Air Grid: Five Houses

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Air Grid Material

Before embarking upon a discussion of *Air Grid: Five Houses*, it is necessary to introduce the phenomenon of air grid material. Air grid material is a lightweight, three-dimensional rectilinear lattice structure made from lustrous, brightly coloured machine thread, drawn into a foam-board support and held taut in the grip of fine incisions, sliced into designated members of the 'support armature'.

The principles of order according to which the rectilinear lattice structure is drawn consists in the vertical alignment of an array of equivalent 'grid fields', an equal distance apart, in the 'air/space' predetermined by the design of the foam-board support armature. It is by replication and addition of the single grid field that a block of air grid material is brought into formation.

Although the principles of order that determine the formation of air grid material are conceptually simple, in its material manifestation what is simple (the figure of the rectilinear lattice) is very hard to discern. Sometimes the air grid material will appear to condense a cloud of radiant plasma, at other times to vibrate, as if an invisible force were acting on the threads, switching them from on to off.

Air grid material quite literally constitutes a volume of coloured hatching in the air, acting, as a three-dimensional grating of sufficiently fine grain, so that the human visual system, as it scans back and forth, trying to make sense of what it sees, cannot fix an image. The effect is like that of a badly tuned television or radio, of unfocused information: vision cannot grasp what passes across its sensory field. But unlike the effect of a badly tuned instrument, which can be most disturbing to the viewing subject, the experience of watching air grid material is both delightful and strange. This strangeness, I believe, is due to three ideas that murmur beneath the threshold of perception and whose expression I will attempt to describe.

Idea 1: Confused Perception of Colour as Expression of the Idea of Harmony

> We may be drawn towards particular objects, like a flash of bioluminescence in the sea or the structural colours of a butterfly's wing and away from others, like the brown-pigmented vole. [1]

In fact the threads of air grid material are coloured by pigments, each individual thread producing one specific colour quality, regardless of where the viewer stands in relation to it (subject, of course, to the diversity of effects produced in all objects of vision as they are

conditioned by differing intensities and directions of illumination). However, air grid material is able to simulate the dynamic qualities of structural colours. This is because the lattice of air grid material is composed of a multitude of differently coloured threads, and as the eyes probe the lattice, seeking as all eyes do, to fix an image, so these differences of colour will move in and out of our field of attention, seeming to switch from colour to colour. It is often hard to be precise about exactly which colour one perceives at any particular moment, or in any particular location in the body of air grid material, rather the overall effect is of a shift that shimmers across the chromatic scale. Furthermore, the lines of thread cast shadows upon one another and upon the inner surfaces of the support armature, which also tend to shift and shimmer with the movement of the eye and of the colour and so to participate in the overall effect of a sonorous modular vibration: as if the threads were vibrating in the air but in doing so emitting harmonics, not of sound, but of colour.

In the experience of air grid material, one's primary feeling is as if one is present, watching, as the colours are being mixed by the eyes. Such a feeling of being aware of the process of vision itself is pleasurable but curiously remote, as if one were looking below the threshold of perception and into a world of pure sensation, a virtual world, full of potential but a place into which we cannot go.

Idea 2: Confused Perception of Points and Vectors as Expression of the Idea of Depth

Occurring at the intersections of the threads, air grid material displays an array of tiny points in the air/space established by the support armature. Whilst it might be possible to focus attention on one such point, to focus attention on all of them is impossible. Air grid material elicits a feeling of intrigue and this feeling forces movement around the object of attention; the viewer moves around, attempting to bring what they see into focus and succeeding only partially. No clear perception can emerge; it is as if the viewer were gazing, not into a field of equally spaced points, but into a cloud of airy gas.

But, what is more, the order of the lattice structure is such as to generate patterns of interference. As the eye scans back and forth across the air grid material so one thread will become occluded by another and because the lattice is drawn into an order that distributes the thread equally in the air (the cadence of the threads in the *X*, *Y* and *Z* direction being 1 to 1 to 1), so, for every vector of visual occlusion, not just one, but a whole array of threads are brought into alignment and made to seem as if subsumed within the width of a single vector. It is because of this quality of occlusion that deep, crystalline chasms are opened up inside the air grid material, revealing an alluring and exaggerated depth within the formlessness of the airy cloud.

Idea 3: Clear Conception of Curves as Expression of the Idea of Gravity

Held taut in the grip of fine incisions of the support armature, the array of lustrous threads appears to be associated with the linear precision of vectors in abstract, mathematical space. But air/space is not mathematical, it is phenomenal and whilst it might be possible to imagine that some concealed technological device guarantees the precise trajectory of the threads, only a cursory examination of air grid material is necessary to realise this cannot be so. The threads are exempted from the pull of gravity in the imagination of the viewing subject only. The logic of the situation must be that all the threads are curved, if only ever so slightly, bowing down at mid span toward the centre of the earth.

