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**TITLE: DIGITAL SEMIOTICS**

**1. MULTIMODAL SEMIOTICS**

From the infancy of the science of semiotics, scholars have identified the need to develop holistic and comprehensive theories and descriptions of semiosis, applicable to all signs and sign systems but also capable of taking into account the specific characteristics of different semiotic phenomena (cf Sebeok 2001 for a discussion). Saussure foresaw the need for a “science that studies the life of signs within society” (Saussure 1916/1974: 16); while Barthes (1957/1972: 112), calling for the “development of a semiological science”, observed: “[i]n a single day, how many really non-signifying fields do we cross? Very few, sometimes none”. For Danesi (2007: 1) “[t]he ultimate goal of semiotics is...to unravel the meanings that are built into all kinds of human products, from words,

symbols, narratives, symphonies, paintings, and comic books to scientific theories and mathematical theorems”.

Such a science must also be capable of accounting for the interaction of signs within texts to create more complex signs: what Preziosi (1986: 45) addressed as “the implications of a holistic and multimodal approach to semiosis”. In the 1960s, founding members of the International Association for Semiotic Studies (IASS) continued Saussure’s commitment to the development of a conceptual framework for an all-encompassing ‘science of signs’, with Lotman coining the term ‘semiosphere’, by analogy with the ‘biosphere’ (Lotman 1984/2005: 208; cf also Uspensky and Lotman 1978), to represent the philosophical basis for such an approach:

All semiotic space may be regarded as a unified mechanism (if not organism). In this case, primacy does not lie in one or another sign, but in the “greater system”, namely the semiosphere... Just as, by sticking together individual steaks, we don’t obtain a calf, but by cutting up a calf, we may obtain steaks, - in summarizing separate acts, we don’t obtain a semiotic universe. On the contrary, only the existence of such a universe – the semiosphere – makes the specific signatory act real.

A similarly holistic perspective on semiosis is based on and adapted from Michael Halliday’s (1978) insight that language realizes and thus reflects in its internal organization the social functions for which it serves (language as social resource): this is the ‘social semiotic’ tradition (e.g. Hodge and Kress 1988), which has formed the basis of the emerging field of multimodal studies (e.g. O’Toole 1994; O’Halloran 1999; Kress and van Leeuwen 2001; Kress and van Leeuwen 2006 [1996]; Bateman 2007; Jewitt 2009).

The study of multimodal communication – communication involving (the interaction of) multiple semiotic resources such as (spoken and written) language, gesture, dress, architecture, proximity (and in film for example) lighting, movement, gaze, camera angle, etc - received four major impetuses during the twentieth century. Firstly, as Kress and van Leeuwen (2001: 1) observe, the long-term “distinct preference for monomodality” in Western culture shifted, such that both the popular and ‘high

culture' arts (2001: 1) began "to use an increasing variety of materials and to cross boundaries between the various art, design and performance disciplines, towards multimodal Gesamtkunstwerke, multimedia events and so on". Secondly, as Kress and van Leeuwen (2001: 1) go on to claim, "[t]he desire for crossing boundaries inspired twentieth century semiotics. The main schools of semiotics all sought to develop a theoretical framework applicable to all semiotic modes, from folk costume to poetry, from traffic signs to classical music, from fashion to theatre".

The third major impetus to the study of multimodal discourse study during the twentieth century was the increasing power of computers to handle multimedia data which led to a dazzling array of online images, music, videos and animations which were freely exchanged as a major source of information. Directly related, the fourth major impetus was the availability for the first time of technical resources for recording, replaying and analyzing multimodal data. Advances in recent years in software tools for the study of complex phenomena, particularly those taken up and developed in application to the physical sciences, offer exciting opportunities for those attempting to account for the immense complexities of multimodal communication and culture. Yet to date many of these resources remain to be exploited by semiotic science communities; while those software resources developed for the physical sciences remain themselves to be adapted for the study of semiotic (abstract) phenomena.

