MINDSCAPES AND INTERNET MEDIATED COMMUNICATION

JOHN G GAMMACK
Murdoch University, Australia

Abstract. Cultures are considered to be epistemologically heterogeneous, and it is assumed that epistemologically similar individuals exist across distinct cultures. Epistemological type is viewed as prior to, and transcendent of, nationality and culture. Identifying a shared epistemological basis for communication will be more likely to succeed in dialogical contexts where conformity to prevailing national stereotypes may fail. Two levels of communication are distinguished using Bohm’s terms - explicate: (conformity to social and cultural symbolic norms and conventions) and implicature: (the level at which implicit communicative intention originates). Cyberspatial interactions potentially undermine normative cultural influences and permit multicultural or transcultural environments in which new codes extending from epistemological types, (rather than cultural) become possible, limited only by media potential and symbolisation itself. A theory with implications for an alternative to the homogenization of verbal communication is advanced, with a consideration of potential elements of codes for universal understandings.

1. Introduction

Cyberspace, particularly as the Internet increasingly mediates organizational and social interaction, provides a unique milieu for the exploration and development of new forms of global communication together with the potential for developing personal skills relevant to the promotion of multicultural understanding.

As an apparently non-physical space its occupants may metaphorically roam freely, stake territorial claims and define new cultural norms, in which conceptions of tribe, race, community, and other societal constructs may be explored, reconstructed and reprioritised. Utopian or dystopian visions may be projected against such a background, but rather than to speculate upon one or another picture suggested by the potential, in this paper some broad themes seen as relevant to the construction of particular visions of community will be outlined, and their relationship to internet communication assessed.

The first theme concerns biases in shaping cyberspace, or at least in imposing structures within which interaction will occur. Both bottom up and
top down forces apply here, and the drivers are likely to be understood within categories of economic, cultural and technological dominance and control as top down imperatives, and with innovation, expressivity, communication and individualism generating content from the bottom up. A rhetoric of empowerment, free speech, increased citizen participation in government and a democratizing and egalitarian ethos is also currently promulgated from grass root sources, and being examined by governments currently (Rowe and Frewer, 2000). Although history shows a tradition of the “wild west” being effectively tamed, the ability to construct sites, to innovate, to establish distributed groups and communities, and to subsist relatively immuely within those, remains a virtually constitutional right, and many self organizing groups already exist within cyberspace, and determine their own norms of communication.

The potential for real communication and true democracy may however, be illusory given the inevitable properties of a physicalistic, virtual, time and energy dependent medium, in which you cannot be sure that your correspondent is not a dog. The potential for minute tracking and recording of all communication raises privacy concerns, and is a potential inhibitor of expression. Face to face provides contextual information that aids interpretation of communication, and a minimal literacy is assumed for all communication. Clearly not everyone has computers, modems and access providers, and whether such suffrage is desirable or not, not everyone would be expected to make the transition to such an ecology willingly. The similar priorities of national governments (e.g. economic and military competitiveness) are likely however to exert a concerted pressure towards a technological society. With business and personal transactions increasingly likely to occur remotely and globally, attendant cultural misunderstandings (at individual, workplace and agglomerate levels) are implied. The forms of organization in cyberspace will be influenced by sets of forces which are not however primarily national in origin, and an analysis of the shapers of these must go beyond traditional, geographical and historical analyses to constructs addressing more universal human drives. In this paper the major interest is in the basis for communicative understandings in relation to the internet as a medium.

1.1. COMMUNICATION POTENTIAL AND THE INTERNET

Although Roland Barthes’ author may be dead, computer-mediated, like other mediated forms of communication, generally has both its originator’s intrinsic intention and an external appearance in conventional forms understood by a community. When information leading to business or consumer decisions is being passed clarity and unambiguousness are paramount. Some initial norms for web presence and activity have de facto been established by the dominant Internet nations, particularly the United States, which embodies a more conformist character than apparent free spirited persona suggests (see de
Castillejo, 1973, 1997). The prevalent technologies and policies invented, adopted or propounded by the Internet society and major technology vendors set the environmental parameters for interaction, both social and organizational. Homogeneous standards, de facto or adopted by international bodies make the infrastructure for mediated interaction confined within certain limitations, where the early concerns with security, surveillance, power rebalancing and social control have largely been allayed within the technologies of the internet, and corporate policy making.

