

Epilogue - Recording in the Twenty First Century

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DRAFT VERSION – NOT FOR PUBLICATION OR QUOTATION

Set at an unspecified time in the early part of the twenty-first century, the eponymous heroine of William Gibson's 1988 novel *Mona Lisa Overdrive*¹ is an avid teenage fan of a hypothetical electronic medium – 'simstim' – a developed form of recorded immersive telepresence in which the consumer experiences the sensory perceptions of the protagonist, usually (in a remarkably prescient anticipation of the current obsession with celebrity) someone famous.² Typical scenarios include society parties, sexual encounters and other events to which the adolescent might aspire. Gibson ingeniously blurs the nature, form and content of 'simstim', suggesting that while parts thereof may be based upon actuality, a considerable proportion is staged and hence essentially fictional. Furthermore, he suggests that various forms of (presumably electronic) intervention are used to modify and optimise the final product. In blurring the distinction between the 'real' and the 'virtual' (the performed as opposed to the sequenced, synthesised, sampled and scripted) this imaginary medium takes much of its form and some of its practices from studio recording in the late twentieth and early twenty-first centuries. The final product is experienced through direct neural – rather than sensory – stimulation but, as an individually consumed medium, in other respects it bears a striking resemblance to the consumption of downloaded MP3 files via an i-Pod or similar device.

Interestingly, in an earlier short story *The Winter Market* (1986)³ Gibson adopts a narrative position which initially appears to be that of a conventional recording studio engineer who persuades the owner to allow him to use downtime to record his protégé. A significant part of the tale elapses before we realise that the performer is not a singer or musician but a dreamer of lucid dreams: the 'engineer', however has much the same function as a contemporary sound engineer. His role and his relationships to artist and hardware are clearly recognisable as reflections of contemporary recording studio practices. Gibson's engineer (interestingly, he uses the term 'editor') apparently uses substantial and arcane technologies in his work. As such, in his exclusivity of access to and control of the medium and its technology, he resembles the operator of a large mixing desk or perhaps, in an earlier incarnation, the systems manager of an old-style mainframe computer. The technology of which he has command is clearly complex and difficult and is reserved for the initiate who acts as a crucial intermediary between the artist and the medium – as with its spiritual equivalent, an increasingly endangered species. Indeed, the role of the engineer has virtually disappeared with the emergence of the personal computer and the home studio and this is acknowledged in Gibson's subsequent writings.

In later examples, the 'simstim' material that Mona so avidly consumes is apparently created with far less overtly complex, and hence less exclusively controlled intervention. One senses that the operators are using something resembling laptop technologies as opposed to those of large mixing desks and multitask recorders. (In another interesting technological parallel in *The Winter Market* Gibson refers to a simpler, more accessible technology, which appears to bear much the same relationship to the professional studio, as did the cassette-based portastudio of the 1970s). The sophistication of intervention in Mona's world is perhaps increased but individual access to the processes is similarly enhanced. Once again we can see parallels in our own history: consider for example the evolutionary process that has led from Max Matthews's Music 1 punchcard-based language to systems such as ProTools or perhaps more significantly (in terms of the "mass" market'), Cubase and the like.

The significance of this shift of control from informed elite to mass user is easy to underestimate. Much commercially recorded and released material is now created in semi-domestic situations using little more than a standard home computer with a few expansion options added. A more dramatic example of this so-called 'democratisation' process was provided – albeit predominantly in a different medium – by the coverage of the London terrorist bombings of July 2005. For the first time, the major television news footage was derived, not from professional crews using broadcast equipment but from members of the public using the still and video capabilities of their personal mobile phones. This development and the emergence of the web log (blog) – most conspicuously during the second Iraq war – as an influential medium that is essentially under the control of the individual suggests that, for

a significant number of people, the roles of creator and consumer may have become negotiable on a by-case basis and that we may be constrained to reconsider the relationship that this implies, not least in respect of the 'quality' of product and the expectations of its consumers.

