PICTURING THE BEAST INSIDE: 
ANIMALS, ORGANIZATIONAL IDENTITY AND METAPHORICAL GRAFTING

DAVID R. STILES
Cardiff University
Cardiff Business School
Aberconway Building, Colum Drive
Cardiff, UK, CF5 1QG
Tel: (029) 2031 0303
Fac: (029) 2087 4419
e-mail: drdavid.stiles@ntlworld.com


The author wishes to thank the following, who have helped in the data collection for this paper: Rosnah Bin Abdullah, Andrew Barnsley, Andrew Harston, Lance Mortlock, Kate Parkinson, Dhivya Srinivasan.
PICTURING THE BEAST INSIDE:
ANIMALS, ORGANIZATIONAL IDENTITY AND METAPHORICAL
GRAFTING

Abstract: Organizational identity studies have overlooked the importance of the visual qualities inherent in the ‘identity’ metaphor. This paper develops a tentative theory to remedy this. Empirical data from over 1400 people in four countries show that pictures can combine with words and numbers as complementary and equal partners in a relay system of meaning. This focuses the organizational identity metaphor through a process of metaphorical grafting, which helps identity become a more effective heuristic device.
INTRODUCTION

Much of the knowledge generated by management academics today says little to those few practitioners who actually read it. For knowledge to be actionable, it must emerge from the organizational world and filter back into it. Academics are used to shaping, testing and communicating basic scientific ideas through complex forms of words and numbers and protect such ‘mode 1’ knowledge from contamination by the wider social environment through established scientific rules on integrity (Gibbons, Limoges, Nowotny, Schwartzman, Scott, & Trow, 1994; Nowotny, Scott, & Gibbons, 2001). This may partly explain why we are more reticent about using other forms of knowledge. However, some applied, transdisciplinary forms have long been with us, although they are only just appearing in socially-reflexive contexts outside traditional academic structures (Gibbons et al, 1994). Such ‘mode 2’ knowledge is challenging the cognitive authority of science in an emerging dialogue between academics and other societal stakeholders (Nowotny, 2001). Questions of utility, identity, communication and power are also apparent in literature challenging the relevance of management research (Porter and McKibbin, 1988; Hambrick, 1994; Hitt, 1998; Huff, 2000; Kogan, 2000). Knights and Willmott (1997) berate the disciplinary closure of business academics; and Tranfield and Starkey (1998) and Starkey and Madan (2001) argue that management research must become more transdisciplinary to heal the ‘relevance gap’ between academia and practitioners. Some are more critical of the mode 2 argument, arguing that universities can only be effective knowledge producers if they are financially and ideologically free from seeking practitioner ‘relevance’ (Grey, 2001; Kilduff & Kelemen, 2001). However, if there is a chasm between business academics and practitioners, other forms of knowledge may help to bridge it. The difficulty is in finding forms of knowledge that are widely understood and actionable. Pictorial forms involving culturally embedded phenomena provide such a rich potential source.
Human beings have always had a fascination with other creatures. Animals are not simply important functional elements in society, fulfilling transport, work and nutritional needs, but are important objects of emotional attachment, mysticism and metaphysical enquiry. Prehistoric cave paintings of animals are universal and precede written language by thousands of years, confirming their cultural embeddedness. Such images are not merely decorative, but are likely to signify a primeval and deeply held belief in the magical or religious properties of creatures (Buttrick 1954; Gombrich 1967). In China, the Ganzhi system of animal symbols is fundamental to the philosophy, identity and time measurement of traditional society (Wu 1982; Hearn-Tatt 1997). In western discourse, Aesop's fables (1993), Andersen's fairy tales (1974) and Carroll's Alice in Wonderland (1990) are among the many texts that use animal characterizations to help us interact with our world from childhood.

Such artefacts often imbue animals with human characteristics, reinforcing our special empathy with them. Anthropomorphism is defined as “the attribution of a human form or personality to a god, animal, or thing” (Pearsall & Trumble 1996: 56). It is an innate human tendency, helping to define our relationship with the natural environment, allowing imaginative escapism, and providing a moral and ethical framework to guide behaviour. For instance, Aesop (1993) relates the tale of a lion, fox and ass to warn against naivety and promote more subtle defences against force. The three creatures agree to secure food supplies from a nearby forest. On their return, they negotiate how the spoils should be divided. The fair but feeble-minded ass splits the food into three equal shares and requests that the other two make the first choice. Angry at this presumption, the tyrannical lion promptly devours the ass. Challenged to make a more acceptable division, the perspicacious fox reallocates the spoils to two unequal piles: one containing virtually everything for the lion. The lion complements the fox on his calculations, enquiring who had taught him the art of perfect division. The fox replies that he had learned it extremely recently, by witnessing the ass' fate.
Such fables are partly based on a quasi-zoological understanding of animals, but function mainly on a metaphorical level. It may or may not be true that lions are fierce, asses are unintelligent and foxes are cunning. Such constructs are deeply embedded in universal human myth and are therefore powerful metaphorical devices.

This paper aims to partly explain how that process works by using poststructuralist principles to develop a tentative theory termed *metaphorical grafting*. This will help to show how pictures combine with words to create facets of the complex metaphor known as organizational identity. The idea is that such a metaphor is more effective as a heuristic device if it can be grafted onto another metaphor that allows the development of a strong analogy resulting from a platform of components common to both metaphors. A visual representation is multi-dimensional and operates at a sufficiently deep conceptual level to be a medium by which this process can occur.

The use of pictorial forms in general is first reviewed within organizational literature. A theoretical rationale is then developed for employing such forms, before empirical data is presented to show how metaphorical animal representations further our understanding of seven organizational identities in the UK, Canada, Malaysia and Zambia.

