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A Manifesto of Nodalism

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ABSTRACT

This paper proposes the notion of Nodalism as a means describing contemporary culture and of understanding my own creative practice in electronic music composition. It draws on theories and ideas from Kirby, Bauman, Bourriaud, Deleuze, Guatarri, and Gochenour, to demonstrate how networks of ideas or connectionist neural models of cognitive behaviour can be used to contextualize, understand and become a creative tool for the creation of contemporary electronic music.

KEYWORDS

Electronic music; Manifesto; Meme; Network; Node; Rhizome.

1 | INTRODUCTION

This article is written from my own perspective as a composer of experimental electronic music. As such, many of the examples I draw on are from this area of work or closely related activities. The ideas put forward are however, applicable to all creative practices and disciplines further afield. If a sociologist or philosopher were writing this article the framing of these ideas and their theoretical underpinning would no doubt be different. My purpose is to propose nodalism as means of understanding contemporary culture following post-modernism and how thinking in this way can enhance my own creative practice.

In identifying nodalism as a cultural movement that moves beyond modernism and post-modernism I am aware of Charles Rosen's preface to *The Classical Style* in which he writes that, "In music, as in painting and architecture, the principles of the 'classical' art were codified... when the impulse which created it was already dead." (Rosen, 1971). Whilst I would not go so far as to assert that the nodal impulse is 'dead', I acknowledge that its influence as a model is already to be found in many disciplines. Nodal terminology is used in computer science, neuroscience, architecture, artificial intelligence and neural networks, cultural studies and social networking models. Philip Gochenour (2011) proposes that in the 21st century *"we find that our conception of the world has taken on a particular form, one of nodes situated in networks ... the nodalistic trope can be simply described as a figure of speech that is used to portray an object or process in terms of the connection of discrete units by an open network system that has no hierarchical structure"* (Gochenour, 2011). For Gochenour this non-hierarchical model is a "significant structural metaphor in contemporary thought. Unlike other structural metaphors, however, the nodalistic trope is not confined to the realm of the linguistic and figurative; as it has migrated from a model of mind in neuroscience into psychology and computer science, it has also migrated from concept to concrete architecture, from a typographic representation in Freud to the technological underpinnings of globalism" (Gochenour, 2011). It is the fact that the fractal-like nodalist model can be used to explain i) aspects of brain function; ii) for understanding the plethora of co-existing contemporary music practices; iii) the functioning of society within increasingly local and global economies; and a range of concepts and disciplines in-between that makes it such a pervasive and convincing metaphor.

Gochenour's advocacy of nodalism is compelling. His idea of an open non-hierarchical model is similar to Deleuze and Guattari's planar model proposed as an antidote to the hierarchy of Modernism. However, for me, this is not a convincing or accurate means for describing, modeling, and understanding compositional practice. Composers do not work with a planar or flat model of ideas and influences. This planar model is too neutral. Creative practitioners have preferences and, more importantly, they have

different preferences in different works. Composers exert a 'central agency' and each work will have its own weighted concerns be they structural, narrative, timbral or technical. Therefore, I propose that nodalism as a model of creative practice exhibits a local hierarchy. When a composer is working on a new composition this local hierarchy demonstrates their specific musical and cultural influences within the piece. This concept of local nodal hierarchy can be used as a unifying concept for understanding models of creativity within a specific composition, within a composer's oeuvre, the genre in which they work and their cultural community.

As a creative practitioner I am interested in the nodal network from a poetic and esthetic perspective (Nattiez, 1990). I am keen to interrogate how ideas are formed as a means of testing and questioning my own practice. I also acknowledge that any interpretation of a composer's work is both individual and culturally conditioned. A listener would not make, or even appreciate, all of the connections embedded within my work and would in fact make ones of their own. No experience of music is entirely autonomous. Georgina Born states that the listener is "entangled in a musical assemblage" (Born, 2010). The listener perceives the work as the sum of a network of interactions. Some of these may be due to local circumstance, such as the acoustic of the environment in which the piece is played, extraneous sounds, mood, etc. Others however, are to do with the knowledge of the individual, their recognition of this piece as belonging to a genre, how different influences feed in to a given work. Foucault writes that "The frontiers of a book are never clear-cut ... it is caught up in a system of references to other books, other texts, other sentences: it is a node within a network" (Foucault, 1982). The system of references – the nodes in the network – is of course entirely dependent on the knowledge and cultural acuity of the individual reading the text. Similarly with a piece of electronic music, the nodal network is never fixed, it is renewed in the mind of every listener at each new listening. Adrift in a sea of nodes, the composer's role is to draw together, integrate or juxtapose concepts and ideas into a cohesive form. Lev Manovich presents a strategy that he calls "the logic of selection"; in short, he argues that the ability to develop critical sense towards this ocean of

