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Picturing Currere: Envisioning-experiences within learning

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Although technology is becoming increasingly audio-visually oriented, it is also causing ever-greater volumes of text to be produced. Yet literacy skills are seriously declining, and education bears the blame. This paper explores complexities in interrelationships between words and pictures and sounds, learning and teaching and knowing, experiences and actions and outcomes, in ways that suggest the importance of other views of the world than those the conventional curriculum privileges. ‘Picturing’ is proposed as being complementary to the theory/method of currere to envision experiences within learning for emerging worlds of complexity.

Glancing about the title

Why ‘picturing’? Because the word embodies an enactive sense, which reminds me that as a young learner I was encouraged to make and use pictures to express myself. I have continued to work and play with picturing through my life, and I believe this has enabled me to interpret and understand my complex experiences in the world differently. For example, picturing opened me to seeing ecology like a fractal – a geometric form, which does not become simpler when magnified or reduced – and includes forms such as trees, riverbeds, arteries, and electrical discharges (Davis, Sumara and Luce-Kapler, 2000). Another way of explaining picturing is to suggest that if it was a conventional language most adults would not be able to write it, because most ‘never “learned” to draw’. Consider how peoples’ experiences might be if they could only read. Yet this is how picturing becomes for many younger learners. Just as they begin to tacitly use picturing to express themselves and communicate with others, through drawings, paintings, and sculpting, they are taught that they must learn a system of communicating – that is, using words – and their picturing capabilities are, mostly, forgotten. Rhoda Kellogg (1958), who undertook a comprehensive study of children’s pictures¹, concluded: ‘If art could longer remain untaught we might all retain more of childhood’s natural artistic ability’ (p. 57).

Currere is William Pinar and Madeleine Grumet’s (1976) term for a re-conceptualisation of curriculum, which draws on personal interpretations of past, present, and future education experiences, to generate meaning for complexity in living. I have taken currere to heart because it is empathetic with my picturing of it as a vital coursing of learning, in contrast to the objective teaching-to-learn course of the conventional curriculum concept.

Picturing currere is my way of signifying a gestalt-like suite of meanings, which interconnect picturing with currere. Meanings such as: envisaging currere – forming an exploratory ‘minds eye’ view; re-visionsing currere –

¹ Kellogg studied 100,000 drawings made by some 8000 children (1958, pp. 28-29).
interpreting and understanding the conception as more complementary, than supplementary; and visualising currere – enactively performing these conceptions as ecological experiences-processes for learning-teaching. These are meanings that are generative for my picturing currere as envisioning-experiences within learning. Envisioning-experiences is my way of referring to the complexity of learners’ authentic personal experiences for knowing; the moments in spaces, and occasions within situations, which enable learners and teachers to intimately perceive, engage, and interact with each other’s knowing. This experiential picture for learning and knowing – currere – contrasts with more common concepts of curriculum as the detached and complicated prescriptions that apprehend and qualify methods of learning, that is, of being taught knowledge. I believe that picturing helps to vivify, or bring life to, currere. I see this happening through the re-visioning of the predominantly textual structures of curriculum – the setting out of what comprises teaching of and to learners and how that is constituted – to reveal expanding vistas of learning and teaching experiences.

Pictures in an exhibition

Through this paper I am attempting to portray my ideas about picturing and learning and teaching, by bringing picturing together with words as complementary and generative expressions. Usually, a ‘paper’ is expected to conform to certain rules, which implies a structured linear and hierarchical arrangement of, mostly, words. Therefore, to help see my picturing within and through this structure, I invite the reader to approach my paper more like pictures in an exhibition (or, for the musically minded, jazz on a summer’s day) than pages in a document. That is, to consider the various items as not necessarily bound in the order they appear for advancement to a conclusion, but as being more inter-dependently and diversely generative for imaginative interpretations.

The items I am exhibiting (or, performing) interpret three themes: text, as the dominant medium of communication and knowledge; pictures, for their complex capability to fulfil more than their usual supporting role; and enactivism, a comparatively recent theory for learning and teaching that enables a different way of acting.

To begin, here is an overture picturing the themes as a complex continuum.

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2 ‘Ecological’ is a term that has been appropriated (and) misappropriated to serve many causes. I deconstruct the term to refer to complex organism/environment/energy inter-relationships reflected through being-living-learning in eco (dwelling place) and logos (knowing).

3 I use ‘authentic’ to signify the availability of critical interpretations of modernist ‘experiences’. For example, a typical modernist ‘experience’ generally privileges causal interpretations of outcomes, based on what can be directly observed – drought results from absence of rain. Alternatively, critical interpretations of such ‘experiences’ are concerned for complexities, which interconnect processes with interpretations, within experiences – rain and drought are complexly interrelated in cycles of climatic experiences (See, for example, Kesson & Oliver, 2002).
Picturing

pictures to help us to see thoughts our languages express to generate ideas music represents


The statement that appears above and below the picture is printed on both sides of a paper strip, which has been made into a Möbius strip. A Möbius strip is a loop with a continuous surface formed by twisting the strip and joining the ends together.

