

**VOLUME !**

## **Volume !**

La revue des musiques populaires

**10 : 1 | 2013**

**Écoutes**

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# **Train Listening: Music in the Spaces of the 21<sup>st</sup> Century**

*Le train de l'écoute : la musique dans les espaces du XXI<sup>e</sup> siècle*

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### **Electronic version**

URL: <https://journals.openedition.org/volume/3763>

DOI: 10.4000/volume.3763

ISSN: 1950-568X

### **Publisher**

Association Mélanie Seteun

### **Printed version**

Date of publication: 30 December 2013

Number of pages: 249-263

ISBN: 978-2-913169-34-0

ISSN: 1634-5495

### **Electronic reference**

Bruce Darlington, "Train Listening: Music in the Spaces of the 21<sup>st</sup> Century", *Volume !* [Online], 10 : 1 | 2013, Online since 30 December 2015, connection on 24 August 2022. URL: <http://journals.openedition.org/volume/3763> ; DOI: <https://doi.org/10.4000/volume.3763>

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# Train Listening: Music in the Spaces of the 21<sup>st</sup> Century

by

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**Abstract:** Listening to music on the train is a microcosm of listening to music in the technologically enabled developed world of the 21<sup>st</sup> century. This article engages discussions of listening in modern environments and the methods employed to do so in order to move towards a consideration of new modes of listening and existing alongside music. The failure of traditional functional categories in order to understand the role music is playing in modern society is put forward as is a move towards a radical shift away from the accepted subject-object paradigm of listening. Power structures present in the modern global age are used to emphasise the larger scope of the train carriage as a representative structure for an examination of listening as well as technological societal developments. Modern multitasking trends as well as the impact they have on the mind when considered in the light of certain cognitive hierarchical theories are examined and then placed alongside elements of the Nominalist school of ontological thought in order to establish certain pre-existing theoretical trends which are being re-applied here.

**Keywords:** *Body – Everyday Life – Experience – Listening – Urban – Ontology – Power – Spaces*

**Résumé :** Écouter de la musique dans le train est un microcosme de l'écoute dans les sociétés développées et technologisées du XXI<sup>e</sup> siècle. Cet article traite de l'écoute dans des environnements contemporains et des méthodes utilisées l'analyser, afin de considérer de nouveaux modes d'écoute et d'existence en présence de la musique. Il met en avant l'échec des catégories fonctionnelles traditionnelles pour comprendre le rôle de la musique dans la société contemporaine afin de s'écarter radicalement du paradigme sujet-objet en matière d'écoute. Les structures de pouvoir à l'ère contemporaine sont analysées pour montrer en quoi le wagon de train est une structure représentative permettant d'examiner l'écoute ainsi que les développements technologiques et sociétaux. Il examine les tendances contemporaines multitâches ainsi que leur impact sur l'esprit à l'aune de certaines théories cognitives puis d'éléments de l'ontologie nominaliste, afin d'établir certaines tendances théoriques préalables pour les appliquer à l'objet de cette contribution.

**Mots-clés :** *Corps – vie quotidienne – expérience – écoute – milieu urbain – ontologie – pouvoir – espaces*

Every week for the past year and a half I have travelled via train from my home base of Chester in England to the city of Liverpool at least twice a week, firstly studying for my MA and now my Ph.D. In an odd twist, the journeys have largely inspired my studies. In attempting to focus on academic reading and thinking during the journey I found myself surrounded by a cacophony of noises of various types originating from various sources. Unexpectedly the majority of this noise was created not from conversation or even structural noises inherent in the mode of transportation, but rather it came from clashing and competing musical sources. Headphones broadcasting to multiple, often unwilling listeners, mobile phone ringtones, mobile devices with internal or external speakers, iPads, Kindles, the list goes on. These various sources of music intermixed with the minority of spoken word conversations, train passenger announcements and structural noises (doors, brakes, and so on) created a sonic environment which initially was reminiscent of the alleged 'white noise' interrogation techniques used by the military (Khalili, 2008). However when examined with a more critical eye various cultural and musical questions arose; why were people listening to one headphone whilst holding a conversation? What effect did this have on the music being listened to? How did the non-musical sounds and competing sources of music on the train interact and alter each other? Eventually these questions and others gave rise to some notions concerning the nature of listening in such an environment, and via a reasonable leap of intuition and observation, to 21<sup>st</sup> century urban listening in general.

