

# HEADPHONICS:MOBILE MUSIC ON THE MÉTRO

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# INTRODUCTION

- Practice-based research that investigates the mobile paradigm in the context of electronic music, sound, and performance.
- Investigate generic mobile devices and commercially available apps as a music performance system.
- Consider the idea of mobile as a lens through which a new model of electronic music performance can be interrogated.



## *Converging Media in Schools*



# INTRODUCTION: HEADPHONICS

- Headphonics as a model of music interaction: listening through a mobile device with earbuds and inbuilt microphone.
- Using digital signal processing (DSP) apps to manipulate sound and augment it onto the real world.
- Question the spaces commonly associated with electronic music - where it is made, where it is listened to and experienced.

# BACKGROUND , CONTEXT

- Own experiences of electronic music production have historically been situated in a recording studio environment.
- Frustrated working with a group of music improvisers - sat at a table, obscured behind laptop screen, cables etc.
- Moving between UK and France, vital to have light, portable and resilient equipment that could be easily carried.

# FRAMING THE FIELD: MOBILE MUSIC STUDIES

- How portable auditory devices have shaped subjective experience since the Sony Walkman and lightweight, high-fidelity headphones.
- ‘Musica mobilis’ (Hosokawa, 1981 1984).
- Personal stereos create a cinematic experience (Bull, 2000).
- Personal stereos allows users to create “...customisable, mobile mediated environments that anyone could carry with them wherever they went” (Cohen, 2016).

Cohen, M. (2016). Always On and Always On Them: Portable Radios and the Creation of the Mobile Media Experience, in *Mobile Media & Communication* Vol. 4(3) p.371.

## The walkman effect\*

by SHUHEI HOSOKAWA

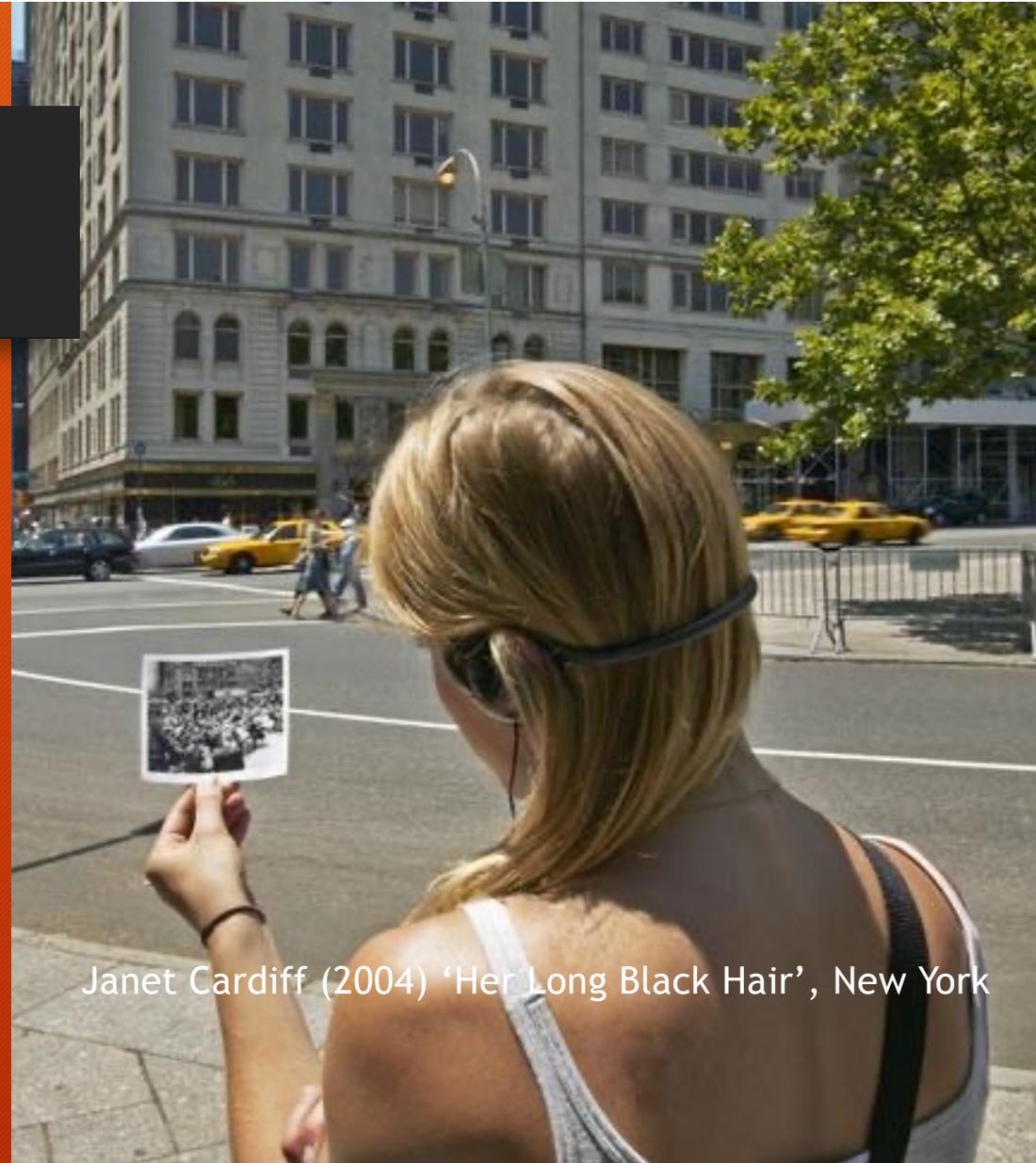
The walkman – a cassette recorder for headphone listening. This gadget, originally invented and marketed by Sony in the spring of 1980 in Japan, and soon exported, has become known throughout the West, however awkward its Japanese-made English may sound. As its use has proliferated, so have the arguments about its effects. One example, a report in *Nouvel Observateur*, was cited by Philippe Sollers (Sollers 1981, p. 50). The interviewer, apparently, asks young people (eighteen to twenty-two years old) the following: whether men with the walkman are human or not; whether they are losing contact with reality; whether the relations between eyes and ears are changing radically; whether they are psychotic or schizophrenic; whether they are worried about the fate of humanity. One of the interviewees replies: your question is out-of-date. All of these problems of communication and incommunicability, according to him, belong to the sixties and the seventies. The eighties are not the same at all. They are the years of *autonomy*, of an intersection of *singularities* in the construction of discourses. Soon, he says, you will have every kind of film on video at home, every kind of classical music on only one tape. This is what gives me pleasure.