In this paper we will address issues in the use of interactive digital resources in the light of an ongoing project to develop a software application for multimodal study (O'Halloran in press 2009; O'Halloran et al. 2010). Focusing on the analysis of a short video advertisement, we take Barthes' (1957/1982) analysis of the mythic sign in a static image as our starting point, applying his approach to the study of multimodal semiosis within a dynamic audiovisual text; while drawing also upon resources from the 'social semiotic' and other traditions of semiotics research. We will show how the interactive (multimodal) digital environment is one in which multiple analytical and theoretical perspectives may be applied and compared, and we address both the opportunities and challenges to semiotics science presented by such technological resources.

## 2. MULTIMODAL SEMIOSIS

Barthes' (1957) famous analysis of the mythic sign in 'Myth today' was presented through the analysis of a static visual image, significantly contextualized with respect to Barthes' own personal first experience of the text presented as present-tense narrative: "I am at the barber's, and a copy of Paris-Match is offered to me. On the cover, a young Negro in a French uniform is saluting..." (Barthes 1957: 101). Such texts were in Barthes' time more accessible to study than dynamic audiovisual texts in two ways. First, one tends to look at a static image longer than any particular part/frame of a dynamic visual text; hence we remember more of the detail of a static image. A scholar in Barthes' time could look repeatedly at a static visual image (by buying the magazine and taking it home) whereas repeated viewing of most dynamic audiovisual media in those days could not readily be viewed repeatedly (it is a question whether, from the evidence of his discourse, Barthes was working from memory or with the text in front of him). Second, the meanings, although multiple, one can read into this image are realized through the limited semiotic resources (sign systems) of one form of expression, the static visual mode. In a typical multimodal dynamic audiovisual text, many semiotic resources are co-deployed to make meaning, as we shall demonstrate in the following analysis. One issue we address then is the extent to which Barthes' analysis can be extended to the analysis of a video text.

Our text is HSBC's 2004 'Easy Rider' motorcycle television commercial, part of the bank's three-year-long 'Cultural Collisions' advertising campaign launched in 2003, which was "designed to...introduce HSBC as 'the world's local bank'", stressing the importance of local knowledge and cultural differences across the globe ([http://www.hsbc.com/hsbc/news\\_room/news/news-archive-2002/3](http://www.hsbc.com/hsbc/news_room/news/news-archive-2002/3)). The advertisement shows a biker riding through a variety of (mostly remote, sometimes desolate) scenes within South America (see the film strip in Figure 1), over the soundtrack of (a cover version of) a Jimi Hendrix song (1971), 'Ezy Ryder'. The song and many of the scenes will resonate with listeners/viewers familiar with the iconic film 'Easy Rider' (1969) starring Peter Fonda, and with 1960s counter-culture in general. The advertisement discourse revolves around differing culturally-determined interpretations of a sign: the

biker, on his travels, repeatedly receives and makes a gesture which, the narrative voice-over tells us, means ‘everything’s OK’ throughout South America – except, we hear, in Brazil, where “it’s really rather rude” (see Figure 1). At this point the biker, eating in a café in a remote location, makes this sign, the music stops, and in the almost complete silence (one can hear, faintly, cicadas, and the clinking of a plate) several locals stare menacingly at the biker. The voiceover narrator proclaims “we never underestimate the importance of local knowledge”, the bank logo appears, the loud music starts up again, and the final scene shows the biker leaving town, wobbling along on his motorbike, no doubt shaken by the offended locals (he gets off more lightly than the character in the ‘Easy Rider’ film).

