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Perceiving images and telling tales: A visual and verbal analysis of the meaning of the internet

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Abstract

This paper uses visual and verbal analysis to delve into the multi-faceted ways in which individuals construct their own meanings and shape their own experiences with the Internet. We build on the Zaltman Metaphor Elicitation Technique, and the principles of visual rhetoric to show how perceptual processes affect picture choices, and how these choices contribute to the narrative imagination. Numerous perceptual principles [abstraction, concept formation, perceptual problem solving, constancy, closure, symmetry and balance] are identified in the choice and organization of visual images. The argument we make is that images and words (visual and textual processes) provide deeper insights into our understanding of consumer online experiences.

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Introduction

One of the growing areas of consumer research is online behaviour of consumers and their interactions with the Internet. Some researchers have argued that the Internet has become indispensable to our lives (Hoffman, Novak and Venkatesh, 2004). The literature in marketing and consumer behaviour that examines people's active involvement with the Internet is rapidly growing (e.g., Anderson, 2001; Froombach, Roest, et al., 2007). Much of the writing in the literature has focused on consumer purchase processes, decision making and consumer product/brand preferences. A few studies have focused on web navigation and customer web experiences (Zinkhan, Kwak, Morrison and Peters, 2003; Novak and Hoffman, 2009). An aspect of the Internet which has received limited attention is the interactions of the consumers at the visual level or the web itself as a visual medium (Kozinets, 2002; Venkatesh, 2003; Zwick and Dholakia, 2006). Such an approach is critical to our

understanding of how consumers select and interpret images metaphorically and cognitively.

In this study, we had consumers select images they felt best reflected *their* own Internet experiences. Analysis of the visual metaphors, both in these images and in the narratives consumers constructed, revealed how people give shape and form to their Internet experiences. This analysis allows us to assess the many meanings the Internet holds for consumers. Our discussion proceeds from the perceived patterns of images to the verbal meanings they convey. We focus on the role played by perceptual processes in the selection and use of images to create personal narratives about the Internet using metaphors.

Why metaphors? Metaphors are employed by people as a shorthand method to make sense of their everyday experiences (Lakoff and Johnson, 1980; Zaltman, 2003). They convey a picture or a meaning instantly with few words. The use of metaphors to describe the Internet is not entirely new and continues to draw attention (Taniguchi, 2003; Johansson, 2009). However, the most dominant metaphors for the Internet have been either spatio-temporal (e.g. MySpace, the world wide web, Explorer) where people "navigate" or "surf the web" or communication oriented (MUApp) emphasizing virtual interactions (de Souza, 2005). Both the spatio-temporal and

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communication metaphors have been derived from designers' perspectives rather than user (i.e. consumer) perspectives. A third type of metaphor, which is of interest to us in this study, accentuates visual and screen representations from the user's point of view (e.g. "Life on the Screen" by [Turkle, 1997](#)). As [Richardson \(2008\)](#) so clearly states in her exposition on visualism:

"...the prevalence of vision-metaphors and visualizing technologies have sustained our epistemological habit of collapsing seeing with knowing, at the same time separating the subject (the seer) from object (the seen), and elevating sight as the one "true" sense enabling disembodied and objective knowledge." (p.68)

This is indeed the main thrust of our study. In this paper, we tap into consumers' perceptual processes using ZMET technique. In particular, our focus is on sensory experiences of consumers and the method employed is a combination of visual and textual analyses. To aid in our research, we address the following research questions:

1. What kind of shape and form does the Internet assume in users' perceptual domain?
2. What underlying processes are associated with the visual aspects of the Internet?
3. What metaphors are employed by consumers in their engagement with the Internet?

Thinking about new technology/the internet

[Kozinets \(2001, 2002\)](#), in his conceptualization of the "field behind the screen", has examined the ways in which the Internet has spawned communities that relate to product experience, and has suggested ways to introduce the Internet strategically into consumer ethos. His recent collaborative work ([Kozinets, Hemetsberger and Schau, 2008](#)) introduces elements of visuality quite explicitly. We cultivate a parallel understanding of the meaning of the Internet by using images and exegeses employed by consumers to convey their understandings. The use and further development of this new technology specifically privileges the visual, and thus demands more precise investigation.

[Venkatesh \(2003\)](#) provides a background for thinking about the far-reaching visual impact of the Internet on consumers. Despite his contention that "you look through the Web site and navigate it," he places more emphasis on textual rather than visual analysis. We build on this work but place equal importance on the visual in electronic environments and informants' visual representations of such experiences.

Visual analysis

Recent work in visual studies ([Hodge, 2003](#)) shows how "images" are encoded in new visual forms associated with the emerging electronic media, and in particular, the Internet. Since there is an interaction between consumers' visual and discursive processing on the Internet, we employ insights from visual rhetoric in our study. In the field of consumer research we refer to relevant work on visual rhetoric by several researchers

([Sherry, 1987](#); [Scott, 1994](#); [McQuarrie and Mick, 1999](#); [Schroeder, 2002](#)) who urge us to view pictures as symbolic artefacts constructed through the conventions of culture. Their work underscores the importance of cultural learning in decoding the message, arguing for a commonality of forms, shapes and colours across cultures, although the metaphorical management of such forms may vary considerably. Elaborating this notion that understanding the decoding of images requires analysis of more than merely verbal data, we consider not only the symbolic qualities of images but also illuminate the ways in which images evoke cognitive conceptualizations.

