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On Musical Mediation: Ontology, Technology and Creativity

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Abstract

This article develops a theoretical analysis of music and mediation, building on the work of Theodor Adorno, Tia DeNora and Antoine Hennion. It begins by suggesting that Lydia Goehr's account of the work concept requires such a perspective. Drawing on Alfred Gell's anthropology of art, the article outlines an approach to mediation that incorporates understandings of music's social, technological and temporal dimensions. It suggests that music's mediations have taken a number of historical forms, which cohere into assemblages, and that we should be alert to shifts in the dominant forms of musical assemblage. In the latter part of the article, these tools are used to conceptualize changing forms of musical creativity that emerged over the twentieth century. A comparison is made between the work concept and jazz and improvised electronic musics. Three contemporary digital music experiments are discussed in detail, demonstrating the concepts of the provisional work and of social, distributed and relayed creativity. Throughout, key motifs are mediation, creativity, and the negotiation of difference.

Music is perhaps the paradigmatic multiply-mediated, immaterial and material, fluid quasi-object, in which subjects and objects collide and intermingle. It favours associations or assemblages between musicians and instruments, composers and scores, listeners and sound systems – that is, between subjects and objects. Music also takes myriad social forms, embodying three orders of social mediation. It produces its own varied social relations – in performance, in musical associations and ensembles, in the musical division of labour. It inflects existing social relations, from the most concrete and intimate to the most abstract of collectivities – music's embodiment of the nation, of social hierarchies, and of the structures of class, race, gender and sexuality. But music is bound up also in the broader institutional forces that provide the basis of its production and reproduction, whether élite or religious patronage, market exchange, the arena of public and subsidized cultural institutions, or late capitalism's multi-polar cultural economy.

In what follows I want to expand on the analysis of music's mediation, linking this to recent attempts to theorize music's changing ontology. I begin with Lydia Goehr's critique of the concept of the musical work, suggesting that she raises but does not pursue the

I am grateful to Simeran Gell for supporting my request to use material from Alfred Gell's work. Gell's figures are reproduced by permission of Oxford University Press; other images are reproduced by permission of the rights holders, as noted in the captions. I would like to thank Dhiraj Murthy and Mariam Fraser for sharing their work with me at an early stage, and Neil Robertson for useful conversations and websites. I also thank these colleagues for ideas and feedback on various drafts: Robert Adlington, Nikolaus Bacht, Andrew Barry, John Bowers, John Butt, Judith Green, Björn Heile, Eric Lewis, Charles Wiffin; and my co-members of the research group 'Improvisation in the Performing Arts' based at the University of California Humanities Research Institute in 2002, particularly George Lewis, Susan Foster, Simon Penny and Jason Stanyek.

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importance for contemporary music of an approach that incorporates understandings of the social, technological and temporal dimensions of music. Such an approach is offered by theories of mediation, and in the course of the article I outline three related arguments that build on this perspective. The first concerns music's social and temporal mediation and its nature as a distributed object. Here I draw on recent work in the anthropology of art, specifically Alfred Gell's *Art and Agency*. I want at once to stress music's particular properties, and to spend time on Gell's analysis because of the fertility of his propositions when we take them to music. I use this approach to reveal music as a medium that destabilizes some of our most cherished dualisms concerning the separation not only of subject from object, but present from past, individual from collectivity, the authentic from the artificial, and production from reception. The second argument is that music's mediations have taken a number of forms, cohering into what we might term assemblages, which themselves endure and take particular historical shapes.[1] The third is that this approach has value in highlighting shifts in the dominant historical forms of musical assemblage. In the later part of the article I focus on jazz and improvised musics and, in particular, on recent digital experiments in music. The aim is to show how we can use these tools to conceptualize changing forms of musical creativity, which themselves evidence new music ontologies that became ascendant over the course of the twentieth century. Taking three examples in which music is engaged with digital technologies and which evidence new kinds of creative process, I develop concepts of relayed creativity and of the provisional work. Throughout, key motifs are mediation, creativity, and the negotiation of difference.

Ontology historicized and relativized

I begin with two contrasting takes on the concept of mediation; or rather, the first requires a theory of mediation and implicitly calls one forth. Lydia Goehr, in her seminal book *The Imaginary Museum of Musical Works*, sets out a strong argument for the necessity of ontologies of music being informed by history – for the indispensability of history to philosophy, and an empirically informed social, cultural and economic history of music at that. Charting the rise from around the year 1800 of the romantic, idealist philosophy of the musical work, Goehr embeds that rise in a constellation of changes, many of them subsumable under the Weberian thesis of the progressive rationalization and autonomization of music and art. Among these changes were the rise of the romantic principle that musical invention depended on the self-expression of the individual composer-genius, who must refuse to follow established rules or submit to external controls; and the arrival of a 'work-based practice' centred on the belief that musical works were perfectly formed, finished and 'untouchable', and transcended any particular performance. This in turn entailed new heights of precision in notation, the vesting of an unprecedented authority in

1 I define a (musical) assemblage as a particular combination of mediations (sonic, discursive, visual, artefactual, technological, social, temporal) characteristic of a certain musical culture and historical period. This definition draws on chapter 3 of Rabinow's *Anthropos Today*, and on Deleuze's reading of Foucault (in *Foucault*).

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the score and a strict division between original and derivative works, as well as moral norms and legal codes that enshrined notions of the composer's originality and the need to protect him from plagiarism through intellectual property rights. Under the work imperative, the musical division of labour became rigidified. A new norm of 'transparency through fidelity' to the work guided both conducting and performing, auguring hierarchical relations between composer and interpreters, and between conductor and players. Audience behaviour, disciplined by the dedicated architecture of the new concert halls, also came under its sway: audiences were expected to be motionless, contemplative and silently attentive, in order to enable the truth and beauty of the work to be heard. As composers underwent 'social emancipation' from the extra-musical demands of church and court and experienced the vagaries of independence, there arose professional organizations, private musical societies and a new species of music institution[2] intended to embody the ideal of musical autonomy.

At the outset, Goehr highlights the separation in the work concept of the ideal musical object from its mundane embodiment or mediation: in performance, music notation or score. She asks: 'What kind of existence do works enjoy, given that they are a) created, b) performed many times in different places, c) not exhaustively captured in notational form, yet d) intimately related to their performances and scores?'[3] And at the end of the book she restates this theme: 'There is nothing about the concept of a work, the relations between works and performances, or works and scores, or works and experiences of them, that is going to tell us where the locus of musical meaning "really" resides.'[4] In this way she seems to recognize that there is no single privileged location of musical meaning, but that it may be distributed across and configured by the relations between its several mediations.

In the last part of the book Goehr sets out to consider mid to late twentieth-century challenges to and shifts in the musical work concept. She argues that both formalism as a movement and what (echoing Benjamin) she calls 'mechanical reproduction' and glosses innocently as 'one development in the history of music'[5] might be seen to have undermined the romantic associations and power of the work concept; and yet she concludes that both have failed to achieve this. From another direction, experimental music in its various manifestations – Cageian chance operations, Fluxus-like performance art and happenings, and Max Neuhaus-type sound installations – is also charged by Goehr with productively undermining the work ideal.[6] Yet, astutely, she notes how these post-modern experiments, in their antagonistic protest, were caught up in a paradoxical intimacy with the very terms of the romantic and modernist work ideal.[7] Jazz is mentioned, in passing only, to note the threat of the work ideal colonizing what, it is implied, amounts to another musical world.

2 Such as, in Britain, the Philharmonic Society in 1813 and the Royal Academy of Music in 1826 (Goehr, *The Imaginary Museum*, 241).

3 Goehr, *The Imaginary Museum*, 3.

4 Goehr, *The Imaginary Museum*, 278.

5 Goehr, *The Imaginary Museum*, 266. The reference is to Benjamin, 'The Work of Art'.

6 On these elements of experimental music, see Nyman, *Experimental Music*.

7 On the antagonistic counterpoint between modernism and postmodernism in music, see chapter 2 of Born, *Rationalizing Culture*.

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What is striking, from the perspective of the present, is that having noticed the role of the heroic discourse of individual genius, romantic performance practice, score-based determinism, the authoritarian orchestral division of labour and so on in reproducing and buttressing the work ideal, Goehr fails to articulate the need for a more systematic account of the changing mediations that she probes. She does not follow through her own programme for a radically revised conception of music's ontology. Compounding the lack of follow-through, and suggesting the limits of her project in this book, is her reluctance to pursue the significance of technologies of music production and reproduction for the shifting ontology of contemporary music. And this despite the oft-discussed prompts issued by Adorno and Benjamin, to speak only of the classical critical theorists, and despite the ubiquity and prominence of technological mediation in each element of contemporary musical experience – creation, performance and reception.[8] Later, I want to show the implications of the new technologies and associated practices for the work concept, which, I will propose, is more destabilized than Goehr allows.

Mediation as the negotiation of difference

From another vantage-point, the philosopher Bruno Latour, in a provocative pamphlet written in the wake of 11 September 2001, argues that 'a war of the worlds has been raging . . . throughout the so-called "modern age" '. He continues that the 'unity' it was imagined the West might, through modernization, bring to the world has been revealed to be illusory: 'Unity was never more than a future possibility to struggle for. Unity has to be the end result of a diplomatic effort; it can't be its uncontroversial starting point.'[9] The modernist vision was founded on a combination of mono-naturalism and multi-culturalism: 'Different cultures existed, with their many idiosyncrasies, but at least there was only one nature with its necessary laws. . . . Differences of opinion and violent conflicts remained, but they all had their source in the subjectivity of the human mind without ever engaging the world, its material reality, its cosmology and ontology'.[10] Thus, 'the many diverse cultures known to social and cultural anthropology stood out against a background of natural unity. They could be compared synoptically not unlike the way a museum's white wall helps to bring out the differences between exotic masks hung side by side'.[11] In this context, Latour asserts, modernist civilizers engaged in 'latent wars, which never even recognised the enemy's status as an enemy, which considered themselves to be no more than simple police operations undertaken in the name of an indisputable mediator, . . . a mediator far above all possible forms of conflict: Nature . . . , Science . . . , Reason'.[12]

Against the background of contemporary heightened anxiety and conflict, and in what for us is a telling metaphor, Latour argues that

8 Recent analyses of music's technological mediation include Mowitt, 'The Sound of Music'; Chanan, *Repeated Takes*; Théberge, *Any Sound You Can Imagine*; and Taylor, *Strange Sounds*.

