

Drawing as Language: The Systemic-Functional Semiotic Argument

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Abstract

This article argues that drawing is a medium of visual communication, using any tool leaving a trace upon a surface, capable of referring to objects and events in the past, present and future, real and imaginary, functioning to modulate the viewer's attitude towards the subject-matter through the systematic selection and combination of visual elements according to cultural conventions which are subject to challenge, change and misunderstandings. In other words, I argue that drawing operates as language, defined in terms of systemic-functional semiotic theory. The theoretical basis is explained and discussed, with examples of the author's drawings demonstrating the theory as driver of creativity, facilitating the negotiation of meaning.

Keywords

Drawing

Language

Semogenic

Systemic-Functional Semiotics

Driver of Creativity

Visualcy

Introduction: Nature and Culture

The *nature* of being human is to have evolved biologically so as to enable us to sense the world in which we live and to adapt as that world changes: we are able to act within our environment, we are able to react in response to our environment, and we are able to act upon our environment. This system of ecology is the balancing act we call survival.

The *culture* of human beings grows not from any organic need to sense or monitor the constant changes within our environment – all sentient organisms do that in some way or another – but from the uniquely-human capacity to reflect upon our experiences, and our

desire to communicate those reflections with a view to influencing each other; our apparent need to make and exchange meanings.

‘...the whole human endeavour (is) to make sense of our lives’ according to personal construct psychologist Phillida Salmon (1978: 43). We thrive through sensing our world and making and communicating meanings from our relationship with it. The more layers of meaning we are able to construct from what we sense and share with others, the richer and more enjoyable our experience of living becomes. If necessity really is the mother of invention, then our need to communicate meanings is the mother of the invention of all codes of human communication – spoken, written, gestured and drawn.

Language

A language is a highly complex system – perhaps one of the most complex in the known universe. (Halliday 2005: 62)

This is the opinion of the leading contemporary socio-linguist, Michael A.K. Halliday, (Table 1), and acts as a warning to those of us daring to dabble outside of our zone of expertise...

A language is a system of meanings, a *semiotic* system, to give it a technical name. But it is more than that; it is a system that makes meanings: it is not only semiotic but *semogenic*. There are many systems of meaning in our lives, but not all of them are meaning-creating. A system of traffic lights, for example, is semiotic but not semogenic. There are other semiotic systems which do create meaning: forms of visual art and music, for example... (Halliday 2005: 63)

... so far, so reassuring. Even though several sources have referred to drawing as a language, for example, Edward Hill (1966), James Lancel McElhinney (2012) and more recently Mick Maslon and Jack Southern (2015), we might augment these mainly metaphoric references by applying the tools of a semiotic theory which elaborates the efficacy of drawing as a *semogenic* system, one capable of *generating* meanings, as well as a means of communicating meanings, in order to convince sceptics:

