Creativity and sound: the agony of the senses

Richard Coyne

People create with sound, music providing the obvious example. The growing fields of sound design in film, video games, installation works, multimedia interactives and other audio environments provide further evidence of a vibrant sonic creativity (Bull 2000; Kahn and Whitehead 1992; LaBelle 2006; Schafer 1993). There is much to be said about the tools of creation in sound; their temporal and spatial aspects, issues of notation, technology and performance, and not least the longstanding relationship between music and architecture (Blesser and Salter 2006; Wittkower 1998). But in this chapter I will focus on the relationship between sound and vision, and what this troubled relationship says about creativity. I marshal evidence to the claim that creativity emerges at the thresholds (Coyne 2005), the boundaries between conditions, and as such belongs within the ludic realms of *agon* (Caillois 1961), the assembly for contest, the place of competition between the senses.

Designers readily identify creative people as those with a strong orientation to the senses (Waterworth 1997). Francis Galton asserted that geniuses ‘have the utmost delight in the exercise of [their] senses and affections’ (Galton 1972: 279). In his ‘incubation model’ of creativity, Torrance identifies an open phase where the creator defers judgement, ‘making use of all the senses, opening up new doors’ (Torrance 1993: 233), and sensitivity as a creative attribute seems to derive from an acute engagement with sensory experience (Razik 1966: 164). The Romantic tradition (Albert and Runco 1999: 23) relates creativity to an enthusiasm for sensation, as evident in the appetite for the Continental grand tour amongst intellectuals and artists in the eighteenth and nineteenth centuries. John Ruskin offers a sonic, kinaesthetic, visual and tactile account of the experience of encountering St Mark’s Square in Venice, in which he progressed from the narrow alleyways of the city ‘resonant with the cries of itinerant salesmen’ to the spectacle of glittering pinnacles and the confusion of delight, ‘the flashes and wreaths of sculptured spray’ (Ruskin and Links 1960: 149). Mathematical invention has also been described in terms that presuppose the ability to visualise, feel or hear relationships. Poincaré’s famous description of his processes of mathematical discovery draws on concepts of combination, unconscious filtering, ‘aesthetic feeling’ and ‘emotional sensibility,’ but also implicate an unfolding narrative over time peppered with everyday sensuality: putting his foot on a step, taking his seat on the bus, and tripping to the seaside (Poincaré 2000). In so far as creativity involves detecting and exploring relationships, these seem to cross over the different
senses. In fact the psychological condition known as synesthesia (Cytowic 1989: 269; 1995), in which individuals exhibit the capability to hear colours and see smells, has become emblematic of an aptitude within any of the arts to contemplate and seek out crossovers of the senses, well illustrated in the common association between musical tones, chords, keys and colours (Newton 2003). So in the realms of creativity the full range of the senses are open to scrutiny as are the ways human societies have identified and carved up the sensorium (Classen 1993). In this chapter I will concentrate on hearing and seeing, the antagonism between which has something to say about the spectrum of the senses. I argue that the troubled relationship between sound and sight has a bearing on creativity.

**Unity and coherence**

The classical tradition relates sound to vision as issues of harmony, unity and order. Architecture joins with music in giving expression to, or enabling participation in, the universe’s yearning towards completeness. Hence the mathematician Poincaré appeals to the ‘harmony of numbers and forms’ and their ‘geometrical elegance’ (Poincaré 2000: 92). Under this Platonic model all modes of creation are subservient to the residence of the truly beautiful and complete in the realm of ideas, the perfect mind of the divine creator, a state that transcends the everyday. Music and architecture are thus thought to provide access to this ideal, the union of which constitutes a major narrative in the traditions of art and design explicit in various treatises, from Roman antiquity (Vitruvius and Morgan 1960) to the Renaissance.

Palladio’s villas were said to be designed in accordance with principles of harmony, to the extent that room dimensions corresponded to harmonic triads (Palladio 1965; Wittkower 1998). Even the practicalities of sound are related to improvement, correction and movement towards an ideal. Vitruvius makes mention of the practical issues pertaining to sound isolation and transmission (Vitruvius and Morgan 1960: 136). The senate house was to be constructed with surface mouldings at the lower levels to assist the passage of the voices of the senators to the balcony above (p. 137). Theatres were to be configured as a series of concentric tiers to match the circular waves of the voice (p. 139) (Vovolis 2003). Vitruvius explains how the clarity of the voice is enhanced by the careful positioning of large bronze sounding vessels in the theatre, a functional schema elaborated by Alberti (Alberti 1996: 276; Naguib and Wiley 2001). The modernist tradition reconstructs the Ideal, and disengages function from transcendence and formalist cosmologies (Perez-Gomez 1985). But the tradition equating harmonization and beauty persists where creativity is at the service of the coherent, the ideal, the beautiful and the functional (Corbusier 1931).

