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THE ART OF RECORDING AND THE AESTHETICS OF PERFECTION

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Recording has transformed the nature of music as an art by reconfiguring the opposition between the aesthetics of perfection and imperfection. A precursor article, 'The Art of Improvisation and the Aesthetics of Imperfection', contrasted the perfectionist aesthetic of the 'work-concept' with the imperfectionist aesthetic of improvisation. Imperfectionist approaches to recording are purist in wanting to maintain the diachronic and synchronic integrity of the performance, which perfectionist recording creatively subverts through mixing and editing. But a purist transparency thesis cannot evade the fact that the recorded image is crafted; against creative editing, however, the imperfectionist ideal of the 'complete take' is humanistic and anti-mechanistic, and not mere Romantic illusion. The article concludes with a discussion of the question of the artistic status of recording, and contrasts the possibility of a non-acousmatic sound art with the essentially acousmatic art of music.

I. MUSICAL ARTWORKS IN THE AGE OF MECHANICAL REPRODUCTION

'MUCH futile thought had been devoted to the question of whether recording is an art. The primary question—whether the very invention of recording had not transformed the entire nature of music as an art—was not raised.' This is Walter Benjamin's famous claim concerning the relation of photography and visual art, transposed to recording and music.[1] Although 'The Work of Art in the Age of Mechanical Reproduction' focuses on photography and film, Benjamin would surely have found much to ponder in the realm of the mechanical reproduction of music also. He regards the question of the art status of film and photography as misconceived because it assumes that these media must measure up to a fixed standard set by a longer-established artform; in contrast, he believes, film and photography undermine the authority of traditional forms of visual art, not least by questioning the latter's ability to set a fixed standard of this kind.[2] Thus, one

[1] The original quotation is: 'Much futile thought had been devoted to the question of whether photography is an art. The primary question—whether the very invention of photography had not transformed the entire nature of art—was not raised' (W. Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', in H. Arendt [ed.], *Illuminations* [London: Fontana, 1973], p. 229).

[2] Benjamin, 'The Work of Art', pp. 226, 228. Roger Scruton's implausible account of film as a recording of a dramatic work would be an example of the kind of view that Benjamin objects to (R. Scruton, *The Aesthetic Understanding* [London: Methuen, 1983]).

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might say, the concepts of art, and of the individual practices claiming art status, constitute a holistically interlocking structure. Moreover, Benjamin argues, mechanical reproducibility causes the decline of art's aura—that numinous quality of presence which characterizes the unique, authentic artwork—and this involves a more radical undermining of authority, whereby the artwork is emancipated from its parasitical dependence on ritual, and begins to be based on politics.[3] In this article, I take the transposed claim quoted at the start as the basis for a discussion of the artistic status and consequences of recording.

Evidence for the decline of the musical aura is the 'regressive listening' which according to Adorno is encouraged by recording—Benjamin prefers the more neutral term 'distracted listening'.[4] The danger was wryly expressed by Artur Schnabel, whose rediscovery of Schubert and Mozart shaped the modern piano repertoire, when he confessed that 'I have a terrible fear of making a record of a Beethoven Sonata and somewhere, some day, someone is going to listen to it while eating a liverwurst sandwich.'[5] However, there are other developments which qualify the thesis of loss of aura. It might be argued that if anything loses its aura through mechanical reproduction it is not the work itself, but live performance, no longer ubiquitous as a way of listening to music—though even this claim is doubtful. An opposed view is that recordings themselves acquire an aura. (The unclarity of the concept of aura contributes to these conflicting interpretations.) Claiming that accurate repetition is essential to ritual, Eisenberg argues that the aura of a musical work is enhanced by recording; while according to Taruskin, recording sacralizes as well as commercializes music, making possible

> the idea of a definitive performance, one that is fully tantamount to the work performed . . . [but which] (we are persuaded) fully reifies the work. . . . It achieves its aura—its power of persuasion—by claiming a total grasp of the creator's intentions and a total submission to [their] will.[6]

Taruskin's claim is extreme and implausible, but a weaker version is commonly

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[3] Benjamin, 'The Work of Art', pp. 223, 226, 222–223. I am indebted to J. Snyder, 'Benjamin on Reproducibility and Aura' in G. Smith (ed.), *Benjamin: Philosophy, Aesthetics, History* (Chicago: Chicago U.P., 1989); also to R. Wolin, *Walter Benjamin: An Aesthetic of Redemption* (Berkeley: University of California Press, 1994), pp. 182–198, and M. Jay, 'Habermas and Modernism', in R. Bernstein (ed.), *Habermas and Modernity* (Cambridge: Polity Press, 1985), pp. 125–139.

[4] Benjamin, *Illuminations*, p. 242; Adorno, 'On the Fetish Character of Music and the Regression of Listening', in J. Bernstein (ed.), *The Culture Industry* (London: Routledge, 1991). E. Eisenberg, *The Recording Angel: Explorations in Phonography* (New York: McGraw-Hill, 1987) discusses the social significance of recorded music; several writers have questioned the decline of the aura.

[5] Schnabel quotation from André Previn and Antony Hopkins, *Music Face to Face* (London: Hamish Hamilton, 1971), p. 89. He did eventually issue many fine recordings, at least one of which the present writer, a vegetarian, has listened to while eating a peanut butter sandwich.

[6] Eisenberg, *The Recording Angel*, pp. 50–54; R. Taruskin, *Text and Act: Essays on Music and Performance*, (Oxford: Oxford U.P., 1995), both quotations p. 354 (see also p. 61n).

held, namely that a composer's own recorded interpretation is uniquely authoritative.