From a communication viewpoint, the uniformity of technical languages and presentation media make sites worldwide appear homogeneous, with little clue to national origin or native style. The way in which the limitations of a powerful and dominant medium attracts and scopes the forms of interaction is readily seen in the way office suites and other application software has gravitated towards global standards. Corporate and academic presentations have largely converged around clichéd presentation graphics, and media development such as that projected by McLuhan (1969) will no doubt occur as countercultural elements foster innovative practices and evolution of those practices. But there seems little doubt that the extrinsic parameters of cyberspace, regardless of the types of content that are mounted, are formulated within a Western tradition, and informed by its dominant values.

1.2. LANGUAGES OF THE INTERNET

Statistically, the primary Internet language is English, although numerous languages are increasingly represented. An accident of history has led to the adoption of English as the prime language of the USA, which has largely pioneered the Internet, and the subsequent dominance of English as the language of international business. Its polyglot quality and large vocabulary have enhanced and sustain English’s dominance, (although other polyglot languages exist with even larger vocabularies and more speakers). Statistics may be found on this, and Bryson (1990) is one particularly entertaining treatment of such statistics. The convention of dual language home pages is, in a sense, realising the hope of the Esperantists, that there would be a common language to foster international understanding. Esperanto however, has been criticised for its Eurocentric bias, amongst other problems, and other attempts, aimed to be culturally neutral, such as loglan (http://www.loglan.org) have not had significant impact. Latin, a dead language, is deemed to have advantages for legal and medical applications, and there is a proposal that formal languages using logic constructs be adopted for electronic contracting activities (Reynolds, 1999) avoiding interpretive ambiguities. Any given system of linguistic symbols will have limited expressibility and it is debatable whether a smaller or larger vocabulary ultimately aids communication. Current initiatives, such as world dictionaries (such as Microsoft’s joint venture with Longman’s),
and publishing policies (such as various French medical journals’ decisions to only publish in English henceforth) are however, likely to ensure that English remains the main language of technology and business, as well as academic publishing. Nuances specific to certain languages are inevitably lost by such a process, and there is an analogous threat of extinction of traditional cultural norms of expression finding continuation in cyberspace, which is yet to be explored.

Indigenous cultural phenomena such as Anime in Japan, are becoming popular in Europe and presumably elsewhere, but the understanding of Japanese culture required to produce Anime is such that few Westerners are considered competent to work in this field (according to an article in the film magazine Empire in 1995). Many examples can be given of faux pas and similar misunderstandings affecting international business ventures, and books describing the explicate norms of social and professional behaviour for particular cultures may be found in any airport. Globalised internet business however is likely to converge around the norms established by currently dominant models and technologies, rather than by a natural extension of native models. Not all cultures subscribe to such a logic of imperialist homogenisation, (Maruyama, 1994) but the extrinsic requirements of the internet, where content is reduced to form, makes global competitiveness on other terms difficult.

The dominant characteristics of interaction a Western cyberspace promotes seems largely to be styled by metaphors of ‘shopping’, novelty seeking, channel hopping upon a whim, individual choice, marketing and presentational tricks, visual excitement and attraction, and digestible information with minimal narrative commitment. The illusion that everyone can communicate because “everyone” from school children to multinational corporations can present a home page in the homogeneous format due to the foreseeable limitations of markup languages implies a bias towards a communicative conformity. As XML becomes the standard for web pages, the diversity of content is limited by the diversity of communication forms available within XML.