Not only do we see the impact of these technologies upon 'creative' activities but, more fundamentally (as Andrew Blake observes), their increasingly prominent role as a means by which identity is conferred and confirmed: technologies become yet more central to our culture and to our individual psyche as evidenced by magazine columns that seek to derive insight about celebrities by attempting to discover what material they have on their personal stereos.

In his works Gibson has created a new medium with its own evolutionary history (described in several different forms and stages of development) but has given it technological and, to some extent, contextual qualities that can be recognised from contemporary sound recording and studio practice. Furthermore, he has anticipated the historical development and at least some of the possible content of this medium and the manner of its consumption. In most of these respects, he has drawn upon technical ideas yet to be established at a practical level: however, the overall form of his medium is clearly recognisable as a reflection of the current situation, and its historical development parallels that of sound recording. This raises the question of what part of any recording-based medium is intrinsic to its being a recording and what is a function of the specific medium itself. Can it be argued, for example, that home video recording and the 'ripping' of CDs have shared qualities by virtue of the resemblance of the technological acts involved or is it the case that the nature and content of their respective media makes them wholly different from each other? It would seem from both the fiction of Gibson and the all-too-real recent history of newsgathering that we can expect future development to be recognisable in terms of current practices to the extent that it may be that most if not all electronic media have at least some characteristics that may be regarded as universal. Once again, Andrew Blake has highlighted an aspect of this future situation that is already, to some extent, with us in his observations that, by virtue of the context in which it is experienced, the personal stereo has already assumed a filmic and hence (to some extent) multi-sensory modality and this may, perhaps, anticipate future developments.

To look forward and seek to anticipate the possible nature of a medium that has technology as its base is, however, fraught with hazard. There is every reason to expect that the present century will see technological changes at least as radical and possibly as unexpected as that of the last. Given the non-existence of electronics in 1900, could it have been possible to anticipate the development of the computer to the level of 2000 or even, given that the only notable precursors at that time were the mechanical devices of Charles Babbage, its existence at all? Probably not. Even with the ability to imagine the technologies themselves, could we reasonably expect to be able to anticipate their applications, especially to creative activities in the visual and audible arts? Almost certainly not. This epilogue, therefore, is charged with difficulty. It is impossible to know with any reasonable degree of certainty what technological developments will take place that may impinge upon recording or even what the nature of recording itself will be.

On the face of it, the punch-card computer, at least in the functional form of Music 1 and the like was a somewhat unlikely candidate for involvement yet its lineal descendants in the form of Cubase and ProTools now command centre stage in virtually every recording studio, regardless of professional, or indeed amateur, level. Current developments in computing technology make obvious suggestions of greater speeds and enhanced processing power to come but this reveals little of the essential nature of our future. What will we be recording so quickly and what processes will be so powerfully delivered in our service?

The types of material recorded on the early phonograph in the late 1800s were not at all the same as those recorded on the machines of 100 years later. Indeed the very idea of recording had, by then, been transformed. This transformation was so radical as to render the term 'recording' literally inaccurate. The products of multitrack technology were not generally 'recordings' in the sense of being a record of the event of a performance (as was initially the case). Rather, the 'recording' process had become an event (or, strictly speaking a series of events) in itself. Thus, by the late 1960s, much so-called 'recorded' work was hopelessly mis-named. In a strict use of the term, the final product could correctly be said to have been synthesised (although not, obviously, in the sense of having been created through the agency of the instrument called a synthesiser) but not to have been recorded: it had never existed as a single entity and hence could not have been 'recorded' in the conventional sense of the term. Here we see technology and its associated processes having

influence upon the form and nature of the final 'product': as Blake implies, the evolution of software from the form and function of the Composers Desktop Project (CDP) to that of Apple's GarageBand is not simply a technological development but also signifies and directly influences what is created as well as the means by which the work is realised. This is a situation that, although offering tremendous opportunity, carries risks as Trevor Wishart has identified in his 1994 work *Audible Design*. Commenting upon the use of the CDP system, he warns that:

"This danger of overkill is particularly acute with the computer processing of sound as anything and everything can be done ... Just as with the traditional acoustic instrument, the task is to use it, to play it, well. In sound composition, this means to use the new tools in a way appropriate to the sound we are immediately dealing with and with a view to particular aesthetic objectives. There is no inherent virtue in doing everything."