Taruskin's comments illustrate the connection between Benjamin's discussion of the aura and the central concerns of this article, for they express the standpoint that I have characterized elsewhere as the aesthetics of perfection. My principal concern in the present article is how recording has reconfigured the opposition between the aesthetics of perfection and imperfection in music. The precursor to this article claimed that the former aesthetic developed in association with the 'work-concept', while the aesthetics of imperfection is associated with improvisation; their opposition was represented by the figures of Schoenberg and Busoni.[7] Schoenberg emphasized the autonomy of the genius-composer in the creation of masterworks, and the subservience of the performer; Busoni found virtues in improvisation and in the personal contribution of the performer-interpreter. From an imperfectionist viewpoint, the unpredictability and excitement of improvisation has a compositional analogue in spontaneous interpretation which generates the illusion of immediate creation. Imperfectionists find virtues in improvisation that transcend inevitable errors in form and execution; indeed, they claim, these virtues arise precisely because of the 'unfinished state' of such performances.[8] Thus imperfection can have positive aesthetic value. A Schoenbergian aesthetics of perfection, in contrast, finds little to commend in this unfinished quality. Perfectionism tends to support an auratic conception of art, while imperfectionism questions it.

Recording does not simply offer new applications of Schoenberg's aesthetic, but new possibilities of its vindication, as Taruskin's comments show. A perfectionist aesthetic of recording aims to screen out allegedly contingent imperfections of live performance. For imperfectionists, in contrast, live performance is privileged, and recording has at best documentary status—when one aspires to the illusion of spontaneous creation, there is the risk of failure and minor imperfection, and so, imperfectionists believe, improvisation and interpretation are not well-served by recording. Hence Busoni's complaint after an early recording session: 'Not letting oneself go for fear of inaccuracies and being conscious the whole time that every note was going to be there for eternity; how can there be any question of inspiration, freedom, swing or poetry?' Schnabel, maintaining that a musical performance could only ever be a transient approximation to the composer's vision, regarded recording as 'destruction by

[7] A. Hamilton, 'The Art of Improvisation and the Aesthetics of Imperfection', *British Journal of Aesthetics*, vol. 40 (2000), pp. 168–185.

[8] The claim of imperfection is often ridiculed, as critic Rob Cowan notes in discussing what he terms the 'perfectionist aesthetic' shown by Herbert von Karajan—'would sloppiness suit you better?' Cowan recognizes that 'rogue freedoms' also have their place in art (letter to *Gramophone*, vol. 77 [September 1999], p. 6). The issue is addressed further in A. Hamilton, 'The Art of Improvisation'.

preservation'. Like Busoni he loathed the 'mechanical exactitude' which diminishes freedom and spontaneity.[9] Indeed, recorded perfection was questioned before the resources to pursue it fully were developed. Adorno referred to Toscanini's approach as 'the barbarism of perfection', the kind of glossy perfection espoused by the culture industry: 'The performance sounds like its own phonograph record.'[10]

However, it should now be clear that neither Taruskin nor Benjamin gives the whole picture. It is arguable that recording as such neither enhances nor undermines the aura; it is only certain conceptions of recording—perfectionist and imperfectionist respectively—that do so. Analogously, it is not the case that the auratic conception of art is particularly associated with composition rather than improvisation; rather, it is allied with a perfectionist aesthetic of composition. Taruskin assumes a perfectionist aesthetic of recording, Benjamin an imperfectionist aesthetic, and these rival aesthetics have been in conflict since the earliest days of the medium, as I will now explain. After discussing the effects of recording on Western art music in terms of the perfectionist–imperfectionist dialectic, the article concludes by addressing Benjamin's allegedly secondary question—in particular the view of sound artists such as Douglas Kahn that phonography should challenge music's hegemony as the universal art of sound, just as film challenges the hegemony of theatre as dramatic art.[11]

II. TRANSPARENCY, FIDELITY, AND THE QUESTION OF SYNCHRONIC PERFECTION

Imperfectionist approaches to recording are purist in wanting to maintain the diachronic and synchronic integrity of the performance, which perfectionist recording creatively subverts. Perfectionist techniques in the synchronic dimension include mixing, compression, and equalization. It is worth noting that there is no essential aesthetic contrast in this dimension between recording and radio broadcasting; all creative decisions concerning mixing and so on made during recording can also be made during a live broadcast. From the earliest days of recording, perfectionist or creative engineers and producers aimed to create involvement in a recording, that quality of aliveness which makes the listener feel that they are present at the performance. To this end, producers tried to capture reflected sound or reverb, for instance by placing a microphone with its dead side to the performer; later, echo chambers were used for the same purpose. But only

[9] Busoni quoted in J. Horowitz, *Understanding Toscanini* (New York: Alfred A. Knopf, 1987), pp. 415–416; C. Saerchinger, *Artur Schnabel: A Biography* (London: Cassell, 1957), pp. 220–225; A. Schnabel, *My Life and Music* (New York: Dover, 1988), pp. 98–99.

[10] See M. Chanan, *Repeated Takes: A Short History of Recording and its Effects on Music* (London: Verso, 1995), p. 118. Von Karajan is another 'perfectionist'. In contrast, it has been argued, Furtwängler's spontaneous art would 'wear out' on record—'He was the very opposite of a gramophone record' (Hans Keller, 'Furtwängler 1886–1954: An Appreciation', *Opera* [February 1955]).

[11] Douglas Kahn, *Noise Water Meat* (Cambridge, MA: MIT Press, 1999).

with stereo recording could a genuine sound-stage could be realized—an impression of the spaciousness and separate sound sources experienced in the performance venue itself. Stereo, multi-track recording became prevalent in popular music and light entertainment before spreading to classical music, and its advent encouraged post-production—that is, post-recording—enhancement to create greater involvement. Where purist producers talk of balancing different sound-sources to create a faithful impression of the original sound-stage, the creative producer talks of *mixing* sound-sources without aiming at fidelity. At least until the digital, compact disc era, synchronic creativity was moulded by the need to compensate for technical shortcomings such as tape hiss and vinyl surface noise, or for difficulties in capturing the wide dynamic range of a large orchestra.[12] *Compression* of the dynamic range between very quiet and very loud passages, and *equalization* ('eq-ing') of treble and bass responses, are standardly used to correct disruptions to the desired frequency response resulting from shortcomings in the recording equipment. The technical limitations of gramophone discs require equalization both in recording and playback, in order to obtain a faithful reproduction of the frequency response. But 'equalization' refers to any alteration of frequency balance, whether genuinely creative or prompted by engineering limitations.