[Schroeder's \(2002\)](#) study of visual consumption resonates with our own work, especially his analysis of the role played by shape, form, and perspective. We turn to abstraction as an important perceptual process by which individuals identify the generic skeletal structure of an object or event. Our analysis is inspired by the work on ZMET ([Zaltman and Coulter, 1995](#); [Zaltman, 1997](#)) which allows entry into the unconscious of consumers by using pictures to tell a story. [Zaltman's \(2003\)](#) groundbreaking work uses images to tap into consumers' unconscious beliefs and feelings, thus making the inchoate explicit. This is particularly important in contexts such as ours, where the novelty and abstractness of the Internet may not allow for deep-seated thoughts to surface, or for consumers to express what they feel resides in their unconscious and which cannot be readily described by words alone. As metaphors or representations of ideas, images offer a way to penetrate deeper into consumers' thoughts about specific products.

Methodology

This research is based on the participation of forty-nine volunteers between the ages of twenty and sixty-five, twenty-five of whom were female and twenty-four male, recruited from the following locations: twenty-one from an urban North American university, eighteen from three Internet cafes (two in the suburbs and one in the downtown core of a large North American city) and ten from a major apartment complex in the downtown area of the same city. Twenty of the forty-nine informants identified themselves as novice users; others identified themselves as having various levels of expertise. By advertising in the assorted locales and offering a small honorarium, we attracted volunteers from various walks of life.

In this study we modified the ZMET technique to better understand what the Internet means to informants. ZMET is a hybrid methodology that includes visual images, in-depth interviews, the Kelly Repertory grid, and laddering techniques. It involves roughly ten steps from the data-gathering process to the final analysis. One central feature of ZMET is the assumption that consumption goods and services possess basic features that connect them to emotional patterns and schemes of thoughts that are almost universally shared by humans ([Wathieu, Liu and Zaltman, 2004](#)). This is where metaphors come into the picture. Metaphors are the basic building blocks of human thought, and can be both visual and verbal. Since the metaphors chosen are chiefly visual mental images, they are communicated mainly through collections of

pictures, graphic design, artworks, or photographs. However, since thinking is an embodied process, other kinds of sensory images (such as touch, hearing, taste, and smell) are also used to elicit deep meanings associated with a product or service. We therefore asked our informants specific questions about the Internet: What does it smell like and what does it not smell like? What does it taste like and what does it not taste like? What does it feel like and what does it not feel like? What does it sound like and what does it not sound like?

The revised the ZMET technique permits us to exploit the disjuncture between the visual and the verbal, even though they are closely linked. The visual perspective engaged informants in four steps that did not necessarily occur in sequence: selecting ten to twelve images that best represented what the Internet means to them; ranking the images in order of importance; identifying the most important images; sorting the images into meaningful categories; and, finally, creating a summary image or a collage that expressed their most important thoughts about the Internet.

At the level of textual or narrative analysis, we used the picture elicitation method and engaged informants in the following ten steps to gather information: 1) they told us what each picture meant to them; 2) they provided additional thoughts that came to mind for which they could not find the appropriate images; 3) they identified and described the most representative image; 4) they then supplied the opposite image based on the notion that one can understand something through what it is not; 5) they related how two of three stimuli randomly selected were similar but different from the third. In step 6, informants were asked to choose the first image and to widen the frame along any dimension they chose and to describe what would enter the picture that would reinforce or contradict the meaning it had for them. In step 7, they used other senses to convey what does and does not represent the concept being studied, the assumption being that people use of all their senses in thinking. In step 8, they described the summary image or a collage that they had earlier created. In step 9, since moving images create a different impression of an idea than still photographs, they created a vignette that described the salient aspects of the Internet. Finally in step 10, we created a consensus map that connects all the emergent themes and illustrates how the key constructs are related to each other.

Each interview was taped with the informant's permission and lasted roughly 2 h on average. Once the interviews were transcribed, we asked informants additional questions that arose from the analysis of the text through email. Informants were more than willing to offer further thoughts and ideas. We analyzed parts of an interview in the context of the entire interview, and we analyzed each interview in the context of the whole body of interviews (Thompson, 1997). As Spiggle (1994, p. 495) suggests, such iteration helps to refine concepts and draw out their theoretical implications.

The data provides a grounding for the abstract understanding—what Spiggle (1998, p. 167) refers to as the eventful frame. This grounding leads to the second level of analysis, which is the elaborated frame. A third level integrating excerpts from interviews, field notes, and descriptive passages constitutes the interpenetrated frame. At the most abstract level, we

subsume and integrate all these elements within the cinematic frame that is crucial to understanding the Internet consumption experience. Finally, as a narrative strategy we use several observations made by informants to weave our own tale. Table 1 summarizes the social identities of our informants.

