

# The Edge of Stillness

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## Abstract

In this paper, I consider what happens when the digital allows us to so slow down motion that we create an ambiguity in which we cannot tell if what we see/hear is still, or very slow, through three cybernetic ideas: control; deciding the undecidable; and the involvement of the observer. It is argued that the distinction that we use in deciding the undecidable, the edge of stillness, is crucial as a pointer to the observer's involvement, an interaction. This edge is the liminal. The experience is a sort of edgy trance.

## Keywords

control; distinction; (edgy) edge; involved observer; liminal; slow/still; trance; undecidable

## Starting

*In recent years, I have explored an area of experience that I have come to specially love. Although in some respects it has long been available (e.g. in trance and hypnosis), it has become available in new ways through digital technology. In particular, I refer to our ability to slow down "sources" of our experience (particularly sound) and thus to explore their detail. We can hear (and see) an extraordinary wealth of detail and change in sounds (and images that seemed unchanging until we slowed them down. At the same time, the act of slowing creates experiences in which trancelike states become hard to avoid. There is an interesting and powerful, liminal ambiguity between these: the fascination in revealed detail contrasted to the tranciness of the still (the liminal). The liminal is the edge where we distinguish between the almost imperceptible (the sub-liminal) and the perceptible.*

*Through this paper I wish to understand something of this strange experience by exploring the liminal edge, using three concepts that have been developed in (second order) cybernetics: control; the drawing of distinctions/deciding the undecidable; and the involvement of the observer.*

*The liminal edge, and playing in this world of cybernetic ideas, is where I like to be.*

## Introduction

This paper is a personal reflection on an interest and practice based in the ambiguity of the very slow that I believe evokes the liminal. Its source is constructing a certain type of experience, embodied in an art that exists at the edge between the very slow and the still, which has become possible through the control offered by developments in digital technologies.

It is a personal meditation, explored through three intertwined strands.

The first strand is reflection (in Schön's 1987 (also Glanville and Schaik's 2003) sense). It is a meditation on these possibilities and experiences, coming from my experience making, and the consequent opportunities I believe they offer audiences.

The second touches on the work of others, in conventional descriptions of the world we inhabit. It introduces developments in digital technology important to this approach, and discusses the constructive source of ambiguity (particularly undecidability) and understanding.

These are illuminated through a third strand, (second order) cybernetics. The power of second order cybernetics is that it recognises boundaries (for example) that are drawn by observers and are therefore constructed. An examination of the making of boundaries leads to one of the seminal works from which second order cybernetics arose: Spencer Brown's *Laws of Form* (1968). Drawing a distinction to act as a boundary is also the way an observer constructs and understands. Such boundaries can be considered places in themselves (Glanville 1990), as in my notion of (architectural) zero space and the "thick" wall (Glanville 1988).

Other approaches are possible, leading to different frames and sets of references. I chose cybernetics because I find it informative (helping me understand), and beautiful in itself. Although the concept of the liminal is crucial, this paper is not an academic exploration of the liminal (or the liminoid): rather it is an exploration of experiences and explanations that can be clustered with this concept.

It may help the reader to keep these threads in mind as they weave their own way through this text.

### **The Liminal**

At the edge of the imperceptible, there is an area that can be called the liminal.<sup>1</sup> In the liminal, we live in ambiguity, the betwixt and between (see Turner 1986, also Glanville 1988, 1990). We resolve (if only for a moment) ambiguity and its uncertainty by deciding on a threshold. Our decision is personal and made for the moment of its making. It determines where, for instance, the slow becomes the still. The liminal describes the edge we make, and our relation to it: a relation that may be decidedly edgy.

My interest is not in what the artist wants to say, but in post-Cagean work that explicitly welcomes the audience (observer) as the creator of his/her own understanding. Therefore, I welcome ambiguity, and its personal resolution in the liminal.

### **Technology**

Many have argued that developments in technology are major forces forming how, at any time, we understand the world (e.g. Gregory 1984).

We recognise that technological developments allow us to investigate and reveal new substance where we had thought there was nothing. Instruments, such as the telescope and microscope, opened up notions that there is vast detail in the emptiness of space, the pinpoints of stars; and apparently uniform, solid surfaces we learn are lumpy, bumpy and mainly void.

So we expect the extra-ordinary technology of the digital to afford us new ways of understanding.