The attitude of the inquirer is a common one: people once lived happily in harmonious contact with nature, but with industrialisation and urbanisation, especially in recent decades, they lose that healthy relationship with the environment, become alienated and turn into David Riesman's 'lonely crowd', suffering from incommunicability. The walkman, for such an interviewer, is taken as encouraging self-enclosure and political apathy among the young, under a structure of mass control. Such 'cultural moralists', as Umberto Eco calls them, are apt to adjust something novel or extraordinary to the normative epistemological system based on the known, on standardised factors. Therefore, they either cannot explain clearly the socio-cultural change brought about by something new, or more typically, they simply fear and refuse any attempt at clarification. Even for those with a keener interest, the new thing is considered as deviant or inappropriate to their ready-made framework of thought.

\* This article is partially derived from Hosokawa 1981a.

# FRAMING THE FIELD: HEADSCAPES

- Changes in our listening modes, spatial relations and perceptual habits have been explored by many sound artists, among whom Janet Cardiff and George Bures Miller have been perhaps the most influential.
- Brandon LaBelle's term 'headscapes' (2015) to describe Cardiff's audio walks highlighting the discrepancies fostered by wearing headphones.



Janet Cardiff (2004) 'Her Long Black Hair', New York

# MOBILE MUSIC AS A GENRE

- Mobile music as a specific genre was identified and theorised by the Mobile Music Workshop: “... *any musical activity using portable devices that are not tethered to a specific stationary locale*” (Gaye et al., 2006).
- *4 Hands iPhone* using the generative audio app RjDj.
- RjDj promoted as a new genre of ‘reactive music’ - interactive versions of existing music using a device’s internal mic to trigger a set of DSP filters.



Adam and Atau. 4 Hands iPhone (2009-11)

Gaye, L. Holmquist, L.E. Behrendt, F. Tanaka, A. 'Mobile Music Technology: Report on an Emerging Field'. In Proceedings of NIME 06, Paris, France, 2006.

# META-LISTENING, EARBUDS & DSP

- Kate Crawford's *Four Ways of Listening with an iPhone* describes a sensation of 'meta-listening'.
- The in-ear style of earbud headphones ushers in the surrounding environment with unusual closeness.
- Listening to the environment through the inbuilt mic of a mobile device and DSP becomes a form of digital immersion, producing 'an almost hallucinatory listening experience'.