PICTURES IN ORGANIZATION STUDIES

Although pictures abound in social discourse, their absence is notable from organizational research in general and organizational identity in particular. Organization theory is ambiguous in its conceptual location of image and reticent about using images in pictorial form. Publishing costs of visual material and legalistic considerations of intellectual property are partly to blame (Emmison and Smith 2000), although a digital culture makes such arguments increasingly difficult to sustain. More persuasive is the observation that aesthetic knowledge has an uneasy standing within social studies. Strati (2000) believes that this is a deliberate
undertaking, given the difficulties of explaining sensory perceptions such as vision, hearing, smell, touch and taste in functionalist terms. There is also evidence that unlike text, numbers, tables and graphs, pictorial images are not generally seen as a legitimate technology of summarization because of the concern of social science to develop an objective 'scientific' approach (Fyfe and Law 1988; Chaplin 1994; Stiles 1997; Emmison and Smith 2000). It is even suggested that political concerns about the potential of images for surveillance and control have led to the exclusion of such data from social science publications (Emmison and Smith 2000).

The theoretical basis for using pictorial forms is embryonic and fragmented, with perspectives drawn largely from functionalist art, social psychology and management theories. Much of art-based literature ignores the social role of images and is instead chiefly concerned with an understanding of the linear development of painting through various 'schools' of representation, based on the evaluation of artistic techniques by an elite of connoisseurs (Vasari 1927; Wölfflin 1950; Gombrich 1967, 1982). As in photography (Emmison and Smith 2000), the emphasis here is on technical construction, style and attribution, rather than how the image was influenced by or itself affected its social and political context. Projective techniques in psychotherapy are based on Freudian theories of repression, which hold that human beings tend to suppress unpalatable thoughts and emotions in a way that internalises tension. Projective tests include the Rorschach inkblot, Thematic Apperception Tests, Szondi, and World Techniques (Semeonoff 1976; Petot 2000; Hibbard 2003). As functional mechanisms for revealing anxieties prior to treatment, they are focused on the individual rather than the social context.

In management theory, pictorial techniques have been formulated, but rarely are these socially contextualized. With notable exceptions (Hatch and Schultz 1997), most appear as instrumental means to assist in problem solving, spawning largely functionalist management
texts. Visual techniques are used to help to widen search processes, by glimpsing the solution to specific branding, marketing or strategy issues (Bernstein 1986; Rickards 1988; Majaro 1991; Higgins 1996; Dowling 2001), rather than understanding social construction processes in and around the organization. Hence, imagery helps managers progress through a prescribed five-stage creative cycle (Russell and Evans 1989); rich pictures are used to stimulate soft systems thinking (Clegg and Walsh 1997); and a host of techniques stimulate lateral thinking and creative play (Henry 2001). Rickards (1999) criticises the creative management tradition from within for being absorbed into a dominant functionalist paradigm, but ultimately fails to construct a robust socially contextualized theory of creativity. More theoretically grounded research has emerged in the literature on cognitive mapping, which explores managers' mental structures in a visual way through mapping, content analysis and repertory grids (Huff 1990; Calori et al. 1994; Tegarden and Sheetz 2003). Cognitive mapping usefully links internal spatial perceptions with the strategic environment, but is based on simplified abstract representations that are verbally driven rather than pictorially based.

Socially reflexive texts on pictorial forms are comparatively rare, with seminal philosophical treatises tending towards the romanticization of art. Kant (1986) divides human knowledge into science, aesthetics and morals, with aesthetics occupying a higher spiritual position than pure rationalism and imbued with creative, expressive and intuitive characteristics. This romanticized view is reflected in influential Marxian expositions of artists as counter-cultural explorers of hidden social truths. Although some art is seen to reinforce class divisions, much is believed to have the revolutionary potential of challenging the hegemony of capitalist relations (Marx 1888; Gramsci 1971; Althusser 1984). Hadjinicolaou (1978) provides a more critical class-based analysis of art history, arguing that the production of visual art reflects dominant ruling-class ideologies that often suppress or subvert alternative ideologies. Although not dealing exclusively with visual images, labour
process work (Willmott 1990) has focused on the subjective side of social relations, emphasizing the fetishistic tendency of capitalism to reinforce people's lack of self-identity by setting individualistic goals rather than establishing collective identity. Tagg (1988) also sees photography as a function of the history of power relations, advocating the interpretation of images locally rather than globally, in order to reveal the subtleties of those relations. Wolff (1981) and Becker (1982) are more contingent in their views, arguing that art and artists are products of the wider material socio-economic environment and are influenced by prevailing aesthetic codes and conventions, both of which mediate the ideological nature of art. Some art can challenge the dominant hegemony, but it depends on how consumers interpret that art and on how artists network to develop sufficient economic and political freedom. Hall (1973) explores how aesthetic codes can result in different connotations in photographs, depending on how the media decide to portray an event.

Mainstream sociology is also reticent about using pictures to explore the social world, following the editorial decision of *American Journal of Sociology* to exclude photographs from 1914 in the interests of 'scientifizing' the subject (Chaplin 1994; Emmison and Smith 2000). This tradition has forced visual sociologists to publish in monographs rather than in mainstream journals, although the establishment of the *International Journal of Visual Sociology* in 1981 marked the beginning of a set of alternative visual journals. Even among those researching image, there is a tendency to regard image as part of an anchorage system of meaning, where the subservient role of image is underlined by anchoring it to a dominant textual component (see, for example, Penn 2000). Chaplin (1994) believes that only a limited number of sociological studies accord pictures an equal role to that of words. The alternative is to see image as a complementary and equal partner to text and numbers in what is termed a relay system (Barthés 1967, 1981). Exemplary works here include Bateson and Mead's (1942) ethnographic study of Balinese culture; Goffman's (1979) gender analysis of advertising
images; Barthés’ (1981) cultural photographic study; Becker's (1981) vignettes of social life; and Harper's (1987) study of a welding shop. Chaplin (1994) analyses feminist art; Penn (2000) examines advertisements; and Emmison and Smith (2000) analyse three-dimensional visual data. These texts challenge mainstream thought by using images as integral parts of their work rather than secondary illustrations. Similarly, Fyfe and Law (1988) show how layout and typography reflect underlying social conventions and Latour (1990) reveals how optical technological innovations can result in a commonly shared visual culture. With the exception of these texts, there has been a general reluctance among social scientists to embrace pictorial image in a socially reflexive way.
ORGANIZATIONAL IDENTITY, PICTURES AND METAPHORICAL GRAFTING

