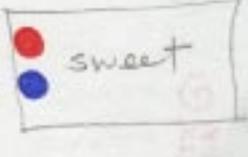
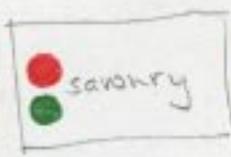
- PRODUCT
- cooked
  - cooked
  - cooked
  - cooked

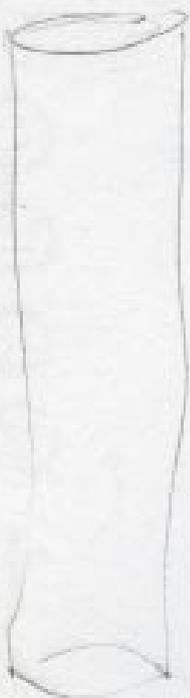
- PRODUCT
- ✕ raw } sweet
  - ✕ raw } sweet
  - ✕ raw } savoury
  - ✕ raw } savoury

- PACKAGING
- cooked
  - cooked
  - cooked
  - cooked

- PACKAGING
- ⊙ raw sweet
  - ⊙ raw for sweet
  - ⊙ raw savoury sweet
  - ⊙ raw sour

|              |            |          |
|--------------|------------|----------|
| homogenised  | H          | 230x5    |
| particulated | P          | 120x3    |
| standardised | S          |          |
| 3% fat       | 3%         | 3        |
| shelf life   | 15<br>DATE | 15<br>30 |