Crawford, K. 'Four Ways of Listening with an iPhone. From Sound and Network Listening to Biometric Data and Geolocative Tracking'. In Hjorth, L. Burgess, J. Richardson, I. (eds.) *Studying Mobile Media: Cultural Technologies, Mobile Communications and the iPhone*. New York and London: Routledge. 2012, p.216.



# FIELD RECORDING AND SOUNDWALKING

- Hildegard Westerkamp soundwalking and soundscape composition: “...an embodied method of personally connecting with the soundscape through focused listening while physically moving through space” (Westerkamp 1974).
- Westerkamp’s non-intrusive style of field recording, learning about the Canadian soundscape ‘with an immigrant’s displaced ears’ (McCartney 2014).
- The microphone as a moving ear, acting as a prosthesis.

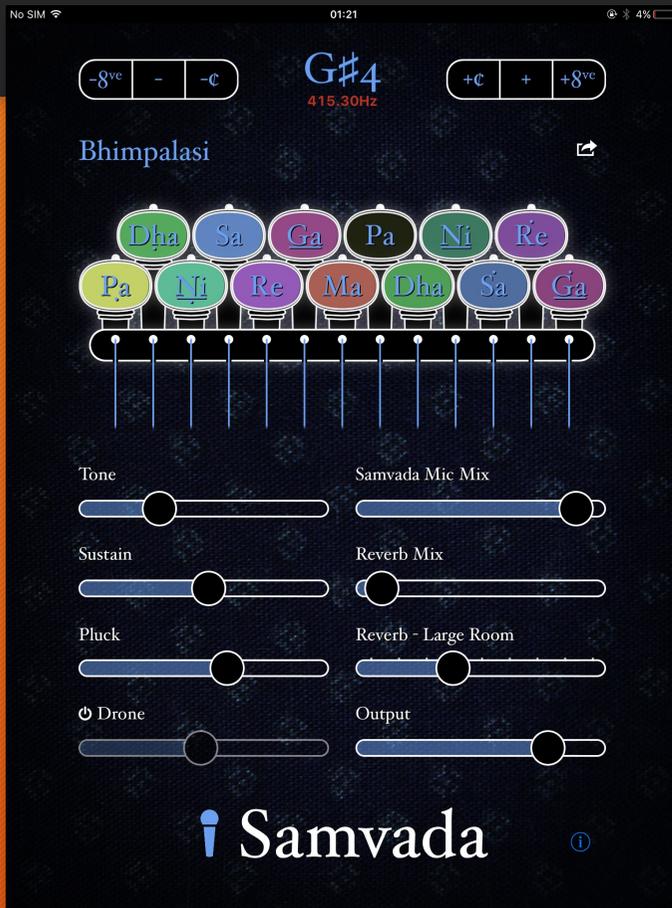
Westerkamp, H. ‘Soundwalking’. In Sound Heritage 3(4). 1974.

McCartney, A. ‘Soundwalking: Creating Moving Environmental Sound Narratives’. In Gopinath, S. Stanyek, J. (eds.) The Oxford Handbook of Mobile Music Studies, Volume 2. Oxford & New York: Oxford University Press. 2014.

# EXTENDED FIELD RECORDING

- Incorporate meta-listening as strategy to overcome the often prescribed sounds of mobile music apps.
- Combine field recording and sound manipulation with DSP apps.
- *Extended Field Recording: Corsica Soundscape* (excerpt)
- <https://steranko.tumblr.com/post/57259521100/an-experiment-in-environmental-music-with-binaural> 
- Wading in the sea while processing audio. To be so close to water while creating electronic sound was a revelation, an epiphany.