However, the aesthetic significance of these processes lies in the opposition between perfection and imperfection. What began as aspects of the engineering process became creative tools—for one person's technical shortcoming is another's aesthetic decision. This opposition was present even during the pre-electric or acoustic era, where performers sang or played through a horn, the resulting sound vibrations being transformed into grooves gouged directly on a wax disc—an era that ended in 1925 with the introduction of microphones and electric amplification. Cedric Wallis, in a 1936 *Gramophone* article, described how even with acoustic recording,

> battle raged between Realists . . . [who] stood out strongly for as accurate a reproduction as possible of the actual sounds recorded, [and] Romantics [who] held that a certain sacrifice of accuracy was permissible, nay, even desirable, if it induced a quality more pleasing to the ear.[13]

Subsequently, the aesthetics of imperfection has insisted on a purely documentary concept of recording. Its purist philosophy, embodied in the very term

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[12] As noted by T. Day, *A Century of Recorded Music* (New Haven, CT: Yale U.P., 2000), p. 24, who argues that for classical recording, creative techniques have become less common in the digital era.

[13] From 'The Future of Recorded Romanticism', quoted in O. Read and W. Welch, *From Tin Foil to Stereo: Evolution of the Phonograph* (Indianapolis: Howard W. Sams, 1976), pp. 385–386. Thus Chanan is wrong to claim that 'all acoustic recording engineers were striving for . . . greater faithfulness to the source', and that only with electrical recording did engineers begin to think in terms of creating an 'aural image' (Chanan, *Repeated Takes*, p. 58).

'hi-fi' or 'high fidelity', aims to give an accurate portrayal of a particular performance. Live recording is regarded as the ideal case, though in classical music it has few committed advocates except in opera.

Imperfectionist purism is advocated in the recent manifesto of the CIMP label, specialists in free jazz:

> There is no compression, homogenization, eq-ing, post-recording splicing, mixing, or electronic fiddling with the performance. Digital recording allows for a vanishingly low noise floor and tremendous dynamic range. . . . You may find passages where the signal is almost inaudible. Resist the temptation to turn the volume up; this is the way it sounded when it was recorded. . . . What you hear is exactly what was played.[14]

Although he does not advocate purism, Pierre Boulez in his criticism of progressive technology makes the purist assumption that one can and ought to 'hear exactly what was played':

> Techniques of recording, backing, transmission, reproduction—microphones, loudspeakers, amplifying equipment, magnetic tape—have been developed to the point where they have betrayed their primary objective, which was faithful reproduction. More and more the so-called techniques of reproduction are acquiring an irrepressible tendency to become autonomous and impress their own image of existing music, and less and less concerned to reproduce as faithfully as possible the conditions of direct audition . . .

Boulez believes that the role of the recording engineer is to transmit this 'reality' into recorded form without further interpretation.[15]

The concepts of realism, fidelity, or documentary status need to be elucidated, and I will do so initially by considering recording's alleged transparency as a medium. The *transparency thesis*, though it is difficult to formulate satisfactorily, claims that the medium is insignificant, and should not intrude itself. A visual version is Kendall Walton's claim that 'Photographs are transparent. We see the world *through* them.'[16] He assimilates looking at photographs with looking

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[14] CIMP Statement of Purpose, on sleeve to Paul Lytton Quartet, *The Balance of Trade* (Redwood, New York: Creative Improvised Music Projects, CIMP #114, 1996). But CIMP's commitment to imperfection is not unlimited, since the 'Recording Engineer's Notes' mention 'the creaking at the beginning of track #4 . . . unfortunately [due to] a slightly loose floorboard'. A radical imperfectionist such as John Cage would have joyfully embraced such contingencies of live performance.

[15] P. Boulez, 'Technology and the Composer', in his *Orientations* (London: Faber, 1986), pp. 488–489. See also Jean Vermeil, *Conversations with Boulez: Thoughts on Conducting* (Portland, OR: Amadeus Press, 1996), pp. 105–106: 'It's absolutely indispensable that you begin with a well-performed, real object . . . as far as instrumental music is concerned, one is responsible for the musical object, and the recording engineer is responsible for transmitting that object as faithfully as possible . . .'.

[16] K. Walton, 'Transparent Pictures: On the Nature of Photographic Realism', *Critical Inquiry*, vol. 11 (1984), pp. 246–277.

through binoculars, telescopes, and closed-circuit television, or looking at mirror-images. In all of these cases, it is said, the object is seen directly—except arguably when it is distorted, as in distorting mirrors. In its aural version, the transparency thesis says that in a (purist) recording one directly hears the original sound-object. Listening to a recording is assimilated with cases of simultaneous and direct audition, even where these are lo-fi: listening on the telephone, through a bugging device, or by audiovisual link. The auditory impression that a listener receives is argued to be almost identical to the impression they would have received when the music was originally performed. 'Directness' cannot be captured informationally, incidentally; the telephone is direct, yet there is greater loss of information than in a hi-fi recording.

However one presents the transparency thesis, it faces the obvious challenge that recordings are artefacts. The recorded image, like the photographic image, is always crafted. It is not unmediated; the medium is significant. Croce's complaint about photography—that 'nature is not entirely subdued', hence the medium's impurity as art—applies also to recording, but the observation cuts both ways. If nature is never entirely subdued, it is nonetheless partly subdued.