‘Pictures’ means any images, realistic or abstract, that people make/use in the course of attempting to express meaning in their lives. ‘Pictures’ is also a way of resisting the privilege many people attach to ‘art’, as in ‘I was never any good at art’.

‘Languages’ means any arrangement of sounds and/or visual symbols – phonetic, alphabetic, or numeric – that people use to communicate with each other.

‘Generate’ means all that comes into being to continue to become. ‘Generate’ is well represented by thinking of children, with the gamut of thoughts that embodies: Us generating children coming into being, their generative4 growing to become a generation, and then themselves generating another coming into being, and so on. ‘Generate’ is also involved in a complex interrelationship with ‘create’, as concepts that nest

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4 The term ‘generative’ has been used in educational literature as a synonym for ‘constructivist’, in particular by science educators (See, for example, Osborne and Freyburg, 1985). Following Andy Begg’s (1999) review of Enactivist theory, which critiques constructivism, I would call my use of generative ‘post-constructivist’.
within each other like, chicken and egg, colony and ant, or complex and simple.

‘Ideas’ expresses the notion of ‘thinking-thoughts’. That is, a making-meaning, process-production cycle within the complexity of world-body-mind interrelationships. Ideas do not arise without this complexity.

‘Music’ expresses the notion of abstract-concrete-abstract complexity the whole statement embodies. Music is the enactive embodiment of the aural-tactile-visual/temporal-spatial-dimensional experiences that pictures reflect and languages express towards generative ideas (such as in music).

Therefore, the complexity of the whole statement is reflected in the picture of a Möbius strip (see Picture 1), which symbolises the infinitely recursive continuum of all concepts. There is no beginning, nor ending, nor hierarchy – there is an inter-dependently interrelated continuum of concrete sayings, interpretive picturings, and generative abstractions, like music – [without a full stop]

Txt\textsuperscript{5}-ing – the economic dominion of word-power?

We are living in a paradoxical age where, on the one hand, complaints abound about the demise of literacy, and on the other hand, where text is supplanting speech. As a consequence of technology, humans are generating ever-greater volumes of text. But, it is text of ever-worsening quality.

William Paulson (2001) writing about ‘literary culture\textsuperscript{6}, expresses concern for what he foresees as its degeneration, which he attributes to two problematics: A turning away from ‘print, literature, and the past so as to put our critical acumen in the service of studying audiovisual and electronic media, popular culture, and the present’ (p. ix); and, ‘the tautology that the humanities have been centered in human practices, meanings, and relations: their relation to the non-human things of the world seems, by comparison, tenuous, problematic, and perhaps even nonexistent’ (pp. ix-x). Paulson states that his mission is to make the ‘strangeness and multiplicity of literary culture part of an always interdisciplinary or a-disciplinary education of world citizens—in all the worlds dimensions’ (p. xi).

I have drawn Paulson into my picture for three reasons: One, to rehearse my position that I am not anti-words, but I am critical of their assumed hierarchy for power and control; two, to show that the problems and concerns I am picturing are deeply seated, diversely situated and pervasive; and three, to segue to another picture, which entertains an ironic literary diversion playing on ideas within words, to introduce my pictur-think-ing upon ‘strangeness, and multiplicity…of an always interdisciplinary or a disciplinary education’.

\textsuperscript{5} ‘Txt’ is a reference to the irony of telephone technology being increasingly used to transmit text messages using an ‘economised’ language form (for example, pls txt me = please text me) in place of speaking, because of the cost-benefit to the caller.

\textsuperscript{6} Paulson notes that literary culture ‘is a nonstandard term, one that brings together the several related ways in which there is a culture associated with literature. If it is possible to speak of literary culture… this is because the works of literature…institutions…communities…ways of thinking and acting form an interdependent ensemble, a recognizable cluster of artifacts, interests, activities, and beliefs’ (p. 26).
Therolinguistics

It was Professor Duby who, by pointing out the remote affiliation of the script with Low Greylag, made possible the first tentative glossary of Penguin. The analogies with Dolphin which had been employed up to that time never proved very useful, and were often misleading.

Indeed it seemed strange that a script written almost entirely in wings, neck, and air should prove the key to the poetry of short-necked, flipper-winged water-writers. But we should not have found it so strange if we had kept in mind the fact that penguins are, despite all evidence to the contrary, birds (Le Guin, 1983, p. 6).

Picture 2. ‘The first tentative glossary of Penguin’ (by the author, 2003).