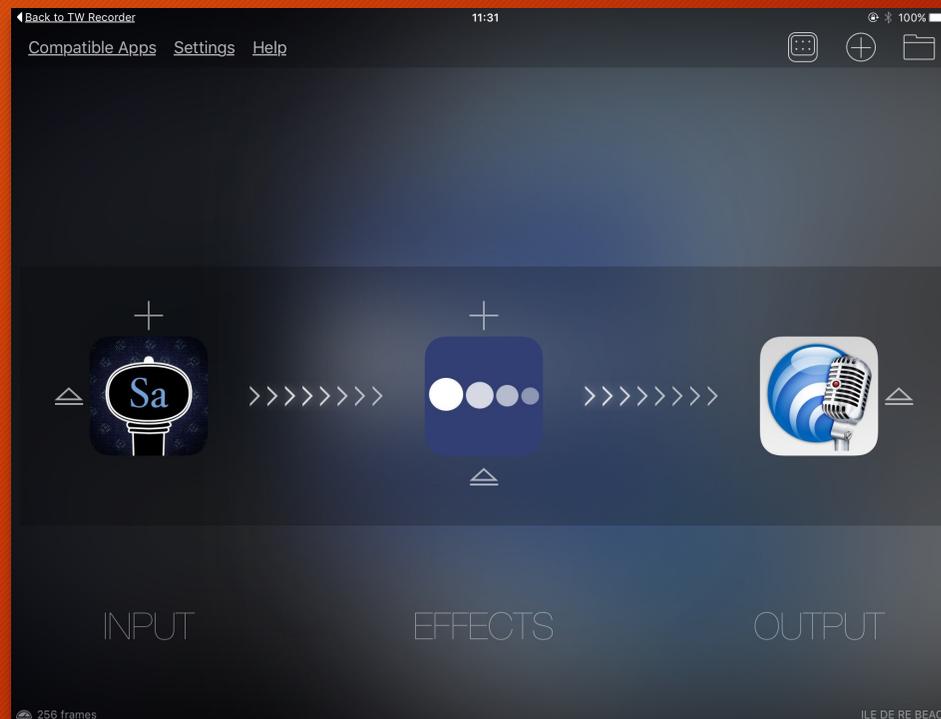
# EXTENDED FIELD RECORDING



- Samvada: simulation of a Sitar instrument.
- Audio from the iPad's mic is passed through a comb-filter system and controlled with a simple set of slider GUI objects.
- Holding the device horizontally, using two or three fingers of one hand to repurpose slider controls into performance gestures.

# AUDIOBUS: INTER APP AUDIO (IAA)

- Audiobus - apps partitioned into input, effects and output slots.
- IAA allows single purpose apps to be chained together, like a guitarist patching together a series of effects pedals.
- Interconnectivity of apps - a way of regaining a sense of ownership over blackboxed systems?

