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'Growing Animals': Text based on talk given at Goldsmiths College, April 12, 2005

Chance would have it…

I want to talk about play and playfulness in relation to the work and will take you through several digitally generated sculptures using these terms, which have been a preoccupation of mine for some time. And this Symposium's topic of "Freedom and Constraint" seems to provide coherence here, a pattern through which I will try to weave some observations from the experience of working. Although I use the terms interchangeably here, in future, I'd like to elaborate this distinction: that play associates itself with constraint while playfulness is more allied to freedom, and that playfulness occurs inside the structure of play.

Last year a colleague and I made an exhibition together which included some collaborative work but also our own individual work, arranged in pairs as though in conversation with each other. This was a way of acknowledging what sculptors often suppress: we believe that objects can talk, that they have a kind of animated life; on the other hand, we do recognise that they are dumb lumps. The exhibition was called "Work and Play" (with Anderson Inge at the RBS Gallery, London, Jan-March 2004). The collaborative process made visible how important aspects of playfulness were in the production of work. Negotiation and "being in the dark", which normally remain internalised, required articulation in order for work to proceed.

Sometimes playfulness is borne out of frustration with rules (constraints) and sometimes it occurs spontaneously in a gesture towards or within freedom. We often forget how important play is in learning because we associate this with institutional issues. We need to remember (and retrieve) earlier experiences and other conditions under which we learn. Play is fundamental to learning, and learning a software programme is no exception. There are particular rules to learn, skills to acquire and one does so through a combination of rote, reiterative exercises (constraints); and making mistakes, following one's nose with no particular end in view (freedom). Play alternates between the two. Concentration is relieved by a break down or break out into play. And play is connected to method, both intrinsically as performative action and, more consciously, as a developing strategy.

The Serpents and Snails project (2001) *(Fig.1)* really came out of learning the 3D modelling programme, starting out very simply with primitive shapes, not even shapes --- lines, angles and arcs. *(Fig. 2)* It was a process of seeing patterns and orders, using tools to extrude shapes or revolve shapes (lathing). Two persistent themes or (virtual) actions developed out of this work. One was boolean intersection where I found delight in splitting formally coherent objects; the other was discovering the deformation tools. Again, this was a kind of transgressive play but also had practical applications. For example, in order to achieve a coherent splitting (intersecting), forms needed to be distorted from their formal purity in order not to end up with a collection of fragments. Initially this exploration was free from an end concept: the sense in which play can take place more fully when outcomes are not determined conceptually or specified in advance as in a design process.

(Fig. 1): Installation view of "Serpents and Snails", 2001, Ceramic, made at European Ceramics Work Centre (EKWC), Holland
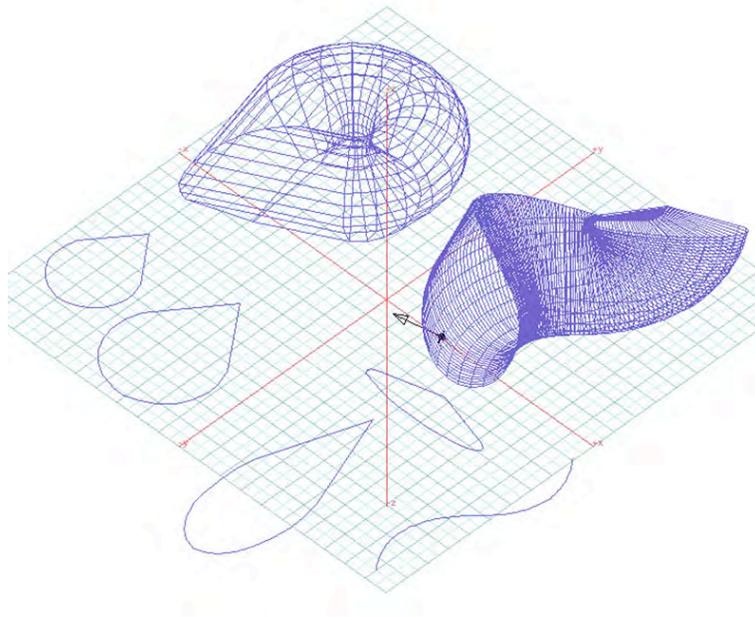
(Fig. 2): Digital Diagrams for "Serpents and Snails", 2000, FormZ digital image