Crafting occurs in the following dimensions, each with photographic parallels, and all involving aesthetic assumptions: (i) choice of microphones and their placement [lens and depth of field]; (ii) choice of tape or magnetic disc [photographic film]; (iii) choice of speakers and playback equipment [hardness or softness (contrast responsiveness) of photographic paper].[17] The status of recordings as artefacts means that, despite Boulez's misgivings, interpretation by the engineer or producer is inevitable. Purists, however, will respond that one may craft a recording to produce greater realism—or indeed greater idealism. They may argue with some justification that stereo recording—because it yields a genuine sound-stage—is more realistic than mono, digital recording is more realistic than analogue, and so on. According to this more sophisticated purism, the purist recording is not, as Boulez thinks, the one without intervention, but the one where intervention is directed towards creating a realistic auditory image. Hence transparency, though sufficient, is not necessary for realism and fidelity.

If one accepts this line of argument, how is 'realistic' to be understood, if not in terms of transparency? An alternative elucidation says that what is heard from the loudspeakers is perceptually indiscriminable from the original sound. But the question arises: indiscriminable by whom, and under what conditions? In general, 'what you hear', as CIMP put it, varies with conditions of playback, and with the listener's expectations—musical listening is, to use a contemporary cliché, theory-laden. (I am supposing here that with technological advances, the acoustic properties of stereo speakers are no longer intrusive and *trompe l'oreille* is

[17] A similar case against transparency in photography is made by J. Snyder and N. Allen, 'Photography, Vision and Representation' in P. Alperson, *The Philosophy of the Visual Arts* (New York: Oxford U.P., 1992), p. 294; also in *Critical Inquiry*, vol. 2 (1975).

possible—when both stereo system and piano are concealed by a screen, a recording of piano music is indistinguishable from the efforts of a live pianist.) As Boulez grudgingly concedes:

> it is easy to justify the refusal to be faithful to an unrecorded reality by arguing that *trompe-l'oeil* reproduction, as it were, has little meaning given that the conditions of listening and its objectives are of a different order, that consequently they demand different criteria of perception.[18]

'Realistic reproduction' or 'fidelity' is relative to a playback situation and to a particular set of listener expectations.

Differences in listener expectation can have dramatic effects. In the Sherlock Holmes story 'The Adventure of the Mazarin Stone', two suspects are duped by a recording of Offenbach's 'Barcarolle' into believing that Holmes is playing the violin in the next room, when in fact he is hidden and overhearing their conversation. The ploy seems implausible given the lo-fi state of recording in the era of 221B Baker Street, but as Eisenberg notes, the common ear of the day was often gulled by records.[19] Although initially regarded as definitive, each technological development is ultimately surpassed. The advent of digital recording in the 1980s, which bypassed most of the distortion inherent in analogue recording, was a liberation comparable to that of electrical recording in the 1920s. Nonetheless, the compact disc does not yield the 'perfect sound forever' that Phillips claimed on its appearance.

More fundamental than varying listener expectations is the fact that one can talk of fidelity only when the recording is played back in the same, or at least a comparable, auditorium as the one in which it was made. Even here one encounters the problem that the playback venue imposes its own ambience on the created ambience. As Eisenberg explains, a recording of an orchestral concert could be created which, when played back in the original venue, would fool a blindfolded audience. But since most of the hall's natural resonance would have been removed from the recording, lest it multiply and muffle the music, the result would sound dismal in a living room—while still in a sense being faithful to the original performance. Conversely, a recording that captured all the resonance of Carnegie Hall would overwhelm the average living room. Most studio recordings aim to strike a balance.[20] Proponents of realism and fidelity may object that these considerations about playback have little practical significance. Normally recordings are directed at standard playback situations—in the case of

[18] P. Boulez, 'Technology and the Composer' in *Orientations*, pp. 488–489. Conditions of audition are discussed in O. Read and W. Welch, *From Tin Foil To Stereo*, ch. 25.

[19] Publicity for the Edison Company between 1916 and 1925 showed blindfolded listeners taking a 'tone test', in which they try to distinguish singer Frieda Hempel live and on record (Day, *A Century of Recorded Music*, illustration 3).

[20] Eisenberg, *The Recording Angel*, pp. 110–111.

classical music, a living-room. Although there is an air of unreality involved in listening to a symphony concert in one's living room, in the case of chamber music the live and playback venues are comparable. The realist reply misses the point, however. Where the venues of recording and playback diverge to a notable extent, as they mostly do, one is forced back on mimicry and compromise—on using clarity, sound-separation, and a sense of involvement to create an illusion of the original situation. So transparency is at least necessary for fidelity, and is generally unattainable.

The artefactual nature of recording is essential to its aesthetic status, therefore. But what kind of artefact is recorded sound? A popular view regards it as an image. Chanan suggests that 'from [multi-channel recording] came the idea of the reproduction of sound as the creation of an image, a form of projection like the cinema, a kind of illusion'.[21] However, both purist and creative recordings produce an image at least in some non-illusory sense. The highly creative mixing from different sound-sources, prevalent in popular music, is distinctive in that the image constitutes an entirely new sound-object. The masters of this process are the *auteurs* of the phonographic arts discussed in the final section of this article. But is there anything to Chanan's suggestion that the results of such creative recording are a kind of illusion? Certainly they are real enough for public concepts to be applied to them, such as: reverberant, resonant, dry, boxy, spacious, palpably present, lifeless, thin, full-bodied, distant. These descriptions—some of which apply also to live acoustics—are part of the record reviewer's critical vocabulary. As noted earlier in connection with the quality of presence, 'present' means 'as if one were there'; a lifeless recording is realistic neither in a purist nor a creative sense. (In contrast, there is nothing audible about a subjective image, such as a tune running through one's head; maybe this is truly illusory.) A cinematic image may be regarded as illusory either because the events are not happening in the cinema at that time, or because they never happened—the film is a montage to which nothing corresponds in reality. Perhaps the Russian soldiers who threw mud at the Nazis on screen failed to realize the first fact. But Chanan presumably regards the auditory image resulting from creative recording as an illusion because while it is taken for a pure, direct product, in reality it is a construction. In this sense his claim is justified. A further sense in which nothing corresponds in reality occurs when diachronic integrity is subverted, as we will now see.