The organizational identity literature also reflects the general academic resistance to pictorial forms. This is despite image being associated with identity (Gioia et al. 2000; Scott and Lane 2000) and calls for new empirical approaches focusing on the identity metaphor (Gioia et al. 2002). Organizational identity is said to be a fundamental or 'root' metaphor because it is based on the central idea of 'being'. It concerns the need for a collection of people to differentiate themselves from and situate themselves in relation to other entities to enable effective interaction (Albert and Whetten 1985; Dutton and Dukerich 1991; Albert et al. 2000; Gioia et al. 2000; Cornelissen 2002). Gioia et al. (2002) suggest that organizational identity has made rapid progress in recent organizational theory because it is simultaneously a first order concept and a second order one. The former quality means that it is based on everyday vocabulary, so is understandable for organizational members; the latter means that it is acceptable to academics as a conceptual abstraction. However, the metaphor is often too broad to be readily applied in empirical research. After all, determining what something 'is' requires exploring many facets of that entity. It may be more helpful to focus the organizational identity metaphor through the use of complementary metaphors.

Organizational identity theorists tend to separate image and aesthetic theory from identity. This has resulted in a focus upon realist ontologies and positivist epistemologies, often predicated by psychology-driven theories of organizations. These have taken the form of social identity approaches (Ashforth and Mael 1989; Hogg and Terry 2000), psychodynamism (Brown and Starkey, 2000), intergroup relations (Brickson 2000), impression or configuration management (Scott and Lane 2000; Pratt and Foreman 2000), and displacement theory (Cornelissen, 2002). Gioia et al. (2000) begin to discuss alternative philosophical approaches based on revisionism and postmodernism and criticise others for rationalist tendencies (2002), but even they admit a preference for a realist ontology. Consequently, early manifestations of
organizational identity (Albert and Whetten 1985) emphasized the core, enduring and distinctive aspects of organizational identity in contrast to the more ephemeral nature of image. More recently, identity has been seen as adaptive, malleable or at least 'sticky' (Dutton and Dukerich 1991; Brown and Starkey 2000; Gioia et al. 2000; Scott and Lane 2000). Such views may have reduced the relative saliency of identity, but even here image is accorded a separate, secondary and more transient role with virtually no discussion of pictorial forms. As in marketing and corporate identity theory (Bernstein 1984; Smith 1996; Dowling 2001), the organizational identity literature generally associates image with external views of the organization and identity with views held by internal stakeholders (Gioia and Thomas 1996; Scott and Lane 2000). Alternative image definitions may contain some internal and external dimensions (Gioia et al. 2000), but conceptual separateness is still at the heart of the literature. For example, although believing that there is a close reciprocity between identity and image, Gioia et al.'s influential (2000) model focuses on the fit between internal self-identity (how organizational members see themselves) and an externally construed image (how outsiders see, or are perceived to see, the organization). Images are seen to have a destabilizing effect upon identity, rather than being an intrinsic aspect of identity. Scott and Lane (2000) do reject an internal-external differentiation and see identity and image as closely related in a wider stakeholder approach, but still see image and identity as separate entities, with the former helping to mould the latter.

In contrast, this study defines image as an intrinsic and inseparable part of organizational identity that helps to determine and communicate identity to others. Pictures in this context are particular spatial forms of organizational image, comprising a set of representations that articulate embedded mental constructs fundamental to the determination of organizational identity.
A theoretical grounding for pictorial forms can be derived from revising semiological and visual sociological approaches using critical post-structuralist literature. Several authors share an understanding of the sociological importance of visual imagery. Baudrillard (1975; 1983) sees visual images increasing in saliency as a consequence of a fundamental decline in traditional metaphysical authority based on reason and science. Such authority is being undermined and replaced by a new media culture that focuses on an infinite series of signs of consumer objects rather than the objects themselves. Consumers are provided with strange, artificial worlds based on images that present the imaginary as real, so that rationalist critiques lack an effective view of reality. Lyotard (1984a) concurs that society is losing faith in grand narratives and suggests that this is leading to a shift from a textual culture emphasizing historical development to a temporally dislocated culture dominated by images and visual discourse. Critique based on verbal reasoning alone merely results in switching between ideological positions based on capitalist exchange value, rather than challenging such positions. Lash (1988) shares the idea that images have replaced traditional verbal forms of discourse because they resemble referents more. This results in a flimsy and unstable world based on 'nomadic' subjectivity, with image-based representations of representations outweighing natural 'facts' in our knowledge archive. While Baudrillard (1983) suggests that death is the only way out of this fuzzy image-laden world, his contemporaries are more optimistic. Deconstruction of such ideologies is a common strategy for escaping subjugation, using processes that reveal contradiction and difference in discourse (Derrida 1973). Foucault (1977) argues that we can free ourselves from the tyranny of the normal and familiar and establish fresh vision through the use of provocative images and figurative uses of words. Similarly, Lyotard (1984b) believes we can deconstruct ideology by applying the imagination and the unconscious. Some artists are able to do this through formal innovation because they are located outside the political and exchange system and can thus avoid fetishism. Lash
(1988) expounds that both figural and discursive forms are viable alternatives in constructing reality, implying that critical deconstruction using words and images can provide liberation from ideological forces. Jameson (1991) similarly argues that we must use image to combat ideologically saturated images created by the media. Image therefore might assist us to deconstruct the metaphor of organizational identity created by a myriad of social forces.

