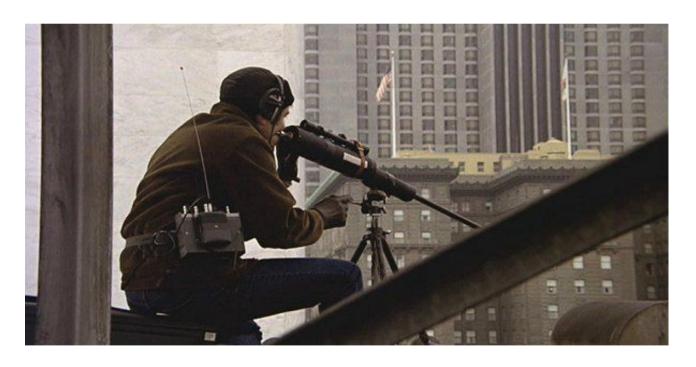
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Resonant concrete: building cinematic urban space through sound



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Prologue: the sound image

The **sound image** is an acoustic representation of an event, of a process or of a dynamic state of affairs (a place, for instance).

Unlike most visual images it is an image that unfolds in time.

A sound image is also somewhat a virtual image, in the sense that it must be reloaded and revived by the perceiver.

Sounds are very powerful fluxes, energies, materials with depth and density that cause real impact on the listener's mind. **They recall memories** and **produce**, most often involuntarily, many kinds of **images** and **strong emotions**.

For instance, if you think of a city you may consider its **soundscape** as a sort of sound image, a urban sound landscape, *i.e.*, the sound equivalent of the image of a certain urban territory.

Urban Soundscape

The canadian composer R. Murray Schafer coined the term 'soundscape' to define «any acoustic field of study». Inspired by *Gestaltpsychologie* theories concerning perceptual relationships between **ground** and **figure**, he provides some

Analysis parameters of a "soundscape":

- keynote sound (background sound) In acoustic ecology, 'tonality' is
 determined by the sounds which frequently or continually produce a sort of
 background sound, upon which other sound events (figures) can be
 perceived.
- *signals* (acoustic) Any sound or acoustic message (figure) which is salient from the ground and that is listened to consciously.
- soundmarks As 'landmarks', which are points of reference on a landscape, 'soundmarks' are also distintive sound marks of a specific place or community, which have a historical, cultura, symbolic or affective relevance.

Audio-visual perception and sound image

Cinema is not just a visual art, it is an audio-visual one.

"Films are 50 percent visual and 50 percent sound. Sometimes sound even overplays the visual." (David Lynch 1998)

That's why Michel Chion coined the term "audio-vision" as the specific perception mode of cinema (television, video). Visual image is still the conscious focus of attention but sound brings a series of effects, sensations and meanings that provide an added-value to what is being perceived on the screen. This added-value projected by sound on the image is sensorial, informative, semantic, narrative, structural and expressive (Chion 1994).

Daniel Deshays reinforces this relationship between sound and image saying that "sound nourrishes the image [and] the image specifies [clarifies]" what we listen to (Deshays 2010).

Film and the city



Louis Le Prince, Traffic crossing Leeds Bridge, 1888

Sound and cinema

Since 1895, adding sound to images had been a concern of adding sound to images - Thomas Edison's Kinetophone, for instance (and William Dickson's experiment) which combined the phonograph and the kinetoscope, but problems with amplifying sound and synchronizing it with image, among other issues, made it very difficult to convincingly establish an effective system of sound for film, which in no way means that cinema screenings were silent.





Sound in the silent film era

Screenings were often accompanied by music, mostly played live, but also recorded on disc, and sometimes even by sound effects, by narrators' voices that commented on certain scenes and sometimes improvised characters' voices.

City-symphony

Charles Sheeler & Paul Strand, *Manhatta* (1921)



Alberto Cavalcanti, *Rien que les heures* (1926)



City-symphony



Walter Ruttmann, Berlin: Symphony of a metropolis (1927)

City-symphony



Dziga Vertov, The Man with a Movie Camera (1929)

[Человек с киноаппаратом]

Resonant concrete

Sound-on-film

The difficulty resided, from the start, in synchronizing the recorded and projected images with sound: 1) the recording material for each was different; 2) it would took two different machines to reproduce them, and said machines would have to be perfectly in synch. The Vitaphone system had had some success in overcoming this difficulty (The Jazz Singer, 1927).

But another achievement had been accomplished before: that of registering sound optically on the film itself, namely through a process developed in Germany called Tri-ergon, which consisted in recording sound in a lateral stripe or track beside the photograms — which is where the term "soundtrack" originated.

The sounds coming from the street

Fritz Lang, *M* (1931)

[*M - Eine Stadt sucht einen Mörder* (A city looks for a murderer)]





Sounds coming from the (invisible) city

Robert Bresson, *Un condamné à mort s'est échappé* (1958)



The urban industrial soundscape

David Lynch, Eraserhead (1977)

A playful utopia of concrete, glass and asphalt



Jacques Tati, *Playtime* (1967)



The acoustics of the "Grands ensembles"

Jean-Luc Godard, Deux ou trois choses que je sais d'elle (1967)



"Apprenez en silence deux ou trois choses que je sais d'elle. Elle, la cruauté du néo-capitalisme. Elle, la prostitution. Elle, la région parisienne. Elle, la salle de bains que n'ont pas 70% des Français. Elle, la terrible loi des grands ensembles. Elle, la physique de l'amour. Elle, la vie d'aujourd'hui."

Epilogue: echos from the 'cité'



Matthieu Kassovitz, La Haine (1995)

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