[21] Chanan, *Repeated Takes*, p. 59. For Chanan, purism brings the listener into the studio or auditorium, with the microphone placed at a distance that includes the natural room resonance of the studio, or acoustic reflections of the auditorium. In contrast, 'creativity' such as Glenn Gould's—of which more shortly—uses an acoustically dead studio and close-up microphones to create an artificial intimacy as if the performer is transported into the presence of the listener (*Repeated Takes*, pp. 59–60).

III. CREATIVE EDITING AND THE QUESTION OF DIACHRONIC PERFECTION

Diachronic creativity consists in creative editing. It is especially prominent in the work of pianist Glenn Gould, whose instinctive grasp of the possibilities of recording technology remains unique among classical performers. Gould was better known as a proponent of creativity in editing rather than in mixing, except for one celebrated case—the 'acoustic orchestration' of Sibelius's three piano pieces 'Kyllikki', which involved four ranks of microphones at different distances from the instrument. It is commonly accepted that different works require a different ambience—Debussy calls for a more reverberant acoustic than Bach, where clarity of line is paramount, for instance. But in the 'Kyllikki' recording, each passage received its own special acoustic context—like a movie camera shifting from long shots to close-ups, to use Gould's favourite metaphor.[22] The example shows that the synchronic/diachronic distinction is useful but not fundamental, since Gould's recording is, technically, a limiting case of mixing. Different microphone sources are put through a device to change the tonal quality of the sound, but they are mixed serially rather than simultaneously.

Synchronic creativity is meant to have audible results, and contemporary sampling—'plunderphonics'—and glitch electronica celebrates its presence. But editing, at least in classical and jazz recording, is normally meant to be undetectable. When tape began to be used for master recordings after the Second World War, editing by tape-splicing became possible, resolving or at least qualifying the objections to recording by Busoni and Schnabel which were quoted earlier. The possibility of multiple takes, and splices between them, allowed Gould, 'virtuoso of the repeated take', to overcome what he regarded as the compromise and uncertainty or 'non-take-twoness' of live performance. Gould believed that ideally the art of performance 'supplied raw material only and the process of assembling or reconstructing the work occupied the major portion of the performer's activity'.[23] The end result would not consist of a single performance; it might not even be made up of extracts from complete takes.

Editing on Gould's view is a creative not a corrective activity. He again drew on parallels with film-making. The recording artist, like the actor, must have

> the ability to summon, on command, the emotional tenor of any moment, in any score . . . one should be free to 'shoot' a Beethoven sonata or a Bach fugue in or out of sequence, intercut [and] apply postproduction techniques as required.

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[22] As one reviewer put it, 'one seems to be overhearing the player, as if one were wandering around the house'. The recording is discussed in A. Kazdin, *Glenn Gould at Work: Creative Lying* (New York: E.P. Dutton/Penguin Books, 1989), p. 139; see also O. Friedrich, *Glenn Gould: A Life and Variations* (London: Methuen, 1994), p. 229.

[23] Gould, *Selected Letters*, p. 180; 'The Prospects of Recording', *High Fidelity*, April 1966, reprinted in T. Page (ed.), *The Glenn Gould Reader* (London: Faber & Faber, 1987); *Selected Letters*, pp. 178 and 101.

In this he echoes Adorno:

> A renewal of the practice of technological recording of music could learn a lot from film. One need not, for example, be embarrassed to cut together the final tape out of a series of partial takes, selecting only the best out of 'shots' that were repeated ten or fifteen times.[24]

However, although Gould sometimes favoured what he called 'montage'—mixing performances with a quite different feel, for instance alternating solemn and playful takes of a Bach fugue—he was mostly less radical, and even issued complete-take performances with no splices. His producer Andy Kazdin commented:

> Gould became known as a 'tape wizard'; he wasn't. He merely understood the full potential of the tape-splicing process . . . :
> 1. Record a complete take of the movement . . .
> 2. Listen to it and carefully note any finger slips and/or musical balances that were not perfect.
> 3. Go back to the piano and record small inserts that would fix the errors.

What was unique about Gould, Kazdin claimed, were the obsessive lengths he took to ensure that the inserts to be recorded would match in volume and tempo the selected basic take.[25] Gould helped to effect a revolution in attitudes to editing. Digital editing is now accurate and undetectable in a way that physical tape-splicing could not achieve, and it has been claimed that a classical CD can contain 1000–1500 'joins'—one for every two seconds of music.[26] As a reaction against such creativity, contemporary record companies with an imperfectionist aesthetic, such as Nimbus, returned to complete-take recording. Many others try to preserve what they regard as the integrity of a performance, saving a good performance by judicious splicing to correct the odd lapse.

The realization that a recording consists of a myriad digitally edited fragments belongs to a family of responses to what appears to be extraneous knowledge that some artistic ideal has been transgressed, one that also includes the discovery that an improviser had practised their improvisation to note-perfection in

[24] 'The Grass Is Always Greener in the Outtakes: An Experiment in Listening', in T. Page (ed.), *The Glenn Gould Reader*, p. 359; 'Ueber die musikalische Verwendung des Radios' ['On the musical employment of radio'], *Gesammelte Schriften*, ed. Rolf Tiedemann (Frankfurt/Main: Suhrkamp Verlag, 1970–1986), vol. 15, p. 392, quoted in T. Levin, 'For the Record: Adorno on Music in the Age of its Technological Reproducibility', *October*, vol. 55 (Winter 1990), pp. 23–47.

[25] Kazdin, *Glenn Gould at Work*, pp. 19–20, 26–27.

