

# **The efficacy of non-verbal Images in Multimedia.**

*Some Considerations. (Word count 2,037)*

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## *Abstract:*

This paper notes the importance of a semiotic approach to Image interaction in Multimedia and regards it as a process of human communication. However we wish to set out a possible research methodology for the categorisation and publication of Images that are *pictorially* coherent, in Multimedia<sup>1</sup>.

Visual representations produce meaning just as words produce meaning. However meaning is not always inherent in a representation or object, but may brought into it by the viewer. In the majority of representations therefor meaning is not fixed but the result of a dialog between the dynamic and complex interplay of knowledge production by the viewer and the information retrieval transfer tasks of Multimedia. Texts, in the broadest sense of the word help Images that are pictorially incoherent and ambiguous to be read, but they may take longer to

<sup>1</sup> see S.H.Bean (paper) Economic Informatics Symposium. Bucherest. Romania. 2000

comprehend, unlike those Images, to quote Susan Sonntag, that are 'freed from the tyranny of text'. In their recent ACM paper<sup>2</sup> Gershon and Page contend that "Images are susceptible to uncertainties and might require some declarative statements to clear them up."<sup>3</sup> Whilst it is true that many images do fall into this category it is certainly not true for all Images.

**Key words:** non-verbal Images.

## 1. INTRODUCTION

### 1.1 Knowledge production/information retrieval and the Image.

When an Image is constructed its meaning relies (in part) upon a number of historically specific conventions, rules and regulations. However we contend that *some* Images are dynamic and evolutionary in their own right, and have a pictorial coherence that originated as a result of a kind of *visual Darwinism*<sup>4</sup>, that is they are discursively ahistorical. The semiotic<sup>5</sup> approach to IR (information retrieval) views knowledge retrieval/production as a human communication process taking place in a social and cultural realm. Those who reject pictorial coherence (such as poststructuralists) emphasise the 'polysemic' nature of Image interaction - there can *only* be plurality of meanings.

Our argument is that Images, that are 'pre-discourse' and non-verbal are unexpectedly obdurate<sup>6</sup> and that they possess formidable defences against uncertainties, ambiguity and pictorial incoherence. They (Gershon and Page) also note that "for long as people have been around, they have used

<sup>2</sup> ACM vol.44. No 8.August 2001. p31

<sup>3</sup> ACM vol.44. No 8.August 2001 p32.

<sup>4</sup> William J.T. Mitchell. p183. Critical Inquiry.Vol.28.No 1.Autumn 2001. University of Chicago.

<sup>5</sup> Semiotics is the study of 'sign systems' and how signs are exchanged in communication.

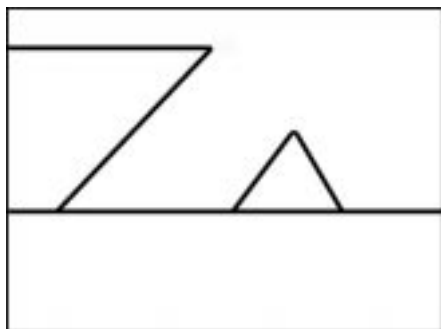
<sup>6</sup> From a semiotic viewpoint James Elkins notes that pictures as a whole are confusing and daunting...and possess formidable defences against quick readings. On Pictures and the Words That Fail them. pxii. Cambridge University Press.

stories to convey information”<sup>7</sup> However pictorial representations of memory began long before writing, and unlike speech, they represent a tangible, retinal-representation of memory, iconic memory.

*John Berger, in discussing the construction of visual communication, notes that the visual element, "seeing," precedes language.*<sup>8</sup>



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Figure 1. Khoi pastoralists. (after Van Rijssen.1985)

Figure 2. CD cover.