Creating the narrative: perceived images and telling tales

Visual consumption today involves images—a sign of the times according to Schroeder, 2002)—and serves as a stimulus that brings to light both cognition and interpretation. But unlike

Table 1
List of informants.

Name	Age	Occupation	Location
Vanessa	20	Student	University
Lisa	33	Office	Suburb/I. café
Gina	21	Student	University
Jennifer	22	Student	University
Sheila	50	Store	Downtown/apt.
Sandra	35	Office	Downtown/I. café
Lena	48	Office	Downtown/apt.
Rita	38	Nurse	Downtown/I. café
Anna	25	Student	University
Nina	21	Student	University
Marisa	55	Housewife	Suburb/I. café
Carla	43	Office	Downtown/I. café
Sabrina	21	Student	University
Rita	22	Student	University
Norma	23	Student	University
Betty	22	Student	University
Linda	44	Store	Suburb/I. café
Susie	57	Housewife	Suburb/I. café
Renata	36	Office	Downtown/apt.
Linda	38	Office	Downtown/I. café
Ginger	27	Office	Downtown/apt
Reesa	34	Office	Downtown/I. café
Sally	32	Office	Downtown/I. café
Shana	31	Office	Downtown/I. café
Bina	65	Housewife	Downtown/apt.
Jim	33	Office	Downtown/I. café
John	24	Student	University
Michael	21	Student	University
Steven	25	Student	University
Roger	34	Office	Downtown/I. café
Jordan	44	Office	Downtown/I. café
Sean	22	Student	University
Rob	65	Office	Downtown/apt
George	40	Office	Downtown/I. café
Rich	23	Student	University
Chris	35	Office	Downtown/I. café
Rueben	21	Student	University
Craig	53	Office	Downtown/I. Café
Doug	24	Student	University
Randy	21	Student	University
Gary	23	Student	University
Jonah	60	Office	Downtown/I. cafe
Josh	52	Office	Downtown/apt.
David	41	Office	Downtown/apt.
Billy	22	Student	University
Allan	46	Office	Downtown/apt.
Rick	24	Student	University
Larry	21	Student	University
Lenny	50	Store	Downtown/apt.

the word, and because of its ability to fool the eye (*trompe l'oeil*), image interpretation is more open ended and contestable. That is, images are central to our everyday cognition—or, as the

saying goes, a picture speaks a thousand words and is therefore packed with persuasive potential. Therefore, what people perceive in images is probably inexhaustible.



A_comm1.JPG



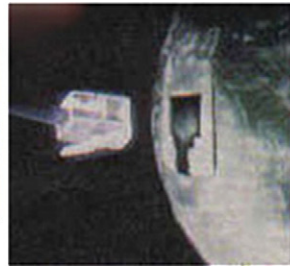
B_inform1.jpg



C_comm2.jpg



D_comm3.jpg



E_comm4.jpg



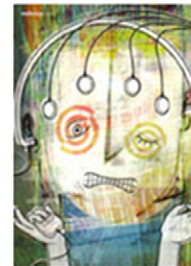
F_comm6.jpg



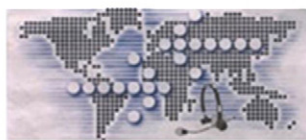
G_comm8.JPG



H_comm9.JPG



I_Comm10.jpg



J_comm14.JPG



K_e-comm1.jpg



L_darkside2.jpg



M_inform2.JPG



N_freedom2.jpg

Fig. 1. Contact sheet.

Our findings are organized under three main themes, visual, non-visual, and verbal analysis; while there may be much overlap and interaction, the pictorial is not reducible to the verbal (Forsey, 2003).

We begin by analyzing the pictures chosen by our informants. Idiosyncratic and drawn largely from magazine photographs and advertisements, the images (we use the terms images and pictures interchangeably) represent a product made by others who are either anonymous or unacknowledged. But once chosen, they become the building blocks for informants who have taken them out of their original context and re-contextualized them in a personalized frame. In sum, these images make visible something that is by definition invisible—the Internet.

Part I—Visual analysis

What kind of shape and form does the Internet take in informants' perceptions? To address this question, we begin with the notion that the images themselves provide the answer. That is, in our study, the informants engaged in the following perceptual processes when selecting pictures: abstraction, use of visual metaphors, perceptual problem solving, the peak shift effect, symmetry and balance, and pictorial representation.

Abstraction

To create a portfolio of images, informants first engaged in abstraction, a process involving a search for essentials. An abstract image may be grounded in the actual form of an object or it may give form to something inherently non-visual, such as emotions (Aumont, 1997). The chosen images amplify what is significant to informants by paring down superfluous detail and by focusing on meaningful experience. Each chosen image exemplifies the universal in the particular, although the ten images form a complete and integrated pattern. While abstraction requires a certain level of consciousness to extract a form, once a picture is culled, informants revert to further unconscious processing until they find the next meaningful image. Here the body simply takes over. The constant switching back and forth between these two levels is illustrated by one of our informants, Vanessa, who observed: “when I was not paying too much attention to the task, I found some of my favourite pictures.”