Imagining

As my picturing of Ursula Le Guin’s ironical ‘report’ depicts (see Picture 2), human learning, thinking, and knowing appear embedded in such an elite textual domain that knowing and learning otherwise, seems practically unthinkable. Therefore, to disrupt what I consider the hegemony of the textual domain, I try to imagine language concepts otherwise—much as Le Guin (1983) has imagined...

that so late as the mid-twentieth century, most scientists, and many artists, did not believe that even Dolphin would ever be comprehensible to the human brain — or worth comprehending! Let another century pass, and we may seem equally laughable. ‘Do you realise,’ the phytolinguist will say to the aesthetic critic, ‘that they couldn’t even read Eggplant?’ (p. 11).
Words like these, help to make strange and disrupt thinking about the privileged system of words, in ways other than the conditioning of textual interpretation usually demands, towards more imaginative learning and thinking and knowing. As my title declares, picturing is another way, although not for negating words, but for complexifying a currere⁷ - of learning and thinking and knowing.

However, the hegemony of words keeps pictures in the margins, playing a supporting role by illuminating the dominance of words. Even the word ‘illuminate’ reflects the historical subordination of pictures in its meaning, that is, to decorate the initial letter of a text or manuscript. Today, the hegemony continues through, for example, the re-imaging of ‘icons’ as symbols on the computer desktop for the supportive ‘mouse’ to click on. But, only as an adjunct to the over-riding power of the keyboard.

**Logos/Logos**

I picture the expression ‘seeing is believing’ cloaking a paradoxical power relationship between picturing and using words. This is exemplified in the heading above, which points to different interpretations of the same word. On the one hand there is a modern interpretation that appeals to seeing/recognising in a picturing manner, and on the other hand, an ancient interpretation, which appeals to a reading (hearing)/believing, in the manner of words. The non-italicised word conveys the modern (plural) sense of emblematic designs that identify organisations, in a picturing manner – seeing McDonald’s Golden Arches produces a corresponding belief about the products available close by. Whereas, Logos conveys the ancient sense, which signifies the articulated principle of reason and judgement; the pronouncement of why something is believed to be so – through divine intervention (the Word of God), systematic logic (the technique of reason), or empirical evidence (scientific ‘truth’). Therefore, I am proposing that the difference between the ancient and modern senses of the word is, perhaps, a matter of power-brokering. That is, in the pervasion of powerful, modern logos throughout the world, an authority has been assigned to them similar to that of Logos and, thereby, they authorise new rules. For example, Naomi Klein (2000) asserts that ‘[l]ogos, by the force of ubiquity, have become the closest thing we have to an international language, recognized and understood in many more places than English’ (p. xx). Klein goes on to explain how logos valorise and validate global territories for their corporations; logos that are legal brands and marks notified by ©™® symbols and defended to the hilt by armies of lawyers. No longer merely stylised words, these ‘imagineered’ brands/marks are legally defined by textual terms such as ‘swoosh’ for Nike, ‘curve’ for Coke, and ‘arches’ for McDonald’s (see Picture 3), and they pinpoint channels, franchises and outlets that territorialise a new global regime.

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⁷ Robert Graham’s (1992) review of currere and reconceptualism interprets ‘a method for giving voice to private experience within a public setting and [which] speaks to the developing structures of a student’s personality as it interacts with social and institutional forms and structures’ (pp. 35-36).
Perhaps, if there is a difference between logos and Logos, it is that the former symbolises the power of the latter, and each recursively re-enforces the logic for so doing. To put it textually: Seeing the sign – recapitulates – believing the Word, and so on. Although logos are concrete, tangible objects, and Logos is an abstract, subjective concept, both appeal to us to see them and believe in them. Furthermore, they appear to be increasingly complicit in a manipulative conflation of objective experience and its subjective interpretation; to have us believe something, which, more often than not, is at odds with our authentic experiences. For example, in the way that British Petroleum has reworded its identity to be read as ‘beyond petroleum’ and redesigned its logo from a shield to a sunburst/flower (see Picture 4) to ‘better’ reflect a view that scientific manipulation of the earth’s environment does not threaten its ecology.

BP has unveiled a new ‘green’ brand image, in an attempt to win over environmentally aware consumers. The new green, white and yellow logo replaces the BP shield and is designed to show the company’s commitment to the environment and solar power. The company is to revert to its old name of BP…and adopt a new slogan ‘Beyond Petroleum’…But environmentalists have yet to be convinced. ‘This is a triumph of style over substance. BP spent more on their logo this year than they did on renewable energy last year,’ the environmentalist group Greenpeace said. ‘BP doesn’t stand for Beyond Petroleum. It stands for Burning the Planet,’ it added (BBC News, 2000).
It's a dot.com.world

To help resolve the problematic seeing (not what it seems) believing paradox, the logos/Logos regime has devised new comprehensive rules about thinking, learning, and knowing to cover spaces in ‘virtual reality’. Information and communication technologies (ICT) exemplify such spaces, and among examples of the new spaces/rules are the cellphone ‘txt’ lexicon, email ‘netiquette’, Microsoft ‘Word’, and the Google ‘search engine’, which are changing languages – ‘globally’. However, the Internet with its World Wide Web generally typifies the virtual effects of technology on words. The origins of the Internet can be traced to military research in the 1970’s and the need for a ‘communication, command, and control network that could survive nuclear attack by having no central control’ (Rheingold, 1994, p. 7). Although, over the intervening quarter-century, much has been made of the socially democratic potential of the Internet, the realities have tended to demonstrate the strengthening of its communication, command, and – de-centralised (globalised) – control attributes.