I believe the biggest development deriving from the digital is increased control: we can now copy, exactly, any image within the "grain" of the digital unit, with a vast range of possible modifications—which was previously impossible. The analogue world (pre-digital) allows, in principle, infinite variety.<sup>2</sup> Whereas we cannot duplicate the (infinitely) fine precision of the analogue, the digital gives us (discrete) precision we can copy precisely, at will. We can summarise the difference thus: we trade the infinite variety of the analogue for the precise control of the digital.<sup>3</sup> Digital precision (the grain) can be scaled so the variety is very large: but it is never infinite because its formation is discrete rather than continuous. The effect of the increase in control can be seen most expressively in the drawable-and-hence-buildable forms of some contemporary

architecture, previously limited by the difficulty of both duplicating and scaling lines defining forms that were non-Euclidean.<sup>4</sup>

One aspect of increased control is our ability to separate previously linked elements. The analogue link between sound frequency and duration can be broken.<sup>5</sup> In the digital realm, we can alter tempo and pitch independently of each other (e.g. Roni Music's "Amazing Slow Downer"). We can, in real time, adjust the pitch of singers who do not hit desired pitches (e.g. reputedly, The Spice Girls), and, in the extreme, recast all aspects of individual sounds (e.g. Celemony's "Melodyne"), without the result sounding artificial. We can achieve similar results visually by interpolating/extrapolating frames. The digital, here, might be considered the temporal, ephemeral equivalent of a microscope or telescope.

### **Slow<sup>6</sup>**

We use technology to extend extremes. Slowing sound lets us reveal minute detail and tiny changes previously inaudible, under the liminal threshold. In terms of such detail the slowed sound may seem full of events, as, when we look into a drop of still water under a microscope, we find it busy with movement and life. We may hear and see detail previously "missed". This detail may be so unfamiliar we are lost when facing it. Pauline Oliveros (in her deep listening programme<sup>7</sup>, Oliveros (2005)) teaches us to listen attentively without imposing a predetermined pattern on the sounds we hear, to find such detail without digital sensory prostheses (arguably impossible, but we can try).

More interesting to me than unveiling detail through slowing down is the effect of the very slow, which becomes available to us through the digital. Slowing down removes the progression of change from realms we can grasp, allowing us to concentrate on the experience of (and at) the moment. I have noticed long-lasting events become isolated: we lose our sense of pattern, even our ability to perceive change at all. Seeking pattern becomes more urgent and harder at this pace, where we are essentially alien. What does it mean to lose our sense of pattern because change occurs too slowly for us to sense? This is one way to think of stillness.

And so we search to distinguish the slow from the still. We never previously had access to the really slow as an artistic means. The really slow brings us to trance: not the trance associated with insistent rhythm, heartbeat and brain waves, but the trance of slowing down, leaving us uncertain—where we step outside the conventions of our own perception and, hence, of ourselves.<sup>8</sup>

Slowness is not only interesting in sound. Visually, we gain control in our ability to cross-fade and otherwise blend two images, or over time-spans inconceivable before the digital. The mechanics of moving analogue faders makes long, smooth fades humanly unachievable. Now we can take as long as we want. Resulting cross-fades move beyond the perceptible: they enter the sub-liminal, bringing us to trance. The image changes, imperceptibly, and we are left uncertain, outside our realm of competence, trying to distinguish the slow from the still.

Thus we shift to stillness, and the realm of perception. When does the very slow become the still? At what point does slow movement become no movement?<sup>9</sup> The question is technically "undecidable" (see next section, below). Not being able to decide whether sound is slow or still presents an ambiguity. In the end we make a choice of one of the two possibilities (we decide). There is a fine line. Second order cybernetics talks of the act by which we make observations: see George Spencer Brown (1968) and his opening command: "Draw a Distinction"! This distinction,

this line, is not a line that can be drawn by agreed mechanism: each of us draws our own line, individually—distinguishes as we distinguish. This distinction is not just where one stops and another begins, but exists in its own right and its drawing is hence recursive (Glanville 1979). To quote Heinz von Foerster: “Only we can decide the undecidable” (Foerster 1991, 2004).<sup>10</sup>

### **Deciding**

Von Foerster’s aphorism tells us that when there are equally acceptable answers to some question, and no overriding logical or evidential procedure promoting the acceptance of one rather than the other, only we can make the choice—and make it freely. Where the slow ends and the still starts is such a question. Making one choice does not oblige us to make the same choice again: there is no “natural” requirement for consistency.<sup>11</sup> We chose where to draw the distinction between the slow and the still—there is no “natural” point where we can insist we cross from one to the other.