Here we are suggesting that the Internet is being socially and politically constructed along particular lines, and an extension of personal biases to the biases of organisational players and the installed technologies can mean the establishment of a dominant technological infrastructure that selectively includes or excludes particular interactions. A sensitivity to initial conditions, (i.e. the technological standards of the 1990s) implies a development agenda of cabling and networking entire nations, delivering information increasingly through virtual interaction and relating to others remotely through verbal and visual media, encouraging a dependency on physical sight, computer literacy and individualism. Debord (1967) has eloquently elaborated the consequences of cultural trends towards alienated experience, noting that “... society which
eliminates geographical distance reproduces distance internally as spectacular separation." (Debord, 1990). The separation involved in mediated communication merely takes a different form, and the messages of the literate are transmitted in different terms, which are not simply understood culturally.

If a globally communicative internet presence requires a conformity to non indigenous values, and if the traditional values associated with specific cultures are to remain in some form, a framework for distinguishing relevant constructs in the formation of on line communities is required. These will be transcultural and refer to more fundamental properties of communication, referenced to an Internet context. The ideas of two thinkers are found helpful here: David Bohm, and Magoroh Maruyama, and the next section indicates some of their relevant concepts.

2. Explicate and Implicate in Communication

The above introduction emphasized some properties of the communication forms possible and currently existing with the network medium, and considers these as externals of the intentions or thoughts behind them, which web page items represent or symbolize. In many transactions the mapping is direct – the form is the content, and (say) a pictorial product catalogue refers simply to a specific stocked product with little interpretation required. Another class of communications however is when greater abstractions are being conveyed, with organisational implications for strategic decision or policy making, legislation, establishing business protocols, and especially collaborative tactical or operational activities in design, documentation or planning. With the potential for emails to be used in litigation, and the fact that language is naturally ambiguous and to be understood in its immediate context it is important to establish the intent of the communication distinct from properties of its appearance, both immediately and retrospectively if the communication is to be archived for organisational learning purposes. Although his is a vastly more far reaching theory than this present application, the terminology of Bohm (1980) provides a construct which may be used to place considerations of communication in perspective. He distinguishes the explicate from the implicate orders and a brief indication of what this means now follows.

[the widespread] distinctions between people (race, nation, family, profession, etc.), which are now preventing mankind from working together for the common good (largely originate) in a kind of thought that treats things as inherently divided, disconnected, and 'broken up' into yet smaller constituent parts ... considered to be essentially independent and self-existent. (Bohm 1980, ix)

A physicist originally, Bohm distinguished two orders of physical reality which he termed the implicate and explicate orders, referring to the primary, undivided and holistic flow, which encompasses thought, and specific
manifestations of thought in the temporal world of identified objects. Bohm’s deeper concerns led him in later life to elaborate these ideas in the realm of social reality, (Bohm, 1990) and develop ideas of dialogue in which meetings of minds occurred distinct from the dominance of one argument or theory over another. Such an occurrence is suggested by the common phrase “being on the same wavelength”. Following Bohm’s (1980) terminology in situations involving communicative intent, the implicate order may be described as holding the potential from which the explicate (formal symbolisation) is made manifest. Any mediated communication will have both these aspects. In the introduction we were primarily concerned with aspects of the explicate – the outward signs and digitized or bounded symbolisations to which the internet has only access. Prior to any symbolisation is the idea intended, and, although it is always possible to ascribe personal meanings to any set of symbols, the real communication occurs when an idea is fully received as it was sent. Sharing ideas, seeing eye to eye, meetings of minds and true dialogue is the aspect of communication we are primarily concerned with in this section, in an attempt to get a handle on the implicate order beyond secondary media representations.

