

# Interactivity, Creativity and Immanence

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## §1. Introduction

Although this paper addresses the issue of digital practise within Art and Design it does so solely through the issue of interactivity. While this might appear to be too specific an engagement it is here that the assumptions that surround fine art practise are most radically challenged. Concepts such as ‘artist’ and ‘user’ will be confronted and it will be shown that interactive media offers a form of practise capable of engaging with the core values of creativity. These issues will be tackled philosophically and through the challenges posed by Complexity Theory. The paper will also draw upon the author’s experience of creating interactive work and his role as a mentor of the Clark’s digital bursaries, Watershed, Bristol.

Terms such as ‘user’ have been inherited from the discipline of Human Computer Interaction (HCI) and artists have expressed disquiet about their use. This is because disciplines such as HCI examine how quickly tasks can be achieved (such as locating a particular file) so that participants are understood as users of systems. Within the arts this has proved to be a problematic concept because agency appears to reside with users whilst the work/software is merely responsive, which appears to run counter to the notion that viewers are affected by and respond to a work of art. This paper will show that both points of view are the products of the same way of understanding the world, one based on human agency and a transcendental ontology<sup>1</sup>. That is an ontology where being is defined by external (i.e. transcendental causes). We will then examine the alternative offered by an ontology of immanence. In contrast to the transcendental, immanence is concerned with that which is self-caused or contains its cause within itself. This is not to say that things in themselves are self caused, but rather than being governed by external forces (as ‘embodied’ by the notion of a transcendental creator of the world) but at the level of being itself the universe is self caused. This may appear as the philosophical splitting of hairs but the consequences of such a shift in thinking are profound, not just in terms of thought but practice as well.

## §2. The Roots of the Transcendental

How should we understand these philosophical issues in relation to practice? Perhaps the greatest critic of the transcendental has been Spinoza. ‘Hidden’ within the (albeit beautiful) logic of the *Ethics* we discover an altogether more critical voice within it’s appendices that addresses these issues very directly

It will suffice at this point if I take as my basis for what must be universally admitted, that all men are born ignorant of the causes of things, that they all have a desire to seek their own advantage, a desire of which they are conscious.

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<sup>1</sup> Ontology is a branch of philosophy that concerns itself with questions of being

(*Ethics*, Part I, Appendix [p 57])<sup>2</sup>

In other words although we might be aware of our desires, it does not mean that we are aware of their causes. Driven as we are by these desires our understanding of the world has been formed by these desires and the processes that allow us to achieve their ends. So what affect has this preoccupation meant for the ways in which we conceptualize the world? Examining humanity's relationship with nature Spinoza notes that

For looking on things as means, they could not believe them to be self created, but on the analogy of the means which they are accustomed to produce for themselves, they were bound to conclude that there was some governor of governors of Nature, endowed with human freedom, who have attended to all their needs and made everything for their use.  
(ibid [p 58])

It would appear that the impact of such thinking would be on animistic and theological beliefs such that man sought

...different methods of worshipping God as he thought fit in order that God should love him beyond others and direct the whole of Nature so as to serve his blind cupidity and insatiable greed.  
(ibid)

However, this has influenced philosophy and science as much as any burgeoning theology. Such purposiveness and the desire to discover the truths of the world have informed philosophy and science as much as religion. Parmenides invocation of a world of truths over and above the illusion of experience was the moment when philosophy came into being. Admiring Parmenides logic Socrates and Plato's assertion of the ideal forms declared a series of permanent and enduring truths over and above a world of changing experiences. Whether one then sought these truths through idealism or empiricism they were taken as 'given' and these transcendental principles shaped western thought. The search for 'scientific' truths and laws is an expression of this, in fact the very notion of scientific *law* demonstrates the projection of human constructs upon the world, in that discoveries are required to fit this form before they are accepted as new knowledge. Thomas Kuhn's *The Structure of Scientific Revolutions* exposes the way that the unspoken laws of science often dismiss evidence that does not conform to this model as experimental error. It is only when the weight of evidence is such that these laws are challenged and overhauled that a 'paradigm shift' occurs within a discipline.