Most significantly, these features are reaching out to a particular audience – children. Writing about his recent study of childhood in a corporate world, Sumana Kasturi (2002) claims that a characteristic of the Internet is its popularity with the young: ‘In general, children are considered to be early adopters of high-tech products. Stories of youngsters spending hours browsing the Net, and of running Web-based businesses, abound and are an indication of the ease with which the Internet has become a part of their lives’ (p. 40). Although there are those who would hold this up as exemplifying positive benefits of the technology, as Kasturi points out: ‘Globalization, media concentration, and the ever-increasing access of children all over the world to both traditional and newer forms of the media have resulted in the universalization of a certain model of childhood as “natural” and “ideal” in a contemporary urban society’ (p. 40). Using textual analysis to review the Disney Corporation’s Web sites, Kasturi concluded that Disney is in the business of teaching people how to be good consumers, ‘by constructing and propagating a worldview compatible with its own corporate interests, one that erases problems of social and economic dimensions, to be replaced by a whitewashed version of homogeneity that is neither true nor democratic’ (p. 54). Once again the power of confusing and conflating symbols and words – symbolised words – becomes genealogically apparent through the exploitive expansionism of Walt Disney’s original ‘Disneyland, Disneyworld,’ colonisation ideology. For example, by appropriating classic children’s literature characters like Winnie the Pooh into the corporate ‘family’ (see Picture 5).
Joe Kincheloe (1997, 2001, 2002) has also written on the power that corporations wield over children. His observations, which focus on McDonald’s restaurants, point to a similarity between the ideological ambitions of Walt Disney and those of McDonald’s founder³ Ray Kroc who, Kincheloe observes, ‘was obsessed with positioning his chain of restaurants in opposition to the social changes he saw occurring around him in the 1960’s’ (2002, p. 81). According to Kincheloe, Kroc’s priority was to protect traditional (American) values and to make McDonald’s a ‘family kind of place’ with advertising that deployed home and family as ‘paleosymbols—signifiers of our oldest and most basic belief structures’ to connect families to the ‘American way of life’ (p. 81). Furthermore, Kincheloe identifies McDonald’s family values theme as ‘one of the most successful campaigns in advertising history’ (p. 82).

Today, the ‘world ideals’ of Walt Disney’s ‘family’ – signified by his ‘hand-lettered’ signature – and Ray Kroc’s ‘family values’ – symbolised by his ‘Golden Arches’ – are intellectual properties of inestimable financial worth to the corporations that resolutely protect them⁹. To paraphrase Kincheloe (2002): It is about selling social relations and ideology, not about selling hamburgers (p. 82).

The picture I have tried to make here is one that shows my fear that we are losing sight of the controlling power with which words are used – especially in subsuming and subverting images – to make us believe in a world that is at odds with the one we authentically experience. I believe my fear is heightened by my capability for ‘seeing’ in ways other than those that my teachers instructed me to learn through their curriculum. I came to believe very early in my learning life that I was at odds with that concept of curriculum, and it has taken me many years to discover another conception that I am more comfortable with.

**Curriculum method and currere processes**

I interpret curriculum and currere as distinct concepts, typically, with curriculum signifying a methodical system for the management of

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³ Ray Kroc was the ‘founder’ of McDonald’s Corporation. Brothers Dick and ‘Mac’ McDonald opened their first McDonald’s restaurant in California in 1948. Kroc acquired franchise rights and formed the corporation in 1955, and bought out the McDonald brothers in 1961 (McDonald’s Corporation, 2003).

⁹ For example, McDonald’s in the UK spent several million dollars on a libel action against two unemployed activists (Vidal, 1997).
education, and currere signifying experiential learning and teaching processes within, through, and beyond education.

Curriculum, as an educational term, developed from an invention for organising knowledge as a ‘method’ (Hamilton, 1990). Its present and predominant formulation – complemented by my picture of ‘The Curriculum Organiser’ (see Picture 6) – is the managing of that method by organising what knowledge is taught, how it is taught, and how the teaching of knowledge is measured as learning effects.

![Picture 6. The Curriculum Organiser (by the author, 2003).](image)

A container designed to methodically partition different projects, plans, subjects and content in a logical arrangement, but allowing for easy modifications to accommodate frequent organisational reforms.