Communication is not only about information transmission between a source and a receiver, as in the classic Shannon and Weaver (1949) model, but in a system of simultaneous mutually shaping entities is a means by which minds come to understand one another, much as pebbles become smooth. Casse (1994) has outlined the new paradigm of communication in which such minds construct and create their environments and relationships. Casse has also developed a typology of communication styles (including a test) which profiles communicators in terms of various emphases (process oriented, people oriented ...). The important point from his paper here is that if the values and styles of communicators are incompatible, increasing clarity or explanation of a message, or disambiguation of other interpretations will be to no avail, contrary to standard business communications advice. Such communicators will not see “eye to eye” in any meaningful way and fail to shape a jointly understood concept.

In effective communication, forms of symbols can get in the way, distracting from the message, and their formal properties such as beauty or mathematical consistency may take precedence in establishing their acceptance. Discussions, which may be institutionalised into political or religious movements potentially confuse the diversity of forms and externalisations with the essential purity of the message or intentional thought. This phenomenon impacts on multicultural understanding, which itself is invested in national and cultural identities. Leaving aside for the moment the question of whether cyberspace threatens or reestablishes traditional identities, new norms applicable in cyberspace are unlikely to immediately supplant terrestrial understandings.
In this regard, the easy transglobal communications which enable new business ventures, personal relationships and access to previously "unavailable" cultural resources, are likely to be governed by an overlay of emergent 'netiquette' norms, largely influenced by American values, and superficial relative to the forms of communication meaningful in other cultures. The meaning of dialogical communication must transcend the superficiality of the medium, which is no panacea for overcoming the notorious problems of international communication, particularly between Eastern and Western cultures.

In his exploration of the concept (Bohm, 1990) characterised dialogue as a meeting of minds beyond forms of symbols, which although temporarily mediating a message, do not ultimately matter. Discussion is the term he reserved for a battle between symbol forms for dominance, with the goal of prevailing rather than understanding.

Naturally there is a more foundational level at which such behavioural and external norms do not apply, and from which misunderstandings may be appropriately assessed as such. The understandings which enable a deeper communication across cultures may be termed *implicate*, and are ontologically prior to particular conventions. Such understandings can apply within, as well as across cultures, but their universality remains an issue. Many categorisations of personality types, ancient and modern, testify to the diversity of human nature, and forms of astrology and personality typing which cross cultures indicate their relative power as explanatory sets of constructs. Whilst scientific evidence is ambivalent, (typical studies indicate some effect, but leave most of the variance unexplained), personal experience of compatibilities and dissonances can usually be adduced to support folk theories and pet beliefs. Whichever form of classification is imposed however, any significant culture will embrace diversity in which harmonies and dissonances will be possible. It is here the mindscapes theory of Maruyama (1980) has direct applicability.

Rejecting the simplenmindedness of typologies, Maruyama's mindscapes relationology goes further than mere temperamental classifications of individual qualities towards an epistemological basis from which communicative and behavioural styles are generated. The heterogeneity of a culture where each mindscape type is represented in some proportion, despite particular dominancies ensures viability through intracultural diversity. As a biological phenomenon, the need for diversity is well understood by geneticists, and large organisations are increasingly paying attention to ensuring such within their operation.

Maruyama (1980) has identified four frequently occurring, canonical mindscape types, of varying prevalence within national cultures, but ultimately transcending those. One of the differentiating constructs is the tendency towards a homogenization, or a heterogenization of the environment.
Homogeneity is associated with control, order and structure, but not with innovation and creativity. Heterogeneity is harder to manage, to quantify and predict, but is less vulnerable to changes in circumstances. If a corporation hires only people exactly like the boss, innovation is unlikely, and the operation will be predictable. Equally, nations differ on the extent to which their people flourish within particular mindscreens. Each culture however is held to contain people of each mindscape type, regardless of the dominant national or cultural stereotype. The four mindscreens are best understood from reading Maruyama’s original writings, but may be characterised for present purposes as H, I, S and G, where H is the dominant Western style. The patterns of behaviours seen in mindscape H are characterised by tendencies to make hierarchies, formalisations, rules, homogenisation, controlling, intolerance of variety and functionalist and goal oriented in activity. G (which has some similarities with S style) is characterised by a heterogenizing style (increasing variety), pattern developing, spontaneity, growth amplification, polycocular vision and other distinguished characteristics. Some African and Asian nations have sophisticated models of management and social economics based on G style characteristics which Maruyama (1994) has lucidly outlined. Maruyama’s theory has been extensively considered in relation to foreign policy, import tariff settings, invention, decision-making and several other aspects (Maruyama, 1994).