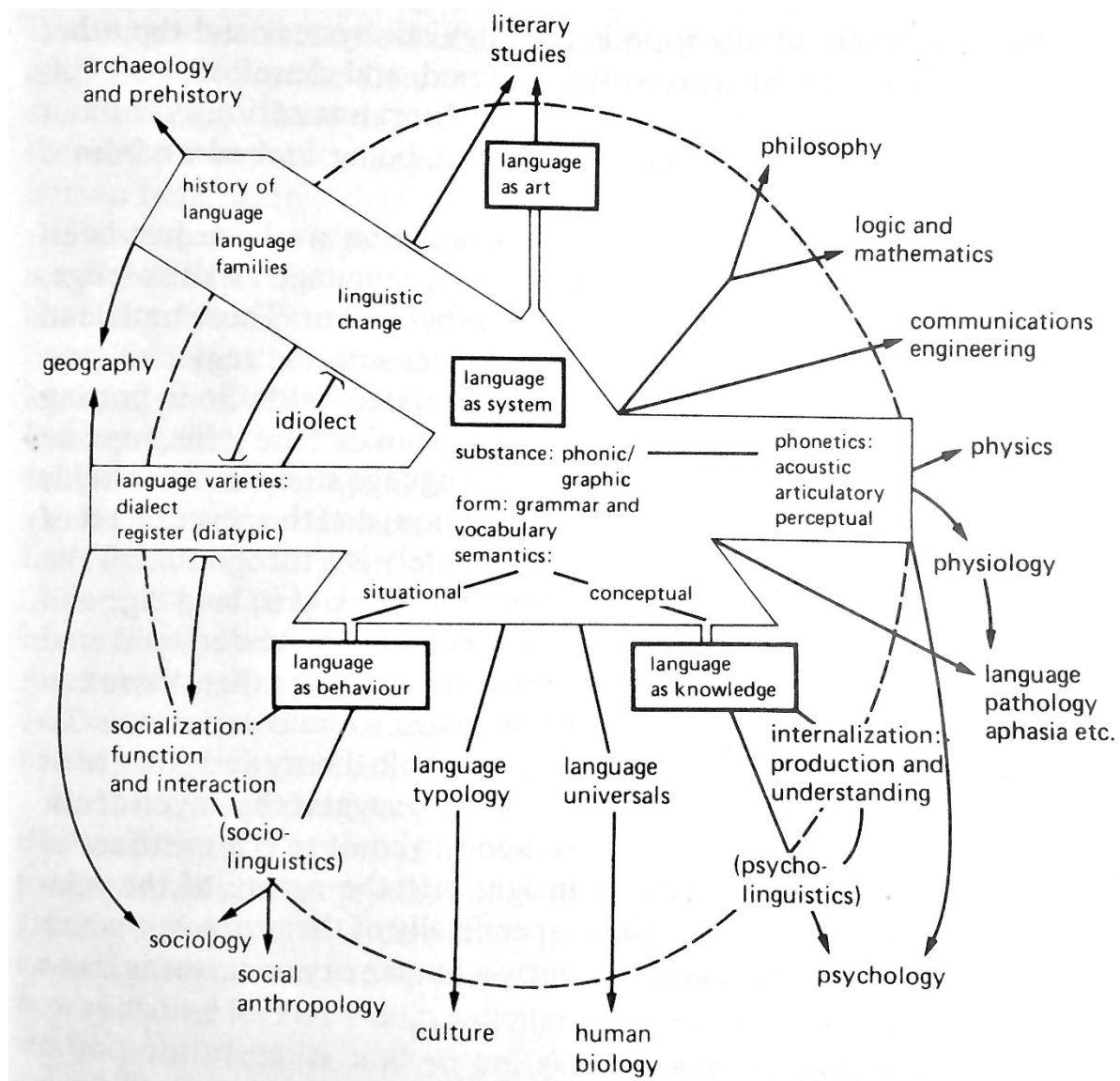


Table 1 The Domain of Language Studies (Halliday 1978: 11)

If the business of being human is to make sense of the world, as personal construct psychology claims (Bannister and Fransella 1980), then we must develop a theory of rationality adequate to a universe of randomness: we must structure order from chaos. The most important feature that distinguishes humans from all other forms of life on the planet is our capacity for evolving referential languages: the capacity to articulate and share with others our experiences of the world in the absence of the objects and events which were the sources for the stimulation of our senses, so as to engage and position others in terms of their

mood and attitude towards those experiences. (Other species communicate through signals, which trigger responses in real time. Such signals are not referential, therefore are not considered as constituting a language).

Humans are unique in using sounds, gestures and marks to stand for the things and events perceived through the senses. Something that stands for something else is a *sign*, and when the rules of syntax governing the paradigmatic selection and the syntagmatic combination of appropriate signs are agreed within a particular community, then such a shared system of negotiating meanings and influencing behaviours becomes a *conventional code*, a language.

Having established that language implies our capacity to reflect upon what we experience. It depends upon our capacity to perceive a shared message as having some meaning beyond the medium of the message itself, as standing for something else, as being *referential*. The question arises: how were these capacities realised?