9 Latour, *War of the Worlds*, 3.

10 Latour, *War of the Worlds*, 6–7.

11 Latour, *War of the Worlds*, 5–6.

12 Latour, *War of the Worlds*, 27 and 26.

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> The common world we took for granted must instead be progressively composed. . . . Nobody can constitute the unity of the world for anyone else, as used to be the case in the times of modernism and post-modernism, by generously offering to let the others in, on condition that they leave at the door all that is dear to them: their gods, their souls, their objects, their times and spaces – in short, their ontology. . . . From now on the battle is about the making of the common world and the outcome is uncertain.[13]

Only one thing is asked of the modernists: 'that they cease to consider universality as their own already established territory'.[14] Latour points to the necessity of modernists mourning the loss of the totemic belief in a supervening reason – or, we might add, aesthetics – that would order or subsume, control or police all that it encountered. He calls for a new practice of what he calls diplomacy: 'What is at stake is war, negotiation, diplomacy. . . . Peace negotiations are not possible unless both sides give up exoticism and its perverse complacency. . . . Diplomacy cannot begin until we suspend our assumptions about what does or does not count as difference.'[15] He ends that, of course, the diplomats' 'offer of mediation . . . may fail'.[16]

Mediation, then: from one perspective, as the clue to transcending idealist ontologies of music; from a second, mediation as diplomacy, as the negotiation between apparently incommensurable worlds. Later in this article I want to see if I can negotiate these meanings. In particular I want to pursue the implications of Latour's tract about the end of false unities for rethinking the 'universal' and cultural relativism, and to open up alternative models of inter-cultural diplomacy – of the negotiation of difference – in music, models that contrast with modernist subsumption or appropriation.[17] More specifically, I will track how musicians are engaging with digital technologies to generate new models and new practices of difference and interrelation in music – what Latour might call negotiation without any modernist presupposition of universalism.

Music and mediation

Theories of mediation have rightly been central to the development of both critical musicology and the cultural study of music. The problematic was set out initially by Adorno in his philosophically-overdetermined and sociologically partial account of the dialectic between autonomous music and the commodified music of the culture industry, the 'torn halves' of

13 Latour, *War of the Worlds*, 29, 30 and 33.
14 Latour, *War of the Worlds*, 36.
15 Latour, *War of the Worlds*, 20 and 42–43.
16 Latour, *War of the Worlds*, 51. Latour's notion of diplomacy must be distinguished from approaches, such as Habermas's discourse ethics (see his *Moral Consciousness*), which are predicated on the goal, and the possibility, of consensus; here consensus is not specified in advance. For similar criticisms of Habermas see, for example, papers by Mouffe and Young in Benhabib, *Democracy and Difference*.
17 On modernist appropriation in music, see Born and Hesmondhalgh, *Western Music and its Others*.

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twentieth-century music.[18] Rejecting idealist ontologies in favour of a materialist aesthetics predicated on the analysis of mediation and of the evolution of musical materials, Adorno began the project on which later writers such as Tia DeNora and Antoine Hennion are now engaged.

In his method of immanent critique, a critical engagement with music's formal properties as given by compositional procedures, Adorno sought to diagnose autonomous music's inherent logic, one that at times he portrayed as isomorphic with or reflective of larger social processes, while at others he saw it as giving evidence of 'objectively subjective engagements with the reality external to the musical text'.[19] Thus, in his study of Schoenberg, the subject-object dialectic appears in the guise of a compositional process in which classical and prior musical techniques and norms are absorbed and then determinately negated, yielding a 'dialectical . . . relationship between tradition and the new' through 'relentless subjectification'.[20] In this way Adorno conceived the subject-object dialectic as a dual movement: in terms of the composer's agency in reworking musical materials (that is, 'everything which confronts [composers], everything about which they have to decide');[21] and in terms of the 'human-made quality of musical discourse and the ways in which musical material [is] pre-formed by history'.[22] Paddison identifies three linked modalities of the dialectic in Adorno's concept of mediation: between artist and material (in the structure of the artwork, particularly the productive tension between mimesis and rationality, expression and construction); between the autonomy of artworks and the commodity regime of market societies (in which artworks take on both normative and critical cognitive functions); and between individual and social totality (an antagonistic relationship experienced by the individual as Weber's 'iron cage of rationality').[23]

But Adorno's exploration of these three levels is unbalanced. If, in his analysis of autonomous music, he appears to bequeath a relational understanding of the subject-object dualism, and thence of how the social gets into music, it is one ruled by a narrow dialectic. Focused on the interaction between composer's subjectivity and musical text, it provides only a weak theorization of the relations between autonomous music and broader sociohistorical processes, in which the social appears primarily in its metabolization in musical form. A telling lacuna is Adorno's aversion to interrogating the specific institutional arrangements of autonomous music, the field in which he was himself enmeshed, and how these condition the music.[24] In comparison, his portrait of music's assimilation by the culture industry weighs entirely the other way, abandoning negative dialectics and brooking no contradictions. As a result, held up against historical realities, his analysis of the dynamics and output of the music industry is woefully reductive. In short, as Peter Martin comments,

18 The full quotation (in translation) is: 'Both are torn halves of an integral freedom, to which however they do not add up' (Adorno, Letter to Walter Benjamin, 123).

19 Leppert, 'Commentary and Notes'; cited in DeNora, *After Adorno*, 26.

20 Jarvis, *Adorno*, 136, commenting on Adorno, *Philosophy of Modern Music*.

21 Jarvis, *Adorno*, 107.

22 DeNora, *After Adorno*, 14.

23 Paddison, *Adorno's Aesthetics of Music*, 146–7.

24 This is precisely the substance of my book *Rationalizing Culture*.

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'It is far from clear that Adorno did in fact provide a coherent account of the relationship he claimed between musical and social structures.'[25]

Yet paradoxically, if we bracket out its totalizing flavour, Adorno's account of the culture industry and its musical products is exemplary in probing the several dimensions in which music's existence is permeated by commodification – be it musical form, performance mode, filmic exposure, radio play, production or reception. In this way it points to a constellatory conception of music's multiple mediations, understood now in the non-dialectical sense of the assemblage – of music's many simultaneous forms of existence. If Adorno's concept of music and art is 'simultaneously descriptive and evaluative',[26] then, unburdened by his normative project, the task of recent theories of mediation has been to sharpen the tools of description and analysis so as to make them adequate to this complex, multiple object, including the existence of contradictions operating within the assemblage.[27] The claim of later writers on mediation has been that it is only through empirical and historical research that it is possible to analyse both how music and its meanings are constructed by wider discursive and social formations, and how in turn music – its emotive, symbolic, corporeal and material properties – become a resource, as Tia DeNora puts it, 'for semiotic activity – for doing, being and naming . . . social reality'.[28]

DeNora summarizes her approach thus: 'Music is active within social life: just as music's meanings may be constructed in relation to things outside it, so, too, things outside music may be constructed in relation to music'.[29] Her emphasis is on agency, interaction and 'world-building'; on how those who listen to music make connections, in their everyday consumption practices, between musical and non-musical domains. Music is engaged in constituting the self; it is set to do biographical, memory and emotional work in the creation of self-identity.[30] Mediation in this sense refers to what DeNora calls the 'co-productive' or two-way interrelations between music and social life. While drawing on Adorno, she insists that these co-productive dynamics cannot be specified in advance. Instead, she stresses the need to trace such connections empirically through a focus on 'music-as-practice, . . . [on] music as a formative medium in relation to consciousness and action, . . . [on] what music makes possible'.[31] To refine this approach she borrows the concept of affordance from perceptual psychology, where it refers to 'what things furnish . . . [or] *afford* the observer'.[32] In DeNora's words, ' "Affordance" captures music's role as . . . a "mediator" of the social . . . . It highlights music's potential as an organising medium, as something that helps to structure such things as styles of consciousness . . . or modes of embodiment'.[33] Affordance

25 Martin, *Sounds and Society*, 112; cited in DeNora, *After Adorno*, 34.
26 Jarvis, *Adorno*, 110.
27 See Born, 'Understanding Music as Culture' and *Rationalizing Culture* on the challenge of analysing tensions and contradictions within diverse musical assemblages.
28 DeNora, *Music in Everyday Life*, 40.
29 DeNora, *Music in Everyday Life*, 44.
30 DeNora, *Music in Everyday Life*, 45.
31 DeNora, *After Adorno*, 46.
32 The idea of affordance was developed by Gibson (*The Senses Considered as a Perceptual System*; 'The Theory of Affordances'); quotation from Gibson, *The Senses*, 285; cited by Clarke, 'Music and Psychology', 118.
33 DeNora, *Music and Everyday Life*, 46–7.

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points, then, to the properties or potential of objects as they are proffered to and may be engaged with or used by subjects. Her aim is to avoid the extremes both of radical constructivism (the conviction that music's meanings and uses are extrinsically constructed, whether by discourse or social context) and of an equally unilateral musical determinism (the idea that music's effects are determined purely intrinsically, by its acoustical or formal properties). Taking my cue from its analogous application to the analysis of human-technology interrelations,[34] I later employ the notion of affordance when discussing the properties of music technologies.