Relating the theory to interpersonal communication, one implication for communication is that (consistent with Casse (1994) as mentioned above) given an epistemological difference between two parties, increasing the clarity, emphasis or other formal attributes of a message will be to no avail. This has practical implications for organizational communications. The understandings across cultures are thus more likely to be mediated by attention to implicate aspects of communication, such as mindscape epistemologies and the styles and values those imply, than by mere expertise in social niceties. According to Maruyama, those with other mindscape types obliged to conform to the cultural practice of a dominant mindscape undergo hypocrisy, strain, underdevelopment and subsedure, whereas arranging diversity harmoniously is more likely to enhance communication and engender innovation. An analogy here is the classical form of oriental art, in which the principle of balancing nebulous and fluid components in a holistic harmony of diverse areas achieves an emergent beauty in which each ‘part’ plays a role defined by the whole.

As virtual communities develop, establish a shared consciousness and communication norms, and link with each other in business or service ventures, understanding the communication norms beyond simple linguistic misunderstandings, and without requirement to conform to a dominant and non indig- enous symbol system will be essential. Such “birds of a feather” can self select their preferred communication modes in self organising groups, but intra or
inter-organisational teams may have no such luxury. The possibility for such a form of communication is now explored.

3. A Code for Transcultural Communication?

We assume there can be no unique type to which all individuals or cultures must conform, and that it is desirable for a harmony in diversity to be properly appreciated. As national and cultural boundaries continue to blur, identities call for redefinition. Virtual interaction undermines many traditional constructions of perceived identity: race, gender, age, origin, education level, accent, class, status are invisible, and need not be apparent during interaction. This focuses on the qualities of the formal message, which as suggested earlier, may be constructed along the dimensions of the values of a dominant or emergent culture. If interaction is increasingly mediated virtually, and along the lines suggested above, communications which emphasise only the explicate forms may lose the informal contexts of message origin which condition a fuller appreciation of the intent. If this is English, the potentialities of pictographic languages are recessed, and if a service does not lend itself to mediated representation, its value may be hard to assess. Furthermore, if an H type mindscape governs or dominates all commercial interactions, more sophisticated and egalitarian models of commerce and management may find it difficult to become established in cyberspace, as national governments conform to Western agendas.

Diversity of content is assured given the nature of the Internet: diversity of expressive communicable forms and media in cyberspace will increasingly be technologically realised and forms matter little if the message is successfully communicated. But can the basis for mutual understanding be mediated symbolically, and are the forms available for messages sufficient to this task? Or do they merely constitute another set of polite norms, superficial, alien, biased, and perfunctory. In understanding another mind polite formal engagements can miss the necessary communion.

The basis of mutual understanding, which is prior to cultural norms and other overlaid social constructions is surely epistemological and closer to the biological and developmental factors which shape linguistic appreciations. Epistemologies and biological development are transcultural and as such are likely to provide a better basis for codifying understandings that inform appreciation of the formally symbolised. Metaphorically, native colours are not to be simply melted into a brown uniformity, but find their place in a mosaic, or as a unique reflectance of white. Identifying the (implicate) archetypes which generate specific but transient explications promises a theoretical means to establish universal codes. Such a code will be white and not brown. These archetypes in turn, are perhaps currently best represented by icons addressing
common human experience, under a general rubric of *emotion*. Many cultures have terms for specific emotions which do not readily translate: *(triste* in French (a form of sadness), *scunnered* in Scots (a form of disgust), a certain word in Tierra del Fuegan (the feeling when two persons are present, both knowing what needs to be done, and wishing the other would start it). The broad categories of anger, fear, happiness, sadness and jealousy seem however to apply to all cultures, if not indeed ages, and are candidate archetypes. Their abstraction into the positive and negative emotions goes deeper into the implicite generator where even these archetypal forms are seen as temporary explications. Regardless of connotative meanings within cultures, *colour* is another candidate for representational codes that relate to universal biological constraints, although this is contentious (Saunders and van Brakel, 1997). Current work in this area is examining this possibility (Gammack and Denby, 1999).