Berger and Luckman (1965) and Weick (1979) believe that people form mental constructions in order to understand their social worlds. Organizational identity has developed as an alternative metaphorical construct to such traditional views of work-based entities as machines, cultures or political systems (Morgan 1986, 1989; Cornelissen 2002). Morgan (1993) shows how unusual metaphors can help imaginatively deconstruct organizational images in such forms as headless horsemen, gramophones and spider plants. Tzoukas (1991) argues that such metaphors work by using abnormal referents to imply a statement of similarity and a suggestive hypothesis of comparison between very different concepts - an analogy, allowing the theorist to derive new observations and propositions about an object of study. Dissimilar attributes are also considered to produce anomaly. The metaphor becomes 'live' (Weick 1989; Tzoukas 1991), should its analogous part be sufficiently suggestive of the organization to be worth exploring as a discovery or heuristic device rather than simply a descriptive one. What constitutes 'sufficient suggestivity' has attracted recent debate, with Cornelissen (2002) arguing that a metaphor must be evaluated by a rigorous four stage process involving transposition, interpretation, correction and repeated testing. When the 'organizational identity' metaphor is processed accordingly, Cornelissen believes that there is insufficient similarity between 'organization' (a collective-level construct) and 'identity' (an individual-level construct) to merit the use of the metaphor. Gioia et al. (2002) deny this, viewing Cornelissen's process as a mechanistic and arbitrary life cycle requiring complete convergence of concepts rather than sufficient similarity.
As Gioia et al. (2002) state, organizational identity is a powerful concept because it has the potential to be easily understood by both academics and practitioners. However, it is also apparent that the metaphor may be too blunt to be used by itself without refinement. Instead, it is proposed that more actionable knowledge can be generated by combining the metaphor of organizational identity with more specific components derived from complementary metaphors. This indirect process is arguably closer to how human beings actually use metaphor in understanding their worlds than the direct use of a single metaphor. It is akin to grafting appropriate parts from one organic metaphor to another root metaphor, to allow the latter to develop and strengthen in a way that would be impossible otherwise. This process can be defined as *metaphorical grafting* and can be attempted only if the metaphors used are complementary. For example, viewing the organization simultaneously as a machine and an expression of collective human identity would require fundamentally different epistemological outlooks based on functionalism and relativism respectively. However, animals provide ideal conceptual components to graft onto the organizational identity root, because like identity animals are seen to possess characteristics that are relative, organic, multi-faceted, widely shared, mutable, embedded, and exhibit profound connectivity with audiences concerned with theory and practice.

An understanding of how this grafting process might work can be obtained from Figure 1, which unites concepts from semiological and organisational theory. It illustrates how the identity of a university and an owl can be compared and contrasted using the commonly-held concept of wisdom. De Saussure (1966) sees language as a system comprising units called *signs*, with each sign consisting of a *signifier* (a sound-image) and a *signified* (the original concept or idea). The identity of an object is derived from both items. Although only existing in their relation to each other, these components can be analysed separately. Thus a feathered creature exists with large eyes and head, and prominent claws
and beak - the signified. Our image of that creature is termed a signifier. Signifier and signified together form a linguistic sign, which is termed 'owl'. This can be stored in verbal form, as a spatial mental representation or *inner picture*, or as a more tangible visual representation or *fabrication* (Langer 1957; Alvesson, 1990). The former is a subjective, mental projection recording an experience of one or more of the human senses. It is created for its own sake, unlike a fabrication, which is an impression communicated to an audience by a sender. Both are representations rather than direct copies of experiences, with inner pictures viewed as embedded cognitive structures and fabrications as external projections.

De Saussure (1966) sees meaning as relative, because a term within a text can only be understood by reference to contrasting terms. So, an owl might assume an identity by contrasting it with a chicken, which it is unlike in important respects such as form, colour and function. Using Peirce's (1955) typology, the visual representation of that owl may be an *icon*, which bears a direct resemblance to the signified object, such as an owl photograph; an *index*, which has a less-direct but causal relationship, such as a pile of half-eaten mice; or a *symbol*, which is only related to the signified by an arbitrary rule, such as a large 'O'. In contrast to a first-order semiological system, where only anthropological or linguistic knowledge is required to associate a signifier with a signified, Barthès (1967) describes a second-order semiological system, where one needs a cultural lexicon to derive meaning. Thus, the sign 'owl' becomes the signifier for a new signified, 'wisdom', resulting in a new sign based on the common metaphor of a wise owl.

This paper imagines a third-order semiological system, where a more complex metaphor is constructed by comparing and contrasting the idea of a wise owl with that of a wise university. As illustrated in Figure 1, the idea of a wise group of people termed a 'university' has already been formed through a parallel process to the owl in first and second order systems. Metaphorical grafting requires organizational stakeholders to be presented with
the opportunity to decide whether there is sufficient similarity between two new signs 'wise owl' and 'wise university'. However, the simultaneous existence of analogies and anomalies means that the grafted composite does not merely become a simile. People can determine not only whether the adjective 'wise' relating to both third-order signifieds is appropriate, but also the degree to which that adjective can be applied to each signified. If deemed sufficient, an association or transference is made between owl and university at a third conceptual level, confirming the analogous part of the metaphor. In Tsoukas' (1991) terms, an analogy is constructed of a university being an owl because of the attribute of wisdom that both are now seen to share.