Drawing

Recent research (Pike et al. 2012) posited that members of our species Homo Sapiens (or, the authors mooted, were they Neanderthals?) had been making drawings in the caves of northern Spain 41,000 BP (before the present), 4000 years earlier than previously thought (Halverson 1992). However, research by the same team published in February this year (Hoffman et al. 2018) now dates some of those cave drawings to c.65,000 years ago¹, placing them firmly within the Neanderthal period, and dramatically closer to the development of speech as a codified means of communication, estimated as between 70,000 and 100,000 years ago by William Noble and Iain Davidson (1996: 217).

We were certainly drawing long before we were writing; Denise Schmandt-Besserat (n.d: 6) suggests a date of c.5,000 BP in Mesopotamia for the first writing – codified marks upon a surface - to represent speech. Her research corroborates the date first put forward by Gordon Childe in 1942 (1964: 58). In fact, our facility for depiction gave birth to the very notion of

written language: Davidson and Noble (1989:131) distinguish between a gesture as signal, eliciting a response in real time, and being able to see what lies behind a gesture, 'standing in' for such a posture:

Language is a system of recognizable meanings arising out of shared, and thus repeated, signs. Language, therefore, depends upon a capacity to perceive the gesture as having a meaning, as being referential. Simple response to a gesture as a stimulus is not language. *The achievement of meaningful (iconic) tracing is the essential first step.* (My italics).

The recognition that a trace *resembles* some aspect of the real object to which it refers allows the possibility of experimenting with the act of tracing. Through prolonged practice, a further insight arises from the recognition of depiction as depiction: that meaning might be attributed to something which does *not* resemble the object to which it refers; a sign which is not iconic, but quite arbitrary, a symbol. This leads to the concept of a conventional code, and opens up the possibilities of languages, where quite arbitrary sounds, gestures or marks are assigned specific meanings with the agreement of the community.

Davidson and Noble (1989) strongly support the argument that depiction is the essential first step towards written language. This is the overwhelming importance that the making of images has in human cultural history. (More will be said about this at the end of the article!)

But even in order to depict, humans must first have the ability to see...

Visual Perception

The opening sentence of John Berger's (1972:7) *Ways of Seeing* reminds us that 'Seeing comes before words.' Perception of our environment is a pre-requisite not only for moving within it and acting upon it, but for reflecting upon it and making sense of it, so as to share with others. Until James J. Gibson (1979) proposed his ecological approach to the understanding of visual perception², all theories of visual perception were based on the assumption that the retinae are passive receivers of light stimulation, stimuli which are then

processed into knowledge either by an assumed innate capacity for interpreting the stimulus (nativist theory), or by a process of unconscious inference, matching the stimulation to stored previous experiences (empiricist theory).

The fallacy in both these assumptions is the belief that the arrays of light arriving at the eyes, having been structured by reflection from the variety of surfaces with their various properties, and refraction through a variety of media (air, water), contain no information about the world, that they must be made to yield information through some kind of mental processing. But these arguments over whether knowledge comes from innate knowledge embedded in the brain, or from previously stored knowledge beg the question: knowledge about the world cannot be explained by supposing that knowledge of the world already exists. Even so, Ernst Gombrich's (1960) *Art and Illusion*, based on a mixture of nativist and empiricist ideas, is still better known than Gibson's work in the art schools. But as Norman Bryson (1983: vii) comments, Gombrich's emphasis upon perceptualism and his suppression of the social character of images leads him to the false notion that drawing is a '*record of perception*'.

Now, it may seem quite plausible to think of observational drawing as an attempt to record, to copy some aspect of the world. As we have seen, this assumption is based upon a widely-held belief in the brain's assumed ability to process from raw sense-data a mental hypothesis which 'matches' reality, and so ultimately all the fascinating questions about what drawing can mean are subsumed under questions about the psychology of the perceiver. Any such questions are appropriated by the disciplines of Science, thus many arts practitioners and art theorists have abrogated their responsibilities as inquirers into human perception, squandering their potential to contribute to the field of visual philosophy.