Next, informants ranked their pictures in order of importance, a step that made them more conscious of the mini-narratives they were creating. At this stage, we first observed what our informants chose before we talked to them. In the third step we asked them to choose a picture that represented the opposite of what they deemed their number one image. Isolation and a lack of communication were the images that predominated.

Visual metaphors

The uniquely human act of drawing similarities between disparate entities is the basis of all concept formation. It is a

short hand way to organize information, frame knowledge, and guide action (Washburn, 1999, p. 586). All images chosen by informants are visual metaphors in a general sense, but we focus here on specific examples.

Over half of our informants identified communication and connectedness as the most important attribute of the Internet. The dominant visual metaphors used by our informants representing this idea were numerous images of the globe, as well as pictures of hand clasps and of people engaging in social interaction. To explain how visual metaphors work, we begin with Vanessa's number one image, a green apple embossed with a globe (Comm1, Fig. 1).

In this example, the metaphor of global communication prompts a positive emotional response (“the perfect image,” Vanessa said later during the interview) because it emphasizes the interplay of movement, colour, and form. “The apple is not perfectly round,” she said, but she sees roundness in it, “because the earth is superimposed on it”, thereby reinforcing its circular shape and suggesting movement (“the earth is a sphere that rotates on its own axis”). So the perceived roundness of the apple is utilized effectively in the metaphor because it serves as a concrete example of global connectedness which allows her to ignore irrelevant and potentially distracting aspects of an idea. Further, the light shining from the side introduces a brightness gradient that creates a pattern of a sphere struck obliquely by light. “The emphasis on the stalk/leaf along with the shape created by light makes the apple look three dimensional,” Vanessa added. She recognized it as having mass.

Perceptual problem solving

Consciously searching and finding answers to problems are critical to the aesthetic experience, but they are also gratifying.

Jim expressed joy at the landscape he chose for this study (Inform 1, Fig. 1). “The picture has an extraordinary naturalism that initially causes the viewer to mistake the image for the actual thing it represents (*trompe l'oeil* effect found in paintings), thereby deceiving in a permitted, pleasant manner” he said. Deception is central to the image's success even though the deception is quickly unmasked, for the viewer is told what lies behind the picture. As Leppert (1996, p. 23) notes, the *trompe l'oeil* marks the certainty of the gaze since the viewer not only looks at the picture but also wonders what is going on in it.

The picture necessitates perceptual problem solving—the landscape includes several layers that are made visible through the actions of the individual in the picture who lifts the curtain to reveal more of the landscape. Depth perception is a habit of movement. When we see one object at a distance behind another, what we are seeing is in a very real sense our own body's potential to move between the objects or to touch them in succession—a mental simulation. “We are not using our eyes as organs of sight...we are using our eyes as proprioceptors and feelers. Vision envelopes proprioception and tactility. It is by nature synesthetic and synesthesia by nature is kinaesthetic.” (Massumi, 1998:18).

John's image of a globe superimposed over a chess board (Comm2, Fig. 1) exemplifies perceptual sorting. "The globe conveys connectedness, while the chess pieces, which are positioned on various points of the globe, allude to chess players from different parts of the world, thus reinforcing the metaphor of connection" he said.

"The iris in the human eye is a visual metaphor for the globe" noted Susie (Comm3, Fig. 1). Here, vision is selected as the most important sensory mechanism through which we make sense of this new technology—a perfect example of what Ramachandran (2001:13) calls *hyper-normal stimuli* and Ramachandran and Hirstein (1999, p. 24) refer to as the process of isolating a single visual modality and amplifying the signal within that modality. The general expectation is that the complete face or body would provide richer cues about the object in question, but, in this instance, additional cues would only detract from what is salient.

In the next picture (Comm4, Fig. 1), where the globe is seen as a telephone outlet, synecdoche is again the metaphor of choice. Jordan viewed this as "the perfect picture to talk about instant global connectedness."

The peak shift principle

In visual objects, the peak shift effect is created through the distortion of line, colour, and textures (composition), and can be applied to faces, forms, and movement. The idea is simply to caricature any one of these criteria and to exaggerate the criterion being judged. Picture 6 (Comm6, Fig. 1), which exemplifies the application of the peak shift principle, shows "the graphic figure of a man, the masculine shape amplified along the male/female continuum (every muscle is highlighted). The angular muscular form is unmistakably male" noted George. The artist/graphic designer subtracts the female form from the male form to create the essence of masculinity. The graphic form (the mechano-morphic image) exemplifies technology and therefore becomes a super stimulus in the

male/female domain. "The use of a URL address, and the keys in bright orange that also colour the landmass of the U., amplifies the idea of technological prowess" George noted.

The pictures of the hand clasp (comm8, and comm9, Fig. 1), on the other hand, create the peak shift effect because of texture. In Michael's image, "the black-and-white colour of the photograph magnifies the frailty of the hands. The wrinkled hands convey the passage of time, and the clasp, a special kind of relationship" he noted (synecdoche). The hands of a female and a hirsute male meeting in the centre call attention to what is represented.

