

Book Review

A review of *Simplicity and Complexity: Pondering Literature, Science and Painting*, by Floyd Merrell, 1998. Ann Arbor, MI: University of Michigan Press, 384pp. ISBN 0472108603. \$65.00 USD.

Reviewed by:

WARREN SELLERS

Deakin University

As its title suggests, this book is an exploration of simplicity and complexity through interdisciplinary contemplation. I discovered in Merrell's text and images a notion of *co-implicity* (co-implication of each in the other) within simplicity's complexity and complexity's simplicity that is generative for perceiving and thinking differently about things and matters simple and complex.

In the so-called 'developed world' where, mostly, methodical systems operate to determine orderly means to ends and to achieve endings for meanings, co-implicity is not a handy notion. Why might this be so? Merrell suggests 'linguicentricity' could be a contributory factor, which he likens to a language prison where customary ways of 'word spinning' make the constraints on interpreting complexities disappear in the familiarity and comfort of uni-versal surroundings (thus my pleasure in adopting a linguicentric approach here). The device Merrell uses to expose linguicentricity and to facilitate his approach to simplicity~complexity¹ is the mathematical sign $\sqrt{-1}$, which indicates complex, or 'imaginary', numbers.

Merrell emphasizes from the outset that images guide his text and, for me, as a picturing thinker (Sellers, 2004) his book expresses ways for *seeing-feeling-thinking differently*² beyond the boundaries of familiar knowledge. If this idea seems peculiar, reflect on Merrell's observation that linguicentricity

embeds knowledge in familiar language habits that resist sensibility beyond simple contrariety (dyadic opposition), never mind allowing any feelings for complexity. As an example, he reminds us of the century or so it took for Copernicus's revolution to be considered non-paradoxical, and that even more time passed before it became a tacit concept.

Thus, I am comfortable interpreting *Complicity* analogously with *Copernicanity*, or a Copernican reconceptualizing of Ptolemaicity. Not, I stress, in any modernist sense of Grand Theorizing, but with a Deleuzian "minor philosophy" (Gregoriou, 2004) that de-privileges the grandiose and celebrates thinking "that produces rather than divests" (Merrell, 1998, p. 245). In a move acknowledging this sense I introduce my picturing (Fig 1), which I adapt from Merrell's concluding diagrammatic figure.

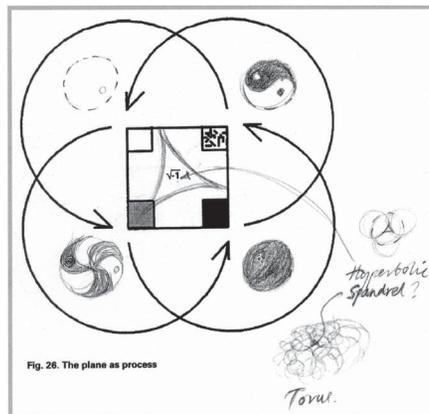


FIGURE 1. Hyperdoxity

Merrell describes his concluding diagram as "a culminating thought experiment, a synthesizing image" (p. 315), which assimilates his preceding 25 diagrams. I like to think of it as an imaginary for *hyperdoxity*, my playful neologism for acknowledging paradoxity beyond simple contrariety. To my mind, hyperdoxity generatively expresses simplicity~complexity's manifold productive conundrums, whereas paradox denotes a troubled aspect looking to divest a problematic part.

The *Taijitu*, *T'ai Chi*, or *yin yang* symbol came to mind as a generative metaphor for interpreting elements and tensional interrelationships in Merrell's diagram and I have penciled on the diagram some ideas about the interplay. My drawing explores Merrell's observations on "three dimensionalizing" the diagram's elements and "putting the figure in circular motion," thus generating a torus, which he notes is "suggested as a topological model for the space-time continuum" (p. 315). My pencil sketch

(in figure 1) represents Merrell's four (arrowed) cycles as spheres in three-dimensional motion generating a torus and surrounding a space that I call a *hyperbolic spandrel*. A spandrel is an area created as consequence of surrounding elements, which seems fitting imagery for $\sqrt{-1}$. For me, as for Merrell, this image generated seeing-feeling-thinking differently.

Merrell's interdisciplinary contributors exhibit their complementarities with his experimental discourse: Writers Italo Calvino, Jorge Luis Borges; scientists Ilya Prigogine, Erwin Schrödinger; and painters Victor Vasarely, and Paul Klee, among others, provide for an intermingling of experiments theorizing liminalities towards actualities. Moreover, these experiments illuminate the linguicentric problematicity that "customary words" fail. In so doing, they demonstrate how the generative fictioning of Calvino and Borges, the explorative science-ing of Prigogine and Schrödinger, and the abstractive picturings of Vasarely and Klee engender feelings for an imaginary realm that Merrell compares to Wittgenstein's eye of the *Tractatus* (1961) that "sees its world but cannot see itself seeing that world in the same act" (Merrell, 1998, p. 280).