We may even sense change in the supposedly completely unchanging. La Monte Young and Marian Zazeela’s (1993) installation “Dream House” essentially consists of a Manhattan apartment with a complex, unfamiliar sound generated by a computer programme, playing continuously and unchanged for over 14 years. Yet, when I (and other visitors I have spoken with) listen in it, freezing all the acoustic factors that can affect sound, the sound changes. Is this unchanging sound still, or moving slowly? Does knowing that the sound is generated by a fixed computer program pumping out a stack of Fourier sine waves really tell us the outcome is fixed, unchanging?<sup>12</sup>

In my piece “Light” (to be shown at the conference) I have produced cross-fades between images so slow they are unobservable. At no moment can we see change. Yet we become aware change has occurred. After some (how much?) time we are convinced the image is different, but we did not notice it change. As with the movement of the stars, what we see now no longer appears the same as what we saw some time ago.

Even if we try to talk as scientific “observers”, we find we are anyhow involved in acts of distinguishing and observing. This is particularly clear where the slow may be still, and v.v. What is crucial to my concerns is that WE decide. The advantage is explicit recognition of the centrality of experience and the role of the observer; understood to be through what is, conventionally, described as individual interpretation (individual difference). The involvement of the observer is a central theme in second order cybernetics (Glanville 2002).

### **Interaction**

In second order cybernetics terms, the decision each of us makes at any moment in the face of an undecidable question is our response to an experience. We have learnt (following Piaget 1955) to behave as though experience is caused by objects in a real world. In this view, experience exists between us and whatever object we take to be its cause—although we construct objects from our experience.<sup>13</sup> The distinction we draw derives from the experience we take as lying between us and what we think of as its source object (the betwixt and between of Turner’s liminal (Trubshaw 1995)). Following Piaget, the (undecidable) decision we make is not of the experience (by definition personal) but of where we locate that experience, reflecting the contribution of both myself-as-observer and the (constructed) source objects we have come to believe generate this experience. The decision is thus shared, exists between and is not predictable. In this sense, it is interactive.

Interaction reflects the involvement of the observer, making sure (s)he is always in the position to

choose and re-choose. The uncertainty that is part and parcel of the ambiguity demands the involvement of the observer to decide between options (or maintain ambiguity), and to make whatever meaning (s)he will as a result of his/her decision. This view (developed by Gordon Pask in his earliest cybernetic machines in the early 1950s (reported in Pask 1970, 1982),<sup>14</sup> and the norm in second order cybernetics (Foerster (1975), Glanville (2002)) contrasts to that proposed by, for instance, semiotic interpretations—where meaning is assumed to be in objects rather than in our understandings (of them).<sup>15</sup>

This is how I understand my experience in “Light”, where the experience I have is ambiguous; of the still, yet moving slowly. Is it slow? Is it still? And of the detail I find in this slowness that sits edgily in contrast to the trance I can also enter into. I jump between the two, resolving the ambiguity one way and then the other, or I concentrate on the edge, the extraordinary phenomenon of the edge which allows me to choose and re-choose: the choice at the edge of stillness, where I distinguish the slow from the still; the distinguishing (and even disintegration) of trance through listening and watching acutely for detail. I am caught in anxiety and in calm, maintaining further ambiguity in my response. I am betwixt and between. I live in contradiction. I am lost.

### **The Liminal**

Above, I argued it is we who decide whether an ambiguous experience is of (e.g.) the still, or the very slow (which the digital makes possible): the decision is not made for us. I used the cybernetic concepts of control, distinction drawing, and deciding undecidable questions to illuminate this experience. I wrote of the “edge” this freedom to decide brings to our experience—a liminal edge, where we are never sure which side of the distinction to be on.

In this understanding, we (each, individually) draw our own distinctions, wherein personal meaning lies. Making the edge embodies distinction drawing, undecidability and personal choice. It’s where we bring into being,<sup>16</sup> moving from the potential to the actual: from the sub-liminal to the super-liminal, via the liminal. It’s the liminal, the edge-threshold we straddle, that does it!

This is the intellectual reason I am interested in exploring and explaining experiences that explicitly require active and continuing participation of the observer. But it is enjoyment of the experience, which in the case of the slow/still is edgy and trancy, that drives this reasoning, as it drives my involvement in the making of the edge in the edgy uncertainty.

The term “liminal” for this sort of edgy edge is a particularly appealing term because it carries with it the notion of the sub-liminal, which can encompass such ideas as that there may be movement yet to be found in the still; that new technology may offer us (as it has in the past) the opportunity to reconsider what still is, as it allows us to individually determine where still begins and slow ends. We may even come to consider that stillness, like silence, as unattainable in the traditional sense, and that we need to re-interpret it—just as John Cage re-interpreted silence (Cage 1966).

