

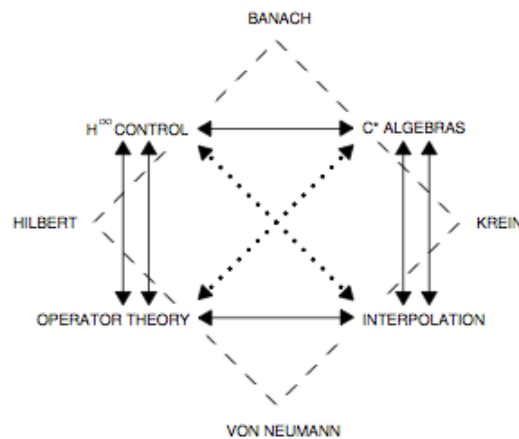
## ***point – line – enclosure – fold – field***

**2nd March, 4.00-5.30 pm - Paper Studio Northumbria, Squires Workshops  
Northumbria University (City Campus West), NE1 8ST**

A seminar discussion with Chris Dorsett comparing Rosalind Krauss' influential diagram of sculpture in the expanded field with Philip Rawson's ideas about the kinetic dimensions of the drawing process. This correspondence was suggested by the 'On Waking Up' seminar held at the *Thinking Tantra* exhibition on 30th January 2017.

The proposition is that both writers, so different in background and approach, rely on patterns of thought that can be demonstrated using a single sheet of paper that can be drawn on and folded. For Krauss a set of established art historical relationships could be, when represented diagrammatically, moved intact to another intellectual location where they would carry on functioning but in radical opposition to their former position and purpose. Similarly, Rawson built his ideas about drawing (especially Tantric diagrams) on the expansive repetition of graphic statements and counterstatements across a field of possibility where their meaning would change as their relationships changed.

The plan is that Chris Dorsett will be joined by Michael Dritschel, Reader in Pure Mathematics at Newcastle University, who introduced his edited papers from the 2004 *International Workshop on Operator Theory and Its Applications* (IWOTA) with references to conversations about Krauss held with Dorsett during commuter journeys into Newcastle.



A few words about the above image which graced the workshop programme and bag. In commuting between home in Hexham and work in Newcastle, I often travel by train. The journeys have resulted in a number of friendships, including with Chris Dorsett, who is a member of the Fine Arts department at Northumbria University (also in Newcastle). A mathematics question led him to introduce me an article by the art critic and theorist, Rosalind Krauss titled "Sculpture in the Expanded Field", which was first published in art journal *October* in 1978, and is now recognized as a key work in contemporary art theory. To briefly summarize a portion of the thesis of her article, the term "sculpture" has been applied in the 20<sup>th</sup> century to such a broad collection of art objects as to become essentially meaningless. This leads her to propose a refined classification built from the idea of what sculpture is not (architecture, landscape) and the negation of these terms. The idea is encoded in a diagram much like the one given above, and is based on a model of the Klein Viergruppe, also known as the Piaget group due to its use by the Swiss developmental psychologist Jean Piaget in the 1940's to describe the development of logical reasoning in children. While the version pictured above makes a hash of the intended logic of the diagram (which would, for example, require that  $H^\infty$  control be the negation of operator theory), it is nevertheless an homage to Krauss and Chris Dorsett, indicates one of the unexpected ways that art and mathematics come together, and encapsulates for me some of the salient features of IWOTA.

**Krauss, R. E. (1978) 'Sculpture in the expanded field', in Rosalind E. Krauss (1986) *The Originality of the Avant-Garde and other Modernist Myths*, Cambridge, MA: MIT Press, pp 277-290.**

(i)

Towards the centre of the field there is a slight mound, a swelling in the earth, which is the only warning given for the presence of the work. Closer to it, the large square face of the pit can be seen, as can the ends of the ladder that is needed to descend into the excavation. The work itself is thus entirely below grade: half atrium, half tunnel, the boundary between outside and in, a delicate structure of wooden posts and beams. The work, *Perimeters/Pavilions/Decoys*, 1978, by Mary Miss, is of course a sculpture or, more precisely, an earthwork.