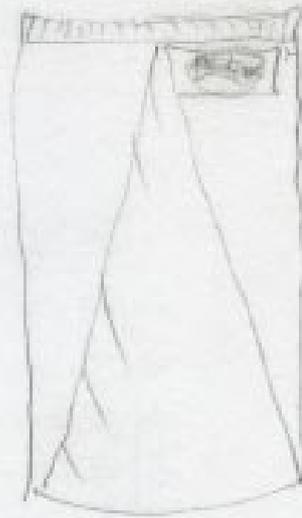




①



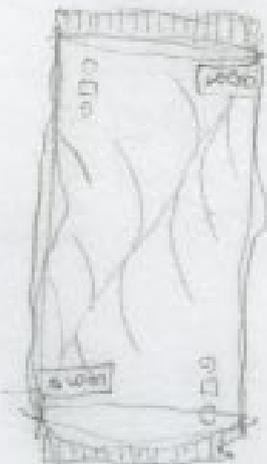
②



③



④



x 2

⑤

k o p q r s t u v w x y z

white stuff

milk like liquid

went big additive

creaming

- tea

- coffee

non-live

creamed off

milk

milk

zilk

a milk like substance

previously milk

originally from dairy cows

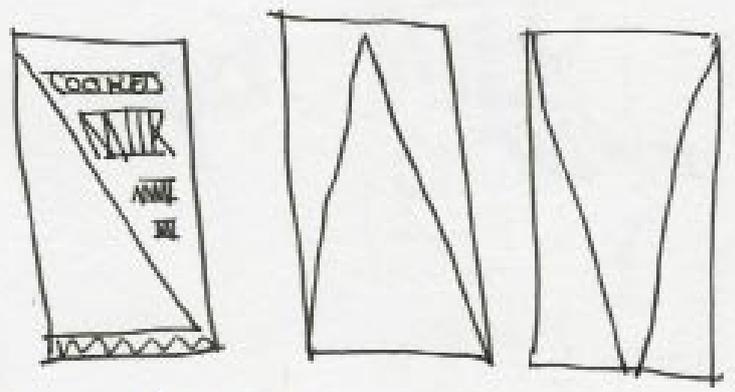
a product originating from cows

processed into a hygienic

stabilised hygienic treated

cooked milk

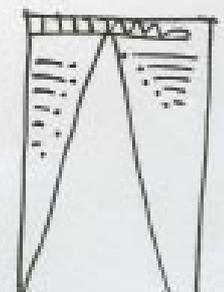