The emphasis on verbal and visual aspects of virtual communication may suffice for superficial correspondence, but the emotive intent of a message impacts considerably more on understanding than the formal words, and this is the aspect lost by disembodied communications. Although emotions themselves are culturally relative, as another aspect of human symbolic functioning, they can act to enhance and clarify complex messages and intentions. Although their construction may be relative to societal norms, as a primitive and immediate experiential quality they may have a biological if not an epistemological universality. Much communication is likely to have an emotional component, but in conveying such a quality in symbolic interaction, can some form of coding be established relevant to preservation of its implicite quality?

Believing that such communications are not verbally registered, but that communication with another, whether in cyberspace or in physical space depends on sharing referents for a symbol system, Gammack (1999) investigated the emotional attributions made for iconic representations of faces. The literature suggests that categorization of facial expressions is essentially universal, and that the categories of human emotion do not differ across cultures. Given the Internet convention of rendering the emotional intent of a message that might otherwise be misperceived by the use of a ‘smiley’ the study examined whether icons representing a range of emotional states would be reliably perceived and categorised across distinct cultures. Evidence for some universality was found across Chinese and British populations, with the facial expressions themselves underdetermining the range of labels which could be applied in each culture. The data however gives a basis for identifying relatively unambiguous archetypes at the level of icons for recording “emotional” information in a culture free way.

Finding that the broad categories were reliably perceived implies that a cross cultural code may be developed which notates the emotive intent of a
message in a relatively unambiguous manner, and which is based more upon deeper and more ancient biological than cortical structures. Such a lexicon however is essentially just another set of conventionalised symbols, and can be disingenuously manipulated to mislead, since it has only as associative relationship to its emotionally registered referents.

4. A Culture Free Correlate for Mindscape Types

Inspired by the work of Maruyama, various researchers worldwide have been attempting to establish and use a culture free instrument for profiling mindscape types. This was originally developed and validated in Tokyo, Bruxelles and Budapest and is known as TOB. (Maruyama, 1994). A TOB test uses visual patterns representing different levels of complexity, redundancy, heterogeneity and interaction, which are some of the dimensions on which mindscape types differ. The instrument has been used to assess aesthetic preferences, relating them to mindscape profile, so that these may be used indicatively as a test for mindscape type. The present study is a small part of that effort, in which a sample of people provided data relevant to relating some mindscape characteristics to such aesthetic preferences. The aim here was to identify patterns of aesthetic preferences against dominant mindscape types, using TOB, (Maruyama, 1994, 131) which consists of 42 different patterns laid out on a 4 x 4 checkerboard. Underlying this work is the assumption that despite culturally dominant mindscales, a simple cross-cultural comparison will not yield predictable differences, whereas a mindscape based classification of the subjects will show a greater, and more useful commonality. In the present application, some general dimensions of aesthetic judgement are expected to emerge, against which particular individuals may be benchmarked for dominant mindscape type.