fragments is exactly what inventiveness in new media is all about. Sorting out from a plethora of choices to assemble new and private non-linear narratives in media is the main strategy in this new media, and what constitutes this logic (Manovich, 2001). The hermetically sealed artwork is an impossibility. Everything makes reference to everything else even if by negation.

2 | NODAL MODELS

In the hundred years since Russolo's *Art of Noises* manifesto of 1913 we have witnessed an exponential rise in the number of musical genres as diverse musical practices collide, meld and fracture to create previously unimagined sound worlds. What we hear today is predominantly technologically mediated audio, given a plethora of tags in a vain attempt to define boundaries and normative modes of behaviour. Kim Cascone, uses flocking behaviour as a model to describe the emergence and formation of new genres of electronic music. Cascone writes that "... a group of nodes assembles and follows a set of simple rules, which creates emergent behaviors. These simple rules are the basis of all flocking behavior [sic]: alignment, separation and cohesion ... In the context of electronic music a flock consists of a cluster of individual nodes that generate content. Content can consist of a sound file, a software instrument, an algorithm, an idea or information ... Because no single node in a flock determines its overall behavior, a flock is not a hierarchical organization but a decentralized one." (Cascone, 2005).

Cascone's quotation is not only interesting in itself but also in its terminology. Although the model Cascone draws on in his paper is based on Craig Reynolds' description of the Boid Algorithm [1], his use of a decentralized non-hierarchical model is clearly derived from the thinking of Deleuze and Guattari's notion of the rhizome – a distributed network. Reynolds' terminology in his paper *Flocks, Herds, and Schools: A Distributed Behavioral Model* (Reynolds, 1987) focuses on emergent and dynamic behavioural models rather than non-hierarchical networks. In *A Thousand Plateaus*, Deleuze and Guattari propose the model of the rhizome as a means of describing contemporary cultural activity, one in which hierarchical structures are supplanted with the concept of a planar (non-hierarchical) network of

connections. Such systems are "finite networks of automata in which communication runs from any neighbor to another, the stems or channels do not pre-exist, and all individuals are interchangeable, defined only by their state at a given moment – such that the local operations are coordinated and the final, global result synchronized without central agency" (Deleuze and Guattari, 1987).

Cascone is also clearly thinking nodally and his definition of 'content' is what Richard Dawkins would term memes – units of cultural information. Dawkins' notion of the meme is one in which ideas are spread from one brain to the next and that creative activity arises from the intersection of memes in a composer's brain. Memes are neuronally encoded cultural information and their phenotypic products (behaviour and artefacts) spread through a process of imitation from one individual's memory to another. Richard Dawkins in *The Selfish Gene* writes that, "examples of memes are tunes, ideas, catch-phrases, clothes fashions, ways of making pots or building arches..." (Dawkins, 1976).

As composers, we traditionally pride ourselves on originality or the unique sound world we create in our works. Steven Jan, writing specifically about Dawkins' work in relation to music writes that, "memetics maintains that conscious intentionality, the fundamental attribute of the human mind, is not some unitary presence, but the resultant construct of a multitude of memes in constant competitive interplay" (Jan, 2007). At its most reductive, Jan's work suggests that a composer's musical style or 'musical identity' is actually the result of memes residing within the composer's brain. The corollary being the more memes one has absorbed through engaging in all areas of contemporary culture, science and ideas, the more unusual neuronal connections that can be made and hence potentially a more varied and richer compositional style can result as memes are combined and hybridized. A nodalist model of creativity and culture celebrates such a mobile, sinuous network. Through this model we can posit that listening and composing are culturally conditioned, contextual, relational, reflective and personal acts and that dynamic nodal networks of influences and ideas are constantly formed and reformed by the experiential knowledge of the individual.