### §3 The Transcendental and Art

Although appearing to exist at the opposite ends of a spectrum art and science do not differ in their search for higher truths. Artists' appropriation of Kant's concept of the

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<sup>2</sup> The standard convention of referencing the original text via the original structure of the text is followed for both Spinoza (Definition, Proposition etc.) and Kant (Section), however in both instances a reference to the translations used [presented in square brackets] and listed in the bibliography is also provided.

sublime has allowed the assertion of a 'higher' principle whilst avoiding any attempt to describe the creative process. In fact this is something Kant built into his account of the sublime, limiting the concept of genius to Fine Art. Kant believed that science was based upon knowledge and could be taught whereas Fine Art involved a radical originality. Kant describes genius as

...the talent (natural endowment) which gives the rule to art. Since talent, as an innate productive faculty of the artist, belongs itself to nature, we may put it this way: Genius is the innate mental aptitude (*ingenium*) through which nature gives the rule to art. (Critique of Judgement §46 [p 168])

Those wishing to defend these concepts against the charges we've made so far concerning the dominance of purposiveness in shaping our understanding of the world will no doubt quote Kant's assertion that Fine Art is 'devoid of an end' (Critique of Judgement §44 [p 166]) as a means of declaring the purity of the transcendental principle. However, this issue is not so clearly cut. Kant states that 'the finality in the product of fine art, intentional though it may be, must not have the *appearance* of being intentional' (Critique of Judgement §45 [p 167] *my italics*). Any apparent lack of law or purpose is ultimately an illusion because there is always a higher (albeit transcendental) principle sought or that is already at work (giving 'the rule to art').

The seemingly 'lawless' nature of creativity is one that has appealed to artists. But as romantic a notion as it is we must ask where does its marriage with the sublime lead us? If creativity relies upon transcendental principles we are left with little option but to agree with Kant's account of genius to account for the production of art. Because of the nature of the transcendental all the artist can do is act as a conduit so that nature 'gives the rule to art'. If this is the case one has to ask what is it that the artist does when they're engaged in the act of making? Despite an affinity with the apparent lawlessness of making most artists wouldn't claim anything but a full engagement in the act of making, an act through which their work emerges.

Mikel Dufrenne offers a description of creative practise that encompasses these experiences. He observes that for the artist

The work he has created will then only appear to him as halting places on the way to the work which remains to be created and which he has not created because he has not come to know it. His only chance of getting to know it is to discover it by creating it. His only resource is the act of making, for which seeing is one reward. This is why the artist is an artist only through his act. (The Phenomenology of Aesthetic Experience p34)

Even though as a phenomenologist Dufrenne ultimately offers a transcendental account of aesthetic experience his description does not leave making behind, indeed the artist's 'only resource is the act of making'. Making is the means by which artists engage with an otherwise fugitive sensibility, this is the origin of the 'lawlessness' of art and the reason for the artist's struggle to attain it – there would be no struggle if there were nothing there to engage. It is the nature of this struggle that we often

engage with when we look at works of art. A palimpsest<sup>3</sup> history that animates the work, the work is never just 'given' but engages the viewer in an unfolding series of experiences. The assertion that traditional practice is itself interactive is in part most likely attributable to the nature of this experience.

#### §4 Spinoza and Complexity

Within the context of this paper further pursuit of Spinoza's philosophy might be ill advised, for as he notes in the last sentence of the *Ethics*

All things excellent are as difficult as they are rare.  
(*Ethics*, Part V, Proposition 42, Scholium [p 223])

However, as we develop our argument there are fundamental principles within the *Ethics* we need to note.

By that which is self-caused I mean that whose essence involves existence; or that whose nature can be conceived only as existing.  
(*Ethics*, Part I, Definition 1 [p 31])

Here Spinoza opens the *Ethics* by laying the metaphysical foundations for a philosophy of immanence. Rather than accepting the duality of substance and thought proposed by Descartes and having to find a way to unite these diverse and essentially 'foreign' substances<sup>4</sup> Spinoza begins with that which is self-caused, that is a single substance. Taken as such we have here, in both senses, an emergent ontology. An ontology that is itself emergent but one where these emergent principles are the driving force of a 'creative' ontology. However, as we embark on this our reading of self causation must be made carefully; I know that I and all that surrounds me will pass in and out of being, but that which constitutes these things does not. We can mark their difference due to the fact that