However, despite Gombrich's assertion, drawing is *not* the record of perception. 'A picture is not an imitation of past seeing... What it records, registers or consolidates is *information*, not sense data'. (Gibson, 1979: 280 my italics)

The function of recording information gleaned from the process of visual perception confirms drawing as a semogenic process: making a drawing is a human activity akin to the use of language, since it transforms perception of the materials of the world into cultural values - it turns matter into meaning (Halliday 2005: 59). The viewer of a drawing may be understood as an interpreter of signs. Applying Gibson's approach allows us to translate optical invariants – information about the surfaces and edges of the material environment which is contained in the structures of the arrays of light arriving at the eyes – into drawn marks, semiotic signs with semogenic potential. We are then able to interpret the culturally-determined and historically-variable conventions of drawing in terms of the underlying ecological regularities which are common to all cultural groups.

In practical terms, the drawer selects from the paradigms of the visual elements of drawing, and combines those elements to produce effects relevant to the communication of their experiences:

SELECT Elements of drawing:	COMBINE Combinations of elements produce:	COMMUNICATE Combinations stand for physical and emotional experiences of the world:
Point Line Shape (2D) Texture Tone Colour Plane	contrast proportion scale pattern rhythm	spatial depth force direction movement volume, mass, weight balance symmetry structure form (3D) surface properties observer's position(s)/mood, attitude

Table 2 Paradigmatic Selection and Syntagmatic Combination of Visual Elements

Functions and Systems of Language

Six functions of language were identified by Russian linguist Roman Jakobson (1960) in his closing remarks to the conference *Style in Language*, held at Indiana University, April 1958:

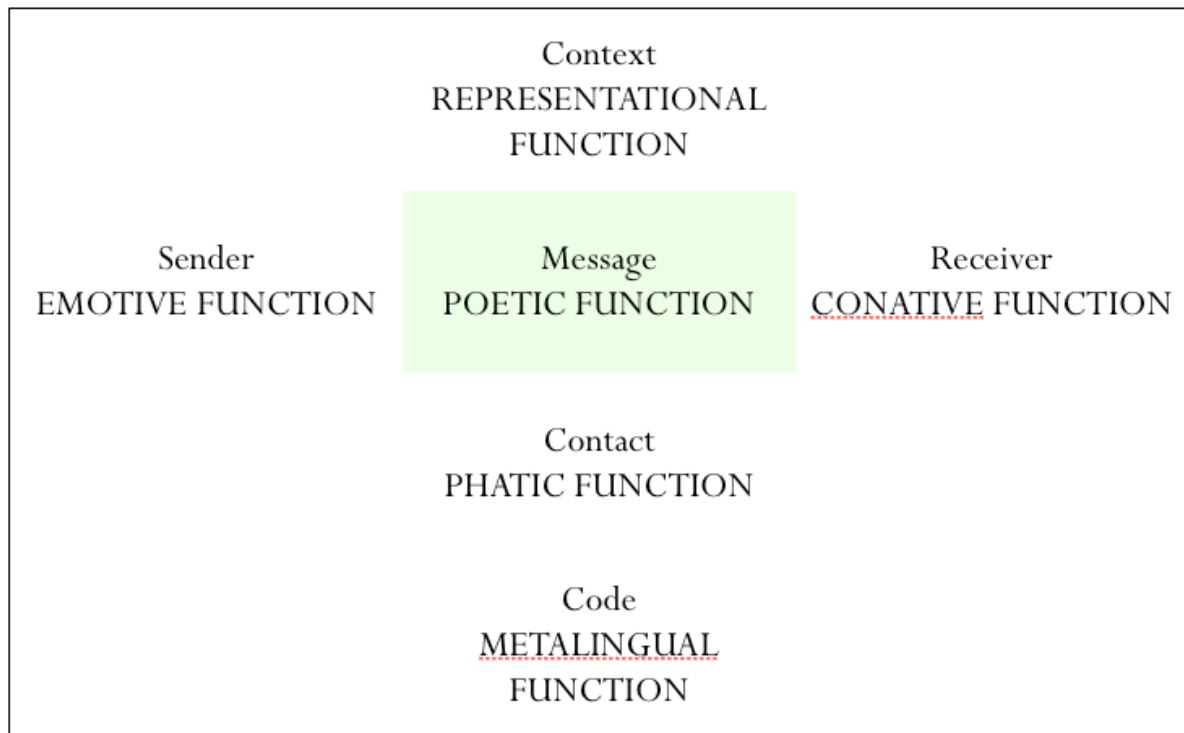


Table 3 Roman Jakobson’s Functions of Language.