The nodal concept is also to be found in connectionist models of creativity used in the cognitive sciences (artificial intelligence, neuroscience, cognitive science, etc.) which are based on interconnected dynamic networks of simple elements exhibiting emergent forms of behaviour. The origins of these models stem from research done in the 1930s by Warren McCulloch and Walter Pitts, and in the following decades by Donald Hebb and Friedrich Hayek. Hayek's brain research and his proposition of 'connective learning' at the neurological level, was published in his book *The Sensory Order* (1952). Hebb's work resulted in a principle termed 'Hebbian learning' that is still pertinent today. In his book *The Organization of Behavior*, Hebb proposes "lasting cellular changes" (Hebb, 1949), occur in neurons in the learning process through persistent firing in a consistent pattern. What is important in Hebb's model is that the "metabolic change" that takes place is due to the causal relationship between cell A and cell B through the temporal precedence of the neural firing of cell A. There is a hierarchy of firing to stimulate neural change and connective strength between neurons in Hebbian learning. Hebb writes, "When one cell repeatedly assists in firing another, the axon of the first cell develops synaptic knobs (or enlarges them if they already exist) in contact with the soma of the second cell." (Hebb, 1949). In his book *Neural Darwinism*, Gerald Edelman (1987) takes this concept of neuronal plasticity and adaptability further exploring a theory of memory based on environmental neural conditioning. This again, can be posited as memetic. Edelman's theory is anti-reductionist (unlike some computational models of creativity) and proposes that consciousness is a unique manifestation of the neurologically complex biology of our brain. Further research by John Horgan demonstrates a Hebbian-like modification of local neighbouring neurons in addition to those directly reinforcing one another in an established network (Horgan, 1994). This is termed 'retrograde signalling' and illustrates the ripple effect of such nodal connections. I would contend that this neurological process is also evident in contemporary culture in the way that two differing memes, for example differing musical ideas, when brought together also trigger associations with other diverse and related memes, so enriching and contextualizing the original connection.

3 | NODALISM: AN UMBRELLA-ISM

We can no longer define what is new, avant-garde, or cutting edge in music or the arts as the unilinear narrative that Modernism purported has been subsumed by a diversity of thought and practice. Culture has splintered into many paths. Parallel streams exist as decentralized nodes of practice rather than one 'true path' – the "nostalgia of the whole and the one." (Lyotard, 1984). This splintering of culture into different aesthetic concerns is a characteristic of both nodal and postmodern ideas. Notions of the 'canon' have been exploded into a myriad of nodes of cultural activity each with its own sub-culture, modes of thinking, and stylistic referents. Arvo Pärt, Brian Ferneyhough, Georg Friedrich Haas, Alva Noto, Andrew Rayel, Björk, Amon Tobin, Eliane Radigue and Taylor Deupree all are key nodal points within specific activities of music. Within each of these sub-cultures there can exist a radical 'cosmopolitanism'. Just as Ligeti drew together influences from fractal geometry, chaos theory, Conlon Nancarrow and African pygmy tribes in his remarkable music of the 1980s onwards, so Alva Noto fuses influences from visual and installation art, techno, minimal music, glitch experimentalism with its origins in the work of Yasunao Tone and Oval, and classical music in his work with Ryuichi Sakamoto and the Ensemble Modern.

In the past decade a number of new theoretical and philosophical models for understanding society and contemporary thought have been proposed. John Mandalios writes that, "What has consequently emerged since the revision of Eurocentric accounts of world history is a theoretical perspective that encompasses divergent civilisational forms and promulgates, to varying degrees, the notion of 'multiple modernities'" (Mandalios, 2010). The most prominent of these movements or aesthetic positions include: Re-modernism (Billy Childish, Charles Thomson, Jesse Richard and Harris Smith); Neo-modernism (Guy Denning); Second Modernity (coined by German sociologist Ulrich Beck); Automodernity (Robert Samuels); Hyper- or Super-modernity (Gilles Lipovetsky); Digimodernity (Alan Kirby); Transmodernism (proposed by Argentinian-Mexican philosopher Enrique Dussel); the Altermodern, (proposed by Nicolas Bourriaud at the 2009 Tate

Triennial) and Liquid Modernity (proposed by the Polish-British sociologist Zygmunt Bauman).