It is proposed that for an effective analogy to become firmly embedded at a third-order level, this grafting process must involve the simultaneous transference of a number of common signifieds rather than a single one. Thus an owl/university may be compared on the basis of being wise, observant, patient and so on. The result is a stronger multi-dimensional analogy with a platform of clear supportive signifieds generating greater understanding of a root metaphor such as an organization's identity. A visual image helps in the construction of such a platform because it is able to rapidly and simultaneously summarize and convey a series of candidate constructs for consideration as signifieds. Following the work of Barthés (1967, 1981) image is seen here as a complementary and equal partner to text in a relay system of meaning. Greater understanding of a social phenomenon is gained by the synergy arising from both text and visual imagery as symbiotic linguistic components. However, the approach here differs from that of most semiologists and visual sociologists in two important respects. Researchers such as Hall (1973), Becker (1981), Saint-Martin (1990), Groupe μ (Edeline, Klinkenberg, & Minguet 1992), Sonesson (1993, 1996, 1999), Emmison and Smith (2000) and Floch (2001) adopt an 'expert' role in analyzing and explaining visual phenomenon, relegating artefacts to objects created by people as subjects. Other writers
(Chaplin 1994) construct their own pictures to represent the societies they study, rather than allowing those they study to do so. However, following post-structuralist principles, this study decentres the analyst from a pivotal role in composing and analysing images. The organizational member is regarded as an active rather than a passive actor in the image construction and interpretation process. As such, she or he selects the images to be used and provides a verbal explanation of what images are most representative of the organization and why. The researcher is limited to providing a loose guiding metaphorical framework and searching for consistencies and inconsistencies in people’s explanatory texts.

Furthermore, most semoticians and visual sociologists (Hall 1973; Goffman 1979; Ffye and Law 1988) tend to rely on analyzing second-hand images produced by actors in the course of general social interaction rather than those produced first-hand for a specific research project. Artefacts studied are often photographs and advertisements intended for other purposes, such as illustrating a news story or marketing a product. Assertions are made by the researcher as to the covert agendas behind such images, often without considering the explanations of the originators of those forms. As such they adopt a realist ontology, with iconic images analyzed directly from the external world rather than constructed from imagination. In contrast, the approach here is based on the derivation and interpretation of original, first-hand images developed by organizational stakeholders for the specific purpose of analyzing that entity's identity.

RESEARCH DESIGN AND PROPOSITIONS
The aim was to determine the extent to which the process of metaphorical grafting occurs, by measuring the degree of analogy and anomaly between animal metaphors and organizational perceptions when the one is grafted onto the other. Specifically, the following propositions were examined:
1. Pictorial animal metaphors allow profound connectivity with audiences because they are culturally embedded and widely understood.

2. Pictorial animal metaphors can be deconstructed by ordinary people to reveal associated verbal components in a relay system of meaning.

3. These components can be associated with, or grafted onto, the organizational identity metaphor in order to derive a platform of analogous and anomalous constructs concerning an organization.

4. These analogous and anomalous constructs can be measured in order to compare and contrast the relative identities of organizations, determining how each organization is commonly perceived by its stakeholders in terms of what it is and is not.

5. Variations in each common organizational identity will be evident, related to particular views taken by the demographic and stakeholder groups constituting the organization.

Given the lack of existing empirical techniques, testing these propositions required the development of a research tool to comprehensively explore visual animal metaphors. The technique was applied to a number of case study organizations in different cultural settings to determine the efficacy of the instrument and the nature of organizational identity as expressed through pictorial form.

In total, 1415 people were involved in the construction and application of the animal metaphors. In 1997, 10 representative stakeholders at one of the case institutions (a UK university business school) explained during in-depth interviews which animals best described organizations in general. Discourse analysis (Potter and Wetherall 1987) revealed 16 animals with at least 5 mentions that formed the basis for the next stage. Pilot respondents
were excluded from the main survey to decrease the possibility of response bias. During
group sessions and in-depth interviews the same year, 272 people completed questionnaires in
which they were asked to list the 5 adjectives they most associated with digitised animal
images originating from monochrome ink drawings drawn by the author but suggested and
refined by pilot respondents. The sample represented the institution's main internal and
external stakeholder groups, weighted by gender, occupation, age, birthplace and nationality.
The inclusion of students from 39 countries ensured that chosen adjectives were as universal
as possible. Suggested adjectives were grouped into similar themes according to content
analysis principles (Walker 1985), with final adjectives reflecting the most frequently
emerging themes, in order to ensure construct validity. The resulting animal portfolio was
subsequently administered in face-to-face sessions with 1132 people in 7 organizations during
1998-2003 to determine which of the animal images and 80 associated adjectives best
described the identity of their particular organization.

Cases were selected in two stages. Three business schools from UK, Canada and
Malaysia were initially chosen, in order to generate comparative data from similar
organizational types in distinct national cultural settings. Should unique organizational
profiles be evident in each case, this would indicate that the research instrument was reliable.
An additional four cases were added in a second stage, so that the efficacy of the instrument
could be tested in other distinct contexts. In the UK, a private real estate company, call centre
and hands-on technology science discovery museum were used; while an ecotourism venture
provided the opportunity to extend the study to a fourth continent. The organizations are not
identified here for reasons of confidentiality.

Four-point likert scales were used to measure the degree to which adjectives
corresponded with each organization, with 'very unlike' scoring -2 and 'very like' scoring +2.
A neutral response was not allowed, forcing a choice in either direction to avoid non-
commitment (Walker 1985). Means were subsequently calculated and Mann-Whitney tests used to detect significant differences between independent groups since data were non-parametric and samples were moderately sized (Sprent 1989). The tests compared organizations and gender, age, birthplace and stakeholder groups within each organization. Internal validation meant splitting each sample in two and comparing statistics. Means indicated which animals and constituent adjectives were most associated with each organization. Adjectives were also grouped in themes according to the classification system of Roget’s Thesaurus (Roget 1962), in order to determine whether salient themes emerged across adjectives. Each adjective was classified into generic categories concerning form (for example, large and small), aesthetic (beautiful, ugly, etc.), motion (fast, slow, etc.), intellect (intelligent, stupid, etc.) and conduct (strong, weak, etc.) Respondents were also asked to explain in writing why they favoured one or more animals and rationales were explored in stakeholder discussion groups with the results audio-taped and discourse analyzed. In total, 16 groups were held, with at least two focus groups used per organization, depending on the size and stakeholder composition of each.