The pursuit of beauty and coherence are now at the margins of contemporary creative practice. It is difficult to identify and agree on what constitutes the ideal. The tradition that seeks to conserve an ideal plays down the role of individual preference, cultural difference, the everyday, and the inevitability, role and productive value of interesting deviations. This challenge to the ideal is brought into sharp relief by contemporary composers, sound designers, performers, theorists, critics and audiences for whom contemporary compositions and sound works would not have been possible were the conventional canons of beauty adhered to, or regarded as, immutable (Kahn and Whitehead 1992). This challenge to the ideal is echoed in contemporary architectural theory (Koolhaas 1994).
Echo and Narcissus

Contrary to the tradition aligning sound, music, form, architecture and vision through concepts of coherence, a further tradition grasps the oppositional character of the senses, though the references are oblique, less obvious and require a kind of psychoanalysis of myths and texts. Much has been made of the myth of Oedipus in this regard: the story of the son who ostensibly kills his father and weds his mother. Freud (1991) uses this classical narrative to illustrate his theories about psychological repression. By various readings the mother represents some desirable, complete and primal condition (arguably a condition resonant with the ideal coherence championed by the classical tradition). The father represents a more tyrannical state, the oppressive rule of law. The story implicates concepts of creativity in that the mother, after whom supposedly Oedipus longs secretly, is enveloping, nurturing, generative and creative. The father, from whom he ostensibly retreats, is restricting, rule bound and unproductive. This mythic structure is obliquely connected with sound and vision, not least in the conclusion of the story, where Oedipus punishes himself by piercing his own eyes with broach pins. For Freud blinding is a symbol for castration, and encapsulates something about primal fears of retribution, feelings of guilt for seeking a return to primal bliss.

In his account of the early life of Leonardo da Vinci, Freud (1953) attributes much of da Vinci’s putative genius and sustained creative production to the transference of erotic energy from unresolved feelings for his mother. Freud thus attributes creativity either to the condition of longing for some kind of wholeness and completeness, or as a symptom of unresolved sexual repression. I need not resolve here his precise attributions of creativity. It is sufficient to note that Freud’s identification of various domestic and psychic complexes implicates vision, sound and creativity, and through a set of relationships that can be described as agonistic.

The myth of Echo and Narcissus (Ovid 1986) illuminates the tensions between the senses even more clearly, or at least demonstrates the power of the different senses to bring psychic conflicts into sharp relief. Echo was a nymph, whose name and circumstance clearly relate to sound. Narcissus was a youth enchanted by the beauty of his own reflection in a pool of water, a story suggestive of the seductions of the visual image. Echo had already been consigned to lingering in caves and groves, and could only repeat faintly what she heard. So she could not communicate her affections for Narcissus, and languished in a condition of unrequited love. Whatever the interpretations of this story, and there are many (Gildenhard and Zissos 2000), the antagonisms implicate two protagonists, one pertaining to sound, the other to vision. Both involve reproduction and repetition (sound reflection and visual reflection); both protagonists wasted away, one in pursuit of the other (Echo following Narcissus). The story suggests various interesting alignments: harmonising sound with a spontaneous mode of creation and vision with a kind of ordered coherence.

So sound and vision are implicated in various conflicts. Any storyteller who wishes to construct a narrative about dispute (father and son, mother and father, country and city, travellers and settlers, the proletariat and the bourgeoisie, creatives and bureaucrats) can do worse than deploy the vexed relationship between the ear and the eye to add emphasis. Odysseus and the Sirens, the Cyclops, Hermes and the lyre serve similar functions as stories invoking exaggerated or diminished sensory capability, and the increase or reduction of powers (Homer 1980: Hyde 1998).
Aural cultures

The myth of Echo and Narcissus can be taken as a reference to a lament over the replacement of one order by another. The idyllic, nomadic life in the countryside is supplanted by settled living in towns. Echo is all over the place, unconstrained, and of the earth. Narcissus is out hunting initially, a leisure pursuit of the settled rich (Veblen 1998). The youthful male is on the side of refinement and sophistication; the nymph is a rustic agent, free to roam, but with diminished sensory capability, consigned to repeating only what she has heard, and in muted tones. Sound and sight are assumed to be related along several lines: sound comes before vision chronologically, vision is superior to sound in providing us with greater control over our environment, sound is supplanted by vision, sound carries with it a kind of innocence, and a dependence on vision breeds a nostalgia for innocence.