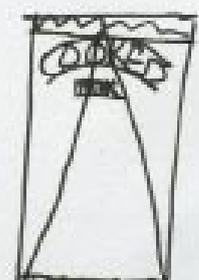
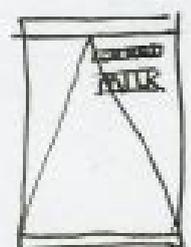
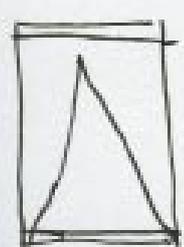
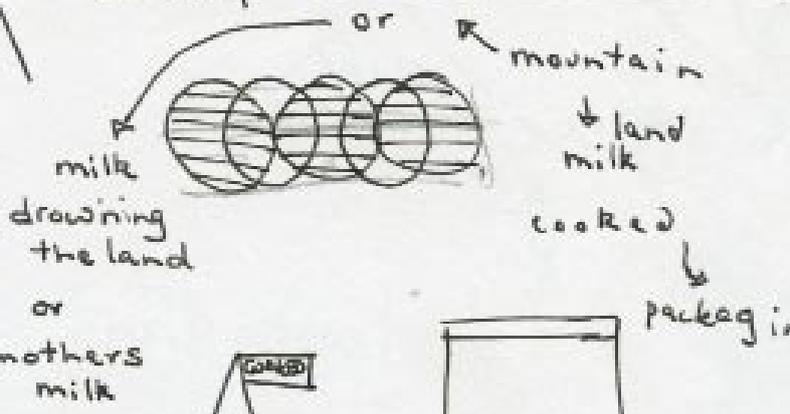
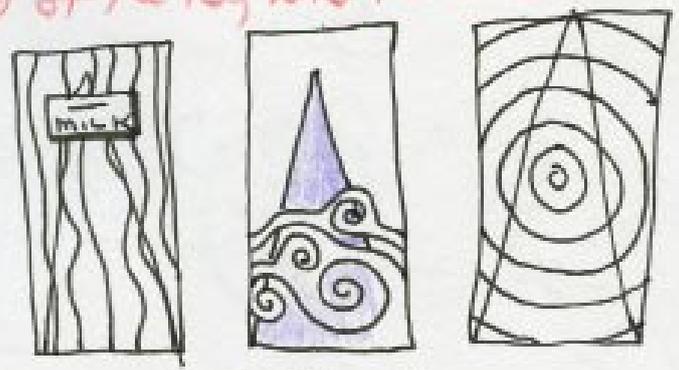
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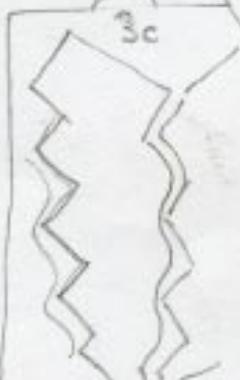
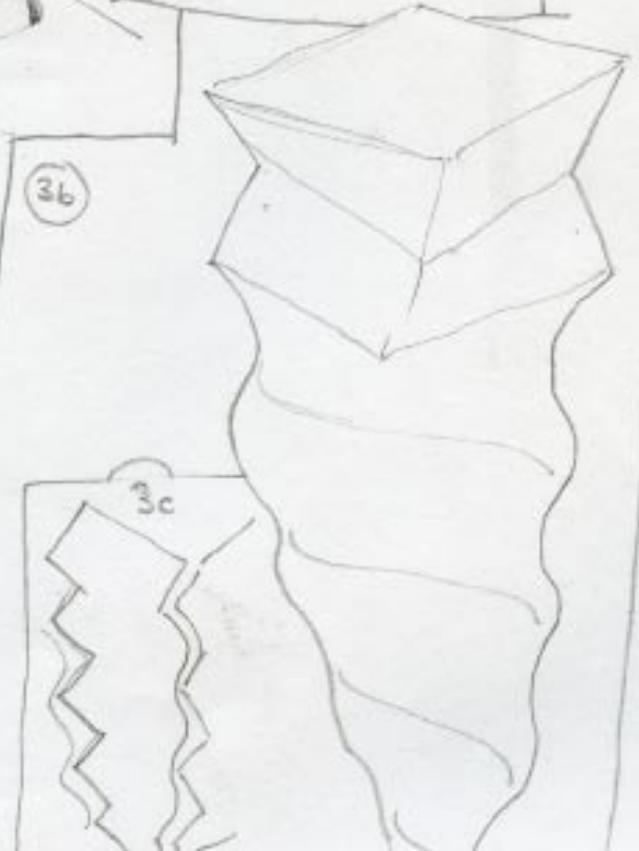
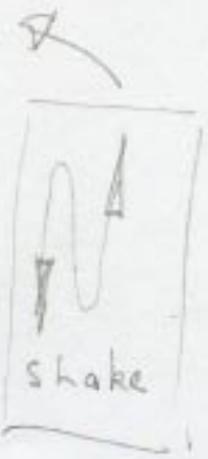
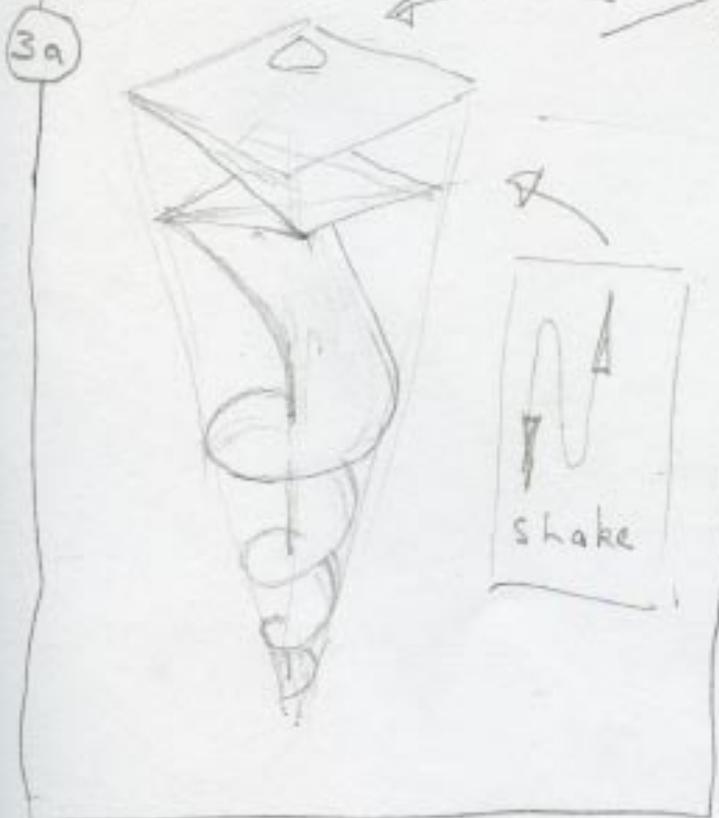
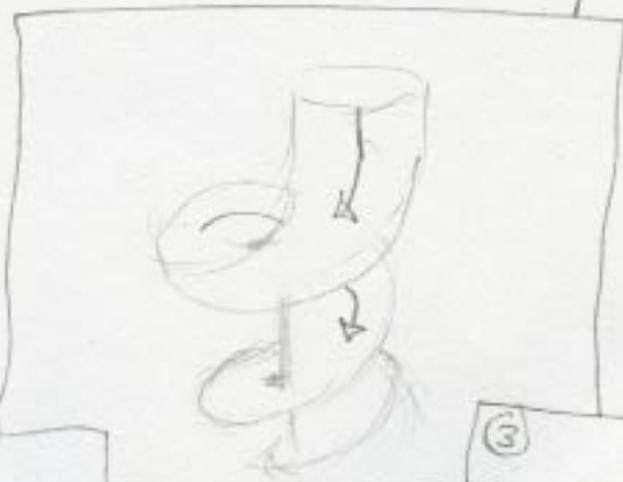
blue top