RESULTS AND ANALYSIS
Animal images and resulting mean adjective scores for each case are presented in Figure 2. The emergence of animal metaphor constructs from discourse analysis of pilot interviews and the subsequent confirmation of both animals and deconstructed associated adjectives by the international sample of 272 people indicated that the first and second propositions were valid. Pictorial animal metaphors did appear to allow profound connectivity with audiences because of their cultural embeddedness. The choice and deconstruction of animal images by non-experts resulted in verbal components that were widely associated with the visual metaphors. This is not to say that other constructs were not important or valid for particular demographic
groups. For example, discourse analysis revealed that Indian respondents were more used to the owl as a harbinger of evil than as a symbol of wisdom. However, there was also widespread recognition of the animal’s association with wisdom in other cultures and the adjectives listed in Figure 2 were clearly common constructs. Further confirmation of construct validity arose from the successful application of the research instrument with remaining respondents in diverse organizational settings. Discourse analysis confirmed that people used the animal images in conjunction with their associated adjectives as part of a relay system of meaning in order to apply these metaphors to their organizations.

The third and fourth propositions were also verified. The means in Figure 2 indicate which components were analogous and anomalous to the identities of the seven organizations after metaphorical grafting had occurred. These analogous and anomalous constructs were measurable and indicated how each organization was perceived in terms of what did and did not constitute its identity. Significant differences in adjective means between organizations were also evident. Each organization presented a different profile, including the three business schools, although there were adjectives that appeared to bisect organizational boundaries: for example, people tended to view their own organizations as intelligent and hardworking, with mean adjective scores of 1.50 and above for most organizations. Similarly, adjectives such as ugly, pestlike and evil were largely rejected with negative means indicating these were unlike most of the organizations surveyed.

In terms of rankings by mean score, the animals most associated with each case were the donkey (the Canadian school), chameleon (Malaysian school), elephant (UK school and call centre), dolphin (real estate agency and museum) and dog (Zambian ecotourist company). Likert adjective and discourse data reveal the reasons for these choices. In broad terms, the overall profile of the Canadian school was fairly upbeat but mixed, less positive than the museum and ecotourism venture but the most optimistic of the business schools. The donkey
reflected the high-ranking hardworking and sturdy adjectives and the medium-ranking stubborn. One student declared that school was:

“Consistent with very little change; its members are hardworking; and mostly reliable; however they seem to go along with the flow and plod along; many are stubborn - set in their ways and refuse to change”.

Unlike the Malaysian school, the school’s intellectual and cognitive characteristics were prominent, including intelligent, smart, wise, clever, sharp, observant and good memory, with smart significant at the 0.01 level. Although not particularly loving or loveable, the institution was felt to be significantly friendlier than other cases at a 0.05 level. Respondents also scored less aesthetically attractive adjectives like ugly, dirty, pestlike, slimy and slippery significantly lower than other cases and the school was felt not to reflect the aggressive tendencies of the shark, snake or lion.

The chameleon was highest ranked animal in the Malaysian school because management was seen to be ever changing, inconsistent, contradictory and even deceitful, insincere and strange in the way it dealt with other faculty and staff. All chameleon adjectives had means higher than 0.50 and colour-changing, deceptive and strange scored around 1.5, significantly higher than other cases at the 0.01 level. Academics’ attendance was regularly checked, leave difficult to obtain and even toilet breaks were monitored. Management were seen as slow in consulting staff and implementing change and self-protective in covering up errors. One academic focus group member explained that:

“The department keeps changing rules, prerequisites to promotion, curriculum and testing methods. The colour changes all the time”.

When grouped by thesaurus theme, unattractive aesthetic adjectives scored highly and were all significant as were all prejudicial adjectives and many concerning immobility, potent power and aggression. The snake and fox ranked highly for similar reasons, with all
adjectives scoring over 0.50. The fox’s cunning, distrustful and wicked characteristics all achieved over 1.0 and were significant at 0.01, as were the snake’s sly, slippery and poisonous associations.

The UK school’s overall profile was less negative than its Malaysian counterpart, but more so than the Canadian school. Although seen to be intelligent and hardworking, the elephant/organisation was more negatively seen as large and heavy. These characteristics were significantly higher than most other cases at the 0.01 level. Focus group discourse indicated that large student numbers adversely affecting the learning experience, with heaviness resulting from an inefficient administration. Intellectual and cognitive adjectives from the elephant, dolphin, owl and dog were highly placed, although all were lower than in the Canadian case. The faculty was generally seen as intellectual, as indicated by the school’s research standing, while academics and staff were also friendly. Prejudicial conduct characteristics such as deceptive, sneaky and cunning were significantly higher at the 0.01 level than most other cases, as were aesthetically unattractive adjectives. As one MBA focus group detailed, the school was seen to be manipulative in its externally projected image to prospective students, although consistent to those enrolled:

"They are out there to make profit... they make no bones about it. They want to make money and that’s why I think they take the numbers that they do. Otherwise they would have a smaller MBA. But yeah, their research results are very good and I think businesses value that".

At the science discovery museum, all dolphin characteristics enjoyed means greater than 1.50 and were significant at the 0.01 level. Three of these adjectives – friendly, playful and hardworking - contributed to a strong theme of affirmative associations. The remaining two were part of an intellectual and cognitive theme, with the museum significantly intelligent, smart, clever and observant at the 0.01 level. These characteristics were also
expressed through the owl and the dog in staff and customer responses. The former declared the museum to be:

“A friendly organisation with a lot of intelligent and talented people working for it. Playful because we have a need to be childlike with the exhibits”.

Also with means above 1.0 and statistically significant were adjectives that portrayed the museum as independent, sturdy, loyal, patient, loveable. Conversely, adjectives involving unattractive aesthetic, unintellectual, prejudicial and aggressive themes all had negative means significantly lower than other cases at the 0.01 level, indicating that stakeholders generally held the organisation in high regard. In fact the profile was the most positive of all cases. This is not to say that negative associations were completely absent. In fact, the elephant form adjective emerged partly because of feelings that it was growing too large, isolating management from other staff. There was some concern from exhibition helpers that management were slow to listen to their views about exhibition items, poor pay and conditions.