For me, this is the value of the edge of stillness. It is the value that allows us to find, within the stillness of the very slow, unimaginable detail—detail without form but with presence. It is the value that allows stillness to enter the transcendental, transcending the stillness of non-motion and the very slow to take us towards that whatever-we-may-call-it where we are, ourselves, no longer distinct. It is the edge that allows either, but also allows both.<sup>17</sup> It is the liminal, where consciousness begins.

## Acknowledgement

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## Endnotes

<sup>1</sup> The Oxford Dictionary of the American Language (Apple Computer OS X) defines liminal as follows: 1 of or relating to a transitional or initial stage of a process; 2 occupying a position at, or on both sides of, a boundary or threshold.

<sup>2</sup> I am using variety in the technical, cybernetic sense developed by Ashby (1956).

<sup>3</sup> This distinction is based on mathematical curves typically used in analogue descriptions, which have infinitely many points on them, and the stepped lines of digital representation. I have been arguing this distinction, and the consequence in controllability, for the last 20 years.

<sup>4</sup> There are many examples in the architecture of leading contemporary stars. The best general introduction was the exhibition of Non-Standard Architecture at the Centre Georges Pompidou. See Migayrou, F and Menen, Z (2003).

<sup>5</sup> The familiar effect of speeding up and slowing down sound in “novelty records” (e.g. the Chipmunks) demonstrates the unbroken link between frequency and duration.

<sup>6</sup> The appreciation of slowness in this paper should be seen against what Carl Honoré (2004) has written about as the Slow Movement.

<sup>7</sup> Oliveros has a special room for deep listening. She runs courses on this, helping us to hear a richness in sound that we had not previously noticed.

<sup>8</sup> Perhaps the most influential recent thinker about trance and hypnosis is Milton Erickson. See, for instance, Erickson, M and Rossi, EL (1981). Graham Barnes has written extensively about hypnosis and cybernetics (e.g. Barnes 1994, 2002).

<sup>9</sup> There are so many definitions of “still” in the dictionary. Still as quiet, calm; still as without movement; still as frozen sampled from the continuous (still frame); still as in yet; still as up to now; still as continuing; still as un-bubbly; still as the device used in distilling. Here I use still as in the first two definitions.

<sup>10</sup> Perhaps the most basic undecidable question is whether there is, or is not, a reality independent of a mind recognising it: how can we know, if no mind recognises it exists? Note that this difficulty does not mean there is no such reality, merely that we cannot know it. Acceptance of this undecidability is the basis from which Ernst von Glasersfeld develops his Radical Constructivism (Glasersfeld 1995).

<sup>11</sup> There are also those who build and maintain the undecidable questions. My aim in much of what I do is to create that which explicitly and articulately asks the listener/viewer to decide, to add their meaning rather than to hope for meaning in the work.

<sup>12</sup> We can ask how we know it is unchanging, etc. Those are questions for another paper.

<sup>13</sup> Thus, in the case of the “Dream House” sound, for instance, we say the experience was of a sound generated by a computer broadcast through loudspeakers.

<sup>14</sup> At the very moment of completing this paper I was fortunate to visit the “Maverick Machines” Exhibition in Edinburgh, which features some of Pask’s work in this area, and work of others

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inspired by Pask. See <http://www.maverickmachines.com/> which discusses and shows this work.

<sup>15</sup> A consequence of my interpretation is that the art which lasts is that which is (in and of itself) understood as the most meaningless, requiring observers to make all meanings. Otherwise, it is hard to explain how we continue to value some artworks through changes of culture and era.

<sup>16</sup> In cybernetic and systems thinking, the system boundary is so central that it is taken to define the system. This assumption is built into Spencer Brown (1968), already discussed.

<sup>17</sup> The distinction between a logic of either/or, and one of both/and was explored by Bateson (1987), who argued that we live in a time when our understanding is changing from either/or to both/and thinking. I have developed an example of this in an examination of a five day workshop at Fuschl, Austria, in Glanville (2006).

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### **Biography**

Ranulph Glanville studied architecture (spending most of the time working in experimental electronic and electro-acoustic music/performance), followed by cybernetics and then human learning. He has published extensively in all three fields. He has taught in Universities around the world. He currently holds a post as Professor of Architecture and Cybernetics at University College, London, and is an Adjunct Professor and Senior Visiting Research Fellow at the Royal Melbourne Institute of Technology University. He is visiting professor at several Australian and other universities. He was recently awarded a DSc for his seminal work in Cybernetics and Design. He has a small, wide ranging art practice founded in musical composition. His hobby is whichever of his interests he is not currently involved in. He is married to the Dutch physiotherapist Aartje Hulstein: they live on the south coast of England. His son, Severi, works in digital post production.