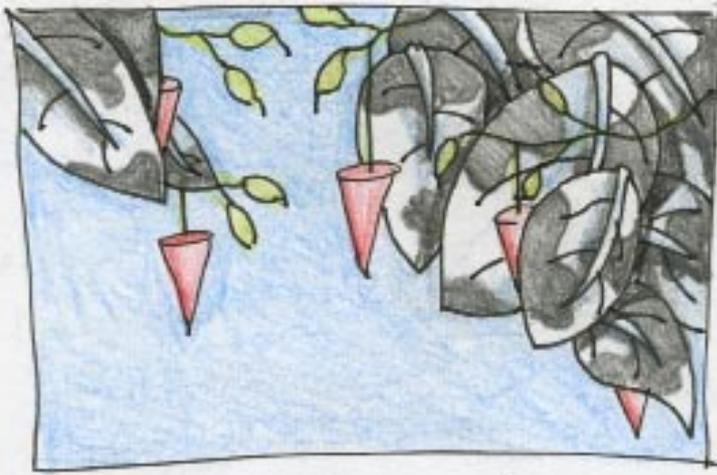
Land of the log white done



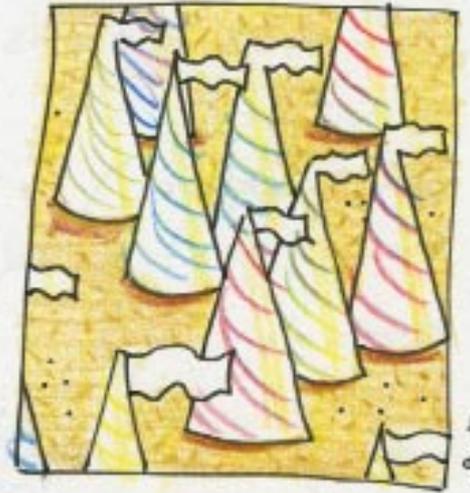




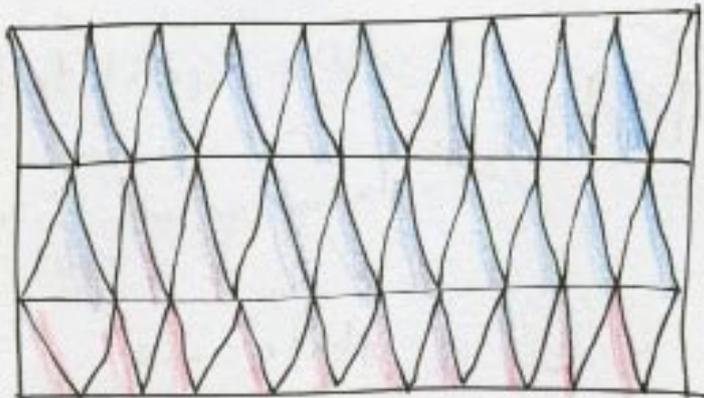
campaign directions



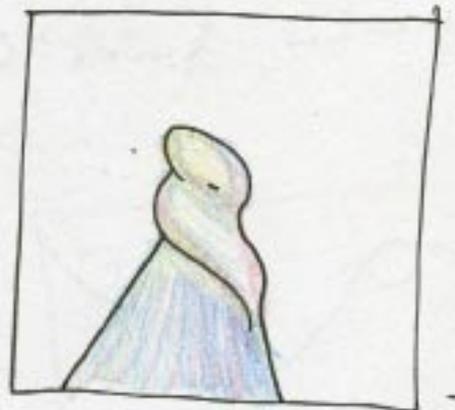
natural/culture



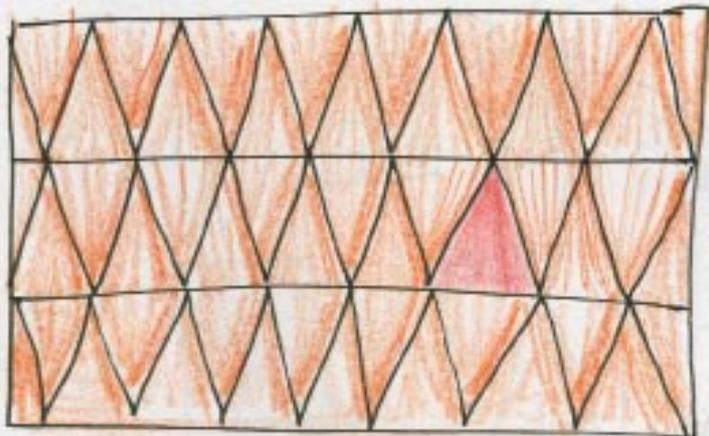
fun object



filling patterns



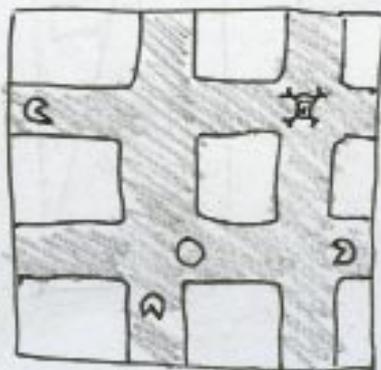
top



patterns: juicy



tail



patches

## *Creative Summary*











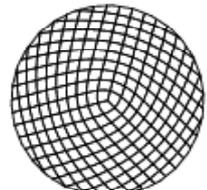
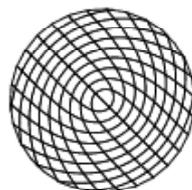
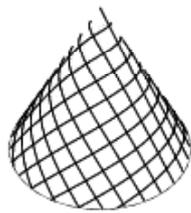
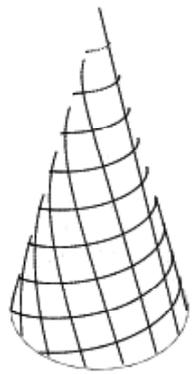