Intersecting this construction of curriculum is currere, which is a (re)conception of curriculum towards personal learning experiences, or, a way of making the silences of educational experiences personally speak to broader perspectives of learning about increasingly diverse and complex knowledge(s) (Doll, 1993, Graham, 1992, Pinar, 1975, Pinar and Grumet, 1976, Pinar, 1994). My picture ‘Complexity in currere-learning-teaching’ (see Picture 7) is an early attempt to conceptualise currere through the synthetical phase of its method. That is, to answer Pinar’s (1994) question: ‘What conceptual gestalt is finally visible?’ (p. 27).
Picture 7. Complexity in currere-learning-teaching (by the author, 2002). A way of projecting for ‘seeing’ how complexity might be represented as a conception that, when illuminated in three different ways, reveals more than the whole displays. My design was inspired by Douglas Hofstadter’s (1980) ‘The “GEB” trip-let casting its three orthogonal shadows’ (p. 1). Hofstadter writes that what he intended as an essay concerning Gödel expanded like a sphere to touch Bach and Escher ‘But finally I realized that to me Gödel and Escher and Bach were only shadows cast in different directions by the some central solid essence. I tried to reconstruct the central object and came up with this book’ (p. 28).

Therefore curriculum and currere can also be seen as different conceptions representing differing worldviews, with curriculum characterising a modernist worldview and currere characterising postmodern views of, and attitudes towards, the world. Differences in these positions include: In curriculum, the empirically-based rational construction of knowledge and the objectivist structuring of teaching for individualistic, economically privileged learning outcomes (See, for example, Apple, 1995, Gabbard, 2000, Popkewitz, 2000); and with currere, phenomenologically and existentially conscious ecological processes of learning and teaching experiences for complexly collective generativity (See, for example, Doll, 1993, Grumet, 1988, Pinar, 1998). In other words, whereas curriculum signifies the effective course of teaching learning for earning achievement, currere concerns generative coursing concepts about learning and teaching in living experiences.

Thus my notion of picturing currere a-scribes\(^\text{10}\) to, and is generative for, an ecological idea of learning and teaching expressed as ‘coursing experiences’. Through this expression I mean to generate a metaphor for a ‘throbbing’\(^\text{11}\) (Kesson and Oliver, 2002) curricular ‘organocentricity’\(^\text{12}\) (Fleener, 2002), which I envision in a recursive organism/environment/energy circulatory continuum. That is, of picturing a biological circulatory system – food/body/blood – having similarities with a psychical circulatory system as environmental/organism/energetic complexes (see Picture 8).

\(^{10}\) My added hyphen emphasises a deconstructive reading as ‘a’ – adding to, ‘scribes’ – writing.

\(^{11}\) Kathleen Kesson and Donald Oliver propose the need for: ‘Throb: A re-conceptualized theory of experience… – the flowing conversation/story of life in the ever-present, vibrating moment’ (p. 191).

\(^{12}\) M. Jayne Fleener (2002) writes, ‘[a]n organocentric curriculum as an organism/environment complex maintains Doll’s five characteristics of a postmodern curriculum as: currere, complexity, cosmology, conversation, and community’ (p. 160).
Blood-mind (by the author, 2001).

A way of picturing interrelationships within analogous complexities of psychical world-body-mind and physical world-body-blood.

My imaginative circulatory system also embodies ideas of reciprocity within organism/environmental complexes as dynamically interactive exchanges – ingestion, conversion, transformation, excretion – which invites a return to a genealogical view of the psychic and physic realms. Re-minding thinking about learning

Proximate to the development of the curriculum ‘method’, attention was also being focused on the idea of the human mind’s ability to ‘see’. Arnold Pacey (1999) quotes Alfred Crosby’s claim that in the 15th and 16th centuries, a “shift to the visual” had the effect of “striking the match” that set the scientific revolution ablaze’ (Crosby, 1997, quoted in Pacey, p. 53). Pacey observes that the significance of visualisation is ‘that the distinction between objective and subjective experience became a distinction between what could be seen and what could not’ (p. 53). Quoting Crosby further, Pacey writes ‘visualization, together with objective, quantified measurement, was used to “snap the padlock on nature”...Even music, he says, could be interpreted visually after musical notation had evolved’ (p. 53).

Writing on the complexity of meaning in relation to technology, Pacey considers more recent ideas around thinking visually, and comments on relationships between artists who have re-envisioned world views and consequent scientific ‘discoveries’. Quoting Leonard Shlain, Pacey writes that ‘artists have regularly challenged conventional assumptions about

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13 I have hyphenated ‘re-minding’ to signify my deconstructive interpretation of re – anew, afresh conceptions of minding – caring mindfulness.
space, time, and light...[And] innovation in nineteenth-century painting may have prepared people’s minds for the new insights offered by relativity and quantum mechanics, however abstract they may be’ (Shlain, 1991, quoted in Pacey, p. 54). However, views such as these also emphasise the tension that continues to separate the aesthetic from the scientific, with the former pejoratively characterised as ‘woolly’ or ‘fuzzy’, and the latter as ‘hard-edged’ or ‘narrow-minded’. Pacey touches on the paradox in this tension by referring to the generativity of fractals that ‘makes complex relationships accessible to the “intuition”’ (p. 55). He defines ‘intuition’ as ‘thinking...in which ideas emerge from visual experience without intermediate stages of verbal reasoning – ideas that can then be discussed verbally or tested using mathematics or experiment’ (p. 55).