Many academics writing about music take for granted what it means to listen. People are spoken about as listening to this type of music or that type of music, however the widely accepted definition of listening as 'engaged hearing' (Carter, 2004) would seem stretched to place what was being heard on the train into any sort of cohesive form to be listened to. Similarly DeNora's discussion of traditional 'serious listening' as serving to transport the listener 'beyond the realm of material and temporal being, to allow oneself to be taken over by music's textual time' (DeNora, 2000: 157) also proves little help in this most time-critical of situations (on the train). A loss of material and temporal being may well result in a loss of station and connection. Despite many years of musical training I found it almost impossible to follow a musical theme, identify a harmonic sequence or experience any affective responses from what I was *hearing* during my journey. Separating out 'listening' from 'hearing' and then using the ensuing discussion to question the extent to which this may position music as a culturally constructed phenomena is a very important but usually neglected step to take in this kind of investigation. Even noted scholars of musical ontology who are mostly extremely precise in their choice of language sometimes intermix the phrases 'hearing' and 'listening' within the same paragraph without offering an adequate explanation of the differences (Kania, 2011).

Constructing 'music' from the overlapping and competing streams of sound being heard aboard the train seems a particularly difficult task, and one that stretches Blacking's traditional definition of music as 'humanly organised sound' to virtual

breaking point (1995: 10). This makes a reconsideration of the term 'music' just as important as understanding the differences between 'listening' and 'hearing'. What happens to the status of music as music when multiple sources are making it almost impossible for the ears to follow any one theme? What are the core elements that make up music in the mind of the listener, and what, if any, of these elements can be removed before the listening or hearing mind no longer identifies these sounds as music? This leads into some tricky ontological territory concerning the nature of music, and although this article will not delve specifically into that particular arena it will, in addition to its primary focus of examining listening in 21<sup>st</sup> century spaces, keep such issues as well as the standard dominant positions of music ontology in mind.

## Function

Throughout modern urban living we are exposed to music in a more or less constant stream, with busy train journeys often being no exception. Whilst shopping, driving, travelling on public transport and even in more progressive workplaces, music is a part of our daily existence. For both its primary instigators and those simply experiencing it, modern music is haphazardly crossing various functional boundaries and being placed in a crisis of sorts. Not an exclusively ontological crisis, but a largely practical one; who is playing this music? Who is it being aimed at, and what purpose is it supposed to be serving? Certain functional categories have traditionally been used to answer these questions but none of them

seem to properly fit anymore. For example music within these spaces cannot be said to be muzak as traditionally conceived because it does not follow the traditional structures and patterns of muzak. In the same way neither can it be said to be truly 'background music' or 'wallpaper music'. Certainly people are experiencing these sounds, this music, in a 'live' situation (another category for music in public spaces), as distinct from music in the home, but no-one would seriously suggest that the majority of individuals in a large shopping centre have travelled there to experience the music being played over the public address system, or that the controlling interests behind the publically broadcasting music are aiming solely to entertain. The music being experienced in these 21<sup>st</sup> century spaces is something new, something crossing divides that represents not only new modes and ways of listening, but is actually representative of much deeper sociological trends concerning subjectivity in modern life.

