

Allen Fisher, **Testing and Experimenting: after the Complexity Manifold:**
draft notes and extensions

Part 1:

1. title page.
2. Paige Mitchell, photograph of Kirkaldy's Testing and Experimenting Works, Southwark, London, May, 2011.
3. FlexBlue undersea nuclear reactor, English Channel, France, *The Ecologist*, February, 2011.
4. Allen Fisher, photograph of doors in Hereford, September, 2011.
5. BP's Prudhoe Bay field, Alaska, Bryan and Cherry Alexander, *Guardian*, August 2006.

Publications referred to in Part 1 include:

Allen Fisher (1981 & 1982) *BLOOD BONE BRAIN*, Documents on nine microfiches in seven booklets, London: Spanner.

Fisher (2004) *GRAVITY*, *Gravity as a consequence of shape*, volume one, Cambridge and West Perth: Salt Publishing.

Fisher (2004) *ENTANGLEMENT*, *Gravity as a consequence of shape*, volume two, Willowdale, Toronto: The Gig.

Fisher (2005) *PLACE*, the collected books published 1974-1982, Hastings: Reality Street Editions.

Fisher (2007) *CONFIDENCE IN LACK*, essays, Sutton: Writers Forum.

Fisher (2007) *LEANS*, *Gravity as a consequence of shape*, volume three, Cambridge: Salt Publishing.

Fisher (2010) *PROPOSALS*, *poem-image-commentary*, Hereford: Spanner.

Part 2:

6. 3-D Magnet Field computer simulation of Reversing Geodynamo. G.A. Glatzmaier and P.H. Roberts (1995) 'A three-dimensional self-consistent computer simulation of a geomagnetic field reversal', *Nature* 377, 203-209. Glatzmaier and Roberts are at Los Alamos National Laboratory and University of California, Los Angeles.
 - Palaeomagnetic records indicate geomagnetic field on Earth for at least 3 billion years.
 - Records show dipole polarity reversed roughly every 200,000 years with individual reversals taking about 2,000 years each.
 - fluid outer core surrounds solid inner core both composed mainly of iron. convection of fluid in outer core driven by thermal and compositional buoyancy sources at inner

core boundary as Earth cools and iron-rich alloy solidifies onto inner core giving off latent heat and light.

- these buoyancy forces and Coriolis forces due to the Earth's rotation cause fluid flows to be helical, which twists and shears magnetic field, generates new field to replace that which diffuses away.
- note: <http://www.psc.edu/science/glatzmaier.html>

7. C.A. Muses, idealised spatial representation for time and consciousness, *ARK* 40, 1966, 'Divination, Higher Consciousness and Mathematics'.

- in quantum spacetime there are resonances and not exact recurrences.
- Muses' orange threads are tangents to the black sphere developing a helicoidal (seven-angled) surface and a spiral periphery.
- this work links directly to ideas of Pythagorean (Platonic) solids and the mathematics of Euclid, Fibonacci and Pacioli.
- Charles Arthur Muses (1919–2000) published *Chronotopology: Destiny and Control in Human Systems*
- Muses was an informal student of Norbert Wiener. Wiener published *The Human Use of Human Beings: Cybernetics and Society* in 1950.

8. Allen Fisher, *Views of the City triptych: Barbarian, Savage, Civilian*, 1991-93, oil on three panels. Reproduced on www.allenfisher.co.uk

- the work includes research into Augustine, Jean-Paul Sartre, Simone de Beauvoir, Tony Hancock, local farming, and the work of the Ordnance Bomb Disposal Squad and the Special Air Service (SAS) in Herefordshire.
- related poetry may be found in the sequence *Gravity as a consequence of Shape* (the 3 volumes *Gravity*, *Entanglement* and *Leans*).
- part of the work derives from studies of (i) Carpaccio's *Augustine in his Study*, Scuola di San Giorgio, Venice; (ii) the work of Joseph Beuys, particularly the three exhibitions curated and displayed in late 1985 in London and Naples.
- Allen Fisher, 'Monuments to the Future: Social Resonance in the art of Joseph Beuys' on e-space at: <http://e-space.openrepository.com/e-space/bitstream/2173/38654/2/Monuments%20to%20the%20Future.v2.pdf>

9. Allen Fisher, *Thought to Tune My Lute*, 1994, oil on canvas.

- part of a set of responses to ideal forms and logical method.