Jakobson’s six functions of language were distilled by Halliday (1978: 132), who combined the *Emotive* and *Conative* functions (which, in the context of this article, relate to the drawer’s drive to express, and the viewer’s willingness to receive) into what he termed the *Interpersonal* function. Halliday also recognised that the *Phatic* function of maintaining a contact between participants in the communication process, and the *Metalingual* function of clarifying the code in use, were both implicit in the wider context of the communication process. Thus Halliday identifies three functions: the *Ideational*, synonymous with Jakobson’s *Representational*, but we shall prefer the term *Experiential* function, since it refers to the subject-matter, the experiences to be communicated; the *Interpersonal* function, relating both to the drawer’s drive to express, and how the viewer is positioned in terms of mood and attitude to what is represented; and the *Poetic* function relating to the

compositional choices made by the drawer in order to realise – make visible – their mood and attitude.. The ranges of choices available to the drawer under the Poetic function at each *Level of Engagement* , (levels from the scrutiny of individual marks in isolation and in combination, through the episodes of the drawing, to the examination of the whole work in its wider environmental contexts including framing devices, lighting arrangements and the architectural setting), and the related ranges of choices under the Interpersonal function, available to both drawer and viewers in order to adapt modally to the experiences communicated are described as *Systems* of choices. It is a term introduced by Halliday's teacher, linguist John Rupert Firth (1957) who also introduced the term *sociological linguistics* to locate the study of languages within their social perspectives, suggesting that social contexts and languages are *interdependent*: social context influences use of language; language-use influences social context. This interdependency is referred to by linguists as *register*, a concept equally applicable when visual artists consider how to compose a drawing suitable for a particular age-group, for example, or for viewers from a specialist discipline. Firth followed the Russian linguist Mikhail Bakhtin (Holquist 1981) and members of his circle formed around 1917, who had recognised that communication in all its aspects is always *dialogical*, Bakhtin's term to explain the context of situation between the participants in any act of communication.

The chart below (Table 4) is the author's latest adaptation of Halliday's triad, showing how the three *functions* of visual language may be realised through *systems* of choices at each *Level of Engagement*. Hence the term *Systemic-Functional* describing the semiotic model for communication through the medium of drawing: 'the language of displayed art' (O'Toole, 2011).

Function Level of Engagement	EXPERIENTIAL (<i>what</i> is represented: experiences of the world)	INTERPERSONAL (<i>how</i> the viewer is <i>positioned</i> in terms of <i>mood and attitude</i>)	POETIC (<i>how</i> perceptual and emotional experiences are represented)
Drawing as Displayed	<i>Proximal</i> Perceptual Values. Theme Narrative Genre Representational/abstract Interplay of Episodes.	Attitude, Modality: Intimate/Monumental Public/Private Active/Passive Rhythm/focal points: Dynamic/Static Calm/Agitated	Overall format and size. Gestalt relations: horizontals, verticals, <u>diagonals</u> . Framing devices. <u>Colour palette</u> . Systems of Geometry: <u>persp. ortho. axo.</u> etc.
Episodes of the Drawing	<i>Distal</i> Perceptual Values Primary Geometry (layout of surfaces and edges) Actions, events central to narrative. Distance between Surfaces in the Scene.	Position relative to scene (Orientation of viewer). <u>Gaze/eyework</u> Modality: happy/gloomy, calm/excited etc.	Secondary Geometry: (perspective/non perspective projections). Interplay of figures/passages Contrast of tone/texture
Combinations of Marks (sub-assemblies)	<u>Haptic</u> Perceptual Values Edges: occlusion of surfaces Direction Transparency/opacity Atmosphere Time of day	Sense of 'affordances' in the scene. Heavy/lightweight Flatness/illusions of depth	Textural Qualities of Media/Ground. Relative Positions of Marks. Relative Sizes of Marks. Division of Picture- Plane: ratios, angles. Overlap of shapes/tones
Individual Marks	Effects of light on surfaces in the environment. Spatial Depth. Scene Primitives.	Sense of textural differences. Indices of mark- maker's movements: speed, pressure.	Position and Size of Marks within Picture Plane. Interaction between Medium and Surface. Picture Primitives.