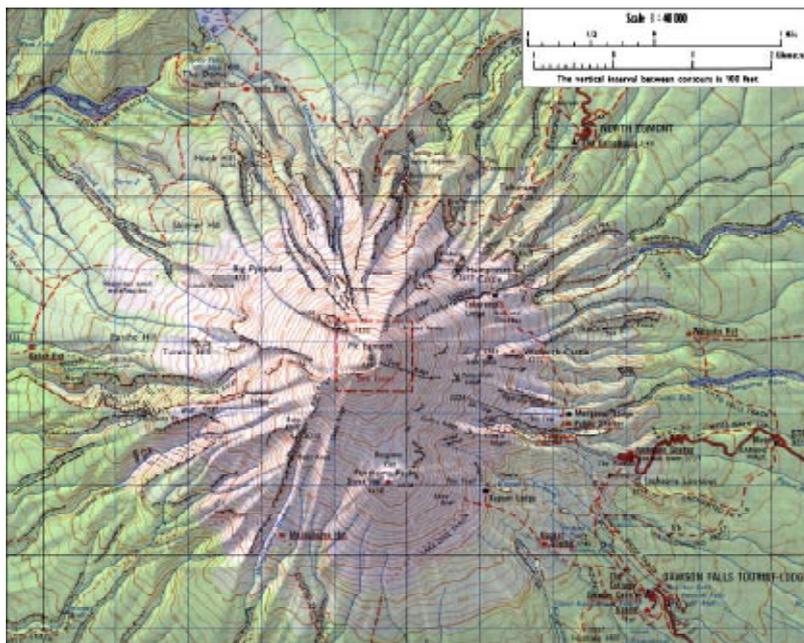




















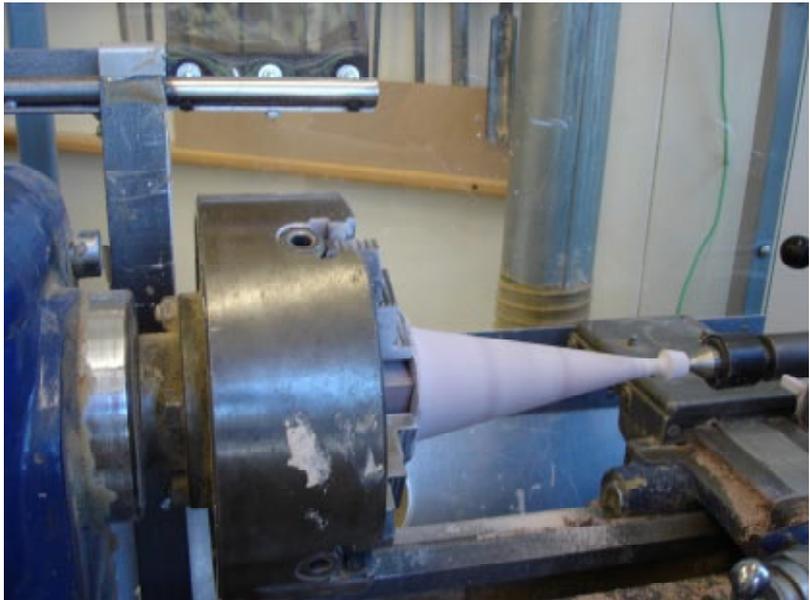






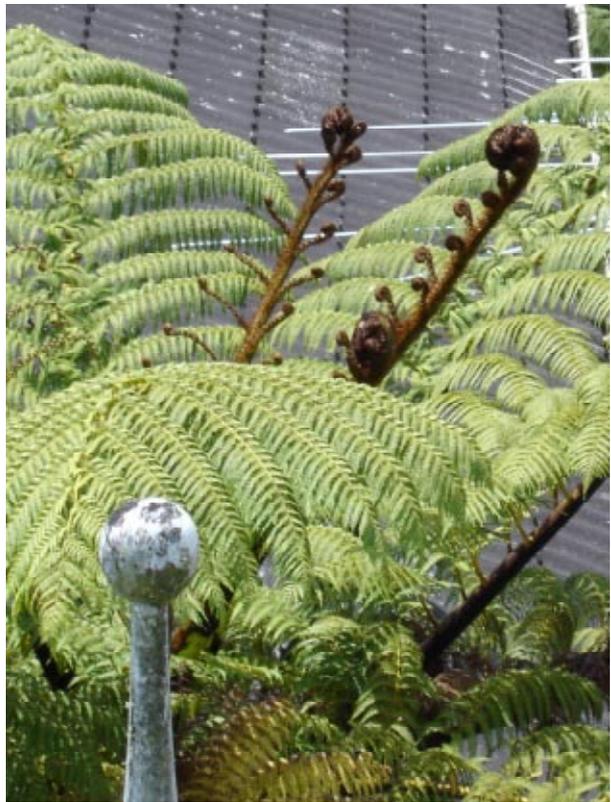






























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## Bibliography

- Anchor milk site. Retrieved 19 January, 2005. <http://www.anchorville.co.nz/flash/loader.php>
- Appadurai, A. Ed. (1986). *The social life of things. Commodities in cultural perspective*. Cambridge: Cambridge University Press.
- Ausubel, D. P. (1960). *The fern and the tiki. An american view of new zealand national character, social attitudes, and race relations*. London: Angus & Robertson.
- Balaji,R.(2006). Tetra pak trains its eyes on dairy industry. *The Hindu*. 19 September, 2006. Retrieved 3 March, 2006 from <http://www.hindu.com/2006/09/19/stories/2006091908691600.htm>
- Bateman, D. (1986). *The illustrated encyclopaedia of new zealand*. Auckland: David Bateman Ltd.
- Bayley, S. (1991). *Taste: the secret meaning of things*. London: Faber & Faber.
- Beeton, I. (1880). *The book of household management. Section:1713*. London: Ward, Lock and Co.
- Beeton, I. (1880). *The housewife's treasury of domestic information*. London: Ward, Lock and Co.
- Belk, R.W., Ger, G., & Askegaard,S. (1996). Metaphors of consumer desire. *Advances in Consumer Research*, 23, 368-73.
- Belk, R. W. (2000). May the farce be with you: on las vegas and consumer infantilisation. *Consumption, Markets and Culture*, 4, 126-140.
- Betts, P. (2004). *The authority of everyday objects: a cultural history of west german industrial design*. California: University of California Press.
- Betts, R. (2004). *A history of popular culture: more of everything, faster and brighter*. NewYork: Routledge.