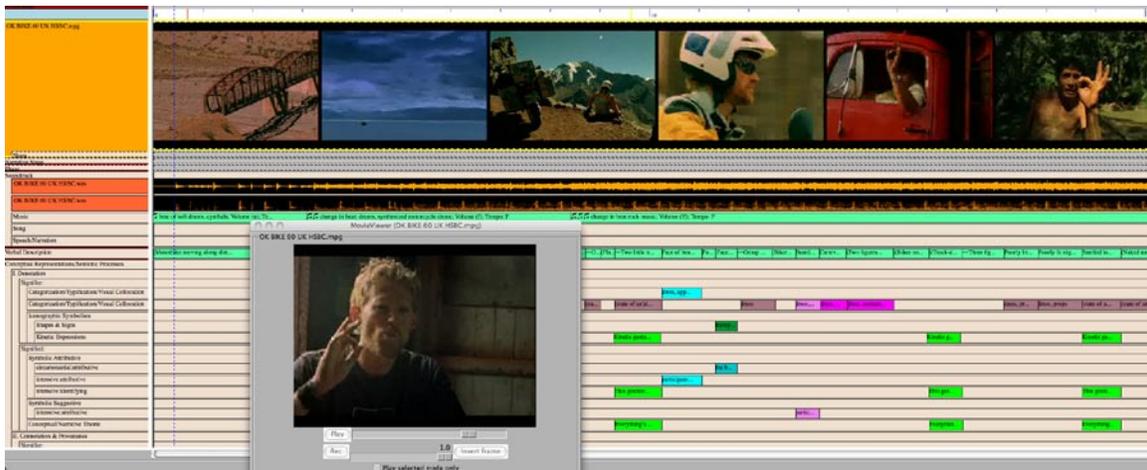


Figure 1: ‘Everything’s OK’

Corporate television advertisements generally fall within the sphere of non-product advertising, which is used predominantly “to communicate a name, presence, or even the philosophy of a company” (Arens 2002: 357). According to Budd et al. (1999), corporate advertisers seldom tell us directly that we should buy their products or services. Instead, they try to associate their products or services with “intensely held values and emotions” by “appealing to the more vulnerable realm[s] of feeling and association” (Budd et al. 1999: 88-92). These texts often draw on a variety of different film forms, types and genres within a single text, for example: narrative, with a main protagonist and cause-and-effect relationships; factual documentary; the persuasiveness of rhetorical form; or via associative connections among images, established in terms of visual

qualities and other techniques that are comparable to the concept of metaphor (cf Bordwell and Thompson 2004: 154-157).

All of these techniques are amalgamated in the HSBC-text which, drawing on Bakhtin's (1981 [1935]; 1986) notions of heteroglossia and intertextuality (cf also Eco's 1989 'closed/open' texts), speaks with many 'voices', mixing and invoking multiple genres, ideological concepts, values, myths and beliefs, and inviting multiple readings by a (projected) heterogeneous audience. We will examine the text both in terms of a denotative, 'closed' reading and of some of the multiple connotative open readings suggested in (our interpretations of) the text.

### 3. DENOTATION ANALYSIS

Although, as Barthes pointed out (cf Chandler 2007: 138), denotation can be seen as nothing more than a naturalized or widely held connotative interpretation, at the level of denotation we find the text's conceptual narrative themes, signified in the software analysis interface via time-aligned nodes (in shades of green) in Figure 1. These denotative meanings are presented as 'self-evident' information through either what van Leeuwen (2001: 95) terms *typification*, achieved by means of visual stereotypes (eg in clothing, hairstyle, physiognomic attributes) or *symbolic attributive* processes (Kress and van Leeuwen 2006: 105) which encode "what a participant means or is". For example, in the HSBC-text, the biker's identity is first established through visual collocation with his bike, and then stereotypical physiognomic attributes or 'object signs' (cf van Leeuwen 2001: 95; cf Thibault 2000: 336) such as the helmet, scruffy beard and sunglasses, and later the European Union insignia on his helmet (see Figure 1). *Symbolic suggestive* processes, in contrast, are realized by kinetic expressions (eg through the gaze of the local people in Figure 2), intimating for example that participants are angry/hostile/intimidating.