Table 4 A Systemic-Functional Semiotic Model for Drawing

Discussion

First of all, I would like to note here that Halliday's systemic-functional semiotic model for language has also been adapted convincingly by my mentor and friend Michael O'Toole (2011, 2018) to the analysis of painting, sculpture and architecture, as well as literature.

Thanks to his inspiration over a long period of time, I have been encouraged to apply my version of the model, not exclusively to the *analysis* of existing works, but to studio teaching as a means to facilitating the *synthesis* of new work, particularly in my capacity as teacher of drawing at Curtin University in Western Australia (Riley 1981), the Swansea College of Art (Riley 2001, 2014a), and the Royal College of Art (Rankin, Riley et al. 2017).

So far, this article has theorised the activity of drawing as a shareable, visible manifestation of some aspect of the relationship between the drawer and their physical, conceptual or imaginational contexts, capable of influencing viewers in terms of their contexts, and as such I argue that drawing fulfils the functions of a language.

Let's now explore the efficacy of the Systemic-Functional Semiotic Model for Drawing (Table 4) as a *driver of creativity* – a means of realising a conceptual idea in material form so that the concept is communicable with other members of the social group who share the visual language.

I have chosen not to demonstrate the transformation of perceptual experiences into drawings - the pedagogical strategy for such observational drawing activities is demonstrated elsewhere (Riley 2014b) - but to take on the challenge of finding a visual means to realise an abstract proposition: the stimulus for the series of drawings *Drawing Precedes Writing*, (examples from which are illustrated in Figures 1, 2 and 3) was the proposition that language structures our realities, implying that we structure order out of chaos, and in particular, the notion that our facility for depiction enabled the development of written codes.

The descriptive comments related to each Figure are by no means definitive statements of absolute meanings, but are offered as examples of how the *Poetic* function might stimulate the viewer (you, dear reader) to negotiate their own interpretations, their own modal responses to their experiences of the overall theme: the emergence of written language.

When the viewer engages with each of these three drawings at the Level of Engagement *Episodes of the Drawing*, then a common syntax may be discerned in their composition: the central position of the square, resting on a horizontal line effectively dividing background (in Western convention, the upper section of the picture-plane) from foreground (lower section of picture-plane), connotes physical stability and epitomises visual balance. Metaphorically, the square invites interpretation as the visible representation of the stability and dependability of our innate structuring capacity; against this unchanging compositional syntax, the variety of transformative changes from background to foreground, chaos to order, is highlighted in each of the drawings.



Figure 1 Howard Riley 2010 *Drawing Precedes Writing I*, oil pastel, graphite, charcoal and pencil on Saunders Waterford 300gsm paper, A3 size.

But each drawing has variations in its qualities at the Level of Engagement *Individual Marks*. For example, in Figure 1 the selections of chisel and scraper to gouge the paper's surface and the layers of oil pastel has produced a combination of marks indicating (the marks are indexical signs) the speed and pressure with which they were made – connotations of urgency, energy, force? Selections from the paradigm of colour connote a stormy atmosphere out of which a form of ravaged writing emerges. The impenetrable surface of the central cylinder remains unscathed, as does our innate facility for structuring...