Recognition of the left 'hand' picture is immediate but unless the viewer has had previous experience of the right hand picture, (go on try and give it a title),<sup>11</sup> it may never be understood. Conversely, if properly designed, once an attribute, (for instance a title), is attached to an Image it is nearly impossible to assign any other to it. If, as it seems Gershon and Page's research is towards information and knowledge retrieval from a visual representations then I believe the direction should be towards the left hand type. (Extensive training may be necessary to insure a viewer does receive an un-ambiguous meaning from the right hand image). Though reading skill is a result of training and lack of skill may further increase delays in information retrieval. However information and knowledge retrieval from the right hand picture, (without a title to guide the viewer), is a different matter. If a title were added to it then of course the author may be able to direct the viewer along a specific reading path. Lets leave the imbedded knowledge and information aside for a moment and consider the fact that the aesthetic codes applied to picture 2, seek to connote, diversify and avoid knowledge

<sup>7</sup> ACM vol.44. No 8. p31.

<sup>8</sup> John Berger: 'Ways of seeing'. (1972:p7). Penguin.

<sup>9</sup> © Anati et al. Rock Art studies. Oxbow Books.

<sup>10</sup> © Frank Zappa. CD cover.

<sup>11</sup> 'A ship arriving too late to save a drowning witch'

production and information retrieval and not to articulate it. This is in stark contrast to any logical or scientific codes for transfer tasks which Multimedia interaction uses to suppress these very values.

The overall objective of the study of non-verbal markings is to conceptualise the dynamic and complex relationship between knowledge production by the viewer and the transfer tasks and associated design retrieval mechanisms in Multimedia.

## 1.2 Non verbal Images.

With the spread and development of Languages, images became encoded with localised cultural aspirations and perspectives (Foucault calls this power/knowledge fixing) that inherently served the interests of particular groups. The coding guides the viewer towards a preferred reading<sup>12</sup> and away from 'aberrant decoding'. As a result of the use of these codes within cultural diversification there are many culturally specific Visual Languages. We contend however, that certain Images occur independently of language and culture, so that, whilst there are many Visual Languages, they might be all underpinned by a core of primordial images, non-verbal images (pre-discursive referents), by what James Elkins calls 'the darkness of non-verbal markings'<sup>13</sup>. He also goes on to note however that 'the purpose of the unmediated perception is a return of the viewer into the world of shadows, a decent back into the cave of images'<sup>14</sup> and because there is no discourse, disorder.



Figure 3. Positive cavemen handprints<sup>15</sup>

<sup>12</sup> Stuart Hall. 'Representation'. Sage publication.

<sup>13</sup> James Elkins. 'On Pictures and the words that fail them'. Cambridge University Press. pxii

<sup>14</sup> W.J.T.Mitchell. Iconology. p93. University of Chicago Press.

<sup>15</sup> Images of Power. Lewis-Williams and Thomas Dowson. Page 109

The purpose of our research is the development of a methodology that will detect and categorise echoes of these primordial non verbal Images (pre-discursive referents) in Multimedia, primarily in Images and multimedia Image Sequences. Historically some researchers have concluded otherwise. Roland Barthes notes : *it appears increasingly more difficult to conceive a system of images and objects whose signifieds can exist independently of language.*<sup>16</sup> Though this is considered by some researchers as a primary failing of Barthe's work.

In order to identify pre-discursive referents that might be in current use, it will be necessary to start by reviewing and analysing Images from a period in human evolution *marked largely by the absence of languages and cultures*,<sup>17</sup> a period from where man first presented retinal representations of memory in pictorial form, namely in Upper Palaeolithic Rock Art. The technical methods used by man for this process, (which proved to be more stable than those used for representing speech,) have created visible records of memory that go back to the dawn of Mankind.

### 1.3 Is an Image worth a thousand words?

In their ACM article Gershon and Page<sup>18</sup> contend “A Story is worth a thousand Pictures”, however William Mitchell<sup>19</sup> notes that if the total bytes of an Images were compared to the number of bytes contained in a word document it would by its nature contain more information.

Central to this research 'to see if pictures provide their own metalanguage', (and we quote Elisebeth Anscombe<sup>20</sup> here), is the link between 'pre-discursive referents' and these primordial images, which, we contend, will indicate that specific Palaeolithic pre-discursive images, (Garlake calls these representations,<sup>21</sup>) are still in everyday use, and that being 'pre-discursive' they cross the platforms of Culture, Language and Geography. With the representational practices that have evolved we can apply many codes such as composition, framing, lighting, focusing, exposure, processing, digital enhancement and so on, to an Image. But as they are culturally specific a preferred reading can only be obtained within that culture and therefore outside that culture may open to misreading. Non-verbal Images by their nature are multi-stable.