Muzak (the style not the company) began life as a tool employed to create 'untroublesome and socially useful subjects, as citizens, workers or consumers' (Atkinson, 2006: 10). It evolved into a specific style of arrangement where vocals were deliberately removed so as to avoid distracting workers attention away from the task at hand; whilst at the same time incorporating common styles from the most popular and successful artists of both the past and present (Radano, 1989: 450). The music being experienced on the train does not conform to these criteria. It has no centralised 'controller' or 'programmer' who is aiming to use music as a tool and has a specific goal and

criteria for choosing what music is played; it is also often vocal in nature and in contrast to muzak is designed to be distracting and attention seeking. This in itself is not a big theoretical problem as the category of 'background' music, which frequently incorporates unabridged or unaltered popular music including vocals, becomes available as an alternative. This 'background' (Dube and Morin, 2001, Dubé *et al.*, 1995, Milliman, 1982) or 'wallpaper' music (Lincoln, 2005) is usually defined by its employment for specific functions such as manipulation of shoppers and its success is gauged via quantitative criteria such as sales figures. Music in these instances is 'background' to or 'wallpaper' to another foreground activity.

The music being experienced on the train could be perceived as being 'background' to or 'wallpaper' to the primary function of making a train journey, however it serves no collective function. In contrast to a business or similar abstract entity which may be employing music as a manipulative tool, this music on the train is being employed by individuals with no such collective agenda. Whilst it may be true that these individuals have a listening agenda for themselves, they are extremely unlikely to have an agenda which includes influencing an entire train carriage full of people in the hope of achieving a specific goal. The music being heard has not been chosen for its affect or effect on those who will hear it; even 'wallpaper' music employed in private homes to accompany meals, which is obviously not chosen by corporate entities (at least at the point of consumption), is still chosen according to some sort of experiential criteria. Perhaps individuals wish to create a certain

mood for dinner guests, or promote the image of being a particular social stratum and so on. Even if a collective agenda were proved to be present it is almost impossible to imagine what kind of quantitative process would be put in place to gauge the effectiveness of this music on the train passengers hearing it. What would such a process measure and how would such a measurement incorporate the irregularity of type, volume, duration and multiple overlapping streams of music being heard into a statistical format? Without such considerations taken into account the quantitative data gained would be next to useless. Making informed decisions about what was to be deemed 'successful' or 'unsuccessful' uses of music for a specific agenda would be impossible. It is because these various elements are not clearly adhered to that the music experienced on the train cannot be said to be either muzak or 'background'/'wallpaper' music.

The model of 'ubiquitous music' developed by Kassabian (Kassabian, 2013) attempts to take into account this phenomenon of ever present but category defying music and comes close to fitting our needs in understand train listening. Ubiquitous music is a consideration of the music heard every day from almost everywhere in modern first world societies. It is inexorably linked to developments in technology which allow music to flow from 'out of the wall, out of our clothing, our televisions, our computers, our video games and so on' (2013: 2). Ubiquitous music is sourceless (Kassabian, 2002); a quality which influences a redefinition of the relationships individuals have with this particular type of cultural artefact. However the

music on the train has plainly evident and identifiable sources. Pinpointing where the music in a train carriage is originating from, even when the sources are extremely multiple is not necessarily a difficult task (if only because of the visual technological triggers able to be observed). Ubiquitous music also relies on the concept that what is being heard actually *is* music. If what is being heard cannot be categorised as music by those experiencing it then the situation becomes significantly more complex. As mentioned previously, during a train journey various musical elements could be briefly identified (rhythm, harmony, and melody) but never in a complete enough form to trigger deeper recognition of either the specific music being played (genre or piece) or the affect it was supposed to be having. Without these elements it becomes increasingly difficult for those hearing or listening to music to identify it as such, and so increasingly difficult to remain within the confines of 'ubiquitous music' as a theoretical model.