- Bourdieu, P. (1996). Trans. Nice, R. *Distinction: a social critique of the judgement of taste*. United States of America: Harvard College.
- Briggs, A. (2001). Veblen, bourdieu, and conspicuous consumption. *Journal of Economic Issues*, 35, 99.
- Chambers,J. (2007). Safekids Media Release. (2004).New Zealand National Poisons Centre. *Otago University*. Retrieved 3 March, 2008 from [www.safekids.org.nz/downloads/Kitchen%20Poisons%20-%20Safekids%20Position%202007.pdf](http://www.safekids.org.nz/downloads/Kitchen%20Poisons%20-%20Safekids%20Position%202007.pdf)
- Duchting, H. (2000). *Kandinsky:1866-1944: A revolution in painting*. Koln: Benedikt Taschen.
- Featherstone M. (1996). *Consumer culture & postmodernism*. London. Sage Publications Ltd.
- Findlay, V. (2002) *Color.: A natural history of the palette*. NewYork: Ballantine Books.
- Fiske, John. (1978). *Reading television*. London: Methuen & Co. Ltd.
- Fitzsimmons, C. (19 August, 2003). Milk keeps kids' bones strong. *The Weekend Australian*. Retrieved 21 August, 2003 from [www.theaustralian.news.com.au](http://www.theaustralian.news.com.au).
- Fonterra Co-operative group. Working with a fair value share. *Fonterra Co-operative Group*. Retrieved 12 October 2004 from <http://www.fonterra.com/content/dairyingnz/history/history3.jsp>
- Frederikson, B. (30 March, 2005). Dishwasher detergent safety - acid test. *Consumer Magazine*. 445,12.
- Gage, J. (1993). *Colour and culture: practice and meaning from antiquity to abstraction*. London: Thames and Hudson.
- Gentry, J., Baker, S. M., & Kraft, F. B. (1995). The role of possessions in creating, maintaining and preserving one's Identity: Over the life course. *Advances in Consumer Research*, 22, 413-418.
- Ger, G. (1999). Product-place images: Image as a narrative. *Advances in Consumer Research*, 26, 163-163.