<sup>16</sup> See Roland Barthes. “Elements of Semiology”

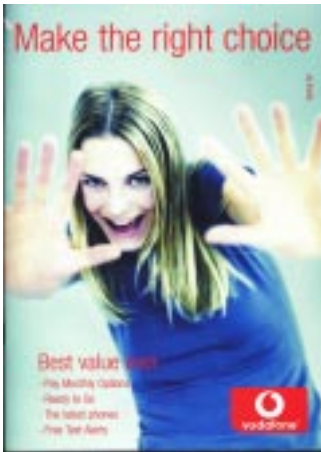
<sup>17</sup> See Anati et al. Rock Art studies.

<sup>18</sup> See ACM August 2000/Vol.44. No 8

<sup>19</sup> See William J. Mitchell 'The re-configured eye' MIT Press.

<sup>20</sup> See William Mitchell 'On Picture Theory'.

<sup>21</sup> See Peter Gartlake. Interview, Zimbabwe. August 2001.

Figure 4. Vodaphone<sup>22</sup>Figure 5. Graffiti Ireland<sup>23</sup>

Key to this is the principle that non-verbal images, (pre-discursive referents, Mitchell calls these *Proper Pictures*<sup>24</sup>), like 'proper names avoid ambiguous designations' (Foucault)<sup>25</sup>. There is no need for interpretation or a caption. They are *Picturae Universae*. To quote Barthes 'the study of these ... messages has still to be carried out the...system is very likely constituted ... by a *universal symbolic order* (my italics) in short by a stock of stereotypes, (schemes, colours, graphism, gestures, expressions and arrangements of elements)'.<sup>26</sup> He continues, 'such a decipherment....would have to carry out (perhaps using tests) directed readings, artificially varying certain elements of the photograph to see if the variation of forms leads to variations in meaning.

The anthropologist Randal White notes that: '*Like neurological memory, which endures despite the constant replacement of brain cells, human cultural traditions and practices endure for millennia despite the constant replacement of one generation of human organisms by another.*

<sup>22</sup> © Vodaphone

<sup>23</sup> © author

<sup>24</sup> See William J.T. Mitchell 'Picture Theory'. University of Chicago Press.

<sup>25</sup> See Michel Foucault. 'The Archeology of Knowledge'.

<sup>26</sup> See Susan Sontag 'A Barthes Reader'.

*What are the cultural processes of memory, and how far back in time can we trace them?"*<sup>27</sup>

Might they also serve as a mnemonic underpinning for all visual Languages? Panofsky notes that the denotation of a representational visual image is what all viewers from any culture and at any time would recognise the image as depicting.<sup>28</sup> Garlake<sup>29</sup> has investigated the Archaeological (more specifically the Palaeolithic) perspective, though he prefers to use the term 'representations' and he has been able to reduce their number down to ca 60 images.

## **2. FINDING THE PICTURES.**

For Gershon. and Page "Information visualisation is a process that transforms data, information and Knowledge into a form that relies on the human visual system to perceive the message. Its goal is to enable the presentation of meaning in a compelling understandable, and appealing way."<sup>30</sup> This might be true within a specific culture, but outside their own cultural, Images are dissonant, incoherent, and non-stable, whereas those that resist coding and therefore preferred readings are multi-stable.

For categorisational purposes two models of classification are interesting: Randal White's<sup>31</sup> 'Connerton' reference (three categories of neurological memory) as a template for types of images:

- Personal Images, used by individuals to represent to themselves or details of their own biographies.
- Cognitive Images, which represent knowledge of surroundings, including geography, vocabulary and other learned 'facts'.
- Habit Images, which are memory Images of gestures and operations.

<sup>27</sup> See Randal White. Ravello: Centro Universitario Europeo Per I Beni Culturali, ed. J. Hahn- et al, 1995

<sup>28</sup> Panofsky.1970a, pages 52-53.