Ubiquitous music seriously challenges many of the categorisations and preconceptions of modern urban listening but it does not challenge the dominance of subject-object musical thinking in the most effective way. Rather than considering modern listeners as part of a collective web of sorts and no longer mere subjects to be sold things, it would seem more potent to consider the changes in nature occurring in the actual relationships between listeners and music. The proposed 'Borg' argument where individuals are 'uncomfortable being unhooked from the background sound of ubiquitous subjectivity' (Kassabian, 2002) is correct to a point but does not go far enough. Indi-

viduals engaged with music through modern technology are actually approaching a situation where they would not understand the concept of unplugging or unhooking. They are 'becoming' with music and technology to the point where there is nothing to unhook; where music occupies the same ontological level as, and has become an inseparable part of, who and what people are in a technological age. This however will be discussed in more detail later on. Suffice it to say for now that this 21<sup>st</sup> century music cannot be considered as 'background', 'wallpaper', muzak, or 'ubiquitous' music, but instead must be viewed as something else.

## Something Else

It is this 'something else' that modern music is becoming that is by far the most interesting and important aspect of this discussion, and the term 'becoming'(along with others) which will prove invaluable throughout. Modern urban locations where music is employed, either personally or publically, are encouraging a clear demonstration of the power of modern technology to alter the traditional sites and relationships of music and listening. No longer are those wishing to experience their own musical choices forced to remain at home or carry extremely limited supplies of music with them. The digital music player in various guises and formats (MP3, MP4, AAC and so on) has allowed access to vast storehouses of music almost anywhere. Tens of thousands of songs can be stored, transported and enjoyed in virtually any environment, and specifically for us here, the

train. The mobilisation of music in this fashion has been examined in detail by scholars such as Bull (2007, 2005, 2000), Beer (2007, 2008a), and Simun (2009) among others, but the subjectivity of those examined or the effect changes in subjectivity may have on what it means to listen in this way has rarely if at all been taken seriously.

Those individuals on the train engaged via technology with 'creating' or instigating music are experiencing a self 'in process' (Massumi, 2002). They are, through music as well as their environment, engaged and committed to the act of 'becoming' (Haraway, 2008). The renewal in the idea of the body as the gateway to understanding modern subjectivity through movement and sensation is vital to understanding a subject which is constantly being distributed and remodelled based on the trajectories it takes, which in turn are based on movement and sensation. There is a long accepted theoretical and conceptual linkage between music and the body (see Stilwell, 2011) which when combined with modern digital technology allows music to play an extremely large part in all this. As movement and sensation mean that the body, and therefore the subject, constantly resists static interrogation whilst at the same time engaging emotional states and responses, the way music is invited 'in' becomes very important. When people shop there is music, when people travel there is music, even when people sleep there can be music (Kassabian, 2002). Music travels with the body through its adventures in movement and sensation, and by doing so becomes a part of the subjective experience of everyday life. Both the instigators of music on the train and

those for whom this 'music' is an aural assault or merely a sonic confusion are intertwined in this series of interactions.

'Listening' to music (the phrase is still useful at this point despite its questioned status) in modern environments in this way is no longer to listen to something separate. In the same way that modern urban sounds failed to be easily placed into the traditional categories of muzak, 'wallpaper'/'background' or ubiquitous music, so too does modern listening begin to seriously erode the boundaries which are traditionally constructed between subject and object, whereby the subject listens *to* something. Music in this traditional model is an outside 'other'; a temporary addition to the instigating subject which is engaged for some specific purpose and then discarded when that purpose has been accomplished. Even if the purpose of listening is as mundane as a minor mood alteration (not to imply this is simple or easy to understand, see Dimasio, 2000), music has always been considered as something outside the body. It triggers bodily processes such as affect (Clough and Halley, 2007, Beer, 2008b) and memory by interacting with both the body and consciousness from an 'outside stimulus' paradigm. However modern digital technology has allowed and invited music inside the subjective space of the body, which in turn has altered the state of 'listening' to something closer to 'experiencing'.