[26] As Jonathan Kettle explains in 'Don't Believe All You Hear', in *The Piano: BBC Music Magazine Special Issue* (London: BBC, 1997), p. 56; see also Day, *A Century of Recorded Music*, pp. 26–29. This seems an extraordinary figure, though no doubt much more editing goes on than is generally realized. The present article has been reworked to death and contains an edit at least every two words.

advance.[27] In the digital era, the editing, if performed competently, is unlikely to be detectable. But even when it is not possible to tell by listening that the recording was a montage, or that the performance was carefully pre-prepared, these features have aesthetic significance. When the listener learns the true state of affairs, from the performer for instance, their aesthetic pleasure may justifiably be impaired. Moreover, performance interpretation may be adversely affected by the aesthetic of perfection that creative editing expresses. Gould apparently agreed with Busoni about the spontaneity of interpretation, claiming to prefer 'sessions to which one can bring an almost dangerous degree of improvisatory open-mindedness . . . [with] no absolute, a priori, interpretive commitment'.[28] But how can this sense of danger be sustained if further takes are always possible? The knowledge that imperfections are eliminable may dissipate a crucial tension, either in the per- former directly, or in the creative product.

The imperfectionist ideal of the 'complete take' is humanistic and anti-mechanistic, and it is not mere Romantic illusion.[29] The possibilities of 'perfect' recording have had an undeniable effect on audiences. Listening many times to a single performance of a work means that errors as well as felicities become prominent; as a result there is now less tolerance, both by performers and listeners, of note-imperfection and similar flaws. Technical standards of performance have been driven up, it may be argued, to the detriment of imperfectionist values. The growth of recordings has also, arguably, led to standardized interpretations and instrumental style—vibrato, portamento, and so on. As Taruskin writes:

> No less than the score, the performance is [now] regarded as a 'text' rather than as an activity, and this creates another pressure toward the elimination from it of anything spontaneous or 'merely' personal, let alone idiosyncratic.[30]

The aesthetic interest of what may be termed a *Gouldian recording*—where there is full creative use of editorial techniques—is that it presents the listener with an interpretation directly, rather than via a performance. A performance in something more than a weak sense—one that is not a mere 'reading of the notes' and has that degree of coherence which recorded performances hopefully do—is an instance or token of an interpretation. Gouldian recordings, in contrast, present an interpretation directly.[31] Since each recording is a montage, it is not the case

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[27] The latter is discussed in the precursor of the present article, 'The Art of Improvisation'.

[28] Gould, *Selected Letters*, p. 178.

[29] An interesting non-classical example is *Panthalassa*, Bill Laswell's remix of Miles Davis's 1969–1974 recordings (Sony/Columbia CK 67909, 1998). Paul Tingen comments that the result is 'imbued with '90s perfectionist production values. But . . . the music loses in spontaneity and here-and-now aliveness and the instant interaction between the musicians is less apparent' (P. Tingen, *Miles Beyond: The Electric Explorations of Miles Davis, 1967–91* [New York: Billboard Books, 2001], p. 141).

[30] Taruskin, *Text and Act: Essays on Music and Performance*, p. 61n.

[31] David Helfgott's recordings of Rachmaninov are a notorious example of recorded performances

that two Gouldian recordings could be instances of the same interpretation. Gould aimed to build up a picture of the work, rather than offering a picture of a particular performance. These are metaphors of course, since no recording depicts the work, even though there is a sense in which a documentary recording depicts the performance that it documents. But perhaps rather than showing us the way in which the work sounds, when performed by an inevitably fallible human performer, a Gouldian recording shows us the way in which the work is—or one way, given that a work is necessarily subject to interpretation.

This section has shown further parallels between film and creative recording, in the synchronic as well as diachronic dimension, though of course the parallel is incomplete—in classical music the score has an authority lacking in the screenplay or the book on which the film was based. Benjamin's claim that what is seen on the cinema screen has no independent existence, that in film 'nothing answers to the role of the original', is particularly resonant in the case of Gouldian recording. There is no original performance—the recording is a construction or pastiche. The result is illusory just in the sense that a multi-track recording, made up of tracks recorded on different occasions, is an illusion. In an era of creative recording, musical works can be realized other than through a performance, whether live or recorded.

IV. THE POSSIBILITIES OF ART PHONOGRAPHY

Thus far this article has been concerned with a central aspect of Benjamin's 'primary question'—how the invention of recording transformed the nature of music as an art. There remains the issue of whether the 'secondary question' concerning art phonography really is secondary. Compared to photography, in fact, little thought—whether futile or not—has been devoted to the question of whether recording is an art. American sound artist Douglas Kahn has defended the status of recording as an independent artform, lamenting that 'Art photography is commonplace, but an art phonography? When compared to the photographic arts, the phonographic arts are retarded.' For Kahn, art phonography is a non-musical audio art of mimetic or imitative sound, repressed by music's hegemony as the universal art of sound: 'The capacity for overt mimesis is, after all, what phonography shares with photography and what it doesn't share with music', he argues.[32] To assess Kahn's view requires some discussion of the distinction between music and other possible sonic or audio arts. Imitative sound is that which is identified—even when presented in an artistic context or performance—

without coherence or accuracy. These issues are further discussed in N. Spice, 'Hubbub' (review of Chanan, *Repeated Takes*) in *London Review of Books*, 6 July 1995, pp. 3–6, and J. Levinson, 'Performative vs. Critical Interpretation in Music', in M. Krausz (ed.), *The Interpretation of Music: Philosophical Essays* (Oxford: Clarendon Press, 1993).

[32] Kahn, 'Audio Art in the Deaf Century', in D. Lander and M. Lexier (eds), *Sound by Artists* (Toronto: Art Metropole, 1990), pp. 301, 309; *Noise Water Meat*, pp. 80–81.

in terms of its cause, as the sound of some event such as a door slamming or a dog barking. In fact many terms have been used to characterize such sounds: significant, anecdotal, associative or dramatic sound; noise; or, conceived as a kind of experience, the purely acoustic, the practical, the literal, the documentary, the non-aesthetic.