In his article about the notion of pluralism in the social theories of John Rawls and Jean-François Lyotard, AlemSeghed Kebede writes that, “Aesthetically, it [postmodernism] augments our inventiveness, for it is in dissent that the free play of multiple narratives is made possible ... Hence, postmodern knowledge allows us not only to recognize multiple discourses, but it also augments our sensitivity concerning the incommensurable nature of narratives ... Both contend that contemporary societies are inherently pluralistic because they are characterized by the proliferation of incommensurable narratives/doctrines. Rawls considers pluralism as the positive outcome of the expansion of civil society; Lyotard, on the other hand, aligns pluralism with the demise of grand narratives that he believes hopelessly suffer from the problems of overextension ... Indeed, pluralism is a condition that prevails in democratic societies; it is not a mere historical accident that will phase out over time. Democratic societies cannot dissociate themselves from the state of pluralism unless they degenerate into some form of totalitarianism.” (Kebede, 2002).

Many of these new theories emphasise the individual and their connectedness within a local and global frame. There is also often a significant emphasis on the role that technology plays in shaping contemporary culture. Bauman writes, “What prompts so many commentators to speak of the ‘end of history’, of post-modernity, ‘second modernity’ and surmodernity’, or otherwise to articulate the intuition of a radical change in the arrangement of human cohabitation and in social conditions under which life-politics is nowadays conducted, is the fact that the long effort to accelerate the speed of movement has presently reached its ‘natural limit’. Power can move with the speed of the electronic signal - and so the time required for the movement of its essential ingredients has been reduced to instantaneity. For all practical purposes, power has become truly exterritorial, no longer bound, not even slowed down, by the resistance of space...” (Bauman, 2000). In the context of these newly proposed models, nodalism is not merely yet another model. I propose it as a meta-framework within which all of these new models co-exist. The creative practitioner or composer can

navigate their way through each of these models (which themselves are nodes) incorporating and plundering ideas from each.

From my perspective as a composer there are a number of elements that practically inform how I view my creative practice and its position within the culture in which I work. These are often concerned with notions of the ‘self’ and ‘situatedness’ within local and global models. Lyotard prefers postmodern “little narratives” (Lyotard, 1984) and for many musicians and artists these local narratives intersect with, or are negotiated within, more global narratives. Kebede writes that these “little narratives are bound to their own local ‘discursive rules’ and their ‘evaluative logic’ is less epistemic and more social ... The self, therefore, is not an entity existing unto itself; rather its existence is bound up with the intricate social interaction within which it exists.” (Kebede, 2002). Lyotard writes that, “A self does not amount to much, but no self is an island; each exists in a fabric of relations that is now more complex and mobile than ever before”. (Lyotard, 1984). This fabric of relations is inherently nodal. The self exists in relation to others in social groupings. The ‘little narratives’ of Lyotard contrast with Bourriaud’s ‘new universalism’ of the Altermodern in which he proposes that “Artists are responding to a new globalised perception. They traverse a cultural landscape saturated with signs and create new pathways between multiple formats of expression and communication.” (Bourriaud, 2009). Between the positions outlined by Lyotard and Bourriaud can be situated the ‘self’ from the perspective of liquid modernity as proposed by Zygmunt Bauman. Bauman, along with social theorists such as Ulrich Beck and Anthony Giddens maintain that modernism continues in contemporary society in a more radicalised version rather than being post-modern. Bauman characterises liquid modernity as being a chaotic continuation of modernism in which there is a focus on the individual and their fluid movement from one social position to another. Traditional social patterns are replaced by individualised or localised ones. There is an emphasis on impermanence and social mobility. Despite the different theoretical standpoints and terminology of Lyotard, Bourriaud and Bauman, the emphasis on connectivity and the relationship between an individual and society can be reconciled in the nodal model. The

difference being their respective perspectival starting points from either the individual or the global. Bauman's model with its emphasis on the fracturing of social patterns and fluidity of movement is particularly close to the concept of dynamic nodal systems and emergent behaviours.