The difficulty of predicting the detailed direction of technological developments is self-evident. Consider, for example the impact of the Short Message System originally offered as an almost throwaway peripheral option by mobile phone operators. Who would have predicted the rise and dominance of the text message and its impact upon social interaction and even upon language itself? Nor for that matter can we be at all sure about exactly what we will be recording: will the idea of the single medium (such as music) or a simple composite (such as video) endure or will the consumer opt for the greater degree of immersion potentially available from multi-sensory media? Gibson cleverly took an existing medium and its practices and extrapolated from that point to embrace his own ideas. The ideas were revolutionary but the means by which they were to be realised was surprisingly recognisable. This raises the question of whether all electronic media may tend to have an inherent and broadly common operational form. Subsequent and possible future technological developments make it difficult to continue this relatively direct extrapolation not least as a consequence of the ever-increasing rate of change. To help consider possible future forms, it may be useful to review the changes thus far.

From its initially simple and literal role, the 'middle period' of recording saw its product undergo substantial reification. From the descriptive term for the collection of shellac discs required to render a classical symphony into recorded form, the album metamorphosed into an art object in its own right. The graphic sleeve styling of jazz recordings on the Blue Note label prepared the ground for the upsurge of package-based art that supported the explosive development of the LP as concept-based art form in the mid/late 1960s. The concept of the album became the concept album. With the demise of so-called 'progressive' music in the mid 1970s, the significance of the LP as 'art' object receded, this recession accelerated by the smaller physical size of its successor, the compact disc. During the supremacy of the CD, the significance of the album as object was largely destroyed by the lack of spectacle of small images and the un-readability of sleeve notes in tiny print sizes. The advent of the downloadable file with no visual (or other) content than the sound itself completed the process: de-reification was effectively complete and recorded sound had reverted to being a 'pure' single medium – a move opposite to the predictions of the proponents of immersive virtual reality as the 'next big thing'. Significantly, this process took place at exactly the time when computer power was beginning to make virtual reality a serious possibility.

The recorded product was thus transformed from (literal) record to ephemerally supported object and subsequently to detached, abstracted soundfile. Such identity as remains is entirely a function of what can be heard from that soundfile supported by associative information gleaned from other, essentially unconnected sources such as television, magazines, and so on. Attempts have been made to associate other media with the recording but to minimal effect. The concept of the recorded work as an object in its own right seems currently unfashionable and fashion is perhaps a crucial factor in the present and future state of recording. The industry has embraced an extraordinary speed and intensity of technological development with studios vying with each other to offer the latest and most revolutionary of resources. Inescapably these have often been superficial and of little more substance than fashions as transitory as those of the clothing industry. Sonic fashion has successively dictated a dry drum sound, followed by an electronically processed one (in the form of gated reverberation) and subsequently by large-scale (and usually simulated) acoustic environments. In the design of musical sound, and hence the popularity of enabling technologies, fashion rules supreme. To predict clothing fashion over years to come might reasonably be regarded as impossible or at least futile and the same consideration may well apply to the sonic design of recording and the musical forms and styles that it serves. All of this leads to the inescapable conclusion that little of the future of recording can be

predicted with any degree of certainty. The context of this volume, however, provides a rare indulgence to speculate about what alternatives may lie ahead.

The first point to consider is what we shall be recording in times to come. Music seems likely: the demand for the classics endures notwithstanding the vicissitudes of the marketplace but whether the future mainstream product will remain 'simply' musical seems open to question. Critical to this issue is the consideration of the nature of possible future media and their relationships to enabling technologies. There is a view (once again previously mooted by Blake) that suggests that technology, particularly that of the personal computer, has had a generally emancipating impact upon the creative media arts and that the apparently unstoppable rise in the power of such machines implies that this process will continue. The technological cottage industry seems fated to continue to supplant the industrial monolith, at least in this area of endeavour.