10. Fluorescent proteins visualise cancer *in vivo*. Robert M. Hoffman, *Lancet Oncol* 2002; 3: 546–56. <http://www.metamouse.com/links/RMH-2002.Lancet%20Oncology.pdf>
<http://asia.stanford.edu/events/spring07/slides402S/okazaki.pdf>

- a way of imaging metastases in mice by use of tumour cells expressing green fluorescent protein (GFP) that can be used to examine fresh tissue, both *in situ* and externally.
- real-time studies of tumour progression, metastasis, and drug-response evaluations.
- the GFP gene, cloned from bioluminescent organisms, has now also been introduced

into a series of human and rodent cancer-cell lines in vitro, which stably express GFP after transplantation to rodents with metastatic cancer.

- Techniques were also developed for transduction of tumours by GFP in vivo. With this fluorescent tool, single cells from tumours and metastases can be imaged.
- GFP-expressing tumours of the colon, prostate, breast, brain, liver, lymph nodes, lung, pancreas, bone, and other organs have also been visualised externally by use of quantitative transcutaneous wholebody fluorescence imaging.
- GFP technology has also been used for real-time imaging and quantification of angiogenesis (development of new blood cells).

11. Blake, Carolyn (1997) Glacier at Maloja Pass, Upper Engadine, Switzerland, photograph.

- close to Friedrich Nietzsche's house at Lake Sils.

12. Patterns of connectedness: using simulations from the inside of Polyomavirus at 25-Å (Ångström) resolution from James P. Griffith, Diana L. Griffith, Ivan Rayment, William T. Murakami & Donald L. D. Caspar (1992) 'Polyomavirus capsid and vision electron density maps computed by Fourier analysis', *Nature* 355, 6361, 1992.

- Polyomaviruses are a group of small, non-enveloped DNA viruses that can infect birds, rodents, and primates.
- See also: Elizabeth A. Hewat, Nuria Verdaguer, Ignacio Fita, Wendy Blakemore, Sharon Brookes, Andrew King, John Newman, Esteban Domingo, Mauricio G. Mateu and David I. Stuart (1997) 'Structure of the complex of a Fab fragment of a neutralizing antibody with foot-and-mouth disease virus: positioning of a highly mobile antigenic loop', *The EMBO (European Molecular Biology Organization) Journal*, 16, 1492-1500.
- Gregory Bateson (1979, 1980) *Mind and Nature, A Necessary Unity*, London: Fontana/Collins.
- Carl Schuster and Edmund Carpenter (1996) *Patterns that Connect, Social Symbolism in Ancient and Tribal Art*, New York: Harry N. Abrams.
- 'Patterns of connectedness', as part of an aesthetic theory, was articulated in Allen Fisher, *Necessary Business*, Spanner, London, 1985 (rewritten 1992). Rewritten version in *Topological Shovel*, The Gig, Ontario, 1999 (which also includes the 'Thumbnail Lecture', 'The Mathematics of Rimbaud', and 'Topological Shovel').

13. Attributed to Jacopo de' Barbari, *Fra Luca Pacioli and Student*, tempera on wood, 1495, Museo & Gallerie di Capodimonte, Naples.

- The ideal geometries derived from serpentine and spiral forms were exemplified in the early work of the Babylonians and then the Greeks. They were codified by Euclid in his *Elements* in 323 BCE. In the medieval period Arab mathematicians and the European, Leonardo Pisano Fibonacci, provided the algebra needed for ideas of proportions from natural phenomena. Around 1500, Fra Luca Pacioli, the inventor of double entry book-

keeping, brought the ideas of Euclid's Golden Section or Golden Mean into mathematical connection to the Fibonacci series in his *Divine Proportions*, illustrated by Leonardo da Vinci or one of Leonardo's workshop.