As a composer, I recognise that 'local narratives' are important to me during the creation of a new work, but that I always have an eye on the positioning of my work within a more global perspective. Here, Bourriaud's notion of the Altermodern is also important to me. Bourriaud writes that "Altermodernism can be defined as that moment when it became possible for us to produce something that made sense starting from an assumed heterochrony, that is, from a vision of human history as constituted of multiple temporalities, disdaining the nostalgia for the avant-garde and indeed for any era – a positive vision of chaos and complexity. It is neither a petrified kind of time advancing in loops (postmodernism) nor a linear vision of history (modernism) but a positive experience of disorientation through an art-form exploring all dimensions of the present, tracing lines in all directions of time and space. The artist turns cultural nomad: what remains of the Baudelairean model of modernism is no doubt this *flânerie*, transformed into a technique for generating creativeness and deriving knowledge." (Bourriaud, 2009).

Nodalism, with its emphasis on a plurality of decentralized but locally hierarchical loci, thus arises from the postmodern condition but enables all of the ideas that have transcended it or been proposed by contemporary theorists as following it to co-exist within a nodal meta-framework. The fact that these conditions exist in parallel rather than in some linear cultural determinism is not new and is already exemplified in the music of diverse composers such as John Cage and Bernd Alois Zimmermann from the 1950s. Simultaneous to the emergence of the modernist composers of the Darmstadt School (Boulez, Stockhausen, Nono, et al.), Zimmermann developed his pluralistic *klangkomposition* using a combination of serialism, avant-garde techniques, collage, and extensive quotation from medieval music to jazz. Tom Service writes that "Unlike his slightly younger colleagues, Karlheinz Stockhausen, Pierre Boulez, or Luigi Nono, Zimmermann never subscribed

to the idea that a single musical or political approach was the solution to the world's creative problems. Instead, in his acceptance of the diversity of musical possibility, his postmodern experiments in stylistic and intertextual fusion, Zimmermann looks forward to the generation after him, and to the creative world of today's composers, for whom all of music history is available as material to be worked with." (Service, 2012).

4 | PROCLAMATIONS

1. We live in a nodal age in which no one theoretical model or -ism predominates. In contemporary culture we find different nodes of cultural thought or practice each given a specific name as outlined above. Nodalism acts as a unifying network in which these different emergent cultural trends act as local centres of behavioural models or aesthetic thinking. Such thinking has its origins in Marc Augé's writings on supermodernism in which he contends that the contemporary understanding of 'local' can only be defined through reference to the 'global'. I am extending this in a metaphorical sense, regarding nodalism as the 'global' model and specific theoretical positions (such as digimodernity or the altermodern) as the 'local' within this. Furthermore, the composer can freely appropriate and hybridize any of these elements.

2. Nodalism allows residual and emergent forms of cultural behavior to co-exist. Modernist and Post-Modernist practices and ideas have not 'died' as have been claimed (Bourriaud, 2009; Kirby, 2013), but now co-exist in continually reconfigured guises.

3. Nodalism is atemporal. As such it is akin to Integral Theory proposed by Ken Wilber – a contemporary movement that seeks to synthesize the best of pre-modern, modern and postmodern thinking. Although Zygmunt Bauman identifies the nature of contemporary art in the denial of all canons, Bolognini writing that "according to Bauman, the rejection of all canons has enhanced the critical and liberating function of art, forcing the artist and the public to participate in an ongoing process of interpretation and meaning creation" (Bolognini, 2008). I content that through its atemporality, Nodalism does not deny canons but like postmodernism acknowledges a plurality of canons. What needs to be acknowledged

is that canons are both localized within global communities of a given cultural practice (art, music, etc.) and potentially reconfigured in each work through Bourriaud's notion of creative practice "exploring all dimensions of the present, tracing lines in all directions of time and space." (Bourriaud, 2009).

4. Nodalism does not define a style. It is a model for dynamic, fluid and emergent contemporary cultural behaviour. It is apolitical and post-geographical (aterritorial) and as such nodalism reflects artistic practice in our multicultural post-colonial society.

5. Nodalism is apolitical and aterritorial in that it embraces the complexity of the coexistence of multiple politics and territories. Artistic 'globalization' and atemporality are reflected through YouTube and the manner in which music from different periods and styles co-exist in a nodal network of entwined references. Nevertheless, much multicultural influence is still situated within the European-American axis and modes of artistic practice. Although, at its worst this can lead to the multicultural DJ and a form of cultural collectionism, nodalism extends beyond such activities. Nodalism is not merely about sampling. It is, like Bartok's relationship with folk music, about the assimilation and convergence of ideas and integrity of practice that acknowledges the complexity of our artistic practice in today's society. As such nodalism marks a shift from postmodern thinking regarding of the semantic value of the elements drawn together within a work.