Marshall McLuhan (1994) gave potent expression to this identification in his account of the emergence of the electronic age, and its potential for creativity. For McLuhan, the Narcissus story highlights the human capacity to be numbed by technologies (my reflection as an extension of myself). His account invokes three great epochs. In the primal era of sound the ear held sway as the dominant organ in human society. Human beings were immersed in sound. There was a lack of distinction between people, things and environments. People communicated through the voice, or at least, there was the persistent chatter of voices, in which humankind participated. Eventually people discovered, or invented, the power of visual symbols and made marks, pictures and inscribed texts. The transition to vision was complete with the invention of the printing press and the mass production of texts. The modern era is characterised by the pervasiveness of this capacity for pictorial representation, the ability to stand back and to observe. If the aural sense is about immersion and lack of distinctions, then the ascendancy of the visual sense enables detachment and a scientific sensibility. For McLuhan, thinking no doubt of the incessant noise of transistor radios, the multiplication of communication channels and the broadcasting of everyday street talk that crossed social, age and class barriers, the electronic age restores something of the babble of voices. Human kind is in a global condition, a global village, a restoration of the tribe, and one in which we wear all of humankind ‘as our skin’ (ibid.: 47).

McLuhan’s account is romantic, utopian and over-determines the relationship between technology and the human condition (Coyne 1999; Ferguson 1991), but it taps into the power of the myth of primal conflict, between sound and vision. McLuhan (1968) was not alone in making such assertions, but he delivered them in a climate of celebrity, and deployed the very media he was justifying, in digestible sound bytes, and during the heyday of the baby boomers. His projections influenced a generation of computer systems developers (Kay 1990). His view of media reinforced the conflict between sound and vision, implicating creativity. In the electronic age (the digital age), creativity is distributed, or has the potential to be shared, whereas the culture of vision elevated the role of the individual as creative genius. It is aural culture that gives us initial access to creation, and provides the model for distributed, hypertextual creativity currently being attributed to peer-to-peer mass media, ubiquitous communications and the Internet (Rheingold 2002). Neither sense though has a hold on creativity. It is in the tension between them, or in the tensions that they exemplify, that creativity resides.
Textuality

The conflictual relationship between sound and vision is also prominent in language theory (Havelock 1986; Ong 1962). Speaking and listening both pertain to sound. On the other hand, to write something down is to resort to vision. Speech and writing are the polar equivalents of sound and vision in the realm of language. In the same way that McLuhan claimed a kind of privileging of sound over vision, there seems to be an asymmetry in the relationship between speech and writing. Writing is undeniably a major development, but it is nonetheless derived from speech. We write down what we hear or say. Speech is contingent, of the moment, open-ended as evident in the play of conversation. Things written down are fixed and assume authority. Whereas we require the evidence of the written word, speech, communication by voice and sound alone, can be vague and evasive. In so far as we think of language as caught up in these conflicts, we enter into the tradition of Hermes, the messenger god, whose name has carried over into the study of hermeneutics, the art of interpretation (Gadamer 1975; Snodgrass and Coyne 2006). Hermes was a thief, having stolen his brother Apollo’s cattle then concealed the theft by trickery (Hyde 1998). According to Plato ‘the name “Hermes” seems to have something to do with speech: he is an interpreter (hermeneus), a messenger, a thief and a deceiver in words, a wheeler-dealer – and all these activities involve the power of speech’ (Plato 1997: 126). Theorists of language, such as Derrida (1976), seek to confuse the distinctions and priorities between speech and writing, and show that any conception we have of speaking as a primal condition is already imbued with the paraphernalia of writing. Even without examining these arguments in detail we can concede that the relationship between speech and writing is presented as an agonistic one, a concept close to Derrida’s concept of the aporia (Derrida 1993).