Drawing his explorations of visual thinking together, Pacey writes: ‘Effective science has to clothe theory with words and mathematics, with constructs such as “causality,” and now we can say, with visual imagery’ (p. 56), thus echoing my thoughts on the hegemony of words (and their conflation with symbols). However, he also comments on the inquiries of women researchers, such as Anne Roe (1953), Margaret Shotton (1989), and Sherry Turkle (1984) into the ‘masculinity’ of science, and their interpretations, including scientific thought as ‘imageless thinking’ and the ‘masculine image’ of science (cited in Pacey 1999, p. 56). Pacey then says that ‘what is peculiar about “masculine science” is not visual thinking as such...but rather the emotion-avoiding, object-centered thinking strategy’ (p. 56). A strategy, he suggests, that is ‘nicely caricatured in the fictional writings of Douglas Adams’ (p. 56). Although Adams (1982) is well-known for his aphorism on the answer to Life, the Universe and Everything being ‘42’, Pacey notes that ‘in the context of chaos theory...[Adams] suggests that “the closest...human beings come to expressing our understanding of these natural complexities is in music”’ (p. 57).

Pacey’s perceptive readings of meanings in technology continue to generate complexities-within-complexities, which not only reminds us of the male privilege that has historicised technology, but also reminds us to reflect on how complexly jazz musicians play with a theme by improvising – ‘jamming’ – with each other’s performances. These performances are not scored or rehearsed events, they are impromptu happenings, and their ‘quality’ is experienced through a sensory ‘palate’, which includes temporal, spatial, dimensional heuristics that are analogous with an artist’s ‘palette’.

The theme I am improvising with – by playing with other curricular thinker/worker performances – is that the conventional curriculum is, like masculine science and technology, no longer fitting the needs of learners, or teachers for that matter. Rather, there is an ‘intuiting’ – in Pacey’s non-worded reasoning sense – that what they, as learners, are being taught to learn and what they, as teachers, are being instructed to teach is incommensurable with their authentic – currere – experiences as learners and teachers. To put it colloquially: ‘Curriculum and learning just ain’t jammin’.
Acting differently

Brent Davis (1996) writes of the term ‘complexification’ as a recent addition to the English language that appeals to him because it points away from attempts to impose linear and causal models onto phenomena and toward embracing the difficulty and ambiguity of existence [Also,] it is a new word – a new pattern of acting’ (p.xvii). Davis adds that generating new words, or using words in new ways, interrupts commonsense notions that frame our actions. We enable ourselves to act differently’ (p. xvii, my bold emphasis). I adopt this idea of enabling ourselves to act differently as a helpful heuristic for understanding the theory of enactivism that is Davis’s interpretive framework. Although Davis’s book is subtitled ‘Toward a sound alternative’ – and is principally about re-framing mathematics pedagogy away from being visually privileged and towards more auditory awareness – his ideas and arguments are also helpful to my picturing proposals. This is because his concerns are also about inter/dis/rupting structures that constrain learning. Furthermore, by drawing on Davis’s sonorous conceptions, I am also acknowledging the diverse complexity of perception experiences for cognition, and recognising picturing as another contributor to the whole complex of experiences. In a reciprocal manner, Davis also acknowledges the similarly complex role of imagery with his own picture on the book’s cover (see Picture 9).

A complex image, sounding out alternatives to ways of seeing.

This drawing exemplifies the complex instability and ambiguity of many patterns that are often (mis)taken to be concretely set, particularly in the modernist world. Susan Pirie (1996) in her foreword to Davis, uses this image to introduce the importance of context to seeing differently:

My first construal focused on the fetus curled at the heart of a recursively growing world, a new life connected to, developing from, and feeding
on the richness of its past, but emerging from the many chambers of its history to display the art of teaching afresh (p. xi).

Noting that her construal lacked the context of the book’s title, Pirie asks whether other viewers may see ‘An ear, alert to the whisperings of understanding filtered from the reverberating clamor that plays around the nautilus shell?’ (p. xi). In another context, the ear/nautilus shell image/metaphor features as a symbol for the New Zealand education curriculum documentation where it is used to codify the seven essential learning areas (see Picture 10).

![Picture 10. Essential learning areas (Ministry of Education, 1993, p. 8).](image)

The compartmentalisation of essential learning.