6. Nodalism is a means for continual dynamic reconstruction of 'little' and 'grand' narratives over and over. A composer's work will deal with a dynamic constellation of nodes, with new ones added as style and ideas are developed, adapted and ideas congeal. This local-hierarchy is essential to understanding and interpreting specific pieces of music and is an example of a decentralized nodal network rather than the distributed (rhizomatic) nodal network favoured by Deleuze and Guattari. Cascone writes "There are single artists who have initiated the formation of a genre by establishing an initial set of codes and symbols which are reinforced by a hierarchical (one-to-many) network..." (Cascone, 2005).

7. Nodalism does not answer the question how or why ideas are connected, or how new genres are

created – just that they are. The signification of an artwork is still determined by the semiotic model proposed by Jean Molina (Molina, 1990) and developed by Jean-Jacques Nattiez (Nattiez, 1990). Meaning is constructed entirely through the intersection of the nodal connections, their perceived weighting within a work, and the individual's own experiential nodal networks. A composition is a cultural artefact inasmuch that within it is a nodal complex of ideas and influences stemming from the creator – a central agent. The work's reception will depend on the listener or viewer and their cultural experience. They will create their own nodal network (consciously or not) due to the neurological patterning of their brain resulting from their experiences, or as Daniel Dennett would contend, the memetic functioning of the brain. Dennett writes that the "haven all memes depend on reaching is the human mind, but a human mind is itself an artefact created when memes restructure a human brain in order to make it a better habitat for memes." (Dennett, 1993) So the meaning of an electronic music composition as a cultural artefact is constructed through the negotiation of an individual's own nodal network in which meaning is reconfigured at each listening as the selfplex (Blackmore, 1999) develops. In nodalism there is not one message but a polyphony of parallel messages.

5 | CASE STUDY

Such thinking outlined above has become a fundamental part of my creative process. Sketches for new works start with nodal diagrams. These nodal diagrams include musical and extra-musical concepts, theoretical, technological and related ideas. What I find useful and creatively stimulating about them is to follow a train of thinking or free association of ideas and then examine how specific clusters of these resulting nodal networks have further links – a process not unlike Horgan's 'retrograde signalling'. Through examining these links further networks emerge. This process is a circular one of ideas generation and analytical reflection.

Borderlands (2014) is a 38 minute experimental electronic work that features the cello playing of William Mace. The work, originally written for an installation commissioned by IOU Productions explores liminal states and the borders of

consciousness. It is dedicated to the memory of Greville Adkins (1944-2014). The installation also included a text by Deborah Templeton that was recorded by her and mixed at various points throughout the work with the cello. Initial nodes include ideas from Templeton's text and Greville Adkins' own interests and my memories of him. Liminality, numerology, a humanitarian approach to all religions, the cello, art and ambient and modern classical music were all initial loci around which ideas were clustered.

The work is written in D Aeolian mode. Formally the work comprises six static two-minute sections each focusing on a specific pitch in the Aeolian scale. These are interspersed with six four-minute sections each comprising twenty-eight short phrases or modules. Six as a structural unit was specifically chosen as culturally it has a number of concepts and ideas associated with it. In Chinese culture the number six represents the Universe with its four cardinal points and the 'above' and 'below'. Chinese culture also has six senses – in addition to the Western five, the sixth is the mind – pertinent to exploring states of liminality in the work. In Christian symbolism, six represents perfection and completion as man was created on the six day. In Hebrew tradition the number symbolises meditation and intelligence – the former again, linking directly to the theme of the work exploring liminal states. Six sections were chosen as the number six is the first perfect number (the positive aliquot parts (proper divisors) are 1, 2, and 3 and $1+2+3 = 6$). Similarly there are 28 modules as it is the second perfect number ($1+2+4+7+14=28$). Another peculiar property of perfect numbers is the fact that the sum of the reciprocals of the divisors of the number add up to 2. So I decided that each four-minute section of the work would be transposed up two degrees of the Aeolian scale, so by the end of the work the cello is in its uppermost register. As the modules become higher they also become more fragmented, less clustered and so portraying a gradual loss of consciousness. The number two also represents the duality inherent in the work from a musical perspective – that of implied stasis and motion. Each of the four-minute sections presents the twenty-eight modules as a dynamic and emergent model (the final section is different in that it only presents fourteen modules). As

a result, each of the sections contains the same materials but presented in a different combination each time. There is a sense that the materiality of the music is the same in each instance, but because of the reconfiguration of this material and its transposition there is some sense of progression conveyed to the audience.