- Gerstner, K. (1968). *Designing programmes*. Switzerland: Arthur Niggli.
- Gerstner, K. (1986). *The forms of color: The interaction of visual elements*. London: MIT Press.
- Gerstner, K. (2001). *! review of 5x10 years of graphic design etc*. Osfildern-Ruit: Hatje Cantz.
- Goethe, von. J. (1840). *Theory of colours*. (11<sup>th</sup> ed.). London: John Murray.
- Goulding, A., Grant, A.M., Taylor, R.W., Williams, S.M., Parnell, W., Wilson, N., & Mann, J. (2007). Clinical and laboratory observations: Ethnic differences in extreme obesity. *Journal of Pediatrics*, 151, 542-544.
- Grunenberg, C. & Hollein, M. (Eds). (2002). *Shopping: A century of art and consumer culture*. Ostfildern - Ruit: Hatje Cantz.
- Holland, D.K. Ed. (2001). *Design issues: how graphic design inform society*. New York: Allworth Press.
- Honour, H. & Fleming, J. (1995). *A world history of art* (4<sup>th</sup> ed.). London: Lawrence King.
- Holt, D.B. (1998). *Does cultural structure american consumption*. *Journal of Consumer Research*. V 25 n1 p.1
- Hughes, R. (2000). *The shock of the new: art and the century of change*. London: Thames and Hudson.
- Jae, H., & Delecchio, D. (2004). Decision making by low literacy consumers in the presence of point-of-purchase information. *Journal of Consumer Affairs*, 38, 342-342.
- Jain, M. (1998). Dairy foods, fats, and cancer: A review of epidemiological evidence. USA: *Nutrition Research*, i8, 905-937.
- Johnston, M. (2005). Free fruit speaks health message. *New Zealand Herald*. 3 March 2005.
- King, M. J. (2003). *The penguin history of new zealand*. Auckland: Penguin Group.
- Koch, R. (1955). *The book of signs*. Dover:
- Kotler, P. (2003). *Marketing insights from a-z: 80 concepts every manager needs to know*. New Jersey: John Wiley & Sons, Inc.
- Kotler, P., Jain, D. J., Maesincee, S. (2002). *Marketing moves: a new approach to profits, growth, and renewal*. United States of America: Harvard Business School.
- Kyoto Protocol. Generic site. Retrieved 17 July, 2006 from [http://www.crl.co.nz/climate\\_change/default.asp](http://www.crl.co.nz/climate_change/default.asp)
- Lea and Perrins Worcestershire Sauce. Retrieved 13 December, 2007 from [www.worcestershire.whub.org.uk](http://www.worcestershire.whub.org.uk).
- Lyles Treacle. Retrieved 12 December 2007 from [www.lylesgoldensyrup.com/LylesGoldenSyrup/PastPresent/default.htm#LionLogo](http://www.lylesgoldensyrup.com/LylesGoldenSyrup/PastPresent/default.htm#LionLogo)
- Lury, C. (1996). *Consumer culture*. United Kingdom: Polity Press Blackwell Publishers Ltd.
- Meadow Fresh generic site. Retrieved 19 January, 2005 from [http://www.meadowfresh.co.nz/calci\\_kids/](http://www.meadowfresh.co.nz/calci_kids/)
- Miller, D. (1987). *Material culture and mass consumption*. Oxford: Blackwell Publishers.
- Moyer, VA. Current problems in Paediatric and Adolescent Health Care: Child and Adolescent obesity. *Science Direct*. V34 p.6-43. Retrieved 23 December 2004 from [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B7CVN-4KD4WXS-1&\\_user=572227&\\_coverDate=12%2F31%2F2001&\\_rdoc=1&\\_fmt=full&\\_orig=browse&\\_srch=doc-info\(%23toc%2318083%232001%23999689989%23602961%23FLP%23display%23Volume\)&\\_cdi=18083&\\_sort=d&\\_docanchor=&\\_ct=3&\\_acct=C000029098&\\_version=1&\\_urlVersion=0&\\_userid=572227&md5=27ac30812160ce2d0a0567fa462ba7f0](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B7CVN-4KD4WXS-1&_user=572227&_coverDate=12%2F31%2F2001&_rdoc=1&_fmt=full&_orig=browse&_srch=doc-info(%23toc%2318083%232001%23999689989%23602961%23FLP%23display%23Volume)&_cdi=18083&_sort=d&_docanchor=&_ct=3&_acct=C000029098&_version=1&_urlVersion=0&_userid=572227&md5=27ac30812160ce2d0a0567fa462ba7f0)
- Naylor, G. (1968). *The bauhaus*. London: Studio Vista Limited.
- Newton, C. (1999). *Victorian designs for the home*. London: V&A Publications.