All the strange perceptual and conceptual expressions of underlying ideas described so far are universally present in any air grid architecture. However, the air grid we are calling *Five*

Houses is a singular phenomenon and as such it implicates ideas unique to its own specific principles of production.

Air Grid: Five Houses

Air Grid: Five Houses is a unique air grid entity, arising as the consequence of specific principles of production. It consists of two pedestals, one rose coloured, and the other black. Considered in horizontal orthographic projection, the composition of both pedestals is the same, although the rose pedestal projects further in the vertical direction than does the black.

On top of the rose pedestal are arranged five blocks of air grid material, each being configured as a box and conceived as a house and each is a different size. The arrangement of the air grid houses on the pedestal reinforces their change in size as a progressive and coordinated increase. However, because the pedestal is a determinate size, it blocks the capacity to see the serial nature of the houses and so discourages the viewing subject from asking why there are only five?

On top of the lower, black, pedestal is an array of five somewhat enigmatic 'grid plates', again displaying a progressive increase in size: imaginatively the grid plates tend to be read as if they are the 'roofs' to the five houses set out on the rose pedestal. There are obvious correspondences between the placement of the roofs on the black pedestal and the placement of the houses on the rose, and it is easy to see which roof belongs to which house. Through the correspondence of the houses and their roofs, the correspondence that is already built into the pedestals is further reinforced and the opposition 'high' and 'low' is drawn further into the composition in the manner of a pun.

It is also easy to sense that there is a systematic relationship between the five house/roof pairs disposed on the rose and black pedestals; they seem to form a series. And yet there is something paradoxical in this serial quality manifest in *Air Grid: Five Houses*, for if the work really is a fragment of a series then how is it possible that it appears to be complete? One does not find one's mind striving to extend the series through the projection of imaginary, but possible, additional house/roof pairs. *Air Grid: Five Houses* projects a unified image. It is this apparently contradictory quality of being both complete and yet only partial that I believe offers a clue as to the manner in which an incomplete object can appear to be whole.

Variety and System

Between the five house/roof pairs there are factors that do not vary, endowing each paired member of the series with a set of dominant expressive qualities, whilst at the same time lending the same expression to the series as a whole. In perception it is impossible to isolate the invariant properties and to see them, as it were, detached from the total expression, but they can be identified conceptually.

The factors that do not vary between the five house/roof pairs are predominantly related to colour and to order. These are firstly the colours of the air grid material, expressed in the drawing of the threads and in the surfaces of the support frame, and secondly the order of the lattice module, expressed in the cadence of the threads and in the dimensions of the air/space into which they are sewn and which is limited by the surfaces of the support armature.

Now, it is important to note, that although these factors do not vary between one house/roof pair and the next, they do change, and it is this change without variation that is responsible for producing the serial quality of the work.

Principles of Change: Colour

Each paired member of the house/roof series utilises the colours rose, blue and gold, and these colours are present in two ways. Firstly they are the only colours utilised in the drawing of threads within the air/space and they are all three present in any one of the five house/roof pairs. Secondly they are the only colours present in the surfaces of the support armature. However, in the specific case of any of the five house/roof pairs, only two colours are ever present in the surfaces of its support armature; this means that one of the principles of change is the quality of being absent. However, there is a further principle involved in the quality of being absent, for the colour that is absent from the support armature is counterbalanced by being over-represented in the allocation of colours to threads in the lattice drawing of the air/space. Not surprisingly, given the enormous difference in colour mass between the surface colour and the threads, this over-abundance in the threads of the absent support colour makes little difference to the overall perception of the colour of any particular house: it is the support colours that dominate.

It is useful to sum up these principles in a specific example: the tiny house/roof pair enjoys the full array of colours in the drawing of the thread, but only the colours rose and blue are present in the colouring of the roof and of the support surfaces. However, the lack of gold in the roof and support surfaces is compensated in the lattice drawing of the air/space: of the total of 98 drawn threads 28 are rose, 42 are gold and 28 are blue. As we have already mentioned, the dominance of gold in the relative quantities of the threads is hard to perceive, which does not necessarily mean it has no qualitative impact, simply that the qualitative impact is other than what one would expect.

It is far easier to understand the principles of colour change when they are set out in the form of Table 1.