The work is informed by experimental music, classical performance practice of the cello, open works, and how technology can be used to link musical elements through descriptors of pitch or melodic contour in order to move from one module to another. In addition, the pervasive sombre tone of the work is influenced by Edwin Dickinson's painting *The Cello Player* (Figure 1).

As a result of this nodal thinking, the work, as Richard Chartier indicates is 'between genres' [2].

In much of my work I make use of modal and tonal musical elements within an abstract electronic music context. In this work there is no specific postmodern irony in musical modality or tonality and no critique of modernity. Such elements co-exist to be utilized within new work. A composer may choose to highlight these influences and feature their 'assemblage' within a work, or simply integrate them into a whole. Bolognini writes that "This is also the reason why art,



Figure 1 | Edwin Dickinson *The Cello Player* (1924-26).

its narrative, its branding, are now less tied to the vertical dimension (art history) and more to the horizontal dimension (relations with other disciplines, other existential and cultural contexts)” (Bolognini, 2008). For me, the same argument applies to new music.

6 | CONCLUSION

In this paper I have presented nodalism as a means of describing contemporary culture and thought. As more and more theorists proclaim the death of postmodernism there has been a succession of alternatives proposed of which some of the most prominent and discussed are Lipovetsky's Supermodernity, Kirby's Digimodernity and Bourriaud's Altermodern. As a composer I am open to all creative stimuli and identify with many aspects of each of these proposed successors to postmodernism. There are also many elements of postmodernism that are also still pertinent to my and other composer's thinking. As such I propose nodalism as an over-arching framework for all of these contemporary trends. I contend that our society exhibits elements of all of these proposed ways of thinking and that, like the models of creativity discussed above, that their importance in any given community is weighted. Nodalism allows us to reconcile Bourriaud's questioning of how artists are responding to the reconfiguration of modernity in light of ever-increasing globalization in which “Multiculturalism and identity is being overtaken by creolisation” (Bourriaud, 2009) producing a new altermodern culture; Marc Augé's idea of non-place as outlined in his book *Non-Places: Introduction to an Anthropology of Supermodernity* (Augé, 1995); as well as painters, sculptures, architects and musicians creating work under the banner of neo-minimalism or reductionism; and those who draw together aspects of all of these with postmodernism such as the sound artists Janek Schaefer, Taylor Deupree, Kaffe Matthews, Stephan Mathieu and Steve Roden.

My proposition of nodalism as a model to describe the multitude of ways philosophers and theorists attempt to describe contemporary society is derived from associative and connectionist models of creativity derived from our understanding of neurology. I contend that supermodernity, neo-minimalism, postmodernism are simultaneous

pockets of activity and thought within society, equivalent to parallel distributed processing within the individual brain. As such I propose that the nodal model extends beyond the planar non-hierarchical network of Deleuze and Guatarri. There is a local hierarchy at play. The extent to which this hierarchy is weighted is both societally, culturally, and individually conditioned. Furthermore, like the neural connections in the brain, we should think of the nodal model as a three dimensional network in which sinuous threads cluster and aggregate around local nodal hierarchies. These agglomerations are dynamic and fluid. It is this ability to reconfigure networks, to consider their nodal properties anew that makes nodalism such an all-encompassing means for understanding the contemporary condition.

ENDNOTES

[1] <http://www.red3d.com/cwr/boids/>

[2] Email correspondence with the author 15.09.2014

REFERENCES

- Augé, M. (1995). *Non-Places: Introduction to an Anthropology of Supermodernity*. London and New York: Verso.
- Bauman, N. (2000). *Liquid Modernity*. Cambridge: Polity Press.
- Bourriaud, N. (2009). *Altermodern*. London: Tate Publishing.
- Blackmore, S. (1999). *The Meme Machine*. Oxford: Oxford University Press.
- Bolognini, M. (2008). Art and Globalization. *Postdigitale* (pp. 113-119). Roma: Carocci.
- Born, G. (2010). Listening, Mediation, Event: Anthropological and Sociological Perspectives. *Journal of the Royal Musical Association* 135(1), 79–89.
- Cascone, K. (2005). *Flocking and the Emergence of Genre in Post-Digital Music*. Retrieved January 15, 2014, from <http://www.zemos98.org/festivals/zemos987/pack/pdf/kimcasconeeng.pdf>