<sup>29</sup> Interview with Peter Garlake. Zimbabwe. 28-08-01.

<sup>30</sup> See ACM August 2000/Vol.44. No 8

<sup>31</sup> Randal White. Representation and the Evolution of Cultural Memory. This article originally appeared in French as Les archives du Paléolithique in La Recherche, July 1994

...and CS Pierce's<sup>32</sup> typology, who, from a semiotic stand point, considers there are three kinds of representations. Namely:

- Iconic (signs which are at least potentially general),
- Index (inherent relationship that is culturally specific)
- Symbolic (representations that have a conventionalised but arbitrary mediating relationship).

These are in order of *increasing* arbitrariness, and as Chandler<sup>33</sup> rightly points out they are not necessarily mutually exclusive: a Image can be part icon, symbol and an index, or any combination thereof.

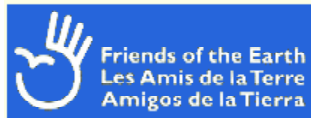


Figure 4. F.O.E.<sup>34</sup>



Figure 5. Reach Out.com.au<sup>35</sup>

### 3. IMAGE INTERACTION IN MULTIMEDIA.

We must continue to make the distinction between the knowledge production and the information retrieval transfer tasks functions of Multimedia. Non verbal markings (pre-discursive referents) are still in everyday use, (see hand Images<sup>36</sup> below) and as we have noted they cross the platforms of Culture, Language and Geography (see MDC Images below). Mediating representations cannot effectively be used in modern Image and Image Sequencing and Multimedia databases as they are open to ambiguity. Gombrich was convinced that, "...we do not have to acquire knowledge about teeth and claws (or hands for that matter) in the same way in which we

<sup>32</sup> Charles Sanders Pierce. American Philosopher. 'On a New List of Categories'. Proceedings of the American Academy of Arts and Sciences 7 (1868), 287-298.

<sup>33</sup> Daniel Chandler. University of Wales. Semiotics basics.

<sup>34</sup> © Friends of the Earth

<sup>35</sup> © Reach out. Australia.

<sup>36</sup> See Lewis-Williams and Dowson. p109 'Images of Power'



learn a language" (LL20)... and he goes..." our survival often depends on our recognition of meaningful features as it does the survival of animals"<sup>37</sup>.



Figure 6. MDC Image<sup>38</sup>. Harare, Zimbabwe.



Figure 6. MDC Image<sup>39</sup>. (sic)

The consequence of this conceptualisation is that the knowledge retrieval process is a dynamic and complex interplay between the ambiguous production of knowledge by the viewer and Multimedia interaction tasks. We believe that, in the case of knowledge production, vis a vis *pictorially* coherent, multi-stable Images in Multimedia, meaning will be unambiguous ab ovo.



Figure 6. Pictorial road sign<sup>40</sup>.



Figure 6. MDC Logo<sup>41</sup>.

<sup>37</sup> Iconology. Mitchell ,W.J.T. University of Chicago Press. Page 79

<sup>38</sup> © author

<sup>39</sup> © author

<sup>40</sup> © The Image and the Eye. E.H.Gombrich. Phaidon. P 23.

<sup>41</sup> © Movement for Democratic Change.

#### **4. CONCLUSION**

The aim of this research is to understand and categorise non-verbal Images (pre-discursive referents), and their efficacy, frequency and use in knowledge production and information retrieval in Multimedia.

As Images and Image Sequences are Culture and Language based we cannot presume they will be universally understood, universally 'visual'<sup>42</sup>. However, non-verbal images are powerful devices for the storage and transfer from one generation from one cultural group, to the next of complex bodies of knowledge and we believe that non-verbal images (pre-discursive referents) pre-date the development of culturally specific visual languages.

Using the results of this analysis as a reference, a methodology could be developed to investigate their current universality and occurrence in Multimedia, primarily in Images and Image Sequences and also to expose any localised anomalies developed by cultural and language differences or geographical variation.

<sup>42</sup>de Lange. Journal of Visual Literacy. Vol:20. Spring 200. Number 1. page: 68