Comm 9 (Fig. 1), in which two arms meet at the centre, also illustrates the peak shift effect through texture. "The light falling on the arms not only throws into relief the skin's porous texture but underscores the strong clasp" said Billy. In this case the clasp is a node, providing greater interruption. The hands bend and twist the vectors constituting them and are more compact and self contained. As with Michael's image, the hair on the left arm contrasts with the smooth right arm to suggest a male/female dimension. "The grainy texture of the photograph echoes the rough texture of the skin" Billy added.

Symmetry and balance

A principle often used to create pictures is symmetry. Symmetrical forms are easier to recognize, remember, and reproduce than asymmetrical forms because they reduce complexity and present information economically and efficiently. Symmetry is also associated with balance although balance does not always necessitate symmetry as is the case in many works of art.

Balance involves a proportional arrangement of forces around a point or axis (Johnson, 1987). In a balanced composition all such factors such as shape, direction, and location are mutually determined in such a way that no change seems possible (Arnheim, 1974). Consider Comm10 (Fig. 1), for instance. In Jonah's opinion "the line of the nose divides the



Fig. 2. Contact sheet.

face into halves. The right eye is balanced with the left in size, colour and form. The right eye is higher than the left and its pupils are dilated while the left eye is shut. The red is balanced by the soft green. The face is connected to a machine, but there are two electrodes on the right and two on the left side of the face. Compared to the rest of the body, the face is disproportionately big, but it conveys the distress caused by technology, while the two hands are symmetrical in size and placement. The mouse, however, is held in the right hand with the middle and index fingers touching the buttons whereas the left hand is struck in a meditative pose (thumb and middle finger touching each other in a symbol of peace)” Jonah noted.

Pictorial representation of summary image

When informants were asked to produce a summary image, over half yielded a collage that reflected various permutations and combinations of the five Internet attributes that we explicate in subsequent textual analysis. Here we briefly highlight these attributes.

Vanessa (Vanessa collage, Fig. 2) placed her image of the green apple/globe in the centre of the collage, where it underscores her main attribute of the Internet: communication with family and close friends. The image is flanked by other ones depicting the following ideas: the Internet facilitating commercial transactions; the Internet’s information potential; the exhilarating freedom of surfing the Net, coupled with the invasion of privacy when your activities on the Net are being tracked by cookies.

Stephen’s three-part collage (Stephen collage, Fig. 2) depicts a virtual world where everything is permissible and accessible: the top section shows an eye open to multiple sources of information; the larger middle section contains a field of sunflowers and the lower section shows the ground/seashore on which the man walks. The hand holding the globe in the upper left corner depicts the unlimited potential of the Net; it is balanced by the picture of the woman with the laptop on the bottom right.

Unlike Vanessa’s and Stephen’s collages, Lisa’s is a more artistic rendering of the Internet: the shape evokes an androgynous body with a mask-like female face (Lisa collage, Fig. 2). The lips below the mask also suggest a female form, but the tie and blue suit evoke a male carrying a briefcase in one arm and money in the other. The wings on the shoulder of the blue suit imply speed and movement. The man in the blue suit appears to be superimposed on the figure of the woman in a red jacket whose arms are crossed in front of her. The bracelet on her left hand helps to identify the image as female.

Thus far we have examined and interpreted the images that informants created to represent their experience with the Internet. In each instance there are frames within frames that constitute the collage. To make multiple frames co-exist within the same frame amounts to the creation of a powerful compositional force. Heretofore, this creation has been entirely visual. We now move to other sensory modalities, to determine how informants imagine what the Internet taste, smells, feels, and sounds like.

Part II—The essence of the internet: the other senses

In addition to visual data, we analyze data gathered through the other senses in order to amplify the distinctions between memory and imagination images. A memory image recalls events or occasions that have been personally experienced or observed. An imagination image, on the other hand, refers to a never before experienced event. The images our informants created through their non-visual senses testify to the capacity to construct new and innovative ways of thinking about the Internet.

When asked about other types of sensory images, Vanessa noted that the Internet smelled like coffee (invigorating) and not whiskey (strong alcoholic smell). It tasted like cheese straws (light, long and twisted) and not like some kinds of pudding (thick and lumpy). The Internet felt like a cloud (one cannot grasp it since it moves and changes) and not like steel (massive but graspable). Finally, it sounded like rock and roll music (modern and fun) and not like one of Beethoven’s symphonies (older and more serene).

Other informants had similar observations to make. Here we provide a brief explanation of only the taste metaphors to communicate the importance of how a complex technology like the Internet can be understood using the other senses as well. Consider what Tina had to say: “The Internet tastes like a jelly doughnut. The Internet is filled with so much clutter such as advertisements that it is often cumbersome to get to the heart of the information that one is searching. But when you get to the centre, the taste is divine—well worth waiting for.” Like the Internet, the jelly doughnut is comprised of the dough on the exterior and the jelly in the interior. In order to get to the jelly, one must nibble or eat her way through the dough just like one must make her way through all the clutter on the Internet in order to get to the exciting part. The revelation offered by taste allows the informant to feel the force of the metaphor inside the body.