Thus words are, within limits, tied mainly to hierarchical linearity—although poetry affords minor lines of flight—so imaginary escape is cognitively and temporally fleeting. That much said, I now turn from words towards picturing, or as Merrell prefers "diagram...this is to say that diagrammaticism, diagrammatology, diagrammatic thinking are always already between one dimension and another, like fractals, like strange attractors, like far-from-equilibrium conditions and their concomitant dissipative structures" (p. 290).

Here then are my selected re-viewings of Merrell's diagrammatising, and how I am seeing-feeling-thinking them differently.

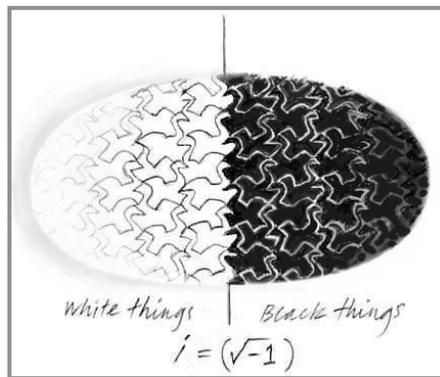


FIGURE 2. 'Cosmic Egg'

Merrell's introduction borrows from Plato to perform a present day dialogue between Simplicio@x@rhetorics.cs.loyola.edu and Sagredo@epistolary.cs.doxa.flor who are discussing the apparent loss of faith in certainty that pervades the modern world. Sagredo embarks on a thought experiment to demonstrate to Simplicio the complexities inherent in simplicities. He opens by noting that until Captain Cook ventured to the underside of the then known world in the 18th century, all swans were believed to be white. With the discovery of non-white swans, Sagredo argues, the category "swans" became less distinct and the category "black things" became more numerous, thereby introducing the notion of "fuzziness." Sagredo's argument then proceeds through the problematic that arises when a dividing line is introduced between an oval containing white things and black things. My re-drawing of Merrell's "Cosmic Egg" pictures them, after M. C. Escher, as swanlike (Fig 2). Sagredo shows the diagram and asks Simplicio whether the dividing line depicts black things or white things. They both agree it depicts neither and share their interpretation of the line as $\sqrt{-1}$ (or i), which is "a metaphor for seepage of uncertainty, ambiguity, contradiction, and paradox into the system" (p. 11). With this metaphor to the fore, Merrell's performance continues.

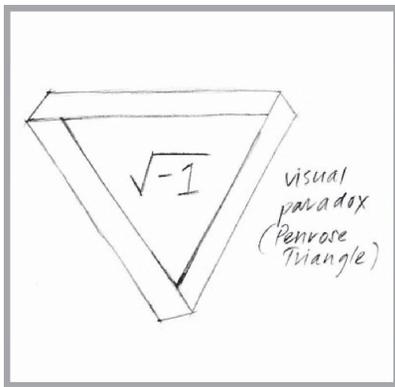


FIGURE 3. Penrose Triangle

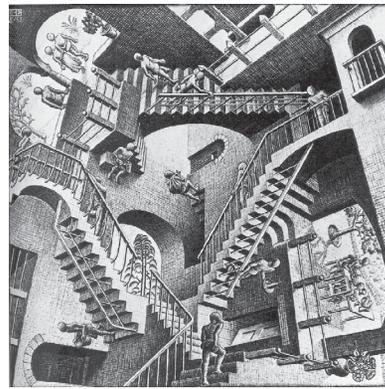


FIGURE 3a. 'Relativity' by M. C. Escher³

To further illuminate the problematic paradox of separate things, Merrell draws attention to the emergent chaos present in the transience within simplicity~complexity states by referring to the Penrose Triangle (Fig 3), which Maurits Escher extensively illustrated in his graphic art. This image engenders some sense of the chicken><egg dilemma that simplicity~complexity draws us into. By referring to Escher's "Relativity" (Fig 3a), Merrell also entertains the simple~complex interdisciplinary interplay available to this concept through Einstein's theories, Eco's semiotics, and Borges's and Calvino's literature.

It is through this notion of paradoxical transience (dimensional space bending—momentary time warping) that Merrell draws attention to the dynamic tensions affecting actualizing states. Such states are represented by $\sqrt{-1}$ (or i), where / when negating “impossibilities” become nurturing “possibilities”.

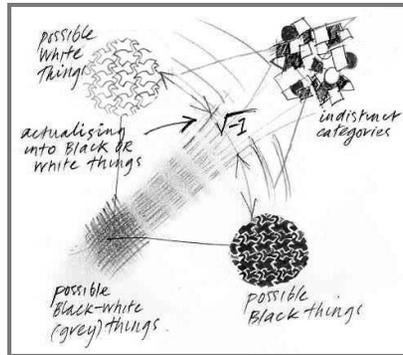


FIGURE 4. Labyrinthine Concoction

My re-drawing of Merrell’s diagram “Three-dimensionalizing the possible-actual swans” (p. 7) (see Fig 4) experiments with picturing states interacting towards potentialities, thus my “labyrinthine concoction.” The nub of Merrell’s work concerns potentialities for exploring simplicities~complexities inherent in the processes of nourishment for generativity, rather than discovering the simplicity of the recipe or appreciating complexities in the served dish. Instead of succumbing to the irresolvable dichotomous problem of whether to cook an omelet or to roast a fowl, Merrell chooses to ponder further a field and contemplate ways which affect worlds of nesting hens, roosting roosters, egg laying, chicken hatching, and the simplicity~complexity that this involves.