Antoine Hennion, another formative writer on mediation, in his historical analysis of the growth of the 'love of Bach' argues similarly that it is not enough to study Bach reception and the development of a taste for Bach – that is, the production of musical subjects – without grasping also the formation of their object – that is, both the Bach oeuvre and the recognition of Bach's genius. Bach affords a new way to love music; he is 'both the object and the means of our love of music'.[35] Hennion advocates a positive analysis of taste through an account of its mediation: 'Taste, pleasure and meaning are contingent [and] conjunctural; and they result from particular intermediaries considered not as the neutral channels through which predetermined social relations operate, but as productive entities that have effectivities of their own'.[36] He contributes to mediation theory a stress on the enduring, long-term potential of amateur practices, of innumerable individual musical 'attachments', to swell, aggregate and thereby ground larger trends in musical tastes and markets, which themselves have effects on the 'music itself'. Laudable in this approach is the aim of tracing the specific practices and connotations that clothe music and endow it with meaning, and of taking dissemination, attachment and the roles of amateur and music-lover in history as seriously as those of composer or professional musician.

A fundamental theoretical question arising from these approaches is how to move beyond the tendency, derived from interactionist sociology, to take the observable micro-social patterns of musical experience and behaviour as the privileged locus for an analysis of musical meaning, and as amounting to the entire socio-musical reality. If we accept that the patterns of meaning projected into music are routinely stabilized, that they can attain some kind of reproduction or closure over the long term, then it behoves us to ask under what conditions this is so. Such stabilities of meaning can be repeatedly observed in music history, as powerful discourses or metaphors come to structure musical experience; moreover they are performative, conditioning future musical expressions and compositional practices. Historically, it is this kind of stability that Goehr identifies over the *longue durée* of the work concept. Lawrence Kramer points to similar processes with his notion of 'constructive descriptions', meanings that attach themselves to music while appearing to be 'its own

34 See, for example, Hutchby, 'Technologies, Texts and Affordances'.

35 Hennion, 'Music and Mediation', 86.

36 Hennion, 'Music and Mediation', 84. His implicit target is Bourdieu's negative account of taste as class domination in another guise (see Bourdieu, *Distinction*).

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seeming' and that have historial agency, installing 'the past in the present'.[37] It is these stabilities that Foucault captured theoretically with his concepts of discursive formation and, later, apparatus.[38]

But although such stabilities may be made up of many small acts and individual experiences, they cannot be reduced to them. They depend on the construction of institutional and economic foundations, authority and legitimacy, and charismatic figures; it is these that provide for the power and reproduction of dominant Western music ontologies, as indicated by Goehr and examined by DeNora in her account of the construction of Beethoven's genius.[39] These processes are central to my study of the computer music institute, IRCAM.[40] In this work I charted the rise of a certain aesthetic and philosophy of musical modernism from the early twentieth century via the agency of its musical and critical proponents, its social networks and institutional settings, its aesthetic boundaries and discursive contents. By analysing the mechanisms of its cumulative cultural power, its methods of accruing authority and economic strength via the charismatic leadership of its post-war champion, Pierre Boulez, I was able to account for IRCAM-modernism's remarkable capacity to stay the same, to achieve an inertial, 'mobile stasis'.[41] It is no coincidence that aesthetic stasis – the ability to occupy large slices of historical time – may be taken to signify universality: if the aesthetic is fertile and rich in invention, then surely nothing is lacking and there is no need for significant change. We might call this state of affairs anti-inventive.[42] IRCAM's attempts to construct an enduring authority were evident too in its particular philosophy of technology which, again, mobilized universalizing claims to model cognitive structures, rather than adopt a more fragile and open sense of the specific aesthetic universe that the technologies were encoding.

On social creativity: Gell and after

If the example of IRCAM requires us to probe the gap between the discourse of invention and its actuality, it also illustrates a basic property of creativity: that it is social. Many influential sociological analyses of art and cultural production affirm the social and distributed nature of creativity. I refer here to the work of Janet Wolff on the social production of art;[43] Howard Becker on art worlds;[44] Pierre Bourdieu's account of the cultural field and the role of cultural intermediaries;[45] the structuralist and post-structuralist concern with codes, conventions

37 Lawrence Kramer, 'Subjectivity Rampant!', 128–31. Kramer's historical hermeneutics point, however, to the need for socio-historical analysis of how it is that certain meanings become dominant, cohering into cultural systems, while others fade away.

38 On discursive formations, see Foucault, *The Archaeology of Knowledge* and *The Order of Things*; on apparatus, see Foucault, *Discipline and Punish*.

39 De Nora, *Beethoven and the Construction of Genius*.

40 Born, *Rationalizing Culture*.

41 *Rationalizing Culture*, 326; for this analysis, see chapters 2, 3 and 11.

42 On the concept of anti-invention, see chapter 9 of Barry, *Political Machines*.

43 See Wolff, *The Social Production of Art* and *Aesthetics and the Sociology of Art*.

44 See Becker, *Art Worlds*.

45 See Bourdieu, *The Field of Cultural Production*.

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and the institutions of authorship;[46] and the recent interest in intellectual property, copyright and the legal constitution of creativity and authorship.[47]

The social and distributed nature of creativity is more obvious in large-scale, bureaucratized, highly capitalized cultural industries such as film and television than in the individual production of music and art. But banal observations on the complex division of labour in modern media can obscure the more interesting point that, as Alfred Gell suggests in his book *Art and Agency* in relation to a range of apparently individualistic and object-based forms of art – from Polynesian and Melanesian carving, tattooing, fetishes and other sculptures to Western painting and visual arts – all cultural production constructs and engages relations not only between persons, but also between persons and things, and it does so across both space and time. I want to explain more about Gell's ideas, which I find in some ways immensely fruitful in considering creativity.

Gell starts by stubbornly delineating the boundaries of his anthropological theory of art and agency from the sociology of art worlds. He locates his account in a central anthropological tradition: Marcel Mauss's analysis of gift exchange, in which prestations or gifts are treated as extensions of persons.[48] It is worth noting at the outset that in rejecting links with the sociology of art and art history, Gell impoverishes his approach. With its Maussian perspective, it stands as much as an account of social relatedness or kinship, with the exchange of art objects an element in their extended reproduction, as of artistic creativity *per se*. Yet the anthropological scope that Gell adopts nonetheless yields tremendous insights. His theory of agency in art centres on the idea that the objects that result from creative agency condense or embody social relations, and that they do so by spinning forms of connectedness across time and space. Through the art object, these social relations are distributed and dispersed both temporally and spatially. But in the process the social relations are also relayed and transformed, as are the objects themselves. The art object has a kind of career; it changes not only via its changing interpretation in performance and reception, but it can change even in its very physical form.[49] Gell points us towards an ontology not of persons and things, nor of instants and processes, but of what the philosopher A. N. Whitehead, attempting to transcend these dualisms, termed 'events'.[50]

46 See, for example, Foucault, 'What is an Author'; and for a collection of essays exemplifying this tradition, Caughie, *Theories of Authorship*.

47 On these issues in relation to music see Frith, *Music and Copyright*, and Frith and Marshall, *Music and Copyright*.

48 Mauss, *The Gift*.

49 It is striking also how similar aspects of Gell's theory are both to Actor Network Theory, in its concern with the construction of networks of connection between human and non-human agents (typically, texts, technologies and other objectifications which bear semiotic inference and mediate social relations; see Latour, *We Have Never Been Modern*, and Law, *Organizing Modernity*); and to Marilyn Strathern's and Nicholas Thomas's concern with distributed persons and with the 'entanglement' of objects, such that the properties of objects are only concretised by their interrelations with other human and non-human actors (see Strathern, *Property, Substance and Effect*; Thomas, *Entangled Objects*).

50 See Whitehead, *Science and the Modern World*, especially chapter 5, 'The Romantic reaction', on the concept of events and their embeddedness in his theory of organic mechanism. Events can be defined as combinations of human and non-human entities which have effects that are under-determined by context – which evidence, that is, retentions of the past and protentions of the future.

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Figure 1 Nail fetishes from the Congo region of Africa. Source: the British Museum, London, MM023467; reproduced by permission of the British Museum. (Gell, *Art and Agency*, 60, Fig. 4.4/1).

Gell's illustrative stories take us from the nail fetishes of the Congo to a re-worked Velázquez painting which Gell calls the '*Slashed*' *Rokeby Venus*. Both are read analogously for the trail of social relations that lie behind and are condensed in them. The creation of the Congolese nail fetishes (Fig. 1) were described by a missionary anthropologist in 1906 thus:

> A palaver [meeting] is held and it is decided whose Kulu [soul] it is that is to enter into the Muamba tree and to preside over the fetish to be made. A boy of great spirit, or else, above all, a great and daring hunter, is chosen. Then they go into the bush and call his name. The Nganga [priest] cuts down the tree, and blood is said to gush forth. A fowl is killed and its blood mingled with the blood that they say comes from the tree. The named one then dies, certainly within ten days. His life has been sacrificed for what the Zinganga consider the welfare of the people. They say that the named one never fails to die. . . . [*The fetish is then carved from the Muamba wood.*] People pass before these fetishes . . . calling on them to kill them if they . . . have done such and such a thing. Others go to them and insist upon their killing so and so, who has done or is about to do them some fearful injury. And as they swear and they make their demand, a nail is driven into the fetish and

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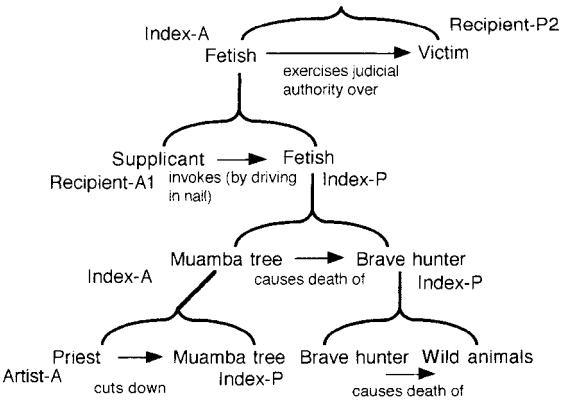


Figure 2 The fetish as an index of cumulative agency and as the visible knot tying together an invisible skein of spatio-temporal relations. Source: Gell, *Art and Agency*, 61, Fig. 4.4/2; reproduced by permission of Oxford University Press.