Even if Tina is the only one to describe the Internet as a jelly doughnut, it is interesting to see how cultural synesthesia (Sullivan, 1986) and cross-modal synaesthesia happen here (See Ramachandran, 2003a, 2003b, 2003c; Ramachandran and Hubbard, 2001). Indeed, the metaphor of the “doughnut” helps explain how “taste” is a sensory modality that communicates well the message of complexity and the ambivalence participants have when engaging with the Internet. Accessing the Internet through “taste” allows us to recognize the relational aspects of vision (sight) and taste (tongue). Since taste involves dissolving the food in one’s mouth, it calls into play “touch” as well. But tasting allows us more intimacy as well, since the food is not only dissolved and savoured in our mouths but it is ultimately ingested within our bodies. More than one of the senses is thus brought into play.

Further, what does the jelly doughnut look like? It is round in shape—the number one shape of the Internet, the globe—is also round. According to Ramachandran (2003c) the brain performs this cross-modal synaesthetic abstraction by identifying what the jelly doughnut and the globe have in common—the property of roundness. In the jelly doughnut, there is also a semi-sweet,

dense dough around a centre filled with soft, sweet, delicious jelly (the essence of the doughnut is the jelly). Jelly has no form: it merely takes the form of the round receptacle (the essence of the Internet is communication and represented by the globe). Movement is also indicated in Tina's comments since you have to break through the clutter to reach the centre of the doughnut to have your taste buds titillated. The taste of the doughnut represented in the insular cortex (which receives gustatory taste sensations) has flavours that are soft and sweet in the centre and thicker and crumbly on the outside. The pleasure an individual derives from obtaining the information one is looking for or communicating with a family member or friend is akin to tasting the sweetness of the jelly in the doughnut. The sensory experience of tasting a jelly doughnut powerfully conveys what the Internet means to Tina. It is apprehended through a subjective route what was before recognized only visually or cognitively.

The process of conceptual blending (see Fauconier and Turner, 2002; Joy and Sherry, 2003 for a full description) discussed above allows us to recognize that, even though the Internet could be dense with traffic and may crash (or crumble like the doughnut), when the right connections are made, Internet users feel great elation (i.e. it tastes divine). Such is the force of sensory appreciation: a realization is delivered in a way that touches an individual intimately.

Part III—Verbal analysis

Often consumers run ideas in their heads in bits and pieces before giving them any form or structure (Fauconier and Turner, 2002). Telling a story, however, is a meaning-making activity that involves assembling different thought processes in a somewhat coherent manner (Arnould, Price, and Curasi, 2000), which more often than not takes the form of a temporal structure (Escalas and Bettman, 2000). Fauconier and Turner (2002) contend that the continuous piecing together of pictures and words allows us to evaluate, plan, and predict what will happen next. They maintain that elaboration, projection, and parable are the basic building blocks of all human thought. Not surprisingly, consumers' daily lives are replete with mini-stories.

Informants' explanations suggest that attentiveness to visual details and the ability to refocus and reinterpret pictures when the narrative conditions change (as in categorizing processes or creating the collage) are two keys to how a narrative is structured. At this stage, there is greater self-talk that helps shape the narrative in a more definitive way than when the pictures were initially gathered.

Grouping processes

Once informants had ranked the ten images and told their stories, they were asked to select three pictures and show how any two pictures differed from the third. For instance, Gina linked the pictures portraying Internet communication as a positive force—"progressive communication" and "speedy communication"—and contrasted them with the picture "ironi-

cal communication," depicting the vulnerability of children to unsavoury material available on the Net (see Gina 1, 2 and 3 Fig. 2). The principle of figure and ground is at work in the grouping and binding process since each category necessitates recognizing it as a unit against the background of the other categories. The three common categories that emerged across participants are communication, e-commerce, and not surprisingly, security/surveillance, which clearly weighed in informants' minds. Two other themes—information and freedom/choice—cut across these categories.

Thematic presentation in terms of ranking

Unlike visual analysis, which shows how abstraction culls the most important feature of the Internet, verbal analysis demonstrates how it shapes the particulars of people's lives. Informants speak primarily in terms of their specific life considerations. Take, for example, Vanessa's mini-tale about the picture that best depicts her relation to the Internet, the apple/globe:

I must admit that I am old fashioned and cherish hand-written letters. To me, ink and paper are personal and emotional. Because letters take time to write, send, receive and read, I switched to electronic notes and chat—mostly in Arial or Times New Roman, using a font of 10 or 12 depending on my mood. I felt uncreative at first and felt that the essence of my messages was lost. But when I started to receive letters from people I love every day, sometimes more than once, I jumped with joy. The apple encapsulates all these ideas in a simple image.

Vanessa's statement outlines an important concern: she believes that a family whose members write to each other (care being demonstrated in hand-written letters) will also stay together, even though they are separated by divorce and geography.