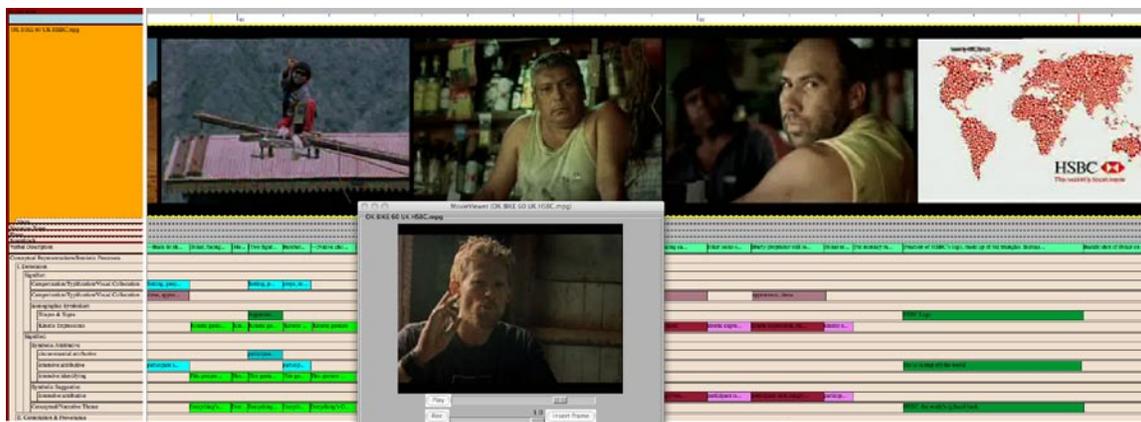


Figure 2: Denotation and symbolic suggestive processes

#### 4. CONNOTATION AND MYTH: MULTIPLE READINGS

There are a variety of connotative readings possible in the text; but as Chandler points out (2007: 139), such readings are inter-subjective and therefore finite in number, “determined by the codes the interpreter has access to”. We can thus analyse the text in terms of a cline of denotation-connotation: for example, while for those familiar with 1960s youth popular (‘counter’-)culture many of the connotations we authors read into the text are reasonably transparent and thus could be considered denotative, for others such readings may not be available; furthermore, multiple readings of such connotative meanings – for example, of the various representations of Latin American people and landscape in the text – are possible.

Clear intertextual references to the film ‘Easy Rider’ abound, something which becomes apparent when certain scenes from both texts are closely compared (see Figure 3 for a comparison of an Easy Rider scene and its counterpart in the HSBC ad). These intertextual references (e.g. shots of the biker on the road exploring ‘foreign’ regions and culture, gestural communications with locals while riding past, and the music) invoke the narrative and themes of the ‘Easy Rider’ film: travelling and being geographically, socially and culturally outside of one’s own world and into that of the ‘other’ (symbolized at the start of the HSBC ad by the rider crossing a bridge: see Figure 1 filmstrip), with potentially tragic consequences (the final scene of the film has the main characters making a gesture at a truck driver which brings violent retribution); and the



(that is, HSBC and its advertising team) that presents the text's main protagonist, the biker, as a neo-colonial 'trailblazer' and 'seeker after freedom', and then mocks this character for his presumption, ignorance and arrogance. The biker/easy rider, in his encounters with the 'other', thus functions by implication as a metaphor for the institutional 'Other', HSBC's potential competitors who 'underestimate the importance of local knowledge' through flawed readings of the local culture. The biker often passes through scenes with his gaze averted, masked by sunglasses, or artificially obscured by cinematographic techniques, which may be interpreted as a visual metaphor for his 'impaired vision' or 'flawed' way seeing the world.

## **5. MULTIMODAL SEMIOTICS IN THE DIGITAL AGE**

There are many complementary theoretical and analytical readings of the text possible in addition to the brief observations given above, while some analyses may be relevant only at particular points. For example, from the domain of applied film studies we find that, with respect to the montage effect in the first part of the advert - a succession of images over a loud rock music soundtrack - (Holman 2002: 195) that "[m]usical score alone usually distances us from the picture content, because there is no synchronous [diegetic: the authors] sound...to make things seem real"; something which then sets up the context for a dramatic return to denotative 'reality' when the music is switched off - literally, on a tape player within the café where the biker commits his faux pas, leaving the 'easy rider' alone with his hostile audience (the dropping of cutlery on a plate is audible). This music thus creates a sort of prosodic affect that dictates how we should interpret the succession of images: not individually nor in purely denotative terms as a narrative sequence (as in, say a travelogue or documentary), but mythically and affectively as a whole, in terms of the multiple (intertextual) readings discussed above. For example, music helps to render the text 'open' (Eco, 1989). Of course one could also apply a variety of musical analyses to explore this aspect of the text. With the introduction of the voiceover (a variety of) linguistic and vocal analyses become relevant, for example to take account of a certain haughty smugness in the voice.