Affirmative adjectives such as hardworking, friendly and loyal also achieved significantly high means at the real estate agency. The dolphin was considered important because of friendly customer relations and the organisation’s playful social life. Intellectual and cognitive characteristics also scored highly, with the fox-like quality of cleverness explained by one focus group manager as meaning:

“We wear a mask. We have to be when we’re quoting our fee. If we can get away with two percent we will”.

This contrasted with how managers believed the organization was viewed externally because of generic views of real estate agencies:
“Customers would see us as a snake. Agents get bad press and most of the time they deserve it”.

However, the means for unattractive aesthetic qualities such as ugly, dirty and pestlike were significantly lower than most other cases at the 0.01 level, with staff conscious of rejecting negative associations. The lion adjective powerful and the elephant adjective strong ranked high, due its success in securing business. Yet, the management focus group believed that the elephant also conveyed ‘dumbness’ in not portraying the organisation well externally in terms of its marketing strategy.

At the call centre, four out of five elephant adjectives recorded means higher than 0.50, with strong and large being significantly high at around 1.50. The lion also had connotations of power, with the company perceived as having a strong market presence with few competitors. Hardworking was the highest scoring adjective, significant at the 0.01 level and being speedy and quick were considered fox and eagle-like qualities apparent in a hectic call centre environment. The organization was also considered nocturnal because of shift patterns. Intellectual and cognitive themes also emerged, with the call centre also considered friendly. Generally positive adjectives were ranked highest, although focus groups did indicate a degree of discontentment concerning poor management communication about rule changes and restructuring that were seen as partly responsible for high staff turnover.

Affirmative adjectives such as hardworking, friendly, loving, loveable generally achieved high and significant means for the Zambian ecotourist company. Intellectual and cognitive characteristics also scored highly, although none were significantly different from other cases. These adjectives confirm the relatively high association of dog, dolphin, owl and elephant with the company. Attractive aesthetic qualities such as beautiful, cuddly and cute were significantly higher than other cases at the 0.01 level, with respondents selecting particular adjectives from animals such as the gazelle and cat rather than all qualities. Being
nocturnal and patient like the owl also achieved significantly higher means than other cases. Aesthetics and nocturnality resulted from the interrelationship of the company and its environment, with a customer explaining that:

“All the people are wise, know what they are talking about. The night time in Africa is always special, so being nocturnal is always fun and beautiful. Being patient and observant is always helpful and is appreciated”.

Being brave like the lion was also highly placed, reflecting the boldness of plans in a hostile regional politico-economic environment. A sense of being unhurried also pervaded the organisation, with this elephant quality ranked near the top of all adjective means and statistically higher than other cases at the 0.01 level. This co-existed with the belief that the organisation was adaptable chameleon-like. According to shareholders, this reflected the difficulties in establishing a stable management.

The final proposition asserted that variations in each common organizational identity would be evident, related to the particular demographic and stakeholder groups constituting the organization. Although space precludes listing all instances, in every case significant differences were evident when data were disaggregated into one or more gender, age, stakeholder or birthplace category. For example, among UK school undergraduates means for conduct adjectives concerning power including mighty, kinglike, powerful, strong, independent and sturdy were significantly higher at the 0.01 level than for MBA students, indicating that they had more positive views of the market standing of the institution. Discourse indicated that unlike MBAs, UK school undergraduates were less likely to be critical of high student numbers and the prioritisation of research over teaching because they had fewer comparative experiences of other universities. Similarly, the means for predatory and bloodthirsty were significantly higher at the 0.01 level among Canadian school undergraduates than other stakeholders, with discourse revealing an emphasis upon the
competitive nature of enrolment and assessment. The overall finding was that each organization presents a complex, multifaceted identity, with significant differences in orientation between various groups confirming the fifth proposition.

CONCLUSIONS

This study indicates that pictorial images can be a powerful tool in determining how stakeholders at all levels understand their organization. Developing actionable knowledge involves using relay systems of metaphorical meaning involving images, words and numbers to generate socially contextualized organizational strategies. Although the propositions here seem to receive empirical support, further research is important to determine whether relay systems involving animal metaphors are appropriate in other organizational settings. It would also be useful to determine whether other organic metaphors – for example, human personalities or plants - provide similarly rich prospects for grafting onto the organisational identity root. This paper has suggested that the culturally embedded nature of animal representations make them particularly insightful in the exploration of organizational identity. The resulting grafting process seems to more adequately reflect the complex workings of metaphors than a direct equivalence allows. Rather than simply associating concepts at a superficial first or second order level, initially unrelated constructs have been compared and contrasted at a third level. Metaphors function by simultaneously allowing analogous and anomalous components within a multi-faceted platform of meaning. Evidence appears to suggest that metaphorical components exist in both verbal and pictorial form, with image being an intrinsic and inseparable part of organizational identity. Moreover, different forms appear to coexist in a relay system, rather than being dominated by any one type of representation. Empirical data indicate the existence and magnitude of such components and help determine the variability by which they are held within and between organizations. This
is not to argue that metaphor can be reduced to a statistical phenomenon along functionalist
tines. The metaphysical properties of animal representations mean that there are important
eltents that are difficult to capture through words or numbers. This is why this analysis uses
ages, words and statistics as interlinked and complementary linguistic forms. This paper
also challenges conventional semiotic theories that experts can adequately deconstruct others’
ages to reveal and explain their constituent parts. The approach outlined here instead
decentres the academic expert and regards the organizational member as an active participant
in the image construction and interpretation process. The process involves the creation of
original images rather than the analysis of second-hand images as semioticians traditionally
focus on. These aspects are important in the social contextualization of organizational
knowledge, in order to make it more actionable. Of course, the researcher still has an essential
role in the structuring and interpretation of data, but this is in a facilitating rather than a
directing manner. The emphasis is upon encouraging the imagination of those best placed to
understand the identities of organizations – stakeholders themselves.