Although the images in pictures 9 & 10 are both quite graphic, their respective interpretations – the subtlety of the former and the directness of the latter – illustrate how differently context affects meaning making. Moreover, they picture an object that is easily conceived of in ‘the round’, and one that is often thought of as being held to make and hear sounds. It is through this visual/aural/tactile-generative/affective complex that I turn towards the idea of haptic experiences.

**Haptic tactics**

Although haptic and tactic have the sense of touch in common, their meanings are poles apart. ‘Haptic’ has an abstract connotation that, as a related word such a haphazard suggests, involves an absence of the organisational structure and order that ‘tactic’ specifically denotes. In my mind, the term ‘haptic tactics’ offers a sort of paradoxical interplay, which picture11 helps to picture.
The left side of picture 11 represents currere – as imaginatively haptic, spatially abstract, temporally fluxing, and cognitively tentative (in the sense of feeling and trying). The right side of picture 11 represents curriculum – as diagrammatically tactical, spatially structured, temporally divided, and cognitively explicit. Although both images draw on the same metaphor, the purposes the metaphor is put to and the heuristics available from each image are quite different. On the one hand, the left side of picture 11 metaphorically ‘echoes’ the irreducible complexity of diverse worlds of learning experiences, and complements Davis’s (1996) vision of currere as an acknowledgment of the relational basis of our knowing (and being) and a recognition of the happenstantial, constantly negotiated nature of our existence… One’s focus is thus set not on the path (because the course has not been predetermined) but on negotiating a path: on currere, running; on the instant of interpretation; on doing (pp. 90-1).

On the other hand, the right side of picture 11 employs the metaphor to reductively ‘frame’ subjects of knowledge into separate learning compartments in a way that graphically rhetorically describes Thomas Popkewitz’s (1997) description of a tactical curriculum, which is a disciplinary technology that directs how the individual is to act, feel, talk, and ‘see’ the world and ‘self’…Curriculum deploys power through the manner in which and the condition on which knowledge is selected, organized, and evaluated in schools (pp. 154-5).

I see the respective uses of the metaphor illustrating their user’s differing worldviews, and thus each reflects the distinctive ethos the user brings to experiencing their knowing/knowledge concepts of their ‘world’. Whereas currereists\textsuperscript{15} embrace a haptically ecological worldview to enactively vivify

\textsuperscript{14} After communicating with the principal writer and the art editor of *The New Zealand Curriculum Framework* (Ministry of Education, 1993), which first featured the nautilus device, I learned that the nautilus resulted from the art editor’s suggested concept of a shell, which also reflected the Māori *koru* (spiral) design. The principal writer’s impression was that the image also helped to overcome some misperceptions that the curriculum framework had adopted a lock-step approach (David Wood, 2 October 2002; and Terence Taylor, 17 March 2003, 17 April 2003, personal communications).

\textsuperscript{15} I thank Noel Gough for suggesting this coinage.
knowing, curricularists deploy a tactical economic worldview to strategically exploit knowledge.

Returning to the notion of haptic, the word hap appears as the root for many common words like happen, happy, perhaps, happenstance, and mishap. Hap’s archaic meaning is of events coming about by chance, particularly, fortunate chance. Davis (1996) uses hap to refer to ‘the center-point of enactivist teaching…to the unexpected consequence, to the sudden insight, to the inexplicable interest that is conditioned or occasioned by the teacher’s actions’ (p. 257). In other words, enactivism inter/dis/rupts what Davis calls a ‘hapless curriculum, wherein the teacher is able to prescribe all learning and to foresee every possible contingency’ (p. 257). Thus I see enactivism encouraging currere to flourish in happenings for learning, which embodies acting differently. Acting differently can also picture the enacting of authentic experience through an altogether different view of curriculum. A view made by members of an Other culture, from a perspective grounded in a non-verbal language.

**Painting the curriculum**

Noel Gough (2002), introducing a chapter in *Curriculum Visions*, quotes William Reid’s view that: ‘Thoughts on curriculum can be pointed, substantive and coherent even if they are only a few lines long; they don’t have to run to 5,000 words...nor need they be in prose, or even words’ (Reid, 1979, quoted in Gough, p.131). Gough comments that there have been few ‘wordless representation of curriculum to date’ (p. 131), however, he points to one interesting example, Kevin Keeffe’s (1991) article ‘Painting the curriculum: the view from Walungurru’, which records the story of four Australian Aboriginal student teachers from the Pintupi community picturing their curriculum vision (see Picture 12).
Picturing Currere

Picture 12. ‘Nganampa manta lingkitu ngaluntjaku: To hold our land firmly’.  
(Bruno, Bruno, Robinson and Robinson, 1989).