> the palaver [business] is settled . . . The Kulu of the man whose life was sacrificed upon the cutting of the tree sees to the rest . . .[51]

The anthropologist's account is of a chain of human and non-human agency, 'an invisible skein of relations, fanning out into social space and social time', which is embodied in the nail fetish, which is itself a bearer of potent agency. The resulting artefact – which Gell calls an *index* – '[objectifies] a whole series of relations in a single visible form'.[52] Figure 2 shows Gell's representation of the chain of agency and relations in the index.

Gell's analysis of the *'Slashed' Rokeby Venus* (Fig. 3) is similar: he says wryly that this work, 'though belonging to the West, has so far not entered the canon of Western art'.[53] The *'Slashed' Rokeby Venus* is the work of a suffragette artist, Mary Richardson, and Velázquez. The work only existed for a few months, before it was superseded by the 'restored *Rokeby Venus*' – the work of Velázquez, Richardson and the National Gallery's picture-restoration staff, which can be seen in the museum today. However, Mary Richardson's version of the picture was photographed, which is how we now know of it. Mary Richardson attacked Velázquez's *Rokeby Venus* in 1914 with a kitchen knife, slashing it deeply several times. 'Slasher Mary' gave this account of her action in 1914: 'I have tried to destroy the picture of the most beautiful woman in mythological history as a protest against the government for destroying Mrs Pankhurst, the most beautiful character in modern history'.[54] Gell comments that

> Richardson equated the woman in the picture (Venus) with Emmeline Pankhurst, and the 'sufferings' of the picture with Mrs Pankhurst's sufferings in prison. . . . In effect, Mary Richardson was an artist who produced a 'new',

51 R. Dennett, *At the Back of the Black Man's Mind; or Notes on the Kingly Office in West Africa.* 1906, reprinted London: Haarlem, 1968, 93. Quoted in Gell, *Art and Agency*, 61.

52 Both quotations from Gell, *Art and Agency*, 62.

53 Gell, *Art and Agency*, 62.

54 Gell, *Art and Agency*, 64; Gell, in turn, takes the quotation from D. Freedberg, *The Power of Images*, Chicago: University of Chicago Press, 1989, 502.

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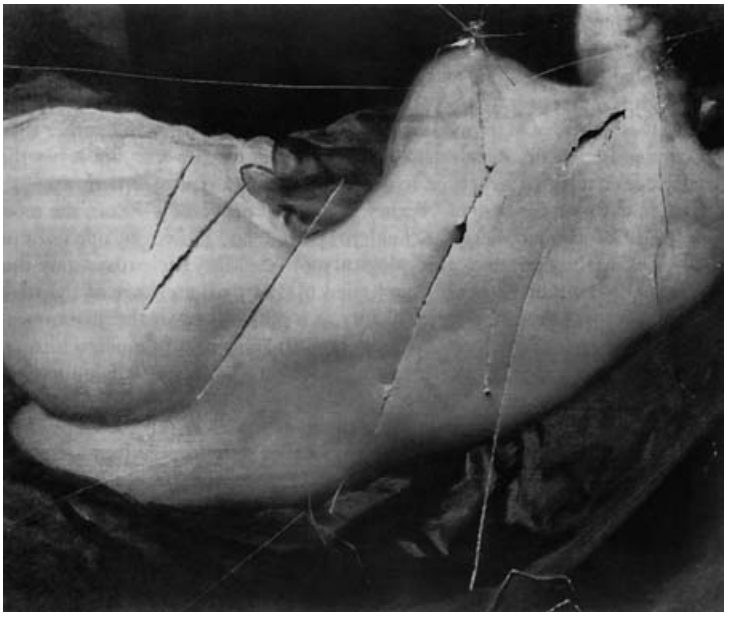


Figure 3 The *Rokeby Venus* by Velázquez slashed by Mary Richardson, 1914. Source: the National Gallery, London; reproduced by permission. (Gell, *Art and Agency*, 63, Fig. 4.4/3).

> modern *Rokeby Venus*, now a representation of Emmeline Pankhurst (standing for modern womanhood as Venus stood for mythological womanhood). . . . The contrast between the supremely controlled and detached agency exercised by Velázquez . . . , and the frenzied gestures of Richardson defacing the image so that its 'death' corresponds to that of Pankhurst, creates the space in which the life of images and persons meet and merge together.[55]

The structure of relations and of agency traced by Gell that surrounds the '*Slashed*' *Rokeby Venus* are shown in Figure 4: the image can be conceived as an index that both condenses social relations and itself has agency. Critical here is a distinction between the ways in which all artworks are successively reinterpreted – in the repeated interpretations of the performance arts, and the evolution of interpretive communities – and Gell's insistence on tracing the projection of social relations into the object, and the effects of this projection in constituting the object.

Gell on collective processes: the extended mind

Gell takes the analysis to another plane with a discussion of style in which he analyses the 'relations between relations' or transformational processes that link numerous instances of Marquesan art. It is a heavily structuralist, indeed a Durkheimian reading, culminating in the proposition that 'the relationships among motifs and figures in the Marquesan art style are

55 Gell, *Art and Agency*, 64.

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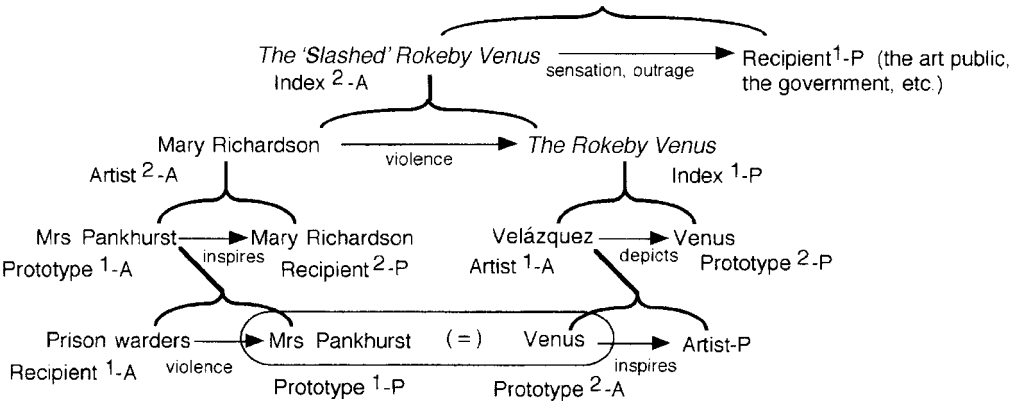


Figure 4 The chain of relations and of agency surrounding the *'Slashed' Rokeby Venus*; for Gell, 'The shared biographical space of persons and things'. Source: Gell, *Art and Agency*, 65, Fig. 4.4/4; reproduced by permission of Oxford University Press.

akin to the relations which existed, on the social plane, between the Marquesans themselves'.[56] The word for images, *Tiki*, is the same as that for the original Marquesan ancestor, the first man; just as individuals are seen by the Marquesans as 'portions' of the collectivity they participate in and divide from – that is, individuals are fragments of the imaginary totality of an indivisible kinship system – so Marquesan art objects are fragments of the 'larger unities' to which they belong by stylistic linkages. 'Artworks are . . . portions of a *distributed object* corresponding to all of the artworks in the Marquesan system, distributed in time and space.'[57] This leads Gell to propose 'the notion of a ''corpus'' of artworks as a kind of spatio-temporally dispersed ''population'' ', where such a corpus is a product of what he calls the 'extended mind' – that is, externalized and collectivized cognitive processes.[58] While telling, Gell's analysis here hints at a kind of closure by echoing the traditional anthropological topos of a bounded, homogenous social whole, whereas his critique of orthodox concepts of art and agency, as we have seen, envisages a different ontology, one of mediation and the forging of social relations, which need not invoke such closure.

Gell on time, tradition and innovation

But Gell goes further, introducing time into the frame. He does this by discussing the *œuvre* of Marcel Duchamp and, by analogy, the stylistic unity of the architecture of Maori meeting houses. At this point he draws on Husserl's model of time-consciousness, itself coterminous with Duchamp's early work. For Husserl, concerned to probe the experience of event in relation to tense, the same event is modified when apprehended from the point of view of present, past or future. The past and future are themselves dynamic, continually altering in cognitive time. Central to this dynamic experience of time is the existence of retentions

56 Gell, *Art and Agency*, 220.
57 Gell, *Art and Agency*, 220; italics in the original.
58 Gell, *Art and Agency*, 221 and 222.