The breaching of these established boundaries as well as a more comprehensive understanding of human-nonhuman interactions can be understood through the concept of 'becoming' (Haraway, 2008). Through 'becoming' as through her

seminal 'Cyborg Manifesto' (2006) Haraway is trying to conceptualise the new spaces which are being created through the interactions of humans and non-humans, and which cause re-evaluations of both ends of the existing paradigm. In this case human-music interactions and therefore the listening processes that go with them are able to be reconsidered in a less oppositional way. Music breaching the outer skin of the human subject via the extension of human subjectivity beyond the boundary of the flesh, through technology, causes a significant change in both parties. Haraway illustrates this point via a discussion of the exchange of fluids with her dog, symbiogenesis as she terms it (2008: 15) as a breaching of boundaries that affects both subjects. Two initially distinct subjects are able to be reconsidered as less separate than may be believed. Traditional boundaries, human-music and human-animal are challenged and reconsidered by subtle shifts in stance and understanding.

These spaces are where traditional 'things' or concepts collide and must be reconsidered. Such a situation is present in the 'new' spaces both experienced and experiencing (for indeed the subjects are such new spaces manifest) on the train. The instigators of music on the train are not listening to music primarily for the personal reasons so often cited by scholars such as Bull, Beer or Denora (Bull, 2007, 2005, 2000, Beer, 2008a, 2007, DeNora, 2000) but instead are actually not making a choice at all. They are simply experiencing modern life in the mode that technology has made the norm for many people. Mobile digital technology contains diaries, address books, social

media applications, photographs, music, work related data and an almost endless list of personal information, some of which is extremely sensitive and may be shared with another individual only in very delicate circumstances. These machines contain far more information about people than is generally realised, and when consciousness is extended or distributed globally via social interaction over the internet (Lupton, 2001, Stone, 2000) such machines become even more potent extensions of the subject. The crucial distinction from technology that has come before is not just the convergence of information (Jenkins, 2006) or the power granted by technological extension (McLuhan, 1995) but is a different concept entirely, one of integration.

Technology's ability to integrate itself into the life of the individual and society more generally, enables and alters two concepts – that of the subjects 'becoming' and the body 'in process'. Modern digital media are no longer simply extensions or tools but instead are a part of the individual's subjectivity. They are 'inside' and a part of the individual, even more so than a pair of glasses or a hearing aid. Music is an integral part of these devices and often upon purchase they come 'pre-loaded' with music, or some sort of 'giftcard' granting access to download 'free' music as part of the package. The music accompanying these devices is not physical in nature; it is ephemeral and abstract, making it instantly recognisable to consumers as similar in nature to their other non-physical interactions through social media, internet banking, 'face-time' and so on. Consideration of a 'face-time' (Apple's video chat software) conversation



or a 'facebook' post as an interaction between an individual and an 'other', a machine, would be laughable in the eyes of most users; so why should these same users consider music as an 'other' when it presents in the same format? The music purchaser does not get a physical product which can be separated out from the machine or even the body. When an individual is experiencing music through these devices on the train they are not engaged in the traditional paradigm of subject-object that has been used to discuss music. They are engaged in a new model, a new mode of listening; one that does not rely upon many of the concepts previously associated with music and listening and which necessitates new conceptual models to be either adapted or created.

Significantly it is vital to understanding music in 21<sup>st</sup> century urban spaces that certain distinctions are developed and understood between primary instigators of music; those with the MP3 players, iPads, mobile phones and so on, and those individuals who are secondary and to a certain extent passive. The theories of 'becoming' and 'process' still apply to these passive individuals who are experiencing the multiple streams of noise-music, but in an altered form. The power relationships on the train are representative of many different urban spaces where similar patterns can be observed.

## Power

The categories of music examined so far (muzak and background/wallpaper/ubiquitous) imply power relationships on multiple levels. The supermarket hoping to influence shoppers or the factory hoping to influence the creation of productive workers are examples of music being employed as a tool within a power dynamic. Management within a factory or perhaps as in certain cases individual workers on a rota system, have power over what music is listened to. Individual shoppers rarely have any direct say in the music being played in shops, but do possess the power of choice not to enter if the music is off-putting or offensive; thus exercising a different type of power relationship with the shop's management than is seen in a factory. The music on the train and as a larger consideration many 21<sup>st</sup> century spaces, also implies power relations. The passengers can be roughly divided into three categories: active listeners, passive listeners and those who are in the middle ground or disengaged entirely (perhaps through disability), although this third category will have little bearing on this investigation. The active listeners are asserting their agency over the other passengers by forcing them to listen to music that they have not chosen to. Passive passengers could choose not to board the train, or disembark once underway but this is a different dynamic of power from consumers choosing not to enter a shop. Because the individual makers of music on the train are not connected to the train operators and are unlikely to be affected or even notice the lack of other passengers, let alone alter their practices as a result, passive passengers are