- Dawkins, R. (1976). *The Selfish Gene*. Oxford: Oxford University Press.
- Deleuze, G., & Guattari, F. (1987). *A Thousand Plateaus*. London and New York: Continuum Publishing.
- Dennett, D. (1993). *Consciousness Explained*. London: Penguin Books.
- Edelman, G. (1987). *Neural Darwinism. The Theory of Neuronal Group Selection*. New York: Basic Books.
- Foucault, M. (1982). *The Archaeology of Knowledge and the Discourse on Language*. New York: Vintage.
- Gochenour, P. (2011). Nodalism. *Digital Humanities Quarterly*, Vol. 5(3), Retrieved January 16, 2014, from <http://www.digitalhumanities.org/dhq/vol/5/3/000105/000105.html>
- Hebb, D. (1949) *The Organization of Behavior*. Retrieved April 7, 2014 <http://ebookbrowse.net/the-organization-of-behavior-donald-o-hebb-pdf-d184194030>
- Horgan, J. (1994). Neural Eavesdropping. *Scientific American* (May) 270(5), 16.
- Jan, S. (2007). *The Memetics of Music: A Neo-Darwinian View of Musical Structure and Culture*. Aldershot: Ashgate.
- Kebede, A. (2002). John Rawls and Jean-François Lyotard on Pluralism: Themes of Convergence and Divergence. Department of Sociology, University of Kansas. Retrieved April 6, 2014, from <http://hdl.handle.net/1808/5196>
- Kirby, A. (2013). *The Death of Postmodernism and Beyond*. *Philosophy Now*, Issue 58. Retrieved January 14, 2014, from http://philosophynow.org/issues/58/The_Death_of_Postmodernism_And_Beyond
- Kirby, A. (2009). *Digimodernism: How New Technologies Dismantle the Postmodern and Reconfigure Our Culture*. London & New York: Continuum.
- Lyotard, J-F. (1984). *The Postmodern Condition: A Report on Knowledge*. Minneapolis: University of Minnesota Press.
- Mandalios, J. (2010). *Beyond Evolution and Historicism: Cultural Forms of Modernity*. Encyclopedia of Life Support Systems, e-book. United Nations Educational, Scientific and Cultural Organization, Paris: EOLSS. Retrieved September 25, 2014, from <http://www.eolss.net/sample-chapters/c04/e6-99a-23.pdf>
- Manovich, L. (2001). *The Language of New Media*. MIT Press.
- Molino, J. (1990). Musical Fact and the Semiology of Music. *Trans. J. A. Underwood. Music Analysis* (9): 133-156.
- Nattiez, J-J. (1990). *Music and Discourse: Towards a Semiology of Music*. New Jersey: Princeton University Press.
- Reynolds, C. (1987). Flocks, Herds, and Schools: A Distributed Behavioral Model. *Computer Graphics*, 21(4) (SIGGRAPH '87 Conference Proceedings) pp. 25-34.
- Service, T. (2012). A guide to Bernd Alois Zimmermann's music. Retrieved January 12, 2014, from [OnClassicalBlog.http://www.theguardian.com/music/tomserviceblog/2012/jun/26/bernd-alois-zimmermann-guide](http://www.theguardian.com/music/tomserviceblog/2012/jun/26/bernd-alois-zimmermann-guide)

BIOGRAPHICAL INFORMATION

Monty Adkins is a composer, performer and professor of experimental electronic music. His work is characterised by slow shifting organic textures often derived from processed instrumental sounds. Inhabiting a post-acousmatic sensibility, his work draws together elements from ambient, acousmatic and microsound music. His recent work has been released on the Audiobulb and Crónica labels. He has written extensively on the aesthetics of electronic music presenting papers at conferences worldwide. In 2013 his book (co-edited with Prof. Michael Russ), the *Roberto Gerhard Companion* was published by Ashgate. A second book on the music of Gerhard post-1939 will be published by in early 2015.