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(memories or traces of the past) and protentions (projections or anticipations): the past is always experienced through a retention of previous events – a construct of the present – just as the future is experienced as a protention of possible eventualities – also a present construct. Both constructs, of past and future, alter as the present evolves through the shifting relations between prehending subject and prehended object.[59]

Gell shows how such a Husserlian perspective illuminates the relations between works in any artist's *œuvre*: how later works are anticipated in earlier ones, and how retentions or traces of earlier works are found in later ones. To illustrate, he argues that almost all of Duchamp's work from 1913 onwards was intentionally part of a single, coherent project. 'It is literally the case that Duchamp's *œuvre* consists of a single distributed object, in that each of Duchamp's separate works is a preparation for, or a development of, other works of his, and all may be traced, by direct or circuitous pathways, to all the others'.[60] An *œuvre*, Gell concludes, is an object distributed in time, where the relations between individual artworks map out a web of retentions and protensions (Fig. 5). He takes the corpus of Maori meeting houses constructed between 1870 and 1930 as a collective instance of the extended mind, proposing that it represents a composite object distributed in time and space (Fig. 6): 'Maori meeting houses may have been the collective production of many separate artists and builders, working in separate communities at different times, each striving to produce something distinctive; yet all are expressions of a common historical trajectory, a common cultural system, of common ideological and political purpose.' They embody the 'physical expression of "Maoridom" as a collective experience in [this] period'.[61] Gell insists that the model works at an individual and a supra-individual level – for a corpus of works, or for styles over time (or genres) that integrate particular instances of creativity into a higher-order unity. The artefacts in such a network are not 'symbols' of another agency, placed elsewhere, but are themselves forms of agency (or indexes, in his terms).

Finally, Gell draws out from this time-model the implications for theorizing tradition and innovation:

> An artefact or event is never either traditional or innovatory in any absolute sense. . . . A 'traditional' artefact . . . is only 'traditional' when viewed from a latter-day perspective, and as a screen . . . through which its precursors are adumbrated. The traditional object is grasped as a retention, a retention of retentions, and so on. Conversely, an 'innovatory' object . . . is innovatory only on condition that we situate ourselves anterior to it in time . . . so that we can likewise see it as a screen through which still later objects may be protended, as a protention, protention of protentions, etc.[62]

What I draw from this is the interesting idea that invention can be grasped as the nature of those objects (or assemblages) that enable the 'protention of protentions'; or in Whitehead's

59 I borrow the concepts of prehending subject and prehended object from chapter 2 of Whitehead, *Process and Reality*.
60 Gell, *Art and Agency*, 245.
61 Both quotations from Gell, *Art and Agency*, 252.
62 Gell, *Art and Agency*, 256.

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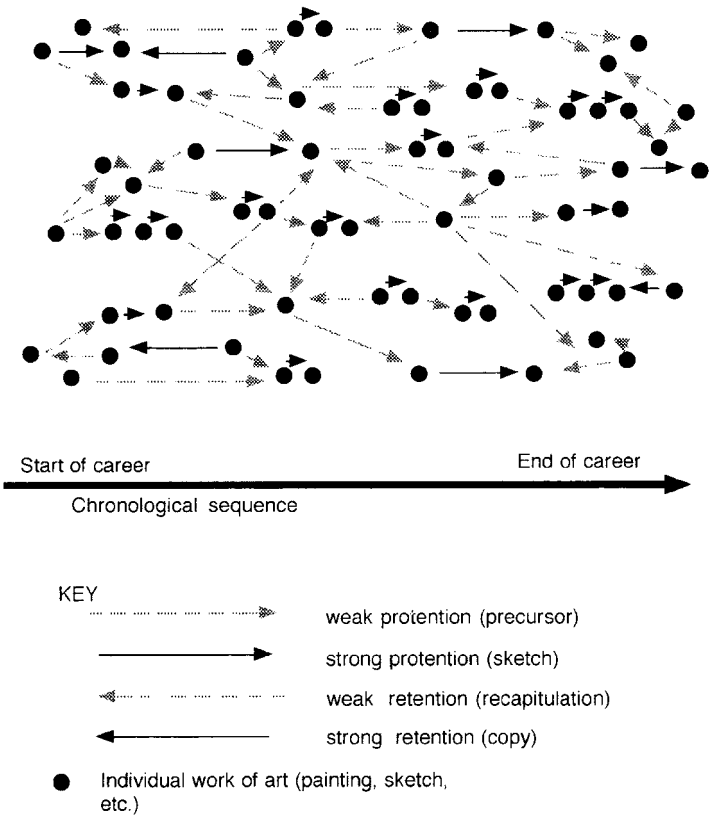


Figure 5 The artist's *oeuvre* as a distributed object in time. Source: Gell, *Art and Agency*, 235, Fig. 9.4/1; reproduced by permission of Oxford University Press.

terms, those events that open out new possibilities not only for the next event, but for the anticipation of the anticipation of . . . a series of further objects and events extended forward in time. It is, of course, a property that can only be apprehended *post hoc*.

*

Where does this take us? In the rest of the article, and with reference to music's engagement with technology, I expand on Gell's illumination of the four kinds of dispersal of creative agency: the way that creative agency can be distributed across time, across space, the way it forges relations between persons, and between subjects and objects. In developing these themes, I offer a criticism similar to that I made earlier of certain mediation theorists: for all Gell's concern to defend the properly anthropological scale of his ideas, we cannot divorce his analysis from the insights provided by sociology and history. This is because, for a theory of creativity in art or music, the microsocial has to be reconnected with the macrosocial, and with historical analysis. His own examples show this: Duchamp as the exemplary figure of artistic modernity; Mary Richardson as exemplary of the invasion of art by other orders of discourse (in this case by early twentieth-century feminist politics). I also return to ontology,

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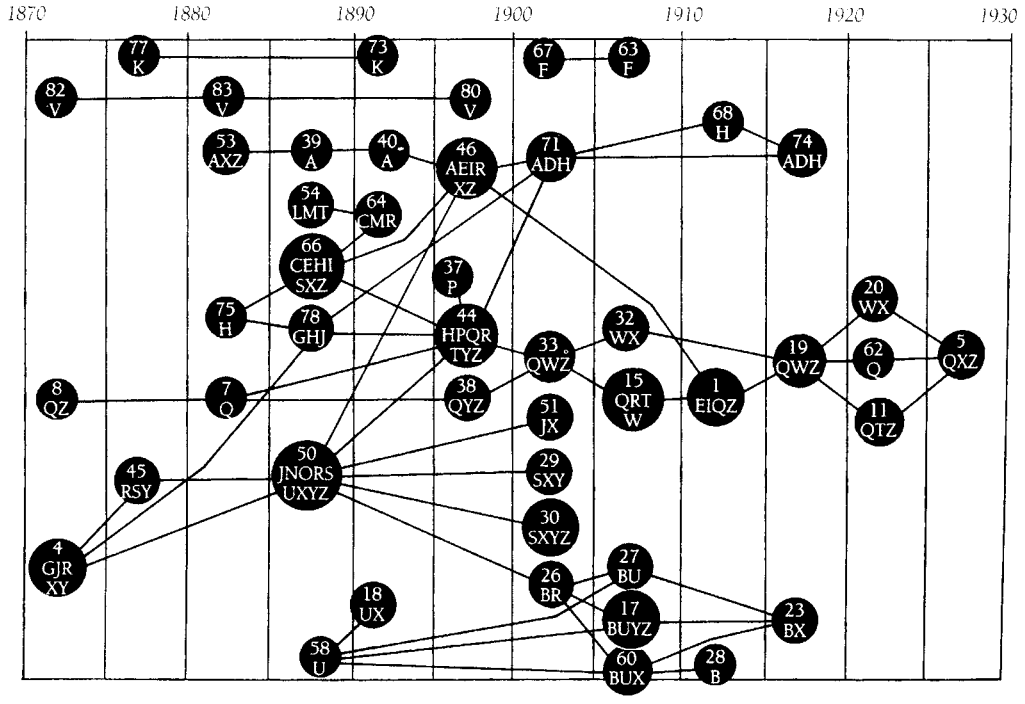


Figure 6 The Maori meeting house as an object distributed in space and time. Source: Neich 1996; reproduced by permission of Roger Neich and Auckland University Press. (Gell, *Art and Agency*, 235, Fig. 9.6/3).

proposing that music indicates how Gell's scheme must be refined by reference to the existence of distinct and changing ontologies.

Creative agency as distributed in time

It seems to me unarguably true that, as genre theory shows us, each art or musical work constructs connections to both prior and future or prospective works: that it acts on time in this dual way and can produce temporality – the 'outer time' of cultural history.[63] But I would make two additional points. First, that in the existential condition of producing a work, the retro, past-oriented and the anticipatory, future-oriented temporal agencies are not symmetrical. The anticipatory is more speculative and uncertain. The new work can fail convincingly to become part of the overall *œuvre*-in-formation. It can fail also to open up new directions and to be generative of anticipations; that is, it can fail to be innovative. Moreover, not every work that opens out further possibilities will be innovative. Conversely, there are innovative works that fail to generate protentions – works that extend their creative possibilities. It is therefore important to retain scepticism towards those styles or corpuses of works which self-consciously adopt the appearance of innovation, but the component works of which do not really add up to generative anticipation of the new. An obvious case are those

63 The contrast implied is with Schutz's idea of 'inner time', influenced by Bergson's concept of *durée*, as 'the very form of existence of music' (Schutz, 'Making Music Together', 170).

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twentieth-century avant-garde movements which clothe themselves in the rhetoric of invention, but which – for all this – result in a form of aesthetic stasis. As I mentioned, this is an argument I make in relation to IRCAM: that the tradition culminating in IRCAM attempted a kind of blocking of aesthetic alternatives through its hegemony; while the appearance of innovation was effected by various displacements – through association with technological change and progressive scientific discourses.[64] It is important, then, to build on Gell's account with reference to those aesthetic systems which, conscious of the value attached to innovation, ape its appearance; and by considering those systems that, in reality, occlude the anticipation of the new through anti-invention.