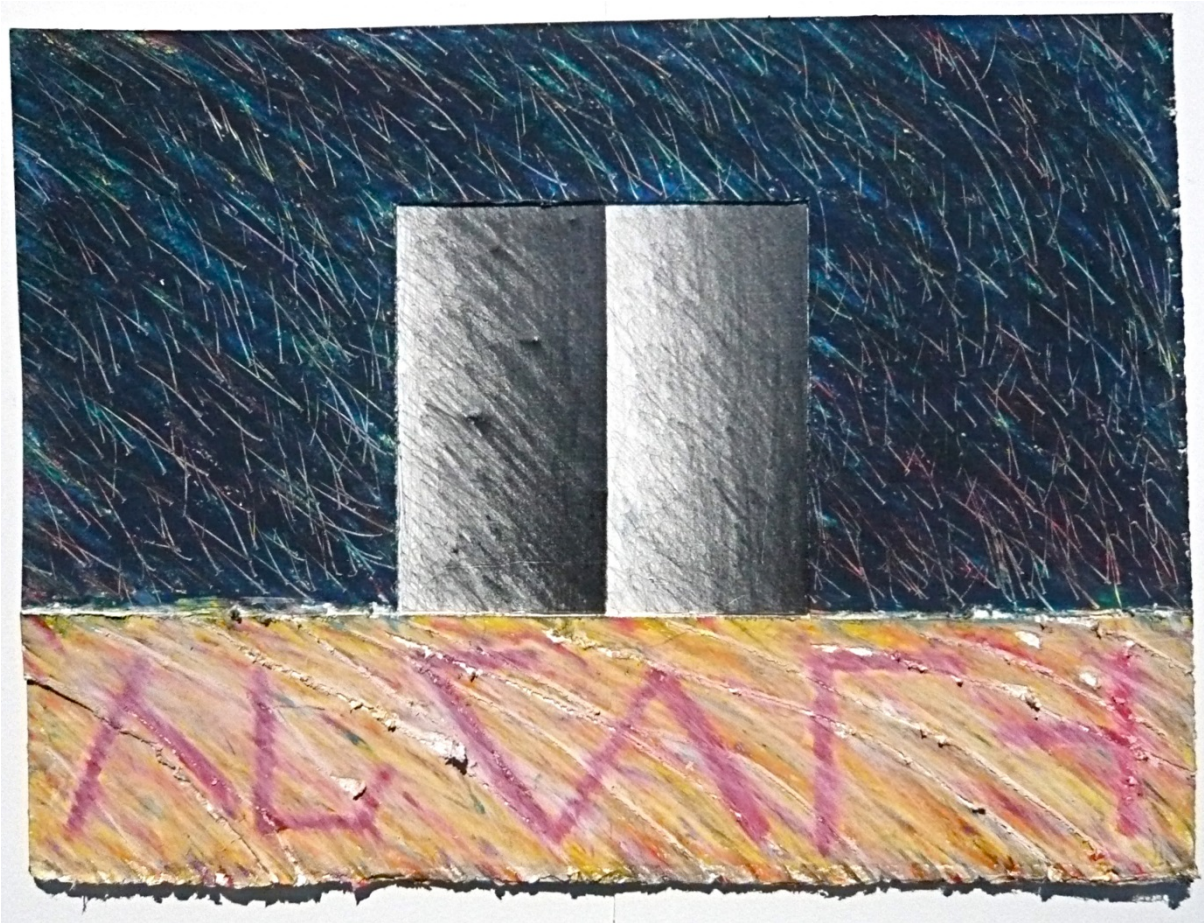


Figure 2 Howard Riley 2010 *Drawing Precedes Writing 2*, oil pastel, graphite, charcoal and pencil on Saunders Waterford 300gsm paper, A3 size.

In Figure 2, at the Level of Engagement *Combinations of Marks*, tonal and textural gradients forming sharp contrast boundaries (representing edges) produce a 'reversible figure' - the two central cylindrical forms - which invites a degree of perceptual intrigue: is the left in front of

the right, or *vice versa*? Does the ambiguity raise questions about the direction our capacity for structuring operates? Do we see the world through language, or language through the world? The foregrounded emergent symbols are embedded, integrated, within their surface: language and the material world are one – which is matter, which is meaning?



Figure 3 Howard Riley 2010 *Drawing Precedes Writing 5*, oil pastel, graphite, charcoal and pencil on Saunders Waterford 300gsm paper, A3 size.