The point at which the music stops is particularly significant for the understanding of the text: this is the point where the myth of the easy rider ends (for the biker, that is). Here the creators of the text wish us to 'tune in' to the text as a (denotative) narrative sequence of events: the traveler has made a social faux pas in a potentially dangerous remote setting. Chandler's (2007: 138) construal of Barthes observations on the denotative sign is particularly important here: "the process of naturalization...leads to the illusion that denotation is a purely literal and universal meaning which is not at all ideological, and indeed that those connotations which seem most obvious to individual interpreters are just as natural". It is therefore at this point that the viewer is most susceptible to the connotative meanings projected by the text as HSBC advert; and it is into this scene that the crucial voiceover stating the bank's credentials occurs - "we never underestimate the importance of local knowledge". The advertisement's makers use the move from mythic to denotative discourse as the context for the creation of their own mythic theme, that of the 'glocalised bank' who understands local culture, also signified in the denotative bank logo "the World's local bank".

These multiple interpretations derive from very close, repeated viewing and analysis of the text as audiovisual data, in such a way not readily available prior to the development of sophisticated interactive computational playback and interface/annotation resources. A variety of analyses, discursive and categorical, and the use of colour and other visual techniques applied to represent such annotations in the interface, allows the user analytical access to the minutiae of signifying phenomena in the audiovisual signal and to show their functions within signs and signifying discourse. The software environment allows the analyst to collocate within the interface a variety of different analyses in multiple configurations, such that larger patterns and correlations of patterns emerge. In this way semiotic phenomena that may be otherwise accessible and presentable only through intuition and discursive analysis can be subjected to empirical analysis of specific features of the text - signs, and their manifold and complex interplay within the text. The interactive digital environment thus demands more of the analyst than what Monelle (2000: 3) referred to as "discursiveness and inconsistency...a bundle of essays".

Digital semiotics can of course, on the other hand, be readily applied or interpreted as reductionist, particularly when automated analyses of low-level features such as shot and pitch detection, event, speaker, face and optical character recognition and detection are considered (cf Lotman quotation earlier). Yet the analysis must ultimately answer to the holistic higher-level perspective on a text as a unity (eg. as mythical discourse): analysis within the digital environment challenges the semiotician to turn theoretical and descriptive insight into applicable analytical schema, and to relate lower-level and higher-level features of a text, to close the 'semantic gap' between the different levels dealt with by computer science and semioticians. Furthermore, digital analysis of course must always occur in tandem with more traditional ways of working, and will draw upon those for its materials and methods: one cannot hope for a digital software that will automatically produce insights such as those of Saussure, Barthes, Halliday or Lotman. But digital semiotics makes such insights more accessible to testing through empirical analysis, and provides a much greater capacity for insight into phenomena not readily accessible with the 'naked eye'.

Digital software is semiotic technology: with it, we find new ways to conduct semiotic research and create semiotics discourse. In this sense, we are expanding the potential for semioticians to create meta-'language' about semiosis, recalling as we do the observations of Lotman and Uspensky (1978: 229):

“The possibility of self-reduplication of metalanguage formations on an unlimited number of levels, along with the introduction of ever-new objects into the sphere of communication, forms culture's reserve in information.”