Clearly there is more than one distinction in operation here. I will focus on that between the literal and the *acousmatic experience of sound*. The latter term was coined by Pierre Schaeffer, founder of *musique concrète*, electronic music which uses as its material recordings of natural or environmental sounds as opposed to computer-synthesized ones. For Schaeffer, when a composition is experienced acousmatically, a curtain has been lowered between its constituent sounds and their previous existence in the world. The acousmatic experience of sound eliminates its literal qualities; the listener spontaneously detaches the sound from its source or cause in the world and—it might be said—attends to it as it is in itself. (One can see that the description 'purely acoustic experience' might apply to this case as well as the literal one, so that description is best avoided.) In contrast, the literal experience of sound is characteristically practical; for instance, rescuers listening for the cries of survivors in the ruins left by an earthquake are treating those sounds purely practically and not acousmatically. Sounds that have particular associations or importance for us as human beings cannot be experienced acousmatically, because the associative or significant content is too great.

A promising route into analysing the concept of music is via the acousmatic experience of sound. Schaeffer writes that 'From the moment you accumulate sounds and noises, deprived of their dramatic [literal] connotations, you cannot help but make music.'[33] Roger Scruton agrees, arguing that acousmatic experience is central to the art of music. For Scruton, the acousmatic realm is phenomenal but objective, and exhibits a 'virtual causality' between tones, in contrast to the real causality between sound-producers—musical instruments among them—and sounds. Virtual causality is found in rhythm, in the way that beats do not just follow one another, but bring each other into being; and in melody, where we hear not just change, but movement—a rising and falling in pitch, and tension and resolution.[34] The literal–acousmatic distinction requires much development—for instance, Scruton's anti-modernist neglect of instrumental timbre as an essential constituent of musical tone may also reflect his concern that since timbre relates the sound to its physical means of production, the acousmatic thesis is threatened. But clearly there is much to the distinction. Against Scruton, who regards the experience of music as entirely acousmatic, I would defend a *twofold thesis* analogous to Richard Wollheim's concept of 'seeing-in', which he

[33] Quoted in J. Diliberto, 'Pierre Schaeffer and Pierre Henry: Pioneers in Sampling', *Electronic Musician* (December 1986), pp. 54–59, 72. The Acousmatics were members of the Pythagorean brotherhood required to listen to lectures delivered unseen from behind a curtain.

[34] R. Scruton, *The Aesthetics of Music* (Oxford: Oxford U.P., 1997), pp. 35, 74–75.

believes captures the experience of pictorial representation. Just as looking at a painting involves experiencing the represented scene and the means of representation (paint-marks on canvas), so listening to a piece of music involves experiencing the sound as a constituent of a musical world of tones, and as having a physical origin. This concept may be termed *hearing-in*, though as in the visual case, one should not regard the more physical perception as direct, and the intentional perception as inferred from it. This is an account that will be developed elsewhere.[35]

On the assumption of some version of an acousmatic characterisation of music—which it is likely that Kahn would share—how plausible are his claims concerning sound-art and its oppressed status? Kahn is right to say that Western art music has maintained a hierarchy of sounds; only in the modernist era has it gradually allowed into music sounds that are unpitched or not discretely pitched.[36] Literal sound has met the greatest resistance, as a result of what Trevor Wishart has called the 'ideology of instrumental puritanism'. It is this ideology that underlies Stockhausen's complaint that *musique concrète* is replete with 'associations [which] divert the listener's comprehension from the self-evidence of the sound-world presented to him because he thinks of bells, organs, birds or faucets'.[37] Schaeffer, however, supported the traditional hierarchy, insisting that the sound-object should be experienced acousmatically, hence John Cage's criticism—the opposite of Stockhausen's—that *musique concrète* was too conventionally musical. Indeed, in despair Schaeffer declared that '*Musique concrète* in its work of assembling sound, produces sound-works, sound-structures, but not music.'[38] But Kahn's arguments against the traditional hierarchy are hard to follow—for instance, his puzzlement that, with modernism, music failed to emulate painting in inverting its representational mode: 'If painting could jettison the recognizable for the non-objective, how could Western art music not follow suit and jettison the non-objective for the recognizable [i.e. literal]?'[39] Modernism was not about inversions of representational mode for their own sake, and Kahn gives no further reason why music should 'follow suit'. His art of literal sound seems to be one of selection only, presenting environmental or natural sounds and encouraging an aesthetic but not an acousmatic attitude towards

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[35] A. Hamilton, 'Music and the Sonic Arts', in preparation.

[36] An early example was the glissando of factory sirens and other industrial sounds, used by composers such as Varèse and Antheil, which moved Sergei Yukovich to exclaim in 1922 that 'The electric siren of Contemporaneity bursts with a mighty roar into the perfumed boudoirs of artistic aestheticism!' (quoted in D. Kahn, *Noise Water Meat*, p. 84).

[37] T. Wishart, *On Sonic Art* (Amsterdam: Harwood Academic, rev. edn 1996); Stockhausen quoted in Kahn, *Noise Water Meat*, p. 112.

[38] Cage quoted in Kahn, *Noise Water Meat*, p. 114; Schaeffer quoted in Kahn, p. 110. Kahn comments that in Cage's own audiotape works such as the pioneering 'Williams Mix' (1952), 'associative properties [of] the recorded sounds . . . are almost entirely obliterated' (p. 113).

[39] Kahn, *Noise Water Meat*, p. 103.

them. But it is not clear whether it is possible to adopt an aesthetic attitude towards sound without also adopting an acousmatic one.