Roger shared similar feelings of connection in his story: "The world map composed of dots represents global communication (comm. 14, Fig. 1). The two arrows which face each other in the middle (composed of large white dots) create the impression of high speed communication. West meets East. At first the picture looks like a jumble of dots and arrows. But at a closer glance, you see a picture of the world. It is like the Internet—once you have decoded the image, you can see there is a lot going on behind it. It is magical!"

The second theme that emerged may be categorized as "e-commerce," more specifically the existing opportunities and inherent dangers in using the Internet for money-making ventures. Vanessa's picture of a Sun Microsystems advertisement with the tag line "The Dot," (referring to Dot.Com companies) showing an aqua blue sea with a large dot resembling a shark swimming underwater (e-comm1. Fig. 1)

alludes to how powerful and treacherous the dot is in the current economy. According to Vanessa: “The allusion to the 80s movie *Jaws* only makes the power and threat of the dot more imposing. Businesses which have no presence on the Net are doomed to be eaten alive by those who use it.”

A third theme of central importance to informants is the issue of privacy and surveillance. Many had chosen pictures that projected their dissatisfaction with the fact that businesses track and gather information about consumers with or without cookies.

Jennifer also addressed the dark side of the Internet: she selected the image of hands trying to open a door (dark side 2, Fig. 1), raising concerns about hacking, virus attacks, and pornography. But she proffers a more balanced assessment of being tracked on the Internet and is somewhat philosophical about it: “The dark and light colour of the hands represents good and evil. The dark hands show how hackers function—they emerge behind an unsuspecting ethical user. Each lock on the door represents the many websites that are visited. Many keys have to be used to unlock the truth.” Jennifer is justifiably upset that she is being surreptitiously watched while surfing the Net.

The Internet as a means of instant access to information—again viewed ambivalently—was the fourth theme that emerged during the interviews. Consider what Sheila says: “The picture I chose is of a little child looking at his little red cart filled with boxes that stack up to the ceiling. The face of the child reminds me of my own emotions when I started to surf the net (inform 2, Fig. 1).” Sheila graphically conveys the sense of being overwhelmed by the amount of information available on the Net. The act of projecting herself into the picture allows her to assess her current situation, for she has come a long way since she first started surfing the Net.

Freedom of choice when surfing the Net (freedom 2, Fig. 1) is best exemplified by Michael’s picture of a sports car with someone at the wheel entering a virtual territory, and depicted as blurred background. Michael identified himself as the driver:

“This picture immediately reminded me of the Internet. The environment surrounding the car is distorted, blurred, and surreal. Similarly, if one surfs the Net, one may find oneself in places never imagined before. The car seems to be heading along an infinitely long path. It also reminds me of the picture I get when I am downloading something—it is usually blurred before it finally downloads. But when it does it is magical. Perhaps the environment will become clear as the car continues its journey.”

The choice/freedom metaphor, which also highlights the importance of agency, holds the possibility of danger, surprise, and adventure—unpredictable, exhilarating, and magical, especially when one reaches a specific destination in a flash or when a download is successful.

Central to the verbal analysis of the various narratives is an understanding of story structuring. Informants struggled to build a significant narrative from the various components, attempting to structure fragments of experience, arguments, and observations into a narrative frame. Furthermore, their story-

telling process was not always linear. As Forsey (2003, p. 192) suggests, while lives can be described in narrative forms, selves do not neatly confirm to the narrative model. Every time informants explicated a chosen image, the larger picture became clearer to them, as they produced stories within stories, and stories about stories. The “aha feeling” grew at every stage, culminating in the overall “aha” feeling with the creation of the collage. But each picture led to the completion of a specific story that was unique to each informant. The five themes, on the other hand, reveal an overarching structure of what the Internet means to every one of them. The structure resembles that of a TV mini-series—each episode has a resolution and the total number of episodes completes a thematic presentation.

Self expression and self transformation

The Internet empowers, inspires, and awes informants, while it also enslaves, destroys, and creates chaos. Informants talk about how they have the means to transform themselves through a vehicle that they cannot really, see, smell, touch, taste or hear. Yet they are able to relate their lower-order needs of being connected, informed and wealthy with higher-order goals of being in control, having self-esteem, and attaining happiness. Both informants’ summary images and the consensus map serve as complex metaphors; the former is each informant’s network to meaning related to the Internet and the latter is an aggregation across informants that represents shared networks of meaning. Vanessa’s collage has a globe in the centre around which all the other images are placed. It allows self expression but is also indicative of self transformation. It was at the collage stage that some re-evaluation of the pictures occurred. That is, some shuffling and redefinitions of meanings occurred, accompanied by a fair amount of self-talk during this process. She was hesitant about which images she would use to convey the notion of e-commerce and in the end used both, since one referred to her personal relationship with money, and the second with horror stories of businesses going under on the Internet.