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**References:**

- Arens, William F. (2002): *Contemporary Advertising*. New York: McGraw-Hill/Irwin.
- Bakhtin, Mikhail (1991) [1935]: *The Dialogic Imagination* Tr. C. Emerson and M. Holquist; ed. M. Holquist. Austin, TX: University of Texas Press.
- Bakhtin, Mikhail (1986): *Speech Genres and Other Late Essays*. Tr. V.W. McGee; ed. C. Emerson and M. Holquist. Austin, TX: University of Texas Press.
- Barthes, Roland (1972) [1957]: *Mythologies*. Tr. Annette Lavers. London: J. Cape.
- Bateman, John (2007): *Towards a grande paradigmatique of film: Christian Metz reloaded*. *Semiotica*, 167, 13-64.
- Bordwell, David, and Thompson, Kristin (2004): *Film Art: An Introduction*. Boston: McGraw-Hill.
- Budd, Mike, Craig, Steve, and Steinman, Clay (1999): *Consuming Environments: Television and Commercial Culture*. New Brunswick, New Jersey: Rutgers University Press.
- Caldas-Coulthard, Carmen Rosa (2003): 'Cross-Cultural Representation of "Otherness" in Media Discourse', in G. Weiss and R. Wodak (eds.), *Critical Discourse Analysis Theory and Interdisciplinarity*. Basingstoke, Hampshire [England]; New York: Palgrave Macmillan, 272-296.
- Chandler, Daniel (2007): *Semiotics: The Basics*. Oxford; New York: Routledge.
- Danesi, Marcel (2007): *The Quest for Meaning: A Guide to Semiotic Theory and Practice*. Toronto: University of Toronto Press.
- Easy Rider* (1969): Director, Dennis Hopper. Columbia Pictures.
- Eco, Umberto (1989): *The Open Work*. Cambridge, MA: Harvard University Press.
- Halliday, Michael A. K. (1978): *Language as Social Semiotic*. London: Edward Arnold.
- Hendrix, James M. (1971): "Ezy Rider", *The Cry of Love*. Reprise.
- Hodge, Robert, and Kress, Gunther (1988): *Social Semiotics*. Cambridge: Polity Press.
- Holman, Tomlinson (2002): *Sound for Film and Television*. Amsterdam: Elsevier.
- Jewitt, Carey (ed.) (2009): *Handbook of Multimodal Analysis*. London: Routledge.

- Kress, Gunther, and van Leeuwen, Theo (2001): *Multimodal Discourse: The Modes and Media of contemporary Communication*. London: Arnold.
- Kress, Gunther, and van Leeuwen, Theo (2006 [1996]): *Reading Images: The Grammar of Visual Design*. London: Routledge.
- Lotman, Yuri (2005) [1984]: "On the Semiosphere", Tr. W. Clark. *Sign System Studies*, 33 (1): 205–229.
- Lotman, Yuri, and Uspensky, Boris. A. (1978): "On the semiotic mechanism of culture". *New Literary History*, 9 (2), 211-232.
- Monelle, Raymond (2000): *The Sense of Music: Semiotic Essays*. Princeton, NJ: Princeton University Press.
- O'Halloran, Kay L. (1999): "Towards a systemic functional analysis of multisemiotic mathematics texts", *Semiotica*, 124 (1/2): 1-29.
- O'Halloran, Kay L. (2009, in press): 'Multimodal Analysis and Digital Technology', in A. Baldry and E. Montagna (eds.), *Interdisciplinary Approaches to Multimodality: Theory and Practice. Readings in Intersemiosis and Multimedia*. Palladino: Campobasso.
- O'Halloran, Kay L., Tan, Sabine, Smith, Bradley A., and Podlasov, Alexey (2010, in press). *Challenges in Designing Digital Interfaces for the Study of Multimodal Phenomena*. *Information Design Journal*.
- O'Toole, Michael (1994): *The Language of Displayed Art*. London: Leicester University Press.
- Preziosi, Donald (1986): 'The Multimodality of Communicative Events', in J. Deely, W. Brooke, and F.E. Kruse (eds.), *Frontiers in Semiotics*. Bloomington: Indiana University Press, 44-50.
- Saussure, Ferdinand de (1916/1974): *Course in General Linguistics* (trans. Wade Baskin). London: Fontana/Collins.
- Sebeok, Thomas A. (2001): *Signs: An Introduction to Semiotics*. Toronto: University of Toronto Press.

- Thibault, Paul J. (2000): 'The Multimodal Transcription of a Television Advertisement: Theory and Practice', in A. Baldry (ed.), *Multimodality and Multimediality in the Distance Learning Age: Papers in English Linguistics*. Campobasso, Italy: Palladino Editore, 311-385.
- van Leeuwen, Theo (2001): 'Semiotics and Iconography', in T. van Leeuwen and C. Jewitt (eds.), *Handbook of Visual Analysis*. London; Thousand Oaks; New Delhi: Sage Publications, 92-118.