Secondly, outer or cultural–historical time is not innocently experienced. It forms part of the calculative agency of musicians and artists. From at least the late eighteenth century, and with greater burden through the nineteenth and twentieth centuries, time consciousness and intentionality are formed by discourses of art's role in the reflection and speeding up of social progress, by working concepts of artistic progress, vanguardism, radicalism and so on. And philosophy colludes; it is performative. These processes have been examined by Renato Poggioli and Peter Osborne, who show how 'modernity', 'avant-garde', 'tradition' and 'postmodernity' are categories of historical consciousness that inhabit European philosophy at the same time as they mediate cultural experience and artistic practice.[65] Gell's bounded anthropological universe has, then, to be reconnected to cultural history in order to grasp the different broader discourses of time and their internalization in creative agency, and how they powerfully inform artists' and musicians' intentionality. Discourses of time are entangled in and inform agency. The phenomenological account of innovation must be coupled with due recognition of 'innovation' as a category and a preoccupation of Western modernity.

But while characteristic of art and high culture, this is not the limit of the insight. Research on genre in popular music shows how variable such discourses of time can be in popular culture. In a fascinating essay, Will Straw contrasts two historically coexistent genres, industrial rock and electronic dance music.[66] Central to the analysis are the very different temporalities (and spatialities) constructed by these musics, and by the subcultures that they subtend: industrial rock a kind of static and repetitive, canonic classicism; electronic dance music issuing a restless stream of innovation manifest in continual generic branchings that result in a proliferation of sub-genres – in Gell's terms, protentions, protentions of protentions and so on.

Creative agency as distributed between persons, between subjects and objects, and across space: from jazz to digitized musics

I want initially to distinguish two aspects of the social distribution of creative agency. First, there are those relations spun between musicians or artists and their projected or envisaged

64 See Born, *Rationalizing Culture*, chapter 11, especially 314–27.
65 See Poggioli, *The Theory of the Avant-Garde*; Osborne, *The Politics of Time*.
66 Straw, 'Systems of Articulation'.

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listeners or audiences. Gell's stress on the relaying of creativity through gifts exchanged, artworks made and distributed, and on the dual nature of the process – its simultaneous anticipation of social connections – is fundamental. It equates with the phenomenologist Schutz's account of 'mutual tuning-in' and of the construction by the musical work of a 'we', of communicative relatedness, across chasms of time and space.[67] But to draw out the full theoretical interest of this insight, it is imperative to see how this process varies, how it can be systematized or negated – as in the history of the avant-garde, in which the necessity of any immediate connection with an audience is rebuked, projecting such a connection over the heads of present audiences into an ideal future.[68] Or we might take the opposite historical tendency – how the connection between producer and audience has been rationalized and scientized in twentieth-century mass media through recourse to market research: in film through the screening of pilots; in television and radio through continuous audience research. In these practices, reified, metonymic representations of the 'audience' come to stand in for real audiences in the instrumental attempt by the industries to control the uncertain circuit of production and reception.[69]

Second, and for the remainder of the article, I want to consider the distribution of creative agency between different producers, as in collaborative forms of musical authorship; and between subjects and objects, human and non-human agents. I focus on the way that electronic and digital technologies afford and enhance a dispersed and collaborative creativity. If music notation and recording were the means by which musical ideas, and then sounds, became spatially mobile – released, or alienated, from both place and co-presence[70] – then digital media have accelerated those processes. With centrifugal force, and more easily than in its commodity forms, music is scattered, flung via the internet in near-real time from any point of creation and departure to any number of points of destination. Moreover, digitized music's immateriality and hyper-mobility as code cause both the economic and legal property regimes associated with the pre-digital era to become outdated and impotent. This is all well established.[71]

Writing on the electronic recording studio and its multi-track aesthetic and practice, Paul Théberge has noted the contradictory tendencies of this analogue technology.[72] On the one hand, there is its potential for a democratised and collaborative creative practice – as Chris Cutler has it, echoing Walter Ong, a new orality that incorporates improvisation and realizes the studio's potential for an empirical and re-socialized music-making, one encapsulated in popular music's notion of the 'group'.[73] On the other hand, he identifies the studio as a site of rationalized and alienated musical labour, evident in the way that tracks are built up

67 See Schutz, 'Making Music Together'.
68 See Poggioli, *The Theory of the Avant-Garde*, and for a sociological account, Bourdieu, *The Field of Cultural Production*, chapters 1 and 2.
69 For an account of the use and effects of systematic market research in television, see Born, *Uncertain Vision*, chapter 7.
70 Chanan, *Musica Practica* and *Repeated Takes*; Taylor, *Strange Sounds*.
71 Frith and Marshall, *Music and Copyright*; Wallis, 'Real Threats to Copyright?'.
72 Théberge, 'The "Sound" of Music'.
73 See Ong, *Orality and Literacy*; Cutler, 'Technology, Politics, and Contemporary Music'.

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through a sequence of separated, often individual takes in which any possibility of co-present aesthetic response and mutuality is lost. The illusory organicism and simulated 'co-presence' of the resulting recordings, in which the edits are imperceptible, has made critics reach for the concept of ideology: for whatever its governing vision, this is in reality a music made of bits and pieces of players and performances, rendered as the idealized image of 'community' and technical perfection in music.

Digital music media both extend these potentials and afford entirely new modes of collaborative authorship. Through their capacity to 'decompose' aural and visual objects into basic binary representations, digital media re-open creative agency. They do this by rendering musical, photographic and filmic objects, in the immaterial form of code, open to re-formation, to repeated re-creation. That is, digital media supersede the capacity of material artefacts to stop the flow of re-creation. Music shows this remarkably well: digitized music, distributed via MP3s, CDs and the internet, is continually, immanently open to re-creation. Distributed across space, time and persons, music can become an object of recurrent decomposition, composition and re-composition by a series of creative agents. We need a new term for this capacity: I suggest relayed creativity.

But similar potentials were evident in another guise in the analogue era. Innovative practices of re-composition were central to a number of black electronic musics, including dub, toasting, scratching, rap, hip hop and their derivatives. These were musics in which, in performance and utilizing mundane technologies, sounds were remixed live with other sounds.[74] Théberge observes, 'By isolating break beats and other bits of recorded sound and music, DJs ([or] "turntablists") could extend and intensify the effect of rhythmic passages and combine them with other music to create a new form of live, improvised music';[75] he goes on to track the mutation of these analogue forms into live mixes using digital sampling. But the precursor of these practices, from which they were protended – albeit through a quite different constellation of improvised performance and technological mediation – was jazz, the prototypical African-American music of the twentieth century. Jazz's ontology and its embeddedness in a particular assemblage of mediations are portrayed in seminal studies by Paul Berliner and Ingrid Monson.[76] From these studies jazz can be grasped as a lateral assemblage, one illuminated by comparison with the vertical hierarchy of mediations characteristic of the work concept.[77]

The ontology of the musical work envisions a hierarchical assemblage: the composer-hero stands over the interpreter, conductor over instrumentalist, interpreter over listener, just as the work ideal authorizes and supervises the score, which supervises performance, which supervises reception. In its idealism, manifest in the conviction that the work is not

74 See Toop, *The Rap Attack*; Hebdige, *Cut 'n' Mix*; Rose, *Black Noise*.

75 Théberge, 'Technology, Creative Practice and Copyright', 148.

76 Berliner, *Thinking in Jazz*; Monson, *Saying Something*.

77 I am aware of the dangers in referring to the 'work concept', 'jazz' and 'digitized music' as though uniform categories. My defence is that only by treating them in this way, as akin to Weberian ideal types, is it possible to draw out comparatively some core features of these complex musical cultures. I do not intend to fuel any evolutionist reading of these musics as successive stages of historical development, nor to imply that they are isolated, immune from mutual influence, or determined by technological change.

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instantiated in any particular material or social form, the philosophy of the work insists that neither music's objectification in recording (wax cylinder, vinyl disc, CD) nor music's sociality form part of the creative process. Indeed, at the same time that it effects hierarchies, the work ontology disavows each of the three orders of social mediation set out at the start of this article through its belief in music's transcendence of the social. The sociality of music-making, the embeddedness of the work in broader social relations of class, gender, race and nation, its dependence on patronage or market exchange: none are understood as immanent in the musical object; all are disavowed and denied.[78] Performance and recording are adjuncts; recording spawns a proliferation of mere variant, commodified and reified interpretations, none of which augment the work, in the sense of musically altering or extending it. Movement is confined to changing traditions of performance and reception that, it is believed, leave no trace in the primary musical object.[79] The work ideal is therefore experienced as unchanging: it exists outside and supervises history. Yet paradoxically, it invites historicism and an obsession with authenticity, a historicism that music's commodification and recording have only intensified.[80] The work ontology sits uneasily, then, with the dynamics analysed by Gell.

The jazz assemblage, in contrast, is lateral and processual. Jazz entertains no split between ideal musical object and mere instantiation, no hierarchy between composer as Creator and performer as interpreter of the Word. There is no final, untouchable work that stands outside history. This is not to deny jazz's specific capacity for self-idealization, evident in a pronounced metaphysics of (co-)presence. But jazz's ontology is primarily material and social, focused on the movement or oscillation between two phases, two crucibles of creative practice. On the one hand, there is the moment of performance (P^1) as a dialogical, participatory creative act grounded in an aesthetics of collaborative improvisation, one that entails a particular experience of musical intersubjectivity and place, in which the interaction is at once musical and social. On the other hand, there is the capture of that moment in commodity form by recording (R^1), an objectification that is productive in enabling improvised performance to be disseminated and known beyond its original time and location – in which form it becomes the aural means of educating and socializing other musicians and later generations, who are thereby empowered to create something new or to cover, re-work or transform the original (P^1) in subsequent improvised performances (P^2).