Table 1 Colours used for the various components of *Air Grid: Five Houses*

House/ roof pair	Horizontal surfaces	Vertical surfaces	No of blue threads	No of rose threads	No of gold threads
First	Blue	Rose	28	28	42
Second	Blue	Gold	56	84	56
Third	Rose	Gold	132	88	88
Fourth	Rose	Blue	121	121	154
Fifth	Gold	Blue	180	270	180

Principles of Change: Order

Every volumetric measurement of *Air Grid: Five Houses* is dictated by the unit module: $1 \times 1 \times 1$ cm (or ⅜ inch cube). This is as true of the pedestals as it is of the five house/roof pairs. However, there are no serial implications manifest in the pedestals, so they fall out of this consideration of change.

For any house/roof pair there are three crucial volumetric measurements. Firstly there is the size of the lattice proper, in other words the dimensions of the air/space in which the intersecting threads are inscribed; secondly there is the size of the house; and thirdly there is the size of the roof. As with the principles of colour change, so with those of size, they are easiest to understand when set out in the form of Table 2.

It is important to notice that between the principle of change demonstrated by colour and the principle demonstrated by order, there is a difference. The colour change is differential,

Table 2 Measurements of the various dimensions of *Air Grid: Five Houses* (all measurements are increments of the unit module)

	Size of lattice			Size of house			Size of roof		
House no	*X*	*Y*	*Z*	*X*	*Y*	*Z*	*X*	*Y*	*Z*
First	6	6	6	16	24	16	16	24	4
Second	6	6	13	24	24	23	24	24	4
Third	10	10	13	24	28	25	24	28	6
Fourth	10	10	17	28	28	29	28	28	6
Fifth	14	14	20	36	32	35	36	32	8

one colour transforms into another, whilst the changes in the order are related to addition. The basic unit module does not change but the extent of the order increases in increments between one house/roof pair and the next.

Binding and Autonomy

The role of the pedestals is that of 'binding', serving to draw the elements of *Air Grid: Five Houses* into a synthetic unity. *Air Grid: Five Houses* is by no means 'whole': there is a far greater number of possible house/roof pairs implicated in the rules of the system than the five that have been realised. It is only in the abstract realm of the possible that *Air Grid: Five Houses* can attain the condition of wholeness; in 'reality' there is always one more member to add. However, *Air Grid: Five Houses* carries an aura of completion and wholeness. As has already been mentioned, the pedestals have a significant role to play in the creation of this aura, providing an artificial objective for the system, as if the five realised house/roof pairs were made solely for the purpose of crowning the relatively large pedestals on which they sit.

Between the five realised members of the series and the two pedestals is a necessarily narcissistic relationship, the binding force of which comes from the self-satisfaction of the ones who contemplate the work: its producers and its consumers.

In fact, selection of the members of the series to be actualised was determined in relation to the size of a person. The five pieces approximate a range of scale between the size of a hand and the length of an arm. In this sense the body of the fabricator had a productive role to play in the expression of the idea of autonomy.

Closure

For all that the pedestal composition of *Air Grid: Five Houses* has a tendency to cause the work to be seen as a unity, upon moving closer and looking into one of the five houses perched atop the pink pedestal, one is drawn into another world: it is the world of that particular house.

In being thus drawn in, one will experience all the characteristics of air grid material that have already been described at the beginning of this document. The figure of the grid will be hard to discern. Clouds of coloured plasma will appear to condense within the house. Alternatively vibrations will seem to appear, as if an invisible force were acting on the threads that mark the air, switching them from on to off. It is as if one were looking into the life of the house, somehow witnessing it become dissolved from the temporal actions of physically embodied beings into the ripples and waves of events as they come and go in the flux of existence bound within being.

And yet, although one can look into each of the five houses as if it were its own unique, self-contained world, replete with the infinity of possibilities that are implicated in its form, nevertheless one will inevitable feel that what one is seeing is securely nested in the bigger (or is it the smaller?) world of the composite air grid structure of which it forms but a part.

Each one of the collection of images that accompanies this essay represents a single glimpse looking into one or another of the five houses. A single point of view such as those captured in these shots cannot represent the real-time experience of the air grid phenomenon, there are three primary reasons why this is so:

1. In 'real' experience the eye is constantly moving and so the lattice of threads will flicker, as if the colours are switching rapidly on and off
2. As the viewing subject moves so patterns of interference will appear to open up and then to close down within the grid
3. The air grid phenomenon is inherently tactile; the materiality of the figure is a sensuously embodied presence, almost as if the air grid were alive.

Nevertheless, the photographs do offer insights into what we mean when we say the air grid structure is replete with miniscule impressions.

Reference

1. A Parker, *Seven Deadly Colours* (London: Free Press, 2005) 268.