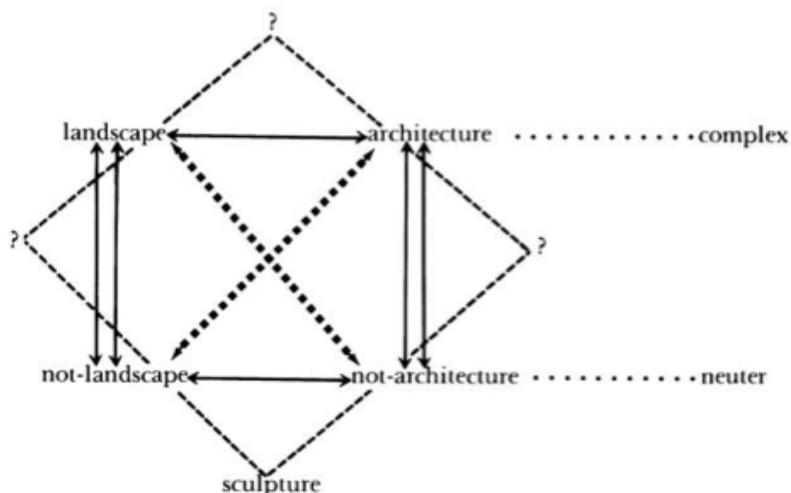
Over the last ten years rather surprising things have come to be called sculpture: narrow corridors with TV monitors at the ends; large photographs documenting country hikes; mirrors placed at strange angles in ordinary rooms; temporary lines cut into the floor of the desert. Nothing, it would seem, could possibly give to such a motley of effort the right to lay claim to whatever one might mean by the category of sculpture. Unless, that is, the category can be made to become almost infinitely malleable.

The critical operations that have accompanied postwar American art have largely worked in the service of this manipulation. In the hands of this criticism categories like sculpture and painting have been kneaded and stretched and twisted in an extraordinary demonstration of elasticity, a display of the way a cultural term can be extended to include just about anything. (Krauss, 1986: 277)

(ii)

Now, if sculpture itself had become a kind of ontological absence, the combination of exclusions, the sum of the neither/nor, that does not mean that the terms themselves from which it is built – the *not-landscape* and the *not-architecture* – did not have a certain interest. This is because these terms express a strict opposition between the built and the not-built, the cultural and the natural, between which the production of sculptural art appeared to be suspended. And what began to happen in the career of one sculptor after another, beginning at the end of the 1960s, is that the attention began to focus on the outer limits of those terms of exclusion. For, if those terms are the expression of a logical opposition stated as a pair of negatives, they can be transformed by a simple inversion into the same polar opposites but expressed positively. That is, the *not-architecture* is, according to the logic of a certain expansion, just another way of expressing the term *landscape*, and the *not-landscape* is, simply, *architecture*. The expansion to which I am referring is called a Klein group when employed mathematically and has various other designations, among them the Piaget group, when used by structuralists involved in mapping operations in the human sciences. By means of this logical expansion a set of binaries is transformed into quaternary field which both mirrors the original opposition and at the same time opens it. (Krauss, 1986: 282-283)

It becomes a logically expanded field which looks like this:



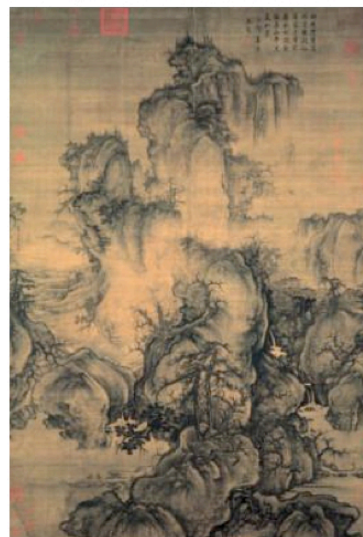
(i)

[Historic] Indian drawing [below left] begins by accepting the format as an established and given area, which then subdivides by means of features such as buildings, doors, and windows, or symbolic, outlined mountains, trees, and spaces. All are defined as completely intelligible spatial enclosures. The subdivision is done on the basis of a rhythmic design. Within the nuclear spaces so established may be set the leading formal inventions, usually as figures. But these figures, for all their fluent linear contours, are still conceived as linked assemblages of containing flat enclosures. Every point on the drawn surface is conceived as lying within one or more defined enclosure. In this type the rectangle of the format usually plays a major role in the development of the thematic forms, since its proportions suggest a basic metrical unit.

In contrast, Far Eastern drawn designs [below right] are based upon a few nuclei scattered over the open surface of the format. Starting from these points the design evolves outward into the negative, undefined area of the surface, never enclosing it all or defining it, implying always that it extends without a break beyond the limits of the format. Certainly the evolved forms may include enclosures; but they are not usually asserted as dogmatic entities. The emphasis is upon the way in which the lines and chains of forms move about within the arena of the open space. The chains of forms evolved from the nuclei may approach one another and articulate with one another but they need not. In such a style the unresolved space may gain a sort of notional definition, and be identified as mist, sky, or water; but this is not essential. The mind is prepared psychologically to accept the undefined region as in some way an essential part of the visual truth. (Rawson, 1969: 203)

(ii)

All well-constructed drawings begin with a specific 'given' nuclear form or form-sequence. This may be any type of form, placed anywhere; but it is important to identify it at once; it is the key to the whole work. And it is the thing which is usually made first. ... The whole drawing consists of a reconciliation between ... contrasted and even apparently irreconcilable forms. This is achieved by progressive 'variation' (in the musical sense) of the stated motives, resolving them into a unity through graphic symbolic forms ... which are derived from aspects of the motives. The counterposing of the motives, theme, and counter-subject sets up a kind of unresolved tension among them ... in which a vital role may be played by the format itself. (Rawson, 1969: 221)



(iii)

The subtlety of its development is an index to the quality of a drawing's visual meaning. For though its initial general categories of form and relationship maybe the same as those common to many works, the richness of reference available to its combined, categorically

complex forms is great; and that available to integrated catenae of such forms is greater still. To construct such catenae, and to make it possible for the spectator to follow the artist into their region of significance and grasp his idea, thematic proposal and development may well be indispensable.