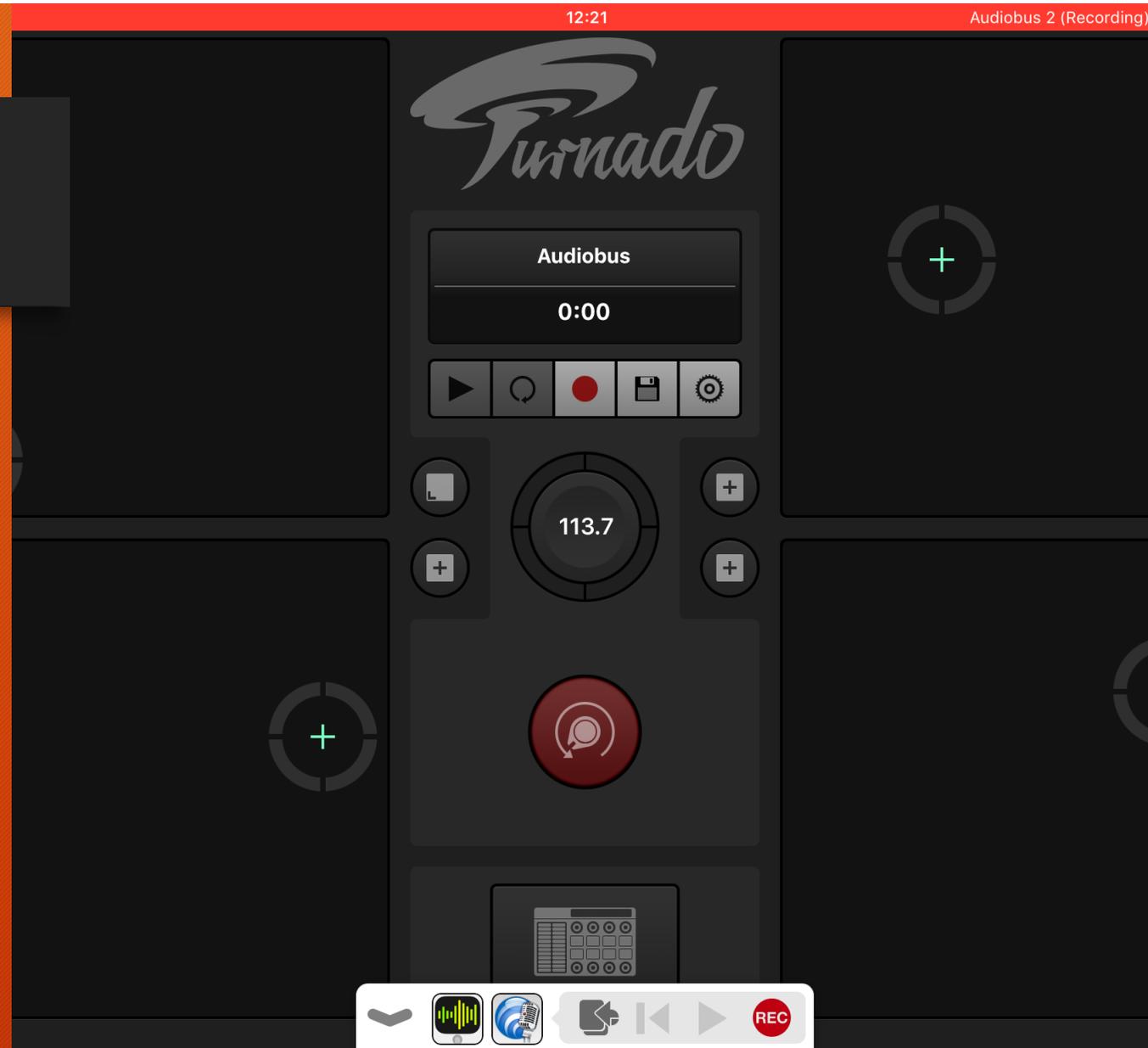


# HEADPHONICS: ON THE MÉTRO

- <https://steranko.tumblr.com/post/93402056898/soundwalk-metro-02>

# TURNADO'S GUI

- Four large, circular icons mapped to various audio effects.
- Option to fix the position of the icons or let them return to their starting point.
- BPM counter allows the overall tempo to be set by tapping or touching the surrounding edges.
- Red knob in the center is a reset button for all four circular icons.
- Thumbs are most efficient for making rapid movements across the screen's x and y axis.



# HEADPHONICS: ON THE MÉTRO

- <https://steranko.tumblr.com/post/111406063903/wintermetro-navigating-chatalet>



# QUESTION: IS THIS A PERFORMANCE?

- What is the significance of this experience of simultaneous recording, walking and making electronic sound?
- How can it be a performance if no-one is aware of it?
- Is it a performance space when there is no stage?
- Does this blur the boundaries between spectatorship and musicianship?

# THE SECRET THEATRE OF HEADPHONICS

- Pieter Verstraete argues a fundamental aspect of headphone mediated listening is its affordance of a secret theatrical experience.
- The user experiences listening and moving as a ‘secret theatre’, an experience that forges new relationships between the user, by-passers and their surroundings (Verstraete 2017:2).
- Brings us back to Hosokawa’s revolutionary text on the Walkman, revisiting his idea of portable music media (*musica mobilis*) in order to experience walking as a secret theatre.
- All passers-by are inevitably involved in the Walkman-theatre, as either actors (holders) or spectators (beholders) (*ibid.*:177).

Verstraete, P. ‘The Secret Theatre Revisited: Eavesdropping on Locative Media Performances’. In *Journal of Sonic Studies* (5), 2017.

# TECHNOLOGICAL REGRESSION?

- Generally, the technical development of an object is regarded as involving functional multiplication.
- The Walkman represents functional reduction, a technological regression.
- Constitutes a new paradigm owing to its 'revolutionary' effects on the pragmatic - not technical - aspects of urban musical listening.
- The device becomes an 'object at hand' (ibid.:168).

# ÉCOUTEUR OR VOYEUR?

- The privileged listener - *écouteur* (the eavesdropper).
- Elisabeth Weis equates the pleasure of *écouter* to voyeurism, a phenomenon central to the cinematic experience: “In every case the eavesdropper acquires some form of knowledge [...] a self-knowledge that the listener would not otherwise have recognised” (1999: 85-6).
- Michael Haneke’s *Code Inconnu: Récit incomplet de divers voyages* (2000) - the camera should not be understood as an absence of point of view, but rather as an additional presence.