disempowered. Shop managers would soon take notice if the music being played in their stores was identified as the cause of rapidly declining sales; however train operators are far less likely to notice the same trend.

Several studies of headphone listeners have failed to account for this aspect of modern listening by focusing too much on the experience of the primary or active listener. Michael Bull argues that headphone listeners are attempting to control their environment through audio isolation (Bull, 2007) however what about those people forced to listen to the overspill 'music' from the headphones of others during their urban journeys? Not just train journeys, but many types of public transportation and public spaces (parks, monuments, museums and so on). These passive listeners are to a certain degree being held hostage to the whims of the active listeners much in line with the theories of 'networked power' and the impact of new media in society put forward by Castells (2009, Castells, 2000).

The currently dominant global mode of power distribution as identified by Castells (2009) can be recognised as active within the power dynamics of listening during the train journey. Music is made and distributed via the actions of large multi-national corporations, who also own and promote the technology necessary to procure and then activate it. Traveling on a train demonstrates one of Castells key points; that power in society is not maintained through violence or direct applications of authority, but by 'how people think about the institutions under which they live' (Castells, 2009: 416). People in states where corruption and

violence proliferate tend to remove themselves from the corridors of power as much as possible, forcing the institutions of power to establish a relationship with the people they control, even if it is only a fictitious one. In the same way listening/hearing (dependent on the passive/active status of the passenger concerned) and music on the train viewed through its power relations demonstrate how modern society has shifted its focus to accommodate listening to music in traditionally unusual places.

Many people in the 21<sup>st</sup> century feel 'that they are in a deterministic relationship with these new technologies, that they are relatively powerless, that the makers and sellers of these products are in control, and that sometimes the technology itself is in control' (Bell, 2007: 8). Both strands of listeners/hearers, primary and secondary, are engaged in a shifting power dynamic caused by both changing technology and societal rules. In over 2 years of journeys no conductor or train official ever appeared and asked the people playing music to turn it off or lower the volume. This is because modern society is rapidly becoming accustomed to experiencing music (or something resembling it) everywhere. The 'quiet' carriages which now exist on longer national routes operated by companies such as Virgin Trains or East Midlands Trains are evidence that this cacophony of noise is becoming an acknowledged issue in society at large. These cars have strict 'no headphone use' and 'no talking on mobile phones' policies which are enforced by train officials. They represent an option for those emasculated by the power structures alluded to earlier. Such carriages are growing in number on

national routes however they are still relatively unknown on shorter regional lines.

Despite the imbalanced power dynamic present in these situations the passive or secondary listeners are still 'in process' through their bodily experiences and are 'becoming' with technology, just as the primary listeners are. Their experiential reality is being affected by the surrounding noises but they are not experiencing the affect usually associated with music. In other words their bodies are 'in process' and are being effected by the music of the primary listeners, but their bodies are not being affected by it, at least not in the traditional sense. It is at this point and in this light that the term 'music' is dangerously close to becoming meaningless, and with these secondary individuals where 'listening' dissolves into the more general 'hearing'.

The principle affective responses to music listening are emotional and often memory based, neither of which reactions tend to be triggered by the noise of a trains brakes being activated. The affect of music is both complex and vital. It is the core emotional 'juice' which helps music become an integral part of the listener's psyche as well as giving instances of music specific and personal meaning to individuals. At the same time musical affect can be used to manipulate mood and conscious emotion, for example to get ready for a night out (DeNora, 2000) but can also go deeper to invoke powerful emotional responses strongly linked to certain historical situations from the individual's life. Affect is one of the crucial ways in which music distinguishes itself from other forms of communication, notably language. Language

being 'essentially a mapping between sound and "propositional" or "conceptual" thought' whereas music is designated to accompany many different social and individual activities but transmits the 'enhancement of affect' across these activities (Jackendoff, 2011: 104).