- New Zealand Packaging Accord. (2004). Ministry of the environment. <http://www.mfe.govt.nz/publications/waste/packaging-accord-jul04/index.html> www.mfe.govt.nz
- New Zealand Food Standards Authority. (2008). <http://www.nzfsa.govt.nz/publications/media-releases/2008/2008-29-feb-labelling-booklet.htm>
- Norman, D. A. (1998). *The design of everyday things*. London: The MIT Press.
- Orange, R. (2004). Ending child poverty? A comparative assessment of united kingdom and new zealand labour government policies for directly increasing family incomes, 1998-2004. Retrieved 2 February 2005 from <http://www.msd.govt.nz/events/conferences/social-policy-04/papers-presentations/96.html>
- Piper, C. (1995). *Billy-can to carton: a history of gisborne milk*. Gisborne: Te Rau Print Limited.
- Ratneshwar, S., Mick, D.G. & Huffman. (Eds). (2000). *The why of consumption: contemporary perspectives on consumer motives, goals and desires*. London: Routledge.
- Riley II, C.A. (1995). *Color codes- modern theories of color in philosophy, painting and architecture, literature, music and psychology*. New England: University Press.
- Robertson, G.L. (2002). The Paper Beverage Carton: Past and Future. *Food Technology*, 56, 46-52. Retrieved 12 May 2004 from <http://direct.bl.uk/bld/PlaceOrder.do?UIN=116844394&ETOC=RN&from=searchengine> www.ift.org/publications.
- Robson, J. (2002). 38, The retail experience. Shopping at tate liverpool. *The European Retail Digest*. Retrieved 26 July, 2004 from [www.templeton.ox.ac.uk/pdf/erd/SampleErd/issue38\\_article02.pdf](http://www.templeton.ox.ac.uk/pdf/erd/SampleErd/issue38_article02.pdf)
- Rojas-Grau, M.A., Avena-Bustillos, R.J., Friedman, M., Henika, P.A., Martin-Belloso, O., & McHugh, T.H. (2006). Mechanical barrier, and antimicrobial properties of apple puree edible films containing plant essential oils. *Journal of agricultural and food*, 24, 9262-9267. Retrieved 3 March from [http://apps.isiknowledge.com/full\\_record.do?product=UA&search\\_mode=GeneralSearch&qid=5&SID=1Aif3MhffIn774G5HMD&page=1&doc=2&colname=WOS](http://apps.isiknowledge.com/full_record.do?product=UA&search_mode=GeneralSearch&qid=5&SID=1Aif3MhffIn774G5HMD&page=1&doc=2&colname=WOS)
- Scammell, H. B. (1891). *Scammel's universal treasure-house of useful knowledge. an encyclope(a)dia of valuable receipts in the principal arts of life*. Philadelphia: Scammell & Company, Publishers.
- Schroeder, J.E. (2002). *Visual consumption*. London: Routledge.
- Scragg, R. Laungesen, M. & Robinson, E. (2001). Parental smoking and related behaviours influence adolescent tobacco smoking: results from the 2001 new zealand national survey of 4th form students. *The New Zealand Medical Journal*, 116, 1187.
- Scrimgeour, F. (1997). Dairy Produce: Analysis of Progress and Issues. *New Zealand Business Review*. Retrieved from <http://wms-soros.mngt.waikato.ac.nz/Research+Website/Research+Publications/Staff+List+Publications?u niid=40023>
- Shaw, M.S. & Farrant, E.D. (1977) *The taieri plain.: tales of years that are gone*. Christchurch: Capper Press.
- Sparke, P. (1995). *As long as it's pink, the sexual politics of taste*. London: Pandora.
- Sparke, P. (Ed.). (1986) *Did Britain make it? British design in context 1946-86*. London: The Design Council.
- Staff writer. (24 September, 2004). Milk for everybody. *Scoop Media*. Anchor milk press release. Retrieved 29 September. 2004 from [www.scoop.co.nz](http://www.scoop.co.nz)
- Staff writer. (23 May, 2001). New study shows worrying milk consumption trends. New Zealand Dietetic Association Press Release. *Scoop Media*. Retrieved 23 May, 2001 from [www.scoop.co.nz](http://www.scoop.co.nz)
- Staff writer. (23 March, 2004). Number of Obese Children triples in 11 years. *The New Zealand Herald*. Retrieved 15 April, 2004).
- Staff writer. (April, 2007). Poison update. *Consumer*. 474,6.
- Stirling, P. (28 September 2002). The young and the restless. *The Listener*.

- Sutherland, A. & Thompson, B. (2003). *Kidfluence; the marketer's guide to understanding and reaching generation y-kids, tweens, and teens*. New York: Mc Graw-Hill.
- Swartz, D. (1996). Bridging the study of culture and religion; Pierre bordieu's political economy of symbolic power. *Sociology of religion*, 57, 71-85.
- Szmigin, I. (2003). *Understanding the consumer*. London: Sage.
- Tetra Laval. (2008) <http://investing.businessweek.com/businessweek/research/stocks/private/snapshot.asp?privcapId=795177>
- Tufte, E.R. (1983). *The visual display of quantitative information*. Connecticut: Graphics Press.
- Tetra Pak (New Zealand) Limited. (1985) Milk in Cartons: The Facts. [www.TetrPak.com](http://www.TetrPak.com)
- Lea. thinkbabynames. Retrieved 12 December, 2007 from <http://www.thinkbabynames.com/meaning/0/Lea>
- Tufte, E.R. (1990). *Envisioning information*. Connecticut: Graphics Press.
- Varley, H. (Eds.). (1980). *Colour*. London: Mitchell Beazley Artists House.
- Verlegh, P.W.J., (1999). Ingroups, outgroups, and stereotyping: Consumer behaviour and social identity theory. *Advances in Consumer Research*, 26, 162-162.
- Volboudt, P. (1986). *Kandinsky*. Paris: Art Data.
- Walker, P. (2001). *The Fox Boy*. London: Bloomsbury.
- Wattanasuwan, K., Elliott, R. (1999). The buddhist self and symbolic consumption: The consumption experience of the teenage dhammakaya buddhists in thailand. *Advances in Consumer Research*. 26, 150-155.
- Watson, J. J., Wright, K. (2000). Consumer ethnocentrism and attitudes towards domestic and foreign products. *European Journal of Marketing*, 34, 1149-1166.
- Whitford, F. (1967). *Kandinsky*. London: Paul Hamlyn.
- Wittgenstein, L. (1977). *Remarks on Colour*. Oxford: Basil Blackwell.