

Acoustic
Ecology

Ecology

A close-up photograph of a large green leaf with prominent veins, set against a light blue sky background. The leaf is the central focus, showing its intricate vein structure and slightly serrated edge. The background is a clear, pale blue sky.

The study of the relationships between organisms and their environment.

Acoustic Ecology

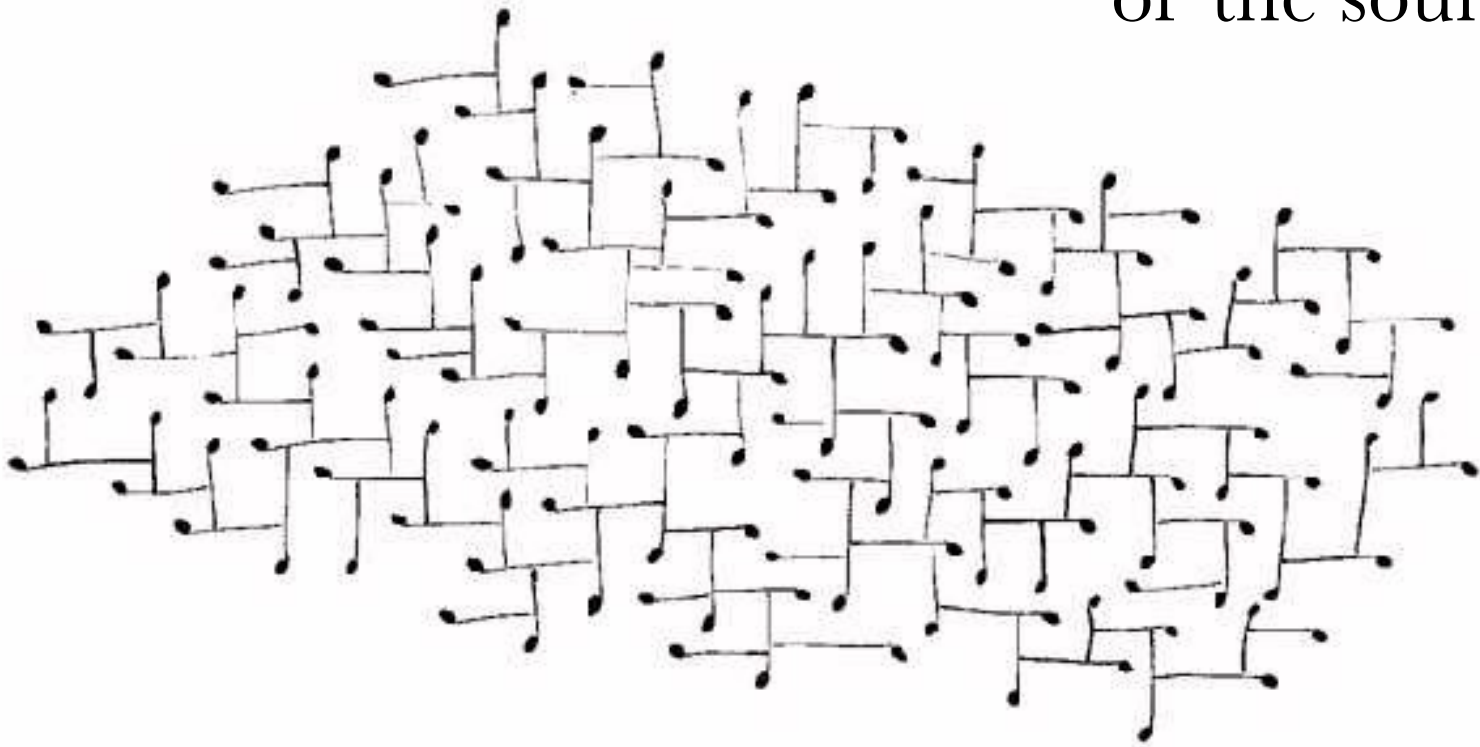
The study of the role of sound in natural habitats and human societies.

The identification, preservation, and restoration of natural and cultural sound environments.