BIBLIOGRAPHY

Doubleday.
Academy of Sciences.


Figure 1: The Association of Concepts in a Third-order Semiological system

Third order

Sign (wise)
owl

Signifier (wise)
owl

Signified (wise university)

Second-order

Sign (owl)

Signifier (owl)

Signified (wisdom)

First-order

Signifier (image of creature)

Signified (feathered creature with large eyes and head, claws and beak)

Signifier (image of group of people)

Signified (Group of people undertaking research and higher education)
<table>
<thead>
<tr>
<th>Animal</th>
<th>Associated Adjectives</th>
<th>Mean Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Canadian School</td>
<td>Malay School</td>
</tr>
<tr>
<td>owl</td>
<td>wise</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>nocturnal</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>patient</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>mysterious</td>
<td><strong>0.01</strong></td>
</tr>
<tr>
<td></td>
<td>observant</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>overall</td>
<td>0.71</td>
</tr>
<tr>
<td>lion</td>
<td>powerful</td>
<td>1.24</td>
</tr>
<tr>
<td></td>
<td>fierce</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td>kinglike</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>predatory</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>brave</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>overall</td>
<td>0.48</td>
</tr>
<tr>
<td>gazelle</td>
<td>fast</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>graceful</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>beautiful</td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td></td>
<td>shy</td>
<td>-0.39</td>
</tr>
<tr>
<td></td>
<td>weak</td>
<td>-0.33</td>
</tr>
<tr>
<td></td>
<td>overall</td>
<td>0.02</td>
</tr>
<tr>
<td>dog</td>
<td>loyal</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>loving</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>obedient</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>smart</td>
<td>1.60</td>
</tr>
<tr>
<td></td>
<td>loveable</td>
<td><strong>0.19</strong></td>
</tr>
<tr>
<td></td>
<td>overall</td>
<td>0.69</td>
</tr>
<tr>
<td>elephant</td>
<td>strong</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>unhurried</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>heavy</td>
<td><strong>0.16</strong></td>
</tr>
<tr>
<td></td>
<td>large</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>good memory</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>overall</td>
<td>0.72</td>
</tr>
<tr>
<td>cat</td>
<td>cuddly</td>
<td><strong>-0.64</strong></td>
</tr>
<tr>
<td></td>
<td>lazy</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>independent</td>
<td>1.42</td>
</tr>
<tr>
<td></td>
<td>sneaky</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>sharp</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>overall</td>
<td>0.42</td>
</tr>
<tr>
<td>dolphin</td>
<td>friendly</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td>intelligent</td>
<td>1.67</td>
</tr>
<tr>
<td></td>
<td>playful</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>streamlined</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>cute</td>
<td><strong>-0.67</strong></td>
</tr>
<tr>
<td></td>
<td>overall</td>
<td>0.64</td>
</tr>
<tr>
<td>Animal</td>
<td>Adjectives</td>
<td>Scores</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Fox</td>
<td>Cunning</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td>Clever</td>
<td>1.15</td>
</tr>
<tr>
<td></td>
<td>Quick</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>Wicked</td>
<td>-0.46</td>
</tr>
<tr>
<td></td>
<td>Distrustful</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>0.39</td>
</tr>
<tr>
<td>Donkey</td>
<td>Foolish</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>Hardworking</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>Stubborn</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Plodding</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>Sturdy</td>
<td>1.37</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>0.73</td>
</tr>
<tr>
<td>Mouse</td>
<td>Small</td>
<td>-0.31</td>
</tr>
<tr>
<td></td>
<td>Timid</td>
<td>-0.54</td>
</tr>
<tr>
<td></td>
<td>Nimble</td>
<td>-0.27</td>
</tr>
<tr>
<td></td>
<td>Dirty</td>
<td>-0.78</td>
</tr>
<tr>
<td></td>
<td>Pestlike</td>
<td>-0.64</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>-0.51</td>
</tr>
<tr>
<td>Shark</td>
<td>Deadly</td>
<td>-0.58</td>
</tr>
<tr>
<td></td>
<td>Feroicos</td>
<td>-0.18</td>
</tr>
<tr>
<td></td>
<td>Overpowering</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td>Bloodthirsty</td>
<td>-0.09</td>
</tr>
<tr>
<td></td>
<td>Cruel</td>
<td>-0.31</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>-0.15</td>
</tr>
<tr>
<td>Eagle</td>
<td>Bird of prey</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td>Mighty</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>Swift</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>Majestic</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>Sharp-eyed</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>0.41</td>
</tr>
<tr>
<td>Chameleon</td>
<td>Ugly</td>
<td>-0.75</td>
</tr>
<tr>
<td></td>
<td>Adaptable</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>Colour-changing</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>Deceptive</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>Strange</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>0.11</td>
</tr>
<tr>
<td>Snail</td>
<td>Slow</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>Slimy</td>
<td>-0.45</td>
</tr>
<tr>
<td></td>
<td>Self-protective</td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td>Vulnerable</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>Defensive</td>
<td>-0.60</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>0.06</td>
</tr>
<tr>
<td>Snake</td>
<td>Dangerous</td>
<td>-0.55</td>
</tr>
<tr>
<td></td>
<td>Poisonous</td>
<td>-0.75</td>
</tr>
<tr>
<td></td>
<td>Slippery</td>
<td>-0.40</td>
</tr>
<tr>
<td></td>
<td>Evil</td>
<td>-0.58</td>
</tr>
<tr>
<td></td>
<td>Sly</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>-0.44</td>
</tr>
<tr>
<td>ostrich</td>
<td>speedy</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>*0.37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.39</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.06</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>67</td>
<td></td>
</tr>
</tbody>
</table>

*significant at 0.10 level, ** at 0.05 level, *** at 0.01 level using 2-tailed Mann-Whitney U test, P corrected for ties