The location of the thematic material in a drawing is usually related to the order in which the drawing was made. The spatial mode also influences the way in which the material is developed. In the mode of space as environment it is obvious that the initial statements of linear thematic material will lie at the preliminary focal nodes of the design which, as I have mentioned, the spectator needs to identify. The variation-development will take place outwards into the open arena of the surface from these centres, maybe without invoking the specific shape of the format. In this mode, too, linear connections may appear which lead the eye actually beyond the edges of the format. Loops or junctions maybe consummated only outside the arena of the sheet. ... In a drawing in the mode of space as limit the themes will probably take the form of distinctly formed enclosures, either one within the other or one against the other, with the format entering sometimes as the enclosing counter-subject itself, sometimes as a third party that needs, as it were, to be 'satisfied'. (Rawson, 1969: 226)

### **Rawson, P. S. (1971) *Tantra: Indian Cult of Ecstasy*, London: Arts Council of Great Britain**

(i)

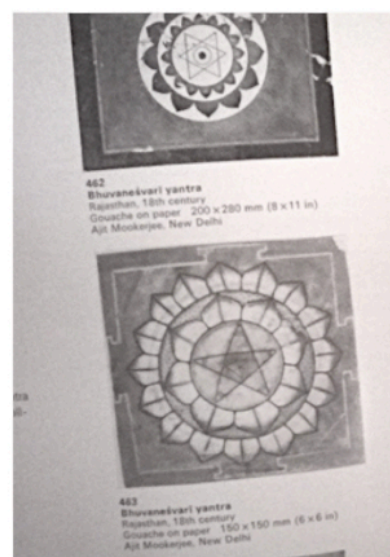
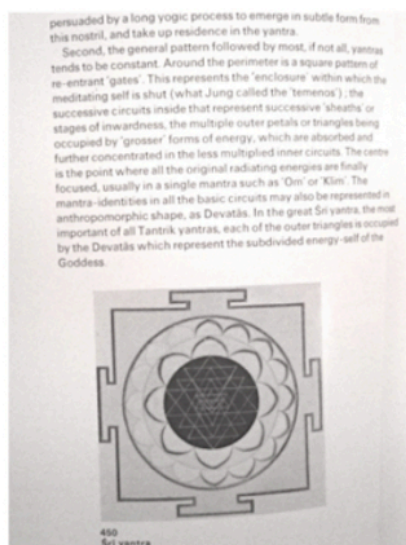
It must also never be forgotten that the ground-plans of most Hindu, Jaina and Buddhist temples are also yantras. (Rawson, 1971: 85)

(ii)

Around the perimeter [of the Śrī yantra diagram (below left)] is a square pattern of re-entrant 'gates'. This represents the 'enclosure' within which the meditating self is shut (what Jung called the 'temenos'); the circuits inside represent successive 'sheaths' or stages of inwardness, the multiple outer petals or triangles being occupied by 'grosser' forms of energy, which are absorbed and further concentrated in the less multiplied inner circuits. The centre is the point where all the original radiating energies are finally focused, usually in a single mantra such as 'Om' or 'Klīm'. (Rawson, 1971: 88)

(iii)

... the Śrī-yantra is best explained from the point of view of genesis. In meditation it is used in the *reverse* direction, serving to focus from the outer rim into the final 'point' or dot all the Sādhaka's realisations of cosmic energy. (Rawson, 1971: 93)



During February and March Paper Studio Northumbria will stage a series of events which explore strands of visual art in relation to astrology, astronomy, mathematics and the cosmos - through the simple act of folding a sheet of paper.

Tuesday 21st February, 6.00-7.30 pm  
Lit and Phil Library, 23 Westgate Road, Newcastle, NE1 1SU  
Zoe Chen  
*Dream Dictionary*

2nd March, 4.00-5.30 pm  
Paper Studio Northumbria, Squires Workshops, City Campus West, NE1 8ST  
Professor Chris Dorsett with Dr Michael Dritschel  
*point-line-enclosure-fold-field*

Saturday 4th March, from 10.00 am  
Zoe Chen  
Lit and Phil Library, 23 Westgate Road, Newcastle, NE1 1SU  
*The Dictionary Game*

Thursday 23rd March 2017, 4.00-5.30 pm  
Paper Studio Northumbria, Squires Workshops, City Campus West, NE1 8ST  
Dr Mark Neyrinck  
*Origami-Folding the Local Universe*