The history of jazz is a history of this cumulative movement between focal musical events – $P^1 \rightarrow R^1 \rightarrow P^2 \rightarrow R^2 \rightarrow P^3 \rightarrow \ldots$ – in which successive re-creations are afforded and communicated both by recording technologies and by a *détournement* of the commodity

78 My use of disavowal and denial is indebted to Bourdieu's concept of *dénégation*, itself akin to Freud's *Verneinung*, which denotes also negation. See Bourdieu, *The Field of Cultural Production*, chapter 2, and particularly the translator's note on 74, which refers to Laplanche and Pontalis, *The Language of Psycho-Analysis*, 261–263.

79 But see chapters 2, 3 and 4 of Butt, *Playing With History*, where he amends Goehr's analysis of the work ideal with a subtler account of the changing historical interrelations between composition, notation and performance. For example, his contention that for much of modern music history notation was 'exemplary rather than mandatory' and that 'the score can be considered as much the record or echo of performative acts and dialogues [including improvisation] as the blueprint of a "work"' (113); or the evidence that some notated works were considered not 'untouchable' but malleable, depending on particular performance opportunities.

80 Butt, *Playing With History*, and Taruskin, *Text and Act*.

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form.[81] In this way the distributed object that is the jazz corpus condenses and relays at once subject-object relations, human and non-human agencies, and the social relations immanent in its history and (re-)creation – the latter including both the immediate, dialogical socialities of jazz performance, and the experiences of race and class articulated in this 'black counter-culture of modernity'.[82] In jazz's distinctive ontology, as in that of many of the African-American derived popular musics of the twentieth century, the sociality of music-making, its musical issue, recording technologies, music's commodity forms: all bear agency, all contribute to the composite musical object (or index). In marked contrast to the ontology of the work, then, jazz embraces each of the three orders of social mediation, all of which – dialogical creative and performance practices, the encompassing realities of race and class, jazz's dependence on commodity exchange – are experienced as integral to jazz's aesthetic operations and its socio-musical being. Monson demonstrates how the interactional qualities of jazz embody African-American aesthetics as they are manifest in linguistic techniques such as verbal duelling, mimicry and signifying, themselves characterized by 'repetition with a difference' and ironic intertextuality.[83] By analogy, she explores jazz's 'intermusicality', its inventive aesthetics of musical allusion, parody and pastiche, suggesting in this way that jazz is a music 'about the relations between [different] musics'.[84] This is a music that exemplifies Gell's analysis.

In light of this brief genealogy, it is possible to assess how digitized music both compounds the jazz assemblage and is distinctive. Even more than its precursors, with music's commodity form rendered liquid as code, digitized music encourages an open sequence in which the closing down of a musical object and its circulation are followed by its potential re-opening and re-creation. The website 'ccmixter', for example, declares itself 'a music sharing site featuring songs licensed under Creative Commons where you can listen to, sample, mash-up or interact with music in whatever way you want . . . [and then] upload your version for others to . . . re-sample'.[85] Similarly, in digital art music 'the status of [musical] material becomes extraordinarily fluid – what might have been a relatively complete musical "statement" can reappear as a sample source for improvisatory inclusion in another work; distinctions between "source material", "transformations" and "completed sections" are contingent . . . [and] a degree of continuity is established between works'.[86] In both cases the work is rendered provisional, its finitude or openness a matter of pragmatics. The conceptual dualism of authenticity or artificiality is obsolete; there is no original and no copy, only rapidly proliferating, variant versions (or materials). The musical object eschews any absolute state as it is repeatedly relayed and transformed across time, space and persons.

81 For the Situationist International, *détournement* refers to the misappropriation of an object or activity from its normal purpose, a key practice of subversion in commodity-based societies (Debord and Wolman, 'A User's Guide'). I hijack the term to point to jazz's inventive subversion of the commodity through its re-embedding in non-alienated social relations.

82 Gilroy, *The Black Atlantic*.

83 Monson, *Saying Something*, 103–4; on signifying, see Gates, *The Signifying Monkey*. For a discussion of popular music's intertextuality, one that stresses popular music's 'otherness but also relation' to 'work thinking', see Middleton, 'Work-in(g) Practice' 72–3.

84 Monson, *Saying Something*, chapter 4; the phrase is from Bowers, 'Improvising Machines., 29.

85 See the Creative Commons website, <http://www.ccmixter.org> (accessed April 2005).

86 Waters, 'The Musical Process', reflecting on his own compositional practice as conditioned by digital technologies.

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Double mutability: digitized music and South Asian diasporic flows

I turn now to three examples in which music is engaged with digital technologies. In doing so, I do not necessarily mean to endorse them, but to explore their implications as indicative forms of contemporary musical mediation. A first example of the properties that I have identified in action is the role that digitized music genres are playing in the formation of a diaspora of affluent South Asian youth based in major urban centres in a number of countries including Britain, the USA, Australia and Singapore.[87] Dhiraj Murthy is currently studying the way that music circulating through the internet and via the diasporic Asian cultural industries, music which is then 'realised' and remixed in local club performances through the intercession of DJs, is binding these young people into a dispersed and global subculture: 'South Asian DJs in the subculture appropriate, through sampling, everything from Brick Lane to Harlem to Bollywood to construct a music they label "Asian".'[88] The result is a prolix hybridity of Asian and other musics. The music is formative of a sense of collective ethnic identity. But the particular power of the music in this mediascape of diasporic cultural flows is contradictory.[89] The mercurial speed at which the music circulates on the internet, and its translation in each location from virtual form and spatial ubiquity into the grounded materiality of performance, dance, bodies and place (whether in Bradford, New York or Melbourne) and therefore new musical contacts, new musical hybridities, give the music the property of mediating the extended social relationships that constitute both its history and its (re)making. The 'mutual tuning-in' is both globally virtual and locally corporeal. And the gift exchange continues; it does not end. Styles that were hip in Britain reach New York four months later; they hit Melbourne a couple of months after, and circulate on to Singapore and New Delhi. This is 'diplomacy' on a grand scale: music's agentive movement between and mediation of both a globally dispersed, virtual community and a localized, co-present public; its oscillation between deterritorialization and place.

As Paul Gilroy has proposed, the microsocial sphere of co-present musical performance and corporeal experience, the fluid roles in contemporary popular musics between musicians, DJs and audience, favour the ongoing formation, in microcosm, of collective identities – of 'musically imagined community'.[90] Black identity formation 'remains the outcome of practical activity: language, gesture, bodily significations, desires. . . . These significations are condensed in musical performance, although it does not monopolize them. In this context, they produce the imaginary effect of an internal racial core or essence by acting on the body through the specific mechanisms of identification and recognition produced in the intimate interaction of performer and crowd'.[91] It is, then, the double mutability, the flux-form-of-existence of digitized music, that gives it a special capacity in spinning social connectedness. That is, first, its mutability in the guise of the oscillation

87 It is important to acknowledge here that access to the infrastructure of digitized music – personal computers, the internet and downloading – continues to be unequal and to depend globally on high socio-economic status. The potential of these technologies is therefore circumscribed, and their eventual scope cannot be known.

88 Murthy, 'Globalization and South Asian Musical Subcultures'.

89 On the concept of the mediascape, see Appadurai, 'Disjunction and Difference'.

90 Gilroy, 'Sounds Authentic'; Born and Hesmondhalgh, *Western Music and its Others*, 35.

91 Gilroy, 'Sounds Authentic', 127.

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between an immaterial, globally spatialized internet form and a localized corporeal form, as remixed sounds and performances – music's capacity to shift between deterritorialization and reterritorialization; and second, its mutability in terms of the potential for relayed creativity, through cumulative hybridities, yielding a provisional musical work which both retains and blurs the traces and boundaries of individual and collective authorship.

In short, what we see in these processes is the potential for a new music ontology, as anticipated in jazz and implied by Latour: from the modernist logic of universality and identity – the musical 'I' who, isolated and apart, appropriates and frames musical others within the musical work – to one of the weaving and spinning of musico-social relatedness. This is a music in process, predicated on the suspension of any master discourse – an aesthetics of mutual encounter, of bridging and negotiation, not an aesthetics of appropriation and subsumption of an other. It augurs a relational aesthetics,[92] one with roots in the movement between performance and reified object and the dialogical musico-socialities of jazz.

Yet if digital media and their networks proffer in this way a new diplomacy in music, a meeting of apparently incommensurable aesthetic worlds, they do not guarantee them. Indeed what is striking in the South Asian youth diaspora studied by Murthy is that these hybrid and motile musical powers result, at least in the contexts of their consumption, in something suspiciously like new essentialisms, new exoticized conceptions of musical 'Asianness'. Murthy's sober hypothesis is that a range of Asian intra- and inter-racial essentialisms are discernible, emanating variably from Asian and mainstream music industries.[93] In both this case and that of IRCAM, then, a hardening or involution of the processes of mediation can be discerned. The methodological point is that the outcome of such processes cannot be known in advance, but must remain open to empirical investigation; and that there is a need to resist the equation of mediation simply with mobility or progressive change.[94]

The fluid circuit of translations: subject becomes object becomes music becomes . . .

Another experiment in the negotiation of difference – here between subject and object, humans and technologies – is evident in my next two examples. Both invoke a different genealogy: that of the postmodern, experimental music initiated by John Cage and his associates. In particular, they echo the commitment to live electronic installations and improvisation manifest in the artisanal, low-tech *bricolages* of such experimental groups as the Sonic Arts Union and Musica Elettronica Viva.[95] If the use of live electronics suggests evidence of parallel invention to the black popular musics mentioned before, there is a telling difference. For in this lineage, each instance of improvisation or installation is limited and sufficient to itself; it generates only the performance event. Unlike the jazz genealogy, here recording and its circulation in commodity form play no role in distributed musical

92 See Bourriaud, *Relational Aesthetics*.

93 DJs, musicians and groups associated with this scene include Nitin Sawhney, Panjabi MC, Stereo Nation, Cornershop, Talvin Singh, Bass Dhol and Badmarsh & Shri Remix.