Sound cuts

Returning to psychoanalysis and cultural theory, in the case of the visual image, according to Lacan (1977), there is a defining moment when a child first sees itself in a mirror and recognises itself as other than its mother and the world around it. For Lacanian psychoanalysis, this is the symbolic moment of the cut, or breach. In terms of the mythopoetics of sound and vision I have been discussing, the stage prior to the mirror phase equates to the immersive character of the sonic field. That the visual image is separate from me does not constitute the defining moment. Rather, the reflected image confirms that I am separate from everything else. Narcissus’ image is not preserved, and few adults would think that the appearance of a person has a separate existence to that person. The artifice of painting and sculpture would have been required to preserve the image. But the mythos of sound provides one of the earliest indications that there is something about ourselves that can be separated and preserved without artifice. Echo dies, but her vocal renderings are preserved. Faint though it may be, the sound of the voice can be thought to persist independently of the originator, as if an emanation or secretion.

Human societies thought of this separation long before technologies existed for the preservation and transmission of the voice. Other bodily emanations can be preserved, but the voice is unlike bodily discharges (fluids, waste), in that the voice carries something of the originator, and life (the discharge of the breath). Rabelais plays with this independent existence of the voice in his sixteenth-century satire, Gargantua and Pantagruel (1955). While sailing in foreign seas, the sailors encounter voices hovering visibly and tangibly in space. Pantagruel grasps some words that are not yet thawed: ‘Then he threw on the deck before us whole handfuls of frozen words,
which looked like crystallized sweets of different colours. [. . .] When we warmed them a little between our hands, they melted like snow, and we actually heard them’ (p. 569). Technologies for recording and transmitting sound make the separation and independence of the voice palpable.

Concepts of the cut may direct us to classical theories of soul and transcendence. Like the sound of the voice, the soul, the breath, can live outside, and outlive, the body. But the cut itself, as excision, rift, threshold, gap and disjunction, resonates throughout contemporary theories of literature, art and creation (Serres 1982; Tschumi 1994) and in ways that directly implicate sound (Augoyard and Torgue 2005; Connor 2004). Being cut off, cut up or cut open may be the direct result of violence, and provide a literal source of agony, but the agonistics of relationships are also negotiated across a cut or gap. There needs to be separation before there is anything to traverse. The cut also relates to anxiety. Because it is ‘cut off’, sound requires visual confirmation of its source. For Connor, sound ‘is experienced as enigmatic or anxiously incomplete until its source can be identified, which is usually to say, visualised’ (2000: 20), a requirement that is not necessarily reciprocated in the case of the visual sense. Whereas we appear to be adept at visual closure, completing an image consisting of four L-shaped marks such that we infer a square, our language for replacing sonic deficit seems to call for entities outside the experience of sound. In many ways sound speaks of incompleteness and the cut.

Adrian Snodgrass and I have explored at some length the importance of the gap, which resides at the core of design as a hermeneutical activity (Snodgrass and Coyne 2006). To design is to interpret, and common theories of interpretation point to the role of ‘distanciation’. This is where something in the text confronts the interpreter as alien or unfamiliar (Gadamer 1975). The interpretive act is a negotiation across this distance. Distanciation can be introduced deliberately into the creative situation, as when a designer, composer, artist, problem-solver or experimenter seeks to adopt an unusual orientation to a task: thinking of a carbon chain as a snake, a churchyard as a nightclub, a musical refrain as an extreme sport. Another way of looking at the negotiation across the cut is through the play of interpretation, and creation, as rendering the familiar strange and the strange familiar in various ways (Gallagher 1992: 129), a role that gives space to the productive play of metaphor (Ricoeur 1977). Playing across the senses also operates as a distanciation, a play of metaphors that contributes to creative imagining: treating spaces as if white noise, columns as drum beats, stained glass as birdsong.

We don’t only need sound to draw attention to the role of the cut, gap, rift, distance and creation, but such attentions bring productive conflict into sharp relief. Ardrey describes sound as having this agonistic character in any case, as articulating a non-dangerous social agonistics he calls ‘noyau’:

Noise, naturally is a prominent characteristic of noyau. You can hear one from a long way off. There is not only the screeching, the yowling, and the hammered insults of the peripheries, but decibels rise like chimney smoke from the heartland too.

(Ardrey 1967: 184)

He describes a husband returning home, as if ‘to leave no neighbor in doubt that the master is at home and in charge of the situation’. As well as arguing with his wife, he starts up his car engine at four o’clock in the morning. Not to do so would imply ‘a public humiliation, an announcement that he did not own a car’ (op. cit.). Sounds provide a social purpose other than communicating lexical meanings. In many cases it matters less what is said than that something is said, that a noise is made, and that it is delivered agonistically.