4.1. METHOD

Subjects were 29 mature students on a UK Business Information Technology masters degree course, with a mean age of 30.3 years, being trained as "hybrid managers", capable in both contemporary business and technology, and liable to be managing diverse teams. Demographic data on age, sex, first-degree background and whether or not they had lived overseas was collected. The communication styles test of Casse (1994) was also applied and ratings obtained on each of his four modes. Subjects then circled one of four statements indicative of distinct mindscape characteristics, under various headings, including decision making, ethics, beauty, social attitudes and so on. Following this they rated each item of TOB on a 7 point scale representing degrees of beauty ranging from ugly to beautiful).
The TOB ratings were then subjected to a Pathfinder (Schvaneveldt, 1990) analysis, (assuming only ordinal level of measurement), and complemented with a multidimensional scaling (MDS) analysis to identify the major constructs distinguishing the items for this group as a whole. This combination of analyses graphically shows both the underlying dimensions explaining the variance, and the relative position of similar items in a minimal spanning tree of the data. As the MDS may distort item position to fit a plane, the local interpretation of nearest neighbours is best provided by the complementary analysis. MDS however shows the main differentiating dimensions among the items. By relating this analysis to independent indications of dominant mindscape tendencies, any patterns of correspondence evident between aesthetic preference and the indicated mindscape type suggest a valid way forward in a larger, rigorous study.

The analysis for the group of subjects (whose statements indicated predominantly G profiles, choosing G statements 3.7 times on average from a possible 7) is summarised in Figure 1, with the coordinates of items not to scale, but retaining their relative positions, and the link weights omitted for clarity. As a small sample pilot study no firm conclusions may be drawn from this, other than to say that there does appear to be some structure in the data consistent with the expectations that mindscape theory would suggest. In particular symmetry (redundancy) appears to broadly distinguish items, with diagonal

![Figure 1 Pathfinder and MDS analysis of 29 subjects on TOB test (partial only)](image-url)
axes of symmetry showing some clustering compared to items with orthogonal axes. The second major dimension is perhaps best characterised by simplicity or complexity of description, in terms of how the components interact — harmoniously or scrappily. This interpretation is subjective, and others are possible, but for a Western subject group, these preferences are not unexpected in underpinning aesthetic judgements. The items displayed in Figure 1 do not exhaust the 42, but are chosen as illustrative of this interpretation. Anomalies however occur, and the interpretation is not simple, partly because aesthetic preference itself is complex, mindscapes are rarely pure, and the diagram averages over a group, which naturally contains heterogeneity. But with an essentially monocultural sample it is clear that even if there are some shared dimensions that may be identified, preferences and opinions vary widely.

Various methods for statistically comparing individual Pathfinder and multidimensional scaling analyses exist (Gammack, 1988) which are yet to be done. To illustrate some individual differences however, two subjects, with high and low G scores, and also with high and low scores on the Casse 'people' dimension were compared. The first subject was a 34 year old male, with a background in business administration, who had lived abroad, and who scored very highly (16/20) on the Casse people dimension. Additionally every one of the statement areas was circled g and his aesthetic preferences are shown in column 1 for items of interest. The second subject was a 31 year old male engineer who scored lowest (1/20) on the people dimension, and had only agreed with 2 statements reflecting G mindscape, which was also among the lowest of this group. He had not lived abroad, and his ratings on the same items are shown in column 2. The item codes themselves are in the third column, with Figure 3 showing the patterns themselves.

A t-test showed their ratings overall to be correlated at $r=0.66$, significant at $p<0.05$ (2 tailed). This suggests that, even with rather different attitudes, generally similar aesthetic judgements, perhaps governed by the principles of symmetry and complexity obtain, and codes embodying these values may be applicable in heightening communication, as their judgements largely agree.

The local differences have not been closely analysed here, but as the subjects’ comparative ratings are shown in Figure 2 for those items that had exact agreement at the scale extremities, some informal, qualitative assessments may be made. The patterns for these subjects do not show sufficient consistency to justify any solid conclusion, but generally the extreme agreements on beauty seem to correspond to symmetrical shapes, and ugly to the asymmetric, although not all the symmetrical shapes were judged as extremely beautiful in the sample. The extra dimension of complexity partially differentiates these for both subjects, where simpler (orthogonal) symmetries are preferred to shapes with diagonal or non-rotational symmetries.
5. Conclusions and Implications