This type of affective response is almost completely lost with the sounds being experienced on the train. The competing streams of music are too sporadic and overlapping to trigger these affective responses. It is true that hearing one line or stanza from a piece of music is enough to trigger these responses, but what elements can be removed from that small section of music before it becomes unrecognisable and meaningless to the one experiencing it? Perhaps the lyrics, or various instruments; maybe a sense of structure? Is it really feasible that an individual who has very strong emotional ties to a piece of music would experience the same emotional response to it if they were only played the drum part of the song, or perhaps 25 % of the verse chords? The power being asserted by the primary listeners is causing a new type of listening, closer in nature to hearing, to arise in the urban spaces of the 21<sup>st</sup> century. Listening to or hearing something not entirely music and not entirely not; without affect and with very little choice. To understand in any depth both how and why music in these situations can be considered to be lacking certain affective stimuli for secondary passengers it becomes important to understand a little of how scientists believe the brain processes stimuli.

## Cognitive Hierarchy

Many scientists studying the advancement of artificial intelligence systems are turning to a more hierarchical view of consciousness as a solution to the problem of the ever increasing processing power previously believed to be needed for effective consciousness modelling (Brooks and Mataric, 1999). The current thinking around cognitive theory is remarkably similar to the idea of a computer processing chip. Some scholars even equate modern urban spaces to computer chips in a variety of theoretical and physical ways (Rutsky, 1999). Researchers are constructing models whereby the entire system of consciousness is predicated upon the constantly increasing complexity of very many layers of semi-autonomous but relatively simple processes. This type of consciousness, known as an 'epiphenomenon' (Hayles, 2005) unseats the dominance of the consciousness as previously understood whilst also attributing far more importance to systems which are largely unconscious in their day to day functioning. Damasio (2000) argues that human senses (taste, touch, smell, vision and hearing) are directly related to nerve response patterns stimulated by the external world, and that emotions are nerve activation patterns determined by the internal world of the body. For this consideration of listening the idea that there may not be a 'consciousness' as previously understood, at the top of the bodily tree making decisions is incredibly important in developing an understanding of what is happening in modern urban environments.

These models suggest that music must be placed in a sufficiently high position within the cognitive hierarchical structure in order to be processed correctly. If the brain is being overloaded with many strands of simultaneous activities it is unlikely that complete processing will occur. The same is true if the brain is unable to properly distinguish a task due to insufficient data, or conflicting messages being received through the senses. Multitasking studies have reported similar results when investigating how the brain operates and learns in multiple stimulus situations (Salvucci and Taatgen, 2010, Wasson, 2004, Rosen, 2008, Levine *et al.*, 2007). Music under such conditions, with its high demands on emotions that individuals for the most part have no conscious control over is likely to drop down this hierarchical list and lose some of the elements that make it music in the perception of the individual. This is particularly likely on the train, where cognitive processing power is, at a minimum, needed to maintain physical balance, listen to passenger announcements and watch for the correct stop. Multitasking interactions with technology and music place significant demands on the brain.

Unlike the eyes which significantly process information before it is delivered to the brain (see Lettvin *et al.*, 1959) the ears deliver everything to the brain with no processing or filtering beforehand. The ears functionality make effectively processing more than a few simultaneously presented auditory stimuli impossible (Humphrey, 1993). When considered in a very noisy train carriage with multiple overlapping streams of sound emanating from various sources, some of which come and go

very quickly, on top of the often complex tasks an individual is simultaneously engaged in, it is not surprising that the brain is overloaded. Music only exists because the witnessing or experiencing mind recognises it as such; without the mind to enforce social boundaries and create structure and affect from the sound being heard, it is just noise. Listening to music on the train from the point of view of the secondary listeners/hearers risks turning the music instigated by the primary listeners into an indecipherable mesh of sound devoid of the qualities that make music unique.