The most gentle of sounds is borne of a benign violence: vibrations set in motion by impacts
between solid, liquid and gaseous bodies. In so far as ‘nayou’ or agon implicate creativity, we could assert that sound is creative in any case. An even bolder claim would be to assert that the impulse to create actually derives from sound. To prove this it would be necessary to demonstrate that metaphors of creation, involving generation, source, emanation and propagation, are sonic before they are visual. Creation as a tendency towards the ideal commonly invokes illumination, but creation as agonistic arguably invokes sonic metaphors: chaos, eruption, explosion, bursting.

Deleuze and Guattari (1988: 311) offer a model of creativity that provides some support for this contention of the priority of sound in creation, of a breaking forth, a transition across a gap, that is both hermeneutical and sonic. They explain their model through three phases of the refrain. The first stage is characterised by the child who feels insecure and comforts herself with a familiar tune sung under the breath. As a second stage, this establishes a home:

For sublime deeds like the foundation of a city or the fabrication of a golem, one draws a circle, or better yet walks in circles as in a children’s dance, combining rhythmic vowels and consonants that correspond to the interior forces of creation as to the differentiated parts of an organism. A mistake in speed, rhythm or harmony would be catastrophic because it would bring back the forces of chaos, destroying both creator and creation.

In the third stage, one allows cracks in the circle:

One launches forth, hazards an improvisation. . . . One ventures from home on the thread of a tune. Along sonorous, gestural, motor lines . . .

(op. cit.)

Here, sound provides a suggestive language for articulating the creative propensity to celebrate the breach, negotiate the cut, to cross boundaries. These three phases are evident in terms of the mythic conflict between sound and vision. The human subject begins with sounds under the breath, a primal comfort in a condition of mobility, then progresses to a centre, a sense of home, articulated in architectural, geometrical and visual terms, which pertains to articulating space in terms of boundaries, as in Vitruvius’ account of the laying out of a town through the constructions of the sacred gnomon, uniting heaven, earth and man (Snodgrass 1990; Vitruvius and Morgan 1960: 26). The breaking out, the quintessentially creative moment, is equated with sound, gesture and movement. It is achieved sonically, and presents as a return to an aural condition.

Everyday creativity

As part of our research into the relationships between sound and creativity, some colleagues and myself conducted a series of studies that focused on people’s ability to arrange sound sources in a room. The initial task was for participants to listen to three fixed sound sources and provide diagrammatic representations of what they heard. They were then to arrange physically the sound sources in a defined space, represent and comment on what they had done and why.

We used mundane sound sources: an auctioneer, someone reading the stock market report for the FTSE100 and someone buying a rail ticket using an automated telesales service.
We avoided music, poetic recitations, radio announcements and uses of sound that carried suggestions of professional performance. We also provided some rudimentary props and a series of compact mobile speakers. The props included plastic storage boxes and lengths of fabric. We hoped the components of the installation would draw participants away from relying on common visual criteria for arranging objects in space: beauty, theatricality and the picturesque (as one might for example in flower arranging). The sounds were looped, and subjects could adjust the sound volume. We then replayed some of these experiments and some of our findings at cross-disciplinary focus group sessions for comment.

When confronted with tasks that appear unconstrained by purpose and sense, participants defaulted readily to arrangements that are symmetrical or follow some conventional ordering system. This seems to be a default condition pertaining to the spatial uncertainties of sound, as noise, cacophony and chaos. Domes and tubes featured prominently in people’s verbal descriptions of the spatial qualities of sounds they were listening to. Certain of the voice recordings had the capacity to aggravate. Covering and occluding featured prominently as strategies for dealing with these sounds. There was ambivalence: respect for the sounds, the unusual process and the intentions of the research team. The sounds were never turned off. Hiding the sound sources was addressed covertly by keeping them audible, but in one case placing the auctioneer’s sound source in a box, covered with fabric and under a table.

There is some accord here with Deleuze’s second phase of the refrain, a kind of repression, bounding, layering and ordering. The process is spatial. According to one participant, ‘I wanted the experience of moving around into these separate and overlapping sound spaces.’ Participants also exhibited a propensity to break out of the constraints of the system, to ‘break the unity of repetition with a story, a specific place’. The spatial implications of sound were also suggestive of leakage and flows. Deleuze and Guattari’s concepts of anxiety, containment and breaking out were all in evidence, and each contributed to the creative moment, the agonistics of design with sound.