Symbolic language, in all its written forms, appears to have emerged from a background world of visual ambiguity, *via* our innate capacity for structuring chaos into order, and has permeated our observations of the material world to such an extent that the two have become one: language is the filter through which we perceive the world, it becomes transparent, interwoven with our perception of the fabric of the material world, yet its visible form – writing - remains forever arbitrary, forever open to negotiation. Thus, drawing affords –

reveals - understanding, it is a source of knowledge, a language through which knowledge is shared.

Postscript: The three R's revisited

The overwhelming importance that the making of images has in human cultural history has been mentioned earlier in this article. Yet our education system still doesn't fully recognise the importance of nurturing drawing. At this point, I confess I am about to repeat myself, (see for example, Riley 2017: 280) but I plead, along with Nelson Goodman (1978: ix-x) that: 'My experience with students and commentators has not convinced me that reiteration is needless.'

We have a word for being articulate with words: *literacy*. We have a word for being articulate with numbers: *numeracy*. But no widely-accepted word for an articulacy with images.

The three *R*'s, *Reading*, *wRiting* and *aRithmetic*, are generally agreed to stand for the important educational priorities of literacy and numeracy. However, *wRiting* itself is implicit evidence of another faculty of educational value: our ability to inscribe marks upon a surface so as to make meaningful representations of our experiences visible to others.

It may be argued that the centrality of *wRiting* within the familiar mantra has usurped the cultural importance of that other faculty for which there is no name. I first tentatively proposed *visualcy*³ some time ago as being appropriate (Riley 2002: 150), and since then my case for such an invented term has been strengthened by W.J.T. Mitchell's (2008: 11) advocacy. The neologism refers to the distinct capacity of the human mind that Bruce Archer identified as 'analogous with the language capacity and the mathematical capacity for cognitive modelling' (Archer and Roberts, 1979). Deanna Petherbridge (1991) has commented that 'Drawing is the primal means of symbolic communication, which predates and embraces writing, and functions as a tool of conceptualisation parallel with language.'

In the wake of such authorities, a more balanced and coherent version of the three R's may be proposed: Reading, *Routing*, and 'Rithmetic. According to the *Oxford English Dictionary*, to rout means 'to cut a groove in a surface'. A router is 'one who routs out or draws forth'. These are venerable words, redolent of a pre-industrialised era. However, here they are revitalised, to remind us of the hand/eye co-ordination essential to much material cultural production even in this digital age of the twenty-first century, and to remind us that the language of drawing facilitates the uniquely-human aspiration to share through visual communication our physical, emotional and spiritual experiences of the world.

Notes

1 It should be noted that this date is challenged by Slimak (et al. September 2018) on grounds of scientific dating techniques. They argue a date of 47,000 BP is more consistent with the archaeological background. However, Hoffman (et al. October 2018b) refute the challenge. Watch this space!

2 James Jerome Gibson explained his notion of 'direct' visual perception thus: '...the seeing of an environment by an observer existing in that environment is direct in that it is not mediated by visual sensations or sense data. The phenomenal visual world of surfaces, objects, and the ground under one's feet is quite different from the phenomenal visual field of colour patches. I assert that the latter experience...is not entailed in the former. Direct perception is not based on the having of sensations. The suggestion will be that it is based on the pickup of information.' (Gibson 1972: 215).

3 James Elkins (2008:1-2) notes the term '...*visual literacy* has been in uncommon but intermittent use for over a hundred and fifty years', and reports a definition as 'understanding how people perceive objects, interpret what they see, and what they learn from them.' My neologism, *visualcy*, embraces not only this sense of understanding, but also the facility for *producing the means to understanding through the articulation of visual elements in the construction of images*. This more pro-active definition is in line with Gina Burkhardt's (et al. 2003: 15) acknowledgement of the demands of the expanded field of the digital age: visual literacy is described as 'the ability to interpret, use, appreciate and create image and video using both conventional and 21st century media in ways that advance thinking, decision making, communication and learning.' Ways of nurturing this ability, which I have described as an 'intelligence of seeing', are offered in Riley (2008) and Rankin, Riley (et al. 2017).

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