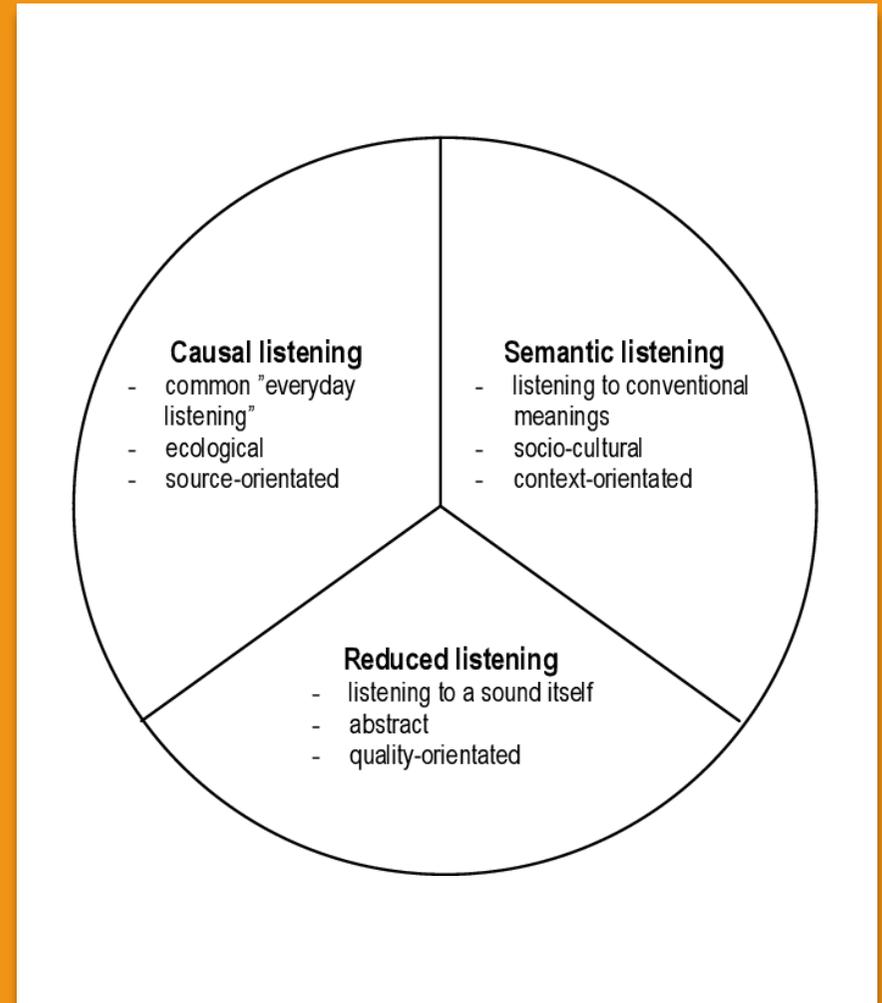


Walker Evans, Subway Photograph 1938

# SEMANTIC LISTENING

- Verstraete extends this concept to mobile music situations that produce a cinema for the ears.
- Michel Chion's three modes of listening; causal, semantic and reduced.
- Learning about the Parisian soundscape with displaced ears.
- The invisible mobile musician blurs the separate 'roles' of actor, eavesdropper, voyeur and audience.

Chion, M. Audio-Vision : Sound On Screen. New York : Columbia University Press. 1990.



# HEADPHONICS: A NEW MODEL OF INTERACTION

- No identifiable elements to mark out headphonic performance.
- No culturally understood gestures associated with music making.
- No traditional performance venue, the Métro carriage becomes the stage.
- The act of augmenting public and private spaces with itinerant electronic sound creates a new experience of these spaces.

# HEADPHONICS: A NEW MODEL OF INTERACTION

- When music-based activities are transformed into new ways of engaging with physical places, perhaps headphones can become closer to a 'phenomenal investigation, rather than a music of identification' (Bonnet 2016: 296).
- Instead of creating an experience distinct from the theatre, mobile music can return to theatre's most fundamental property; its ability to effect a transformation of perception.

Bonnet, F. *The Order of Sounds : A Sonorous Archipelago*, translated by Robin Mackay. Falmouth : Urbanomic. 2016.

# CONCLUSION

- Listening through a mobile device, using earbuds and inbuilt microphone to investigate unfamiliar environments.
- Paris Métro as a site and stage to research a performance system.
- GUI - less is more.
- The relationship between musician, device and physical movement brings about a transformation of perception.

THANK YOU  
MERCI

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