The essence of things produced by God<sup>5</sup> does not involve existence.  
(*Ethics* Part 1, Proposition 24 [p 49])

However, it is also important to note that Spinoza is not drawing upon the notion of a transcendental creator in this proposition. In fact the language used is one of production, of *process*. As we have seen notions of a creator and product have led to the concept of the transcendental; but here we must be wary of the danger that our

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<sup>3</sup> From Greek roots meaning "again-scraped." A palimpsest is a manuscript that has been re-used when it was decided that the expensive parchment could be better used for something else. The Webster describes the term as

1. Writing material or manuscript on which the original writing has been erased for reuse.
2. An object, a place, or an area that reflects its history

Perhaps the most famous of these in recent times has been the Archimedes Palimpsest. The term has also been used by Roland Barthes (Barthes, 1985, p.165) to describe Cy Twombly's work.

<sup>4</sup> Descartes achieves this by invoking the pineal gland as the organ that unites thought and extension.

<sup>5</sup> We should note that the terms God and Substance are interchangeable within Spinoza's philosophy.

understanding of process becomes teleological<sup>6</sup>. Such notions have been compounded by the fact we appear to be surrounded by the relatively constant and determinable objects of the world. However the apparent stability of these objects might not be so clear-cut. As Spinoza observes

If from a body, or an individual thing composed of a number of bodies, certain bodies are separated, and at the same time a like number of other bodies of the same nature take their place, the individual thing will retain its nature as before, without any change in its form (forma).

(*Ethics*, Part II, Proposition 13, Corollary, Lemma 4 [p 74])

This proposition also begins to describe the phenomenon of certain complex systems, such as Jupiter's 'eye' first observed by Cassini and Hooke around 1665 and the storm that still generates it (or for that matter the human body which replaces its cells approximately every seven years). Despite these remarkable qualities the essence of these phenomena do not involve existence.

God is the immanent, not the transitive, cause of things.

(*Ethics* Part I, Proposition 18 [p 46])

Rather than being manipulated by a creator God, it is God, or substance itself that is creative, each of the things that we experience being an expression of substance itself. How should we begin to think about this? We must begin with immanence as process. Perhaps the simplest way to begin thinking about this is through experiments concerning complexity. Conway's *game of life* is perhaps the best known of these and has led to the study of cellular automata. It works by using a grid whose cells are either 'on' or 'off'. Any 'live' cell with less than two neighbours 'dies' of loneliness. Any 'live' cell with more than three neighbours dies of crowding. Any dead cell with exactly three neighbours comes to life. Finally any live cell with two or three neighbours remains unchanged. The system works in such a way that all 'births' and 'deaths' occur simultaneously as the grid changes to its next state. This simple set of rules produces a series of recognisable forms<sup>7</sup> with 'lives' of their own. In this way we can think of an immanent ontology as being creative and productive through its process. Thus

.... all things have been predetermined by God, not from his free will or absolute pleasure, but from the absolute nature of God, his infinite power.

(*Ethics* Part I, Appendix [p 57])

Here Spinoza highlights a single substance whose 'nature' rather than 'will' determine events, this is why 'God is the immanent, not the transitive, cause of things'. The relationship is not transcendental, it is substance itself that through its own nature and process is productive. Indeed we should also think of the infinite in terms of process. When we examine the infinite we often begin with the notion of a

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<sup>6</sup> Where understanding is formed and being is driven by an ultimate purpose or design such that phenomena can be explained by virtue of these purposes and designs.

<sup>7</sup> The Block, Boat, Blinker, Toad and Glider being the better known of the basic forms.

sum to which something is added, in other words we begin with the finite! To avoid this problem mathematicians think of the infinite as *process*.

## §5 Art, Affect and Interactivity

If we return to Dufrenne's notion that an artist is an artist only through the act of making we can begin to see how a generative ontology allows another reading. A reading where the artist's engagement with their materials becomes a resource rather than a game of blind man's buff with the transcendental. The lawlessness of creative practise is not the result of a transcendental hierarchy but the fact that ontology is generative. At a fundamental level simple rules rather than laws govern being. It is through the interaction of these simple rules that ontology is, by its very nature, generative. Artists' manipulation of their materials allows them to build a relationship with the affective sensibility of emergent properties and find themselves addressing an otherwise fugitive and lawless sensibility.