Sarah Napangati Bruno, Paul Tjampitjinpa Bruno, Monica Nangala Robinson, and Victor Tjungurraya Robinson made their painting, over a period of four days, in response to a question posed at the 1989 Australian Curriculum Studies Association national conference: Which way for the Australian curriculum? Keeffe’s (1991) article describes and comments on the painting, drawing from the story the artists told to the conference delegates, and his personal discussions with them:

The painting is in five panels [a central diamond shape surrounded by four triangles, one in each corner]…This painting chronicles a Pintupi journey from the past, through the present and into the future, with special emphasis on schooling. The journey is represented by the tracks of feet moving from one panel of the painting to another. Each panel refers to a different period of time. From the top left, or north-west corner and moving clockwise, the four corner sections refer roughly to the 1960s, 1970s, 1980s and the 1990s. These decades approximate periods in which different policies of assimilation, self-management and self determination have shaped the Pintupi educational experience…The central panel refers to the time before the Pintupi world was transformed by contact with non-Aboriginal society (pp. 260-1).

Keeffe’s article also reviews the role of the painting as political critique in the context of Australian educational policy. He writes that:

A school curriculum is not a monolithic body of culturally loaded learnings that must always weigh oppressively on any student from another cultural background. The contemporary curriculum is riddled with contradictions and ambiguities, creating gaps and spaces into which local political action moves in order to create widespread change and eventual reformation…The painting is such an action and…provides a model of possibilities for the curriculum of the Walungurru school (p. 265).

Keeffe makes a very significant observation in his conclusion by emphasising the importance of the artists’ use of their indigenous medium to express their message, and the effects it generates. He suggests that the medium disrupts the ability of ‘Europeans’ to respond in their culturally privileged terms: ‘A painting cannot be answered by a vague and polite Ministerial letter, filed and archived. It demands a response and sets terms based on Aboriginal values for any subsequent negotiations’ (p. 267). Furthermore, the medium helps to ‘make explicit values that are central to Aboriginal thinking but truly remote from non-Aboriginal thinking…These values are central to the work of the artists as teachers, as values that should permeate the curriculum’ (p. 267). Through this personal-collaborative,
picturing expression, a different way of acting is generated. This way invites reciprocal responses for reflecting and generating from the values and experiences of acting differently.

**Continua**

I opened my paper by picturing a recursive interrelationship continuum as a Möbius strip. I will bring the paper to closure with some interconnecting examples of complex ideas embodied throughout it, which I see as reflecting continua. For example: ‘Painting the curriculum’ and Aboriginal ‘songlines’ (Lawlor, 1991); enactivist concepts for learning and teaching and the poem of Antonio Machado (quoted below), which contributed to them; and a photograph my son took, which I see as a coda to the fractal-like ecological resonances of all these thoughts.
Wanderer, the road is your footsteps, nothing else; wanderer, there is no pain, you lay down a path in walking. In walking you lay down a path and when turning around you see the road you’ll never step on again. Wanderer, path there is none, only tracks on ocean foam.


Picture 13. ‘...laying down a path in walking...’ (Toby Sellers, 2003).

Re-viewing the exhibition

In this paper I have embarked on a journey to express my ideas about the importance of picturing for generating understandings of authentic experiences of the world. Although words appear to be the predominant means of communicating ideas, pictures and words are complexly interrelated. Words and pictures are embodied in each other, and de-scribe each other. How we think we see the world affects what we hear and say about it.

What we call ‘the world’ is not just in mind, nor is it just out there; it is both within and without. Seeing in – insight – and seeing out – outlook –
are equally important for a balanced view and an authentic understanding of our experiences.

There are, however, disturbing differences in views of ‘seeing’, and the ‘authenticity’ of experiences, which I believe are problematics of our concepts of curriculum. The conventional concept holds onto an anthropocentric view of the world, and uses The Curriculum to reify, prescribe, and qualify objectives to that end. However, the theoretical foundations of this anthropocentric, objectivist worldview are under challenge from more recent research and theorising, which is informing more complex understandings of views of the world. These understandings have been the stimulus for reconceptualist curricular alternatives such as currere.

My concern is that the epistemological tension involved in grasping (being taught) one worldview and feeling (experiencing) another, is causing us to lose sight of picturing as a way of thinking that is complexified with words, and complementary to them. As a consequence, we are thinking more thoughtlessly because we are relying more on words and taking pictures for granted. Furthermore, as technology gains ever-greater strongholds over communication, our access to ‘real’ experiences, which are the ‘touchstones’ of authenticity, are being supplanted by simulated and ‘virtual’ experiences.

By interweaving pictures and words in this paper, I have tried to generate my impressions of the complex processes that happen as we are perceiving, interpreting, making meaning, and expressing our understandings of our experiences. And, by doing this paper I am trying to convey what enactive learning and teaching is for me.

A post-script: If you have agreeable memories of enacting your own early learning experiences with pictures, think about how those experiences have languished, perhaps, to only make an occasional guest appearance at a party game. Think how differently you might be acting if picturing was more to you than a party game.
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