In short, it is not about an explicit means or ends; it is about tensions and fusions, interconnections and interrelationships in co-implicity. It concerns concocting examples for perceiving and interpreting ways in which labyrinthine states of interactivity are becoming meaningful potentialities.

Merrell writes of such states as like “the warp and woof of harmony and melody ... taste of sweet and sour...perhaps better, of the sweet scent of ‘Chanel No. 5’ mixed with the smell of a greasy spoon restaurant ... a synaesthetic sensation ... the fusion of every-thing onto one thing’, which is, paradoxically, well-nigh indivisible, barely differentiated, hence of the most fuzzy of fuzziness” (emphasis in original, p. 253). I believe that “labyrinthine concoction” expressively epitomizes simplicity~complexity—before-between-beyond the known. The mystery of simplicity~complexity is to-

gether, within, throughout the middle, and Merrell's quest involves weighing the co-implicit contributions that literature, science and painting bring to realizing chaos actualizing cosmos realizing chaos....

In referring to a "synaesthetic sensation" Merrell points to a neurological condition where perception and cognition become confused, such as sound with color, or scent with taste, and so on. Synaesthesia also has associations with synaesthetic metaphor, which assumes one mode of perception but linguistically links it with others: "[c]ommonplace examples of synesthetic [sic] metaphors in English include phrases such as 'loud colors', 'dark sounds', and 'sweet smells'" (Day, 1996, p. 1). Therefore, as Merrell suggests, synaesthesia is more a generative than a pathological condition.

The significance of these matters for education's theory, practice, and research concern what I earlier called "seeing-feeling-thinking differently." That is, through seeing with feeling in thinking differently, Merrell's ponderings upon literature, science, and painting generate other possibilities to meanings for simplicity and complexity. For meanings to become (always-already-becoming) actually processual, rather than to be methodical constructs. Put differently, simplicity~complexity is generative for meaning becoming different in inter-subjective and non-objective ways; as middles in becoming meanings, rather than a definition of an end for a meaning. This has crucial implications for learning and teaching.

Today, many operators of education systems proclaim their intentions, purposes, and achievements in terms of teaching methods and learning outcomes for the rhetorical postulate of a "Knowledge Society" and its basis on a "New Economy." I have two concerns with this "New Order." Firstly, it is premised mainly on the political imperatives of a minority that are often at significant odds with the social experiences of the majority. Secondly, it embeds knowledge in an epistemology that mainly constitutes it as particular and commodifiable content. To validate this New Order, learning and teaching have been reorganized as an economic commodity / delivery exchange with lifetime value. This arrangement is funded by, accountable to, and quantified and qualified within a technologically managed audit culture that uses concepts of complexity synonymously with complication. That is, complexity as problems reducible through methodical solution.

Simplicity and Complexity: Pondering Literature, Science, and Painting offers two co-implicit responses to my New Order concerns, one pedagogical and the other epistemological: Teaching is no more a delivery mechanism than learning is a tradable commodity; in spite of the techno-jingoistic rhetoric aimed at convincing a new generation that this is so. Therefore, those who understand learning~teaching as living~learning (rather than teaching as / for earning) must be able to personally articulate their interpreting of complex interdisciplinary notions for opening youngsters to simple un-

derstandings for moving beyond the postulations of an economic order on which to base a society. I believe simplicity~complexity is an expression of such a notion, and Merrell's book is a stimulating and accessible introduction to it.

Endnotes

1. I insert a tilde (~) between these words, here and throughout, to indicate my understanding of their co-implication, engendering senses of with *and* in each other.
2. I am not ignoring hearing or privileging seeing, but stating that my personal perceptual preference is towards seeing.
3. 'Relativity', M. C. Escher, 1953. ©2004 The M.C. Escher Company: The Netherlands. All rights reserved. Used by permission. <<http://www.mcescher.com>>

References

- Day, Sean. "Synaesthesia and Synaesthetic Metaphors." *Psyche: An Interdisciplinary Journal of Research on Consciousness* 2, no. 32: (1996). <http://psyche.cs.monash.edu.au> (accessed 5 September 2004).
- Gregoriou, Zelia. "Commencing the Rhizome: Towards a Minor Philosophy of Education." *Educational Philosophy and Theory* 36, no. 3: (2004): 233-51.
- Massumi, Brian. *A User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*. Cambridge, MA: MIT Press, 1992.
- Merrell, Floyd. *Simplicity and Complexity: Pondering Literature, Science, and Painting*. Ann Arbor: The University of Michigan Press, 1998.
- Sellers, Warren. "Picturing *Currere*: Envisioning-Experiences within Learning." Paper presented at the 10th Biennial Conference of the Australian Association of Curriculum Studies, Adelaide, South Australia, 28-30 September 2003. http://acsainc.com.au/content/sellers- picturing_currere.pdf (accessed 28 August 2004).