The second point questions the possible social impact of new, as yet undeveloped media, thus approaching some of the ideas mooted by Gibson. He suggests that, beyond certain levels of 'consumption', involvement with immersive media has the potential to lead to withdrawal, even to the point of virtual catatonia; doubtless, the widespread adoption of immersive media will be accompanied by public expressions of alarm at such perceived threats. In this respect, any hypothetical new media are unlikely to differ significantly from their antecedents.

The third point concerns the use of science fiction which, as an exemplar, may appear academically unsound at first glance. Despite its tenuous nature there is good anecdotal evidence to suggest that some of its predictions can be quite accurate.⁵ This is not, of course, to suggest that the day when consumers will insert the equivalent of a modern-day USB memory stick into a surgically implanted socket and be incorporated into another virtual sensory world is just round the corner: indeed it seems that the mapping of detailed sensory function has as a prerequisite a paradigm shift in the comprehension of the workings of the human brain that is still some way in the future.

The apparently inexorable rise in computer power that underpins the technological basis of current recording practice allows some reasonably reliable predictions to be made. Wider bandwidth, higher resolution, multiplicity of channels, more sophisticated processing, increased volumes of data, and so on, are all in a sense fairly obvious in terms of their implications for creative practice: for example, we may reasonably predict the need for storage and replay of far greater capacity and speed than current CDs and DVDs. The first signs of this are already emerging with the outbreak of format wars between Sony's Blu-Ray disc and the rival HD-DVD system.

Less obvious, perhaps, are the forms that interaction with these systems may take. The QWERTY keyboard and mouse has proved itself to be a remarkably adaptable and enduring interface despite having been initially designed for handling text rather than sound and/or other media. Some recent developments have focussed upon creating more activity-specific interface designs: for example, recent computer-based recording systems have sought to emulate a traditional mixing desk, albeit with considerably expanded functionality, and video editing systems have increasingly gradually come to resemble superseded their hardware-based antecedents. Even the art of the DJ is increasingly supported by computer systems which use controllers that have a functional resemblance to turntables and mixers. These developments might appear oddly retrogressive as if their users find computer-based systems somehow uncomfortable and hence seek the reassurance of familiar interfaces.

For all the responsiveness shown by manufacturers to technological fashion, there remains a significant degree of conservatism in the responses of users to new and innovative systems. One may conjecture that this is, to some extent, because there is not, as yet, a generation of recording engineers for whom the mixing desk has its primary existence on a screen rather than as a physical object. However, the activities of software developers suggest that they anticipate a time when the current situation will change. At this point, not only will the recorded product be de-reified but so will be the means of its creation.

The ability to create an abstracted product by equally abstracted means may imply a paradigm shift in our relationship to recorded media. It might in turn be argued that the present, relatively formalistic material that is created through the various forms of music practice may be susceptible to competition from more abstract forms. Taking as a basis the runaway success of computer games that depend upon virtual worlds in which events unfold, and interactions which determine the direction of events,

one may speculate, for example, that 'conventional' music may have its pre-eminence in recorded media challenged by expanded, interactive soundscapes and other forms, perhaps more directly descriptive or narrative in content than music per se.

The foregoing projections presuppose the continuation of so-called 'democratisation' but assume relatively little in terms of the impact of ongoing technological development: history suggests that we underestimate this at our peril. It could be argued that the holy grail of electronic media – the ability directly to interface and interact with the consumer (if, given earlier arguments, such an appellation is still appropriate) without conventional sensory mediation – remains unchanged. Unfortunately for our purposes, the possibility of direct neural rather than sensory stimulation seems at present to be almost as distant as during the later years of the last century although, at the time of writing, anecdotal evidence suggests that we may be witnessing the first steps in this direction. The dizzying advancements of at least one hundred and thirty years of recording practice suggest that anything is still possible and that the most fantastic developments that we can imagine are, in all probability, a pale reflection of what will actually happen.

¹ William Gibson, *Mona Lisa Overdrive* (London: Victor Gollancz Ltd., 1988).

² Gibson uses the word "sensorium" to cover the sum total of a person's sensory experience.

³ Gibson William, *The Winter Market* (London: Victor Gollancz Ltd., 1986).

⁵ Bruce Sterling, 'A Century of Science Fiction' by Bruce Sterling. *Time Magazine* 29 March 1999...

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