14. Allen Fisher, Fibonacci cylinder 1, 2002.
 - marked off in approximate Fibonacci ratio.
15. J.S. Bach, 'Contrapuntus II' from *Die Kunst der Fuga (The Art of Fugue)*, posthumous edition, 1751.
16. Allen Fisher, example Transcription from Bach's *Die Kunst der Fuga* for *The Art of Flight*, 1974.
17. Allen Fisher, example Translation from transcription to text for *The Art of Flight*, 1974.
18. Allen Fisher, example Typescript from translation for *The Art of Flight*, 1974.
19. Allen Fisher, Fibonacci cylinder 2, 2002.
 - *Fibonacci cylinder 1* folded and crushed in vice providing displacement and disruption of Fibonacci ratio.
20. Allen Fisher, *Veil of Judgement*, 1986-87, oil on two panels. Reproduced on www.allenfisher.co.uk
 - Albert Einstein, handwritten copy of first relativity paper, *Einstein, A Centenary Volume*, edited by A.P. French (1979) London.
 - *Leonardo: Paintings and Drawings*, edited by Ludwig Goldscheider (1943, 1975) London.
 - Julia Kristeva (1977, 1980) *Desire in Language*, edited by Leon S. Roudiez, translated by Thomas Gora &c., New York.
21. Allen Fisher, *Levels of Confidence*, charcoal and oil crayon on paper, 1988.
22. Allen Fisher, *Kessingland*, oil on canvas and hessian with *I Ching* sticks, 1978. Reproduced on www.allenfisher.co.uk
 - *Kessingland Studies*, Spanner, London, 1979, included prints from studies for the painting with poetry from *As Fast As Possible*.
23. Allen Fisher, *Lifting from Fear*, mixed media on torn papers, 1988.
24. Allen Fisher, *OCTOBER '87*, 1987-88, oil on canvas, left hand panel of triptych. Reproduced on www.allenfisher.co.uk
 - work factured from local landscape, figure drawings and Still-lives of tools,
 - factured before and after the Great Storm hit S.E. England 15-16th October 1987.

- reported as worst storm to hit Britain since 1703.

Part 3:

25. John Wilkinson, from 'Like Feeling', *Down to Earth* (Cambridge: Salt Publishing), 2008: 41: 1-9.
26. Rob Holloway, from 'Part-Wing at Full Blown', *Permit* ([New York]: Subpress), 2009: 51: 1-18.
27. Ulli Freer, from *Recovery (Incomplete)*, *Recovery (Incomplete)*(Rot Direkt London), 2011: vi: 1-18.
28. Emily Critchley, from 'Ain't gonna work on your farm no more', *Love / All that / & OK* (London: Penned in the Margins), 2011: 38: 1-9.
29. Scott Thurston, 'Of Being Circular', *Of Being Circular* (Newton-le-Willows, Meseyside: The Knives Forks and Spoons Press), 2010: 5.
30. Marianne Morris, from 'Untitled', part of Marianne Morris, Luke Roberts, Sophie Robinson, Josh Stanley, *Untitled Colossal Parlour Odes* (UK: Bad Press), 2011: 1: 1-18.
31. J.H. Prynne, from 'Along the Wall', *Sub Songs* (London: Barque), 2010: 22: indented section.
32. Andrea Brady, from 'Thrown Fire', *Wildfire* (San Francisco: Krupskaya), 2010: 40: stanza 3.
33. Caroline Bergvall, 'Crop', *Cropper* (Southampton: Torque Press), 2008: 8-9.
34. *cris cheek*, from 'fogs', *part: short life housing* (Willowdale, Toronto: The Gig), 72: 1-11.
35. Larry Lynch, from *Plum Wire Prayers*, *Plum Wire Prayers* (Totnes: Acts of Language), 2007: 'I sight ...' unpaginated, loose leaf page.
36. Carol Watts, from *Occasionals*, XII, *Occasionals* (Hastings: Reality Street), 2011: 40: 1-8.
37. Keston Sutherland, from *Hot White Andy*, *Hot White Andy* (London: Barque), 2007: [1]: 1-9.
38. Miles Champion, from 'AIR BALL', *Eventually* ([New York]: The Rest), 2008: 11: stanza 5.

Part 4:

references:

Michel Foucault (2005) *The Hermeneutics of the Subject, Lectures at the College de France 1981-1982*, edited by Frédéric Gros and translated by Graham Burchell, Basingstoke: Palgrave Macmillan.

Foucault (2010) *The Government of Self and Others, Lectures at the College de France 1982-83*, edited and published as above.

Foucault (2011) *The Courage of Truth. The Government of Self and Others II, Lectures at the College de France 1983-1984*, edited and published as above.