This may seem a simple statement – in fact one might be accused of dressing up the sublime in a different language and that nothing substantial has changed as a result of the insights claimed. As far as traditional practises are concerned this might well be the case. However with regards digital media this is far from the case.

In the first instance we need to confront the notion that work generated digitally is somehow different from other forms of practise. The reason often claimed for this is that it is incapable of bearing the mark of the artist and that software leads to a generic practise. If we return to Dufrenne's analysis and the assertion that it is the artists engagement with their materials that allows an emergent sensibility to occur, these marks, the 'palimpsest history' we referred to earlier, can be understood as a factor in achieving this alongside the characteristics discovered in different media. Although the digital might not carry the thumbprint of the artist it might actually offer more due to its capacity to bring interaction to the fore. Rather than something that is played out in the making of a work (and in part it's viewing) these moments of discovery are brought into the operation of the work itself.

If the production of aesthetic experience is bound to an immanent rather than transcendental ontology there are important realisations to be made about the production of such work. Rather than relying upon some indeterminate internal inspiration or muse we realise that it is by working in the world that our practise emerges. Whereas the cliché of the artist in their garret (for no better a reference see *The Rebel* starring Tony Hancock) serves the notion of artistic genius an immanent ontology challenges this. The artist is no longer the unique conduit (genius) through which 'nature gives the rule to art', rather we begin to realise that practice emerges from a social and cultural milieu (see also *Creative Collaboration*, Vera John-Steiner).

This attitude has meant that any viewer except the artist involved in the act of making (for whom 'seeing is one reward') has been left unconsidered. This is because to do other than this would be to dilute the vision, the 'genius', of the artist. It must be admitted that attitudes within certain forms of practise may be unaffected because of the weight of tradition and the fact that our analysis seems directed towards philosophy. But this should not be the case within digital media. If art is to be

interactive, the actions and behaviours of the people who become a part of that work will radically affect it; the necessity of considering the ways in which people engage with this practise should be recognised as a form of ‘truth to materials’.

## **§6 Interactivity and New Modes of Practice**

As we have noted if we wish to create a genuinely interactive system the space generated between participants and the digital is of primary importance. One of my recent roles has been to act as a mentor for the Clarks Bursaries at Watershed. One of the award holders, Dane Watkins, expressed the doubts that many artists feel when confronted by this. He felt that responding to user opinion would place him in the same position as directors who are forced to alter the ending of films due to negative audience previews. However such end loading focuses evaluation on the reception and consumption of work. Given this interaction becomes a route to, rather than a generator of experience. We are rather, proposing a generative process that spans the life of the work from creation to ‘reception’. The involvement of others becomes an ongoing, iterative and qualitative process that is an essential part of making and not just a testing of what has been made. We are also able to do this because digital media lends itself to this in a way no other media does.

However, my interest in this way of working wasn’t just the result of the Clarks bursaries. My own interest arose as a result of being a New Technology Arts Fellow at the University of Cambridge and the Junction. Although the fellowships were set up to explore collaborations between artists and technologists they also sought to involve the public in the development process. My interest lay in the creation of an installation that modelled a fluid system. Projected onto the floor multiple participants could be tracked and their movement used as a source of energy within the system. The aim was to make one’s impact immediately apparent because of a simple and direct causality; but the system itself would generate rich and unpredictable events. Nobody would occupy a controlling position and the relationships between users would be as important as presence itself.

Once committed to the notion of iterative testing we were quick to realize that code lends itself to this process. Different versions of code and interface can be quickly produced to gauge the quality of interaction whilst also allowing rapid adjustments to be made as a result of observing participants’ experiences. As a result of this we (my collaborator Dr Jonathan Mackenzie and I) created two demos for the first round of testing. Many intuitively interacted with the work but assumptions were also quickly revealed. The most telling was that people wanted to confirm that they were playing with a fluid system, particularly when interaction was based around a touch screen. This had never occurred to us - we’d always known this was what we were dealing with. Everybody else stirred the work violently to confirm this, adding considerable energy with the result that subsequent users found it more difficult to read their effect on the system. We therefore rapidly worked on adaptations and provided a system with a more languid flow. In turn this produced another problem in that multiple users tried to interact with the system resulting in the ‘confusion’ of a device designed to work with a single point of contact. Despite these issues the range of behaviours exhibited were far richer than we’d imagined and provided considerable scope for creative development.