94 This is arguably a tendency in some contemporary sociological theory (Urry, *Sociology Beyond Societies*).

95 See Nyman, *Experimental Music*, chapter 5; and Born, *Rationalizing Culture*, chapter 2, especially 56–61.

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development; there is no cumulative creative relay, no building of an aesthetic language. In experimental electronic music the emphasis is on open processes and unpredictability in performance, and on the design of circuitry as itself a mode of 'composition'; both point to a refusal of the telos of the finished work.

Thought Conductor #2 (*TC2*) is a real-time performance installation conceived by artist-engineer Bruce Gilchrist, whose work exploits raw neurophysiological material to generate art and musical events.[96] In *TC2* 'the signals generated by an individual hooked up to an electroencephalogram are converted in real time, via a relational database devised by software writer Johnny Bradley, into a musical score'.[97] The score appears on monitors, ready to be played by a string quartet. As the quartet plays the music derived from the wired individual's internal processes, the music affects the neurophysiology of the wired individual, which in turn affects the derived EEG readings, the musical score, and so the quartet's playing. In *TC2*, then, music derives from a continuous circuit of mediations and translations which demonstrate the mutable boundaries and connections between human bodies and subjectivities, scientific and visual representations, technologies and musical sounds. Brainwave patterns are converted into immaterial form (EEG readings, digital signals), which are translated into material form (the score, the quartet's playing), and thence into musical sound, and thence back into the responsive consciousness of the original (wired) body. *TC2* exemplifies multiple transitions between subject and object, or rather between subject becoming object (EEG readings) and object (score, music) becoming subject (string players, wired listener's response).[98]

In a knowing inversion of the stimulus-response model of human-machine interaction, in which human agency is understood as driving a purely instrumental system, the musical 'consciousness' of *TC2* is entrusted to the relational database. This software, which translates functional brainwave patterns into musical instructions, encodes and proffers an aesthetic. Its design was not left to chance but informed by research:

> [We accessed] the creative process of a number of composers in Oslo. We achieved this by making brainwave (EEG) recordings of the composers as they made notations of spontaneous mental music in their own style. We then correlated the notations with [their] brainwave recordings. This mass of interactions [was] made into a database, forming a wealth of *musical output possibility* residing on a hard-drive.[99]

In *TC2*'s playful assemblage, creative agency is vested in an aesthetic machine, while human agency dwindles to involuntary brain emissions and the standard musical gestures of the

96 On *TC2*, see the Thought Conductor web site, <http://www.artemergent.org.uk/performances/tc/2.0/index.html> (accessed April 2005).

97 Fraser, 'Making Music Matter', 173.

98 A clear precursor to *TC2* was Alvin Lucier's *Music for Solo Performer* (1965), in which the performer wired himself/herself to pick up alpha brain rhythms, activated when the eyes are closed, which were then amplified through ordinary hi-fi equipment and loudspeakers. Lucier was a member of the Sonic Arts Union. See Nyman, *Experimental Music*, 89–91. I am indebted to John Bowers for this connection.

99 Quotation from the *TC2* website (note 96), italics added.

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quartet. Rather than rendering human-technology interactions according to a 'preferred theory of subjectivity or sociality', in *TC2* the mediations and translations are themselves conceived, as John Bowers puts it, as an 'arena where our varied relations to machines can be explored'.[100]

Having its 'own sound': the computer as encultured agent

A similar ontology of the machine as creative agent is apparent in a piece and a technology, *Voyager*, created by the African-American composer and musician George Lewis.[101] But he takes it further, deconstructing prevailing orthodoxies both of the universal, culturally neutral machine and of human-computer interaction. Lewis, who held residencies at IRCAM earlier in his career, has subsequently developed his work on the basis of a critique of what he considers the Institute to represent in aesthetic, philosophical and technological terms. Uniting in his person the genealogies of American experimental electronic music and of the African-American tradition of free improvisation, notably Chicago's AACM, Lewis portrays *Voyager* as a computer music composition that intentionally constructs the computer as having interactive agency and as endowed with particular aesthetic propensities. This is no universal cognitive machine. For Lewis, 'Notions about the nature and function of music are embedded in the structure of software-based music systems and . . . interactions with these systems tend to reveal characteristics of the community of thought and culture that produced them.'[102]

Lewis conceives *Voyager* as 'a non-hierarchical, interactive musical environment that privileges improvisation. Improvisors engage in dialogue with a computer-driven, interactive "virtual improvising orchestra". The computer program analyses aspects of a human improviser's performance in real-time, using that analysis to guide an improvisation program that generates both complex responses to the musician's playing and independent behaviour that arises from its own internal processes.'[103] Lewis argues that 'interactivity has gradually become a [metaphor] for information retrieval rather than dialogue, posing the danger of commodifying and . . . reifying the encounter with technology'.[104] *Voyager's* aesthetic of variation and difference, he contends, is at variance with this paradigm. A performance of *Voyager* exhibits multiple parallel streams of music emanating from computer and humans – as Lewis puts it, 'an improvisational, subject-subject model of discourse, rather than a stimulus-response set-up'. To this end, the computer is endowed with musical autonomy: it 'does not depend on real-time human input to generate music; . . . the program exhibits generative behaviour independently of the improvisor'.[105]

Moreover the program's simulated subjectivity embodies aspects of African-American aesthetics, identified by Lewis as an 'aesthetics of multidominance'. By this he refers to 'the

100 Bowers, 'Improvising Machines', 23.
101 Released on audio CD: George Lewis, *Voyager*. Avant, 1993, catalogue number AVAN014.
102 Lewis, 'Too Many Notes', 1.
103 Lewis, 'Too Many Notes', 1.
104 Lewis, 'Too Many Notes', 5.
105 Both quotations Lewis, 'Too Many Notes', 4.

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multiple use of colours, [textures, shapes] in intense degrees', in music the use of 'multi-dominant rhythmic and melodic elements'. Multidominance resonates with the AACM's practice of multi-instrumentalism, in which players performed numerous voices on a variety of instruments. This 'extreme multiplicity of voices [was] embedded in a highly collective ensemble orientation', permitting great timbral diversity. Extending the idea of the computer's aesthetic subjectivity, Lewis says:

> In the context of improvised musics that exhibit strong influences from African-American ways of music-making, . . . one's 'own sound' becomes a carrier for history and cultural identity. . . . 'Sound' becomes identifiable with the expression of personality, . . . the assumption of responsibility and an encounter with history, memory and identity. Part of the task of constructing *Voyager* consisted of providing the program with its 'own sound', . . . a kind of technology-mediated animism.[106]

He links this in turn to the trope, found in a number of African traditions, of musical performance as communication between two intelligences. The resulting improvising machine is one that 'incorporates a dialogic imagination', its interactivity based in 'negotiation, difference, partial perspective'.[107] In a wilful, reflexive anthropomorphism, Lewis inscribes in the machine unprecedented quasi-human agency – aesthetic subjectivity, and a capacity for intersubjective negotiation informed by the experience of alterity. He proffers, then, a dialogical socio-technical-musical assemblage, one that models diplomacy and the 'anti-authoritarian impulse in improvisation'. The machine, we might say, de-instrumentalized.

*

I have suggested that theories of mediation, which I approached principally through the work of Gell, offer a way of understanding both how meaning becomes attached to music, and how music exists as a decentred and distributed object, with changing interrelations between its component mediations. These perspectives reveal music to be a medium that makes mutable some of the central dualisms of Western metaphysics: the separation of subject from object, authentic from artificial, present from past, individual from collectivity. Routinely, as I have indicated, music forms hybrids and transitions between these 'pure' states. In the face of such complexities, it is unhelpful to divide the study of music itself from the study of its social, technological and temporal forms. Rather than assume a division between music and its sociology, theories of mediation from Adorno onwards begin from a recognition that music exists in and through its complex and shifting mediations. Gell offers an account of mediation focused on the relational nature of such mediations, as they cohere into assemblages and corpuses.

I have argued that music's ontology and its mediation must be grasped as historical. Although musical mediation takes place in specific, often local settings, it takes a number of

106 Lewis, 'Too Many Notes', 6.
107 Lewis, 'Too Many Notes', 7 and 8.

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characteristic historical forms. In this context, accounts of mediation need to address technological, social and cultural changes heralded early in the twentieth century and now sweeping across the production and reception of art and popular musics, developments that signal a new ontology of the provisional work. Probing the mutual construction of music and time, I have suggested that theories of mediation should move beyond the sphere of micro-social interactions and trace the historical trajectories of musical assemblages, reconnecting them to analyses of the macro-dynamics of cultural history and technological change. The tendency to focus on music's micro-social properties, while important, can displace attention from two critical dimensions. First, how temporality is continually constructed and reconstructed in music, in the Husserlian sense of the shifting perspectives of past, present and future. But in addition, the vantage point afforded by what Foucault called a history of the present makes clear that, on the basis of empirical research, we must be alert to both continuities and discontinuities in historical formations.[108] It is possible to discern how the operations detailed in this article can lead not only to new openings in musical and discursive possibilities – to invention – but also to closure, reification, discursive and musical stasis, processes in which supervening forms of power are often at work. Through an analysis of its mediations, finally, music is revealed as the exemplary locus of diverse modes of creativity: social, distributed and relayed. In this way it offers unparalleled grounds for rethinking creativity itself.

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108 Foucault, *Discipline and Punish*, 31; Foucault, 'Questions of Method'.

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