Whatever one's view of this question—the Kantian inclination would be to assimilate the aesthetic and the acousmatic—there is at least a significant limited truth in Kahn's advocacy of an art of literal sound. For there is an important mimetic aspect to electronic and even live music. There are dimensions of untransformed sound-material that enter into the perception of highly abstract and thus uncontentiously musical examples of electronic composition—namely environment or what Wishart calls 'landscape', the imagined source of the perceived sounds. In the concert hall, the landscape of sounds is the orchestra. Sitting in one's living-room listening to a recording of a Beethoven symphony, the landscape remains the orchestra, but the sound system creates a virtual acoustic space in which this landscape is projected. Wishart comments that this aspect of sonic architecture did not figure in the traditional craft of the musician because, before the invention of sound recording, the composer or performer could not control it: 'the control and composition of landscape open up large new areas of artistic exploration and expression'.[40] An example will make the concept clear. A trumpeter, strapped in a harness attached to a high-wire and playing their instrument while propelled across the auditorium, will give a real impression of a moving musical sound, including the Doppler effect. It is possible in orchestral composition to create an acoustic illusion of this kind of movement—examples are Xenakis's *Metastasis* and Stockhausen's *Carré*. But in electronic composition, in contrast, the plasticity of the sounds allows an incredibly vivid impression of their propulsion across the sound-stage—exploited for instance in Jonathan Harvey's *Bhakti*. Perhaps this landscape does not really imitate, but rather represents an acoustic environment. It is an artistic representation or mediation of the anecdotal, a limited transgression of Boulez's instrumental puritanism. Such a representation is present in any reasonably sophisticated electronic composition.

In contrast, where sound art, so-called, has fully embraced imitation, presenting anecdotal sounds without the crafting of *musique concrète*, it has too often degenerated into the unsatisfactory form of post-1980s video art, much of which is essentially low-budget, low-quality film-making. An exception is the work of Luc Ferrari, who describes his approach as 'anecdotal', upholding the structural aspirations of *musique concrète* while preserving the 'content of the reality of the material which it had originally'. 'Presque Rien Nr. 1', a relatively non-interventionist, lightly modulated piece of sound-art, compresses into twenty minutes, without transformation, recordings of several hours of human activity on a beach.[41] Whether listeners today would describe the results as 'music' is

[40] Wishart, *On Sonic Art*, p. 136.

[41] Ferrari quoted in Wishart, *On Sonic Art*, pp. 136, 129. 'Presque Rien' is discussed in R. Sutherland, *New Perspectives In Music* (London: Sun Tavern Fields, 1994), p. 51. Many examples of post-Ambient industrial and environmental recordings are found in the catalogue of Empreintes

unclear. There is, however, a plausible alternative to a non-musical concept of phonographic art: an expanded definition of art phonography that includes those forms of music whose primary medium is the recording. On this view, art phonography—if not necessarily other prospective sonic arts—is regarded as a musical art.

On this definition the phonographic arts are not at all retarded. Art phonography in this expanded sense would include the electronic music that emerged from the Western art music tradition, comprising *musique concrète* and the contemporaneous evolution of pure electronic music by Stockhausen and others. In tape composition and its digital developments, the notion of a performance is replaced by that of a sounding, though many composers, committed to using live performers, have encouraged the development of a flexible live electronics capable of responding to them. Then there is the very different kind of art phonography that goes by the names of blues, jazz, rock, soul, ambient, hip-hop, electronica, etc. It has been argued that rock music and tape composition are recording-centred, while jazz is performance-centred and Western art music is work-centred.[42] But jazz is in different ways recording-centred too. It was the first art music to be transmitted mainly by recordings, which were the jazz musician's musical academy; while in recent decades the *auteur* concept has been increasingly shared between jazz and rock. Benjamin claimed that with sound motion pictures, technical reproduction won its place among the artistic processes. But while the *auteur* concept, embodied in the director, arose somewhat earlier in film than in recording, during the 1960s it became fully established there. In addition to Glenn Gould's explorations, the role of producer George Martin was essential to the later work of the Beatles, while Frank Zappa began to put recording technology to subversive effect; in jazz, Miles Davis and producer Teo Macero deployed post-production techniques beginning with the album *In a Silent Way*.[43] Producers such as Macero, Quincy Jones, Bill Laswell, and Manfred Eicher may properly be regarded as *auteurs*, even if their role in more purist recording is problematic. Art phonography in this sense is also music, just as art

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Digitales (www.electrocd.com and www.empreintesdigitales.com); other interesting examples include Li Chin Sung, *Past* (New York: TZADIK TZ 7014, 1996), and Katharine Norman, *London* (London: NMC D034). Sound-art is discussed in M. Boon, 'Removal Company', *The Wire*, 212 (April 2002).

[42] A. Edidin, 'Three Kinds of Recording and the Metaphysics of Music', *British Journal of Aesthetics*, vol. 39 (1999), pp. 36–37.

[43] Ted Gioia explains how recording was essential in the development of jazz in *The Imperfect Art* (New York: Oxford U.P., 1988), pp. 63–66. Teo Macero's work with Miles Davis is discussed in Tingen, *Miles Beyond*, pp. 67–70, 139–142; on Zappa, see Ben Watson, 'Frank Zappa as Dadaist: Recording Technology and the Power to Repeat', *Contemporary Music Review*, vol. 15 (1996), pp. 109–137); Charlie Gillett discusses the impact of *auteur* theory in 'The Producer as Artist', in H. Wiley Hitchcock (ed.), *The Phonograph and Our Musical Life: Proceedings of a Centennial Conference 7–10 December 1977*, ISAM Monographs no. 14 (Institute for Studies in American Music, Brooklyn College, City University of New York, 1980).

photography is also a visual art, and so the expanded definition will not appeal to committed sound-artists such as Kahn.

The possibility of art phonography requires more than an article in itself, but this brief discussion has at least shown that Benjamin's 'secondary' question is an intelligible one. But as Benjamin also implies, perhaps, the primary and secondary questions are not really separable, either for the visual arts or music. In considering the first question, one is inevitably considering the second—the changing concept of music impacts on a possible concept of art phonography. Postmodernism tends to deny the priority of text over performance, elevating the 'secondary' arts—opera production compared to composition, for instance. But recording clearly remains a secondary art where it is subservient to a text and to a performance-interpretation. Where there is no original performance, or work, however, and the *auteur* freely manipulates what the performers produce, the phonographic art is no longer secondary. Further discussion of these issues awaits a later occasion. Here my central task has been to contrast the aesthetics of perfection and imperfection concerning recording, and criticize the arguments of their proponents without attempting a resolution of the opposition. For the record, I doubt whether such a resolution is either possible or desirable.[44]

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