

Addenda to session three  
Modernist Painting 1950-1970  
Allen Fisher

## PROPORTIONS

### NATURAL FORMS

Art, architecture, music and poetry have used proportions directly derived from natural forms for many centuries. These were clarified by Leonardo of Pisa (aka Fibonacci) in his thirteenth century *Liber Abaci*. A commonly referred to sequence would be 0, 1, 1, 2, 3, 5, 8, 13, 21 ... (an exponential curve). More recent studies of natural order have been discussed by D'Arcy Thompson (1917 revised 1942)<sup>1</sup>, Matila Ghyka (1946)<sup>2</sup>, René Thom (1972)<sup>3</sup>, and Stuart A. Kauffman (1993)<sup>4</sup>.

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## MEASUREMENT

Art, architecture, music and poetry are also involved in human measurement and design, using, for example, rulers and geometry. We see early examples in aspects of Egyptian painting, such as on the walls in the Tomb of Tutankhamen, and in Greek architecture, such as the Parthenon. These proportioned measurements were clarified by Euclid's *Elements* around 300 BCE.<sup>5</sup>

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<sup>1</sup> D'Arcy Thompson. Abridged and edited by John Tyler Bonner, Cambridge University Press, 1961.

<sup>2</sup> Matila Ghyka. *The Geometry of Art and Life*, reprinted in corrected form, New York: Dover, 1977.

<sup>3</sup> René Thom. *Structural Stability and Morphogenesis*, translated by D. H. Fowler, Reading, Mass.: W.A. Benjamin, 1975.

<sup>4</sup> Stuart A. Kauffman. *The Origins of Order. Self-Organisation and Selection in Evolution*, Oxford University Press, 1993.

<sup>5</sup> The objects referred to were named by Martin Ohm in 1835 as 'The Golden Section'. Aspects of this have been criticised in recent commentaries, partly because the measurement (like  $\pi$ ) involves an endless sequence of numbers (1.6180339887...) and partly because 'beauty' as such does not have a fixed criteria.

## NATURAL FORMS AND MEASUREMENT

Aspects of the work of Fibonacci and Euclid were combined and synthesised by Luca Pacioli in *Divine Proportions* in 1498 (printed 1509 with illustrations by Leonardo da Vinci or his workshop). Pacioli's book used aspects of work in *On Perspective for Painting* by Piero della Francesca from around 1480, but just as importantly, the work *Ten Books on Architecture* by the first century Roman architect and engineer, Vitruvius. Some commentators consider these proportions to be mystical or secret: this would appear to be unnecessary, the use of the proportions have an historical basis, with clear examples of use; the growth of these forms are a consequence of living in a biosphere, on a planet that rotates.

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## PROPRIOCEPTION

Art, architecture, music and poetry also involve proprioception, an involvement in orientation and context, particularly informed, in painting, by the experience of gravity, light source, and organs in the body in relation to visual and haptic perception.

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## PERCEPTION

Perception is complexed by what you see rapidly changing in front of you, informed by your memory and feeling; this has been considerably elaborated upon by a range of specialists. My varied examples regarding perception and proprioception begin with the phenomenological philosopher, M. Merleau-Ponty<sup>6</sup> and the poet Charles Olson<sup>7</sup>; I have subsequently found useful and interesting specialist work from the biologist, D. N. Lee<sup>8</sup>, the psychologist, J. J. Gibson<sup>9</sup>, and the linguist, Ray Jackendoff.<sup>10</sup>.

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<sup>6</sup>M. Merleau-Ponty. *Phenomenology of Perception*, translated by Colin Smith, London: Routledge & Kegan Paul, 1962; Merleau-Ponty. 'Eye and Mind', translated by Carleton Dallery, in *The Primacy of Perception, And Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*, Northwestern University Press, 1964; Merleau-Ponty. 'Cézanne's Doubt' in *Sense and Non-Sense*, translated by Hubert L. Dreyfus and Patricia Allen Dreyfus, Northwestern University, 1964.

<sup>7</sup> Charles Olson. *Proprioception*, San Francisco: Four Seasons Foundation, 1965.

<sup>8</sup>D.N. Lee. 'Visual proprioceptive control of stance' in *Journal of Human Movement Studies*, 1, 87-95, 1975, but see more generally Vicki Bruce and Patrick Green. *Visual Perception. Physiology, Psychology and Ecology*, New Jersey: Lawrence Erlbaum, 1985.