Embodied creativity

Much research into creativity focuses on cognitive functioning, as a product of the organ of the human brain – subject to influences, but as if isolated and autonomous (Boden 1990; Galton 1972; Sternberg and Lubart 1999; Torrance 1975). There are three arguments in favour of a revision of this hypothesis.

First: creativity is not only manifested in isolated, cognitive acts of introspective thought that can be tested by paper-based tasks; where creativity is construed as a text-based, numerical or visual activity, it is also manifested in dance, performance, and gesture, including movements of the hands, as in drawing and music-making. In his nineteenth-century survey of ‘genius’, Galton includes chapters on oarsmanship and wrestling, not as demonstrations of creative intelligence, but presented by way of contrast with intellectual virtuosity in science, poetry and statesmanship. Yet skills and outcomes in sports, performance, gesture and voice have equal purchase in the realms of creativity, not only in their tactics, choreography and design but also in their implementation and improvisation. Spontaneous and reflective creation involving limb, rhythm, movement, sound and response are the primary media of invention in many fields, and the neglect of the body in favour of classical views of cognition in creativity research constitutes a major shortcoming (Martindale 1999).

Our simple study described above indicates that where the diagrammatic representation of the spatial aspects of sound falters, people are adept at the embodied task of moving around...
loudspeakers, listening and re-positioning, to whatever purpose. Whereas people soon reach their limitations in talking about sounds in the abstract, they are adept at constructing narratives about actions that they have just performed, i.e. configuring sound sources. Their creativity is revealed in both physical action and reflection (Schön 1982).

Second: creativity is highly contextual. Societies and groups can exhibit creative behaviours without recourse to individual celebrity. The social construction of creativity requires some actions and individuals to be received as creative and acknowledged as such by some community or other, in a community of practice (Rickards and Moger 2006). The supposed genius of the moment may in fact be ahead of its time, in the wrong place at the right time, in the wrong circuit, or in last season’s disciplinary matrix (Kuhn 1970). By a radical reading, it is social, cultural, legal and technological contexts that are the engines of creativity, elevating certain events and people as originators, heroes, geniuses and holders of intellectual property to a social or political end and there will always be those content to create in silence while others suffer the limelight. Our highly constrained experiment illustrates the complex relationship between context and agent. Were the experimenters the creative ones for inventing such an experiment, or were the participants for producing interesting outcomes? The question of the source of creativity is soon diffused as we think of the hardware, the intellectual climate and the circumstance.

Third: certain contemporary theories of cognition place thought beyond the brain in any case, as embodied, social, contextual and contingent (Anderson et al. 2000; Clark 1997, 2003; Coyne 2007). According to theories of situated cognition, brain function is incremental and timely, making maximum use of opportunity and context. We are not as isolated from our environment as we often think, or as suggested by our visually-oriented culture. Nor is the environment as mute. The cues are already there for individual cognitive apparatus to make its connections, born of generations over which personal and community practices and norms are bedded down. The social and material environment thinks, with creative events completed at any moment by the presence of the right individual or group at the appropriate time.

Were one to assert that creativity is in fact an action of the tribe, then it would be an easy slip into the endorsement of the creative power of the sonic field, of McLuhan’s non-individuating aural primitivism. In our experiment, according to situated cognition, the thinking of the participants was already in place by virtue of the hardware, the room and the sounds. This is not to dispense with designer agency, but to situate it. In the world of abstract creativity studies, the brain of the individual is burdened with the necessity to imagine and take into account a whole context. For the designer on the case, working with the materials, the project is already at hand.

These assertions about creativity are further animated by concepts of agon. In so far as creativity is subjected to psychometric analysis it seems to rely on text and vision, and enters into conflict with aural and other sensory modalities. Failing to recognise or appropriate the conflict between the senses also ignores important aspects of creativity. The cut is after all a gesture. Like clapping (Connor 2003), it signals both the reward and the impetus to create. The contextual nature of creative achievement implicates competition and presents as the driver of creation. In so far as thought occurs in an extended environment with the brain as the organ of opportunity, then it operates at the margins, the incremental shifts, the micro–thresholds of existence, the minor cuts and agonies of human experience. Attending to sound amplifies the creative potential of agon.
Acknowledgements

I am grateful to co-investigators Martin Parker and Peter Nelson, and especially to Raymond Lucas for his input into the project and conducting the studies. This research is supported by a grant from the Arts and Humanities Research Council.

References