A year later the work was realised as a small installation. What became immediately apparent was the physical impact of the system. Whereas the demos only afforded a limited use of the body it now became a part of the work. This led to a type of behaviour where human involvement 'expressed' the system and uninhibited behaviour often replaced the intuitive behaviour we had observed when testing the demos. This created another level of dynamism where these reactions became a part of the work and an invite for other to participate.

However the scope of involvement open to the artist is far wider than this and can occur in surprising places. The 2004 Clarks bursaries were set up with the intention of examining the relationship between mobile technology and Watershed as a social space. As such, notions of iterative testing were central to the work. Bursary holders were also given access to staff within Mobile Bristol, a DTI funded project examining the potential of mobile media. What was interesting was that without exception nobody used these technologies in a 'locative' form. In fact Dane's work was the only project to make use of a mobile technology that wasn't reliant upon the use of mobile technology within a fixed infrastructure.

Using pocket PCs he worked on a project called '*LoveMatch*' utilising Flash animations (for an online version please go to <http://www.eatmydata.co.uk/LoveMatch/LoveMatchWeb.html>). Although proposed as a networked piece it was only realised as a standalone application, however even in this form it pointed towards some interesting conclusions. *LoveMatch* allowed you to select from a series of graphic icons to progressively build an image of yourself. Once completed the system would derive your personnel qualities from this and offer to select your ideal partner. The 'catch' was that in every instance after you entered your details these were selected randomly. Dane believed that people would quickly pick up on this

I intended *LoveMatch* to be a satirical comment on profiling. I thought that the users would recognise the arbitrary nature of the imagery and object to the conclusions. But they didn't.

What they clearly enjoyed doing was playing with the work as if it possessed some reality, often entering into an emotional engagement with the system, sometimes claiming to recognise themselves and sometimes trying to coax 'appropriate' responses from the system. A similar involvement can be seen in *Ghosts*, a commission carried out by Squidsoup prior to receiving their bursary. Developed for Watershed's 21<sup>st</sup> birthday celebrations it was created as a digital space within which people could leave their reminiscences about Watershed. This was achieved by allowing users to enter text that became part of the structure of a rendered geometry, which could be left to move on its own accord, or navigated by users. In itself this was a beautiful object, however it was surprising how a simple mechanism could generate a sense of involvement. I was particularly struck by this after my children entered text during the preview of the work. A few weeks later I saw *Ghosts* being shown at a conference and saw my children's comments moving through space, a sensation that was like catching a fleeting glimpse of loved ones in a crowd. Both of these works demonstrate an important route into the complexity of a system

Here Spinoza's theories of affect come into play, highlighting how these emotional reactions can involve us physically.

The mind does not know itself except in so far as it perceives ideas of affections of the body. ( Proposition 23, Part II [p 81])

Given these observations we begin to realise that, given an immanent, creative and generative ontology it is our body and our emotions that involves us in these complex systems<sup>8</sup>. Taking the maxim that the results of a complex system can only be known through its operation a creative involvement with interactive systems demands the involvement of participants in the creation of these systems. Rather than employing notions such as artist or user such an involvement also demands a sensitivity to the *qualities* that emerge from these systems.

Within the digital arts theory and practise point towards the profound value of iterative evaluation, leading to work where simplicity and involvement are not mutually exclusive. There is a clear need for new modes of practise that, contrary to traditional modes, involve participants in the creation of work. This involvement moves beyond concepts of reception, consumption, evaluation and use. Although one would shy away from applying the notion of creative users because of the baggage that this brings with it, within these systems participants generate the events that surround them. Such work needs to manifest itself emotionally and performatively as process. Mired as we are in a language originating from computer science it will only be through the establishment of genuine and sensitive dialogues with participants that we will discover an emergent language that will allow us to move beyond terminology that leaves us struggling with notions such as 'user'.

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<sup>8</sup> Indeed writing about Spinoza the neurologist Antonio Damasio (*Looking for Spinoza*) reads emotion as our primary response to the world, effectively an evolutionary mechanism that powers our responses to situations and on top of which feelings and other faculties are built