Maruyama’s work points to picture coded information systems, which, by analogy to Chinese and Japanese writing systems convey more information faster, and in applications where complex relations must be appreciated simultaneously, such as in face recognition, the parallel quality has advantages over written systems. Enduring codes for universal concepts may best be represented in pictorial forms, and Maruyama has developed some candidate systems for this (Maruyama, 1986, 1994). Encoding information systems in a culture fair manner may well involve pictures, emotions, colours and other non-linguistic symbols, but all are essentially limited by the nature of symbolisation,
which is to support interpretation, ambiguity, conventionalised meanings and the like. And it remains the case that meanings of symbols are attributed by humans, in value laden contexts and for specific purposes, all of which are variable. Even colours may have nationalistic or mythological connotations. Although finding a suitable convention may help to democratise cyberspatial interactions and virtual forms of communication, these essential limitations of mediated communication remain. Regardless of diversity of forms, and indeed content, and the relative universality of conventional encodings, it would seem that shared understandings are beyond what may be formally conveyed, and depend on a shared mindscape epistemology, where the formal attributes of a communication are secondary.

The practical implications of this, if true, are that seeking universality at the level of forms and mediated symbolic conventions is unfruitful. The mindscape types identified by Maruyama, and which we take to exist in all cultures imply that shared understandings are possible, but that across types and mediated forms there may be communication difficulties if not impasses. It was notable that the statements, even on beauty showed a variety of responses whilst the aesthetic judgements showed a greater similarity, possibly explained by universal underlying principles of aesthetics, such as symmetry and complexity, adjusted by secondary considerations. Such tensions between verbal forms are viewed as necessary in a pluralistic society, operating essentially verbally, but the resolution of their implications for conflict remains a consideration, with which political, religious and other great ideologies alongside practical management and psychological approaches frequently fail to deal.

We believe that being free of the limitations of a type or of a form allows a proper recognition of unique abilities, and healthy attitude to diversity, and the ability to translate among styles of interaction. Recognition of the equivalence of intentions despite formal differences allows communication attempts to be translated into a presentational form for an alternative audience. Translation implies a mastery of two expressive forms, together with a third code or generative basis from which their conceptual equivalence may be established. Mindscape type G is the most developed type with respect to these skills and can enhance the experience of other types by providing a diversity of vision. Picture codings are claimed to help develop G type thinking, (Maruyama, 1994: 95) and interactive video games develop such skills. Educationally, university teaching emphasising verbal narratives may be retrogressive in a world of multimedia technology. Who reads Charles Dickens now?!

The training of integrated abilities in single individuals which have hitherto been distinguished as relevant to the programs of one or other faculty has led to several suggestions concerning the (tertiary) education of the ‘hybrid manager’ (Earl and Skyrme, 1992; Howell and Gammack, 1996). This term has fallen into disuse, not least because of the connotations of the word hybrid in French.
Such individuals however will be essential in the endeavour of knowledge management in organisations, and continuation of inter-faculty education programs, where individuals gain knowledge both of business processes and of relevant supporting IT are indicated. Such individuals can act for two sides, with separate cultures and differing immediate goals but while they may embody the adaptability of the generalist, if they lack the in-depth skills of the specialist their position may be unrecognised or untenable against metrics which rely on the explicate properties only.

One could extrapolate more and more combinations of skills along these lines, designing specific programs of integrated education for individuals, or more ambitiously for stabilised teams. A holistic education strategy fostering integrative abilities would naturally require the specialist skills to be developed, in ways different from multiple trainings in distinctive disciplines. The content of what is related is seen as secondary to an ability to abstract underlying patterns and perceive relations across disciplines. Thus as the knowledge in the disciplines changes or updates, the adaptation will be quicker and less dependent on specific forms of information. An understanding of the theory of mindscape provides a basis for the design of such a truly transcultural program.

References

Bohm, D.: 1990, On Dialogue, David Bohm seminars, Pegasus Communications, Boston, MA.