This line of argument shares significant theoretical ground with the music ontologists generally known as nominalists, who are often social constructivist in nature. Predelli for example argues that the boundaries for what is considered a correct and therefore accurate rendition of a piece of music will shift with the passage of time and particularly with cultural boundaries. He claims judgements concerning correctness in performance are based on 'transient aesthetical and cultural criteria, and do not appear to be constrained by an immutable set of prescriptions associated with an everlasting abstract entity' (Predelli, 1995: 347). Similarly Goodman argues that performance deviation in correctness of notes could lead to a piece of music no longer being considered as that specific piece of music (1968). The idea that the brain may fail to construct musical sound as music in the mind due to a lack of processing power follows very similar theoretical lines. In both the nominalist stance and the one presented here, music is able to be challenged on a fundamental level, necessitating a reconsideration of what it actually is. It can be

broken up from a whole and unquestionable entity into a more socially bound entity dependent upon perceptual and experiential criteria for its existence.

## Conclusion

The spaces of 21<sup>st</sup> century urban living are well represented by the train journey in several regards, but particularly when it comes to listening to music. Both of the key terms in the previous statement 'listening' and 'music' are under assault from changes in not just social behaviours and boundaries, but also from technology and subjectivity advances and reconsiderations. Music fails to fall into one of the previously employed categories for music in public spaces (muzak, 'wallpaper', 'background') or even some of the new categories being developed (ubiquitous). It is personal and public at the same time, and whilst the actual music has not changed, the way it interacts with the subject has. No longer is the traditional paradigm of subject-object holding sway for many listeners in technological societies; the technology has facilitated a moving of boundaries where the subject is extending beyond the boundary of the flesh whilst at the same time music is moving inwards towards the core being. Technology represents so many deeply intimate aspects of the subject now that the idea of a solitary being, self-contained and separate from the world being inhabited is hard to maintain. Just as A.I systems designers and consciousness studies scholars are redeveloping the models they use and employing a more 'multiple-systems' based hierarchical approach to the development of conscious-

ness, so is music entering and intermingling with the subject on much more equal grounds than ever before. Music must enter into the consciousness hierarchy at a sufficiently high level in order to be processed as music and not just noise.

The concepts of 'becoming' (Haraway, 2008) and 'Bodies in Process' (Massumi, 2002) as concepts are easily adaptable to be representative of the ways in which modern listeners on the train experience music, sometimes as music and sometimes not. The endless and constant reorganizing of boundaries and subjectivity makes the 21<sup>st</sup> century technological experience of music closer to a holistic experience, as opposed to an employment of emotionally charged music for some sort of affect before being discarded. This is despite the stated differences between primary and secondary passengers/listeners/hearers. The crossing of boundaries is not limited to the experience of music on trains, but also to the power relationships which are being forged in 21<sup>st</sup> century urban spaces. Primary listeners have some power over secondary or passive hearers, but both groups are capable of feeling disempowered by technology,

and society is recognising certain of these issues with the creation of 'quiet' zones. These power dynamics significantly alter the older corporation-consumer paradigm that existed with older categories of music in public spaces.

The logical continuation of this line of investigation is to delve more deeply into the worlds of musical ontology. Both the nominalist and realist positions which have held such sway in discussions of the ontology of music have significant shortcomings when used to categorise this 'something else' that modern music is becoming. Even more modern ontological discussions of non-orchestral music (Stansbie, 2010, Kania, 2006) have not fully embraced the changes in both listening as an activity and the integration of music further into the subjective experience of the individual (and society to a certain point) than ever before. These and others are areas for expansion of the investigation of listening and music in the spaces of the 21<sup>st</sup> century and will hopefully yield new and interesting ways of discussing the increasing integration of technology, music and subjectivity occurring in our modern society.

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