<sup>9</sup>J.J. Gibson. *The Ecological Approach to Visual Perception*, Boston: Houghton Mifflin, 1979.

<sup>10</sup> When Ray Jackendoff asked how perceptual features are structured he recognised that stored, long-term memories are linked with lexical items and that it would be oversimplification to think that this grows out of the usual assumption that the domain of meaning is a uniform, homogenous level of structure, say some form of logic. That is, '... phonology and syntax are built out of formally distinct interacting subcomponents.' (Ray Jackendoff. *Foundations of Language. Brain, Meaning, Grammar, Evolution*, Oxford: Oxford University Press, 2002: 345)

'A major division in the structure of meaning appears to lie between' what Jackendoff calls *conceptual structure* and *spatial structure*. *Conceptual structure* 'is a hierarchical arrangement built of discrete features and functions; it encodes such aspects of understanding as category membership (taxonomy) and predicate-argument structure.' (2002: 346) *Spatial structure* 'by contrast, is concerned with encoding the spatial understanding of the physical world—not just moment-by-moment appearance, but the integration over time of the shape, motion, and layout of objects in space (and possibly the forces among them)'.(2002: 346) [By *spatial* I presume Jackendoff must mean Spatio-temporal.] *Spatial structure* can be thought of as the 'upper end' of the visual system, it also receives and integrates inputs about shape and spatial layout from the haptic system, auditory localisation, and the somatosensory system. It is thus a system of central cognition. Jackendoff's working hypothesis is that 'the grammatical aspects of language make reference only to *Conceptual structure*, not to *Spatial structure*. Nothing in grammar depends on detailed shapes of objects. On the other hand, *Spatial structure* is language's indirect connection to visual, haptic, and proprioceptive perception, and to the control of action; it is through the *Spatial structure* connection that we can talk about what we see.' (2002: 348)

## MODERNIST critique and experiment

Modernist critique can be thought to have begun in the work of a range of artists, architects, musicians and poets who use aspects of proportion and measurement to organise their artefacts. Jacque-Louis David's eighteenth-century attention in his painting to the measured elements in the work of seventeenth-century Nicolas Poussin, in the context of revolutionary France; Poussin provides David with a constructive basis for a socio-political situation allegorised through historical drama. Gustave Courbet in his nineteenth-century 'Realism' organises a complexity of figures and gives dignity to everyday life; his works use the kind of large scale that had previously been reserved for the Court, the Church and mythological subjects. Edouard Manet's attention to the autonomy of the picture plane, rather than attention to what it represents, as the substantial basis for the art work, is an explicit critique of the prevailing norms of the 1860s. Paul Cézanne's ideas regarding the 'truth in painting' are a further testament to the needs of the picture.<sup>11</sup> The twentieth century thus set out from a rich ground of opportunities that has engendered a large expansion of critiques into every element of artistic practice. As Jasper Johns said, I think art criticises art ... It seems to me old art offers just as good a criticism of new art as new art offers old.' <sup>12</sup> Initial, but useful views, regarding 'Modernism' and 'Modernist' painting practice, may be discerned in the work of Johanna Drucker (1994)<sup>13</sup> and, by contrast, in the weighty, illustrated volume *Art since 1900*, edited by Hal Foster, Rosalind Krauss and others (2011)<sup>14</sup>. All of this leads into a further range of opportunities, and in particular, a text to be written.

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<sup>11</sup>'I owe you the truth in painting and I will tell it to you.' Paul Cézanne, letter to Emile Bernard, 23 October, 1905. The comment has provided the engine for a number of texts. The philosopher Jacques Derrida takes the phrase 'the truth in painting' for the title of his 1978 book (translated by Geoff Bennington and Ian McLeod, The University of Chicago Press, 1987). This is taken up again by Irna Costache in 2000, "The Truth in Painting or in Text? The Dialogue between Studio Art and Theory in Education" (available online from The American Society for Aesthetics, <http://aesthetics-online.org/?page=CostacheTruth>).

<sup>12</sup> Jasper Johns. Interview in *Art News*, 72, 1973: 21.

<sup>13</sup> Johanna Drucker. *Theorizing Modernism. Visual Art and the Critical Tradition*, New York: Columbia University Press, 1994

<sup>14</sup> Hal Foster, Rosalind Krauss &c (editors). *Art since 1900: Modernism, Antimodernism, Postmodernism*, second edition, London: Thames & Hudson, 2011.