For Steven, in the virtual world (unlike the real world) everything is permissible. The pleasure of search and adventure is conveyed in the image of the girl working at her laptop, bordering a field of sunflowers. Steven’s picture of the eye represents the potential for achieving insight and knowledge on the Net but also evokes the need for vigilance—a reference to security issues. The man running away, with his back turned away from the viewer, represents the dark side of the Internet.

On the positive side, informants talked about the joy of communication, the power of investment and economic transactions, the empowerment due to boundless knowledge, and the pleasure of discovery. This represents avid participation on the Internet.

Self talk and redefinition of meanings at the collage stage reinforces the idea that stories are tentative, fragmented, and partial. Although we strain to make sense of our experiences through the narratives we construct, selves are more complex, porous, and fluid (Forsey, 2003). Being and becoming are continuous life processes.

Balance

Ultimately, the deep metaphor of balance captures the act of balancing, which is initially learned as a bodily activity. Balance requires an ordering of forces and weights relative to an axis, thereby allowing one to look at both sides of a picture/event. Connected to this notion of physical balance are other senses of balance—systemic, psychological, and logical (Lakoff & Johnson, 1980). By amplifying this concept, we have made a metaphorical projection from the physical image schemata generated in physical balance to the non-physical (Lakoff and Johnson, 1999; Joy and Sherry, 2003). In this case, informants balanced the ideas of self expression with notions of self transformation (being and becoming), but the act of creating an equilibrium between these allowed them to tap into the deep metaphor of balance.

Conclusion: perceiving images and telling tales

According to communication specialists, almost eighty percent of human interaction is nonverbal. Thoughts occur as images, which are mostly visual (Zaltman, 1997). Our informants chose images that served as a window into their thoughts. These images were used to tap nonverbal reactions and to probe below the surface for deeper feelings.

We began with visual analysis and more specifically with the perceptual processes associated with the choice of images. Participants were able to abstract—to cull from the myriads of images that were available to them—those shapes and forms that represented the key attributes of the Internet. The skeletal process led to the recognition of principal features even though they did not name them as such. Principles of closure, amplification of a visual mode, symmetry, balance, constancy, movement, the use of visual metaphors, the generic viewpoint, grouping and the peak shift effect were applied in consumers' sense-making. Vision is not a mechanical recording of elements but the apprehension of significant and essential elements in an image.

As noted earlier, the type and size of the visual object determine the relationship between the viewer's space and the plastic space of the image. Within the plastic space, the shape and form of the image are critical. Overlapping, transparency, distortion and gradients are all ways in which depth is conveyed. What a person perceives is not merely an arrangement of colours, shapes and forms but also an interplay of tensions inherent in any precept (Arnheim, 1974). With the recognition of dynamics comes an understanding of balance and expression present in the image.

While most informants were able to articulate the meanings of the images they chose and construct a story, quite often they had to be gently nudged along. It was only during the process of categorization and the creation of the summary images that they fleshed out the plot line. As Zeki (1999, p. 9) notes, the visual system has been perfected over millions of years, well before the linguistic system. The brain is able to detect in a fraction of a second, the identity of a constantly changing object (Cavanagh, 2005). But people may be hard pressed to describe what they see. What is remarkable in the verbal narratives is that, although informants had identified the pictures that best represented their

relationship to the Internet (abstraction), their descriptions were about the particulars of their daily lives. Vanessa's longing to be united with her parents and siblings is echoed in many of her statements—almost as if voicing these specific concerns led to emotional relief, which the picture per se could not communicate. The picture of the apple was used to elicit this emotion and information, but the picture itself abstracted a salient feature of the Internet—communication. Once she established this idea, everything else she narrated was linked to this stance: the requirement of being wary of conducting business, the joy of discovery, the freedom of choice, the reluctance to accept technological surveillance on the Internet, and so on. She establishes herself as a credible protagonist and communicates why her actions have moral weight.

Vanessa also had to devise a way in which she could keep her family together while remaining in touch with them. The Internet provided the solution. Miller and Slater (2000:10) observe that people engage with material culture through versions of themselves that are articulated and transformed through that encounter. Michael's verbal narratives also underscore this process. His image of the wrinkled hands represented his desire for long term friendships that could only be nurtured through constant contact via the Internet. Choosing the picture seems to have strengthened his resolve to build and maintain friendships. Thus, each picture identified by every informant led to the exploration of the particulars of their quotidian lives—an activity Zeki (1998) suggests is more satisfying than dealing in the abstract. In both instances, Vanessa and Michael, exemplify what Miller and Slater (2000, p. 11) call “expansive realization”—to be who one thinks one is—facilitated through the use of the Internet.

We have primarily two sets of data—visual and verbal. Visual analysis helps us to pay attention to the limits of language because as Tilley (2002:23) says, “discourses and material practices are fundamentally different.” The pictures have a relation to the stories but to reduce the visual to the verbal would be too simplistic.

Ultimately, images and words are separate building blocks in the telling of stories but the two amplify each other. Researchers need to enrich and supplement the abstractions that accompany visuals with the details and particulars that accompany the verbal. Finally, while we recognize the potential value of neurological studies to consumption it is also important to recall the limitations of a purely neurological analysis.

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