One of the significant constraints in the digital process is my commitment to the object. So, the limitless possibilities of 3D modelling have always been constrained by my desire to make objects from these explorations. I used to describe this as a dichotomy between the virtual (disembodied) realm and the material (embodied) realm and my project was to bridge this duality and to think of this as a dialectical process. However, this might not actually be the case for a particular given object (the digital precedes material) but might do so over several works (material feeds back into next phase of digital). However, I now think of it more as a bi-polar relationship where meanderings and more unpredictable "spin offs" might occur.

For me, the digital is disembodied in comparison to my work as a sculptor in the studio where another kind of freedom takes place: that of engaging directly with material, constrained by it, yet (relatively) free from a conceptual *a priori.*

To what end, the digital…

The virtual can proliferate endlessly. I need the constraint of its eventual manifestation in the embodied realm. In working with material without an end expectation, process fills the void; the means have a priority over the ends. This kind of involvement acknowledges facticity, the embeddedness of actions, the "earthing" of decisions. What was once seen as provisional can quickly become fixed, like habit. I don't mean for this to have a negative ring because this occurs on a plane of experimentation and improvisation. It's just that embodied decisions carry a kind of weight: its there in the object which has been accumulating time and effort.

I want to say that these considerations don't apply in working digitally, at least not in the early stages of learning. However, as complexity of the modelling increases, there is a similar, or equivalent situation. While things can be changed quickly (increased provisionality) and one can "undo" and go back to the originating structure (parametric construction lines), an investment in time accrues and presumably one is "getting closer" to what one wants.

Another contrast between the material and digital occurs in recognising the relation between bodily action and reverie. This is most pronounced in repetitive actions (associated with craft based work), which can induce a variety of subliminal thoughts, feelings and associations. When these emerge into consciousness a kind of reflection feeds back into the working process (if not constrained by craft based outcomes or expectations). This level of play and fantasy doesn't occur in the digital because the body's involvement is minimal, those rhythms are absent, and the speed of digital operations requires a different kind of concentration. The equivalent reverie only happens in stasis --- looking (gazing) at the object (its state of completion/incompletion).

One function of play is the mastery of, or overcoming of, anxiety, an anxiety based on "not knowing" which is not so much ignorance (which it also is) but more a lack of grasp where boundaries might be or where things might end up. My initial forays into digital modelling felt like an "aversion therapy", having a sense that this new way of working would be productive (if only to challenge habitual methods) but needing to pinch my nose to take the medicine.

After clumsiness, a letting go…

Freedom is perhaps a state of mind more than anything else. At a certain point something like reverie is possible, one takes a "line for a walk", to borrow Klee's expression. With the digital there appears to be a continuous infinity of the possible. There is involvement in making bizarre or unexpected forms, backtracking to see how it happened. A mistake redeems itself: one is "side-tracked" into repeating a sequence of moves.

One is no longer wholly innocent, yet to be able to retrieve this sense, to "pretend innocence", at least, opens up other areas, and this pretending itself is a playfulness, a compounded (reflexive) play. There occurs an inevitable transition from innocent working towards the acquisition of skills, and something more like improvisation begins to hold sway. Within a given structure or form, one elaborates, extends, bends, subverts the rules. From this orientation, the digital appears to offer more scope for continuous playful "variations on themes", improvisations, because of the absence of the resistance which is a pervasive feature of things, matter and the methods of the material world.

My desire to make links between the digital and the material involves not only objects, but spatial experience as well. Digital space presents itself as rational. After all, it is composed of visual representations of algorithms. However, configurations depend on a variety of perspectival conventions. When you have the capability to revolve an object 360 degrees in any direction and to shift from isomorphic to oblique (etc) projections, the implication is that this multiplicity gives understanding of the object's features. But another way to look at it is as a series of continuous distortions and a feeling that one is none the wiser --- until the model is made and exists in real space.

A significant shift in my work took place when I moved away from modelling abstract forms towards generic architectural representations as a strategy to reveal and ground the deformation operations I had become interested in. To counteract the multiplicity I just mentioned, I decided to "fix" the object with its own perspective by distorting it (through "shearing" geometries). The objects possess a kind of pseudo anamorphism. I inverted the notion of perspective from a variable feature of the viewer's position to rooting it in the object itself. *(Fig.3)*
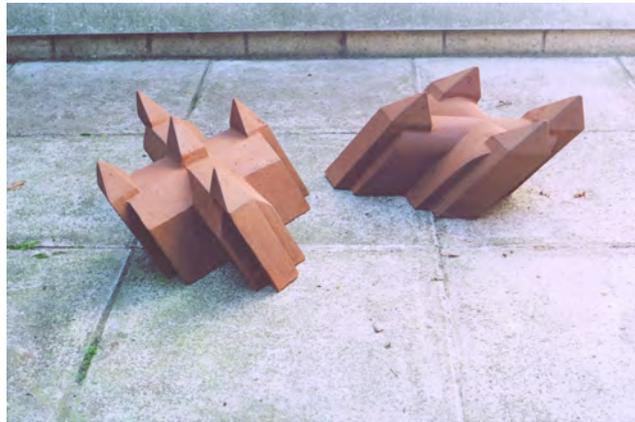
(Fig. 3): "Mighty Mites", 2002, Cast iron

Because I model objects rather than scenes or architectural environments, I tend to rely on the default reference plane grid for orientation. However, working in this environment is ambiguous: I am both focused on an x.y.z co-ordinate system but aware of its infinite extension. It is an abstract Cartesian space. When I began to model animals (I prefer to call it "growing"), that space didn't change, but my attitude towards it did. It became more of a nurturing space, like a womb, but also like an animated playground. *(Fig. 4)*

(Fig. 4): *"Festina lente: make haste slowly"*, 2004, aluminium hare, bronze tortoise

My particular set of "sculptural rules" would naturally inhibit the studio production of animals. Paradoxically, it was the computer that allowed this suppressed content to emerge. It provided a context sufficiently removed and detached from those internalised rules, and redolent with its own systems of engagement which gave a necessary distance for a playfulness to emerge.

Determinacy…

There seems to be a general view that the computer opens up limitless possibilities to our imagination. The unbounded imagination finds a kind of apotheosis through computer visualisation, a capacity to realise these contents if only in simulated form. Can we then make or build anything devised in this virtual space? Engineering becomes ever more capable and sophisticated, as, for example with rapid prototyping technology.

In contrast, I think it was Carl Andre who said that sculptors had no imagination; that is why we have to make things. Seen in this light, the field of imagination happens externally, in the world of things. This kind of enactment or performance is what I would also call play.

Freedom and constraint, like chance and necessity expresses a sense of the contingent, the contingencies that affect all our decisions and our attitudes towards how much we are able to control and how much we are able to relinquish. The issue of intention (what the artist intends) also figures here. What is important is to recognise that these dualities are not separations but two sides of the same coin which have distinct qualities, differentiations. For me, what is at issues is the expression of cohesion, connectivity and difference.

One of the questions which process evokes is how it takes place, how it manifests itself. Although material practices are not necessarily linear in progression, they appear to be locked in a temporal structure where transformation is irreversible. Play in this context is more like a (metaphoric) journey, of travelling a distance. Knowing you can't go back (retrace) gives a decision a particular quality. There are the contingencies of the moment and the sum of all previous decisions. Without a projected endpoint, or with an end of low resolution, the selection process appears to have a random aspect, or features of natural evolution. This is the quality of the game.

The digital hovers somewhere between the internalised, not yet palpable imagination, and the not yet externalised. The 3D modelling platform is a chamber in which potentials accrue in the absence of the determinacy of material structures. But as with material practice there is an understanding of, or a search for, necessary constraints: what can be changed and still played with. Moves and decisions unfold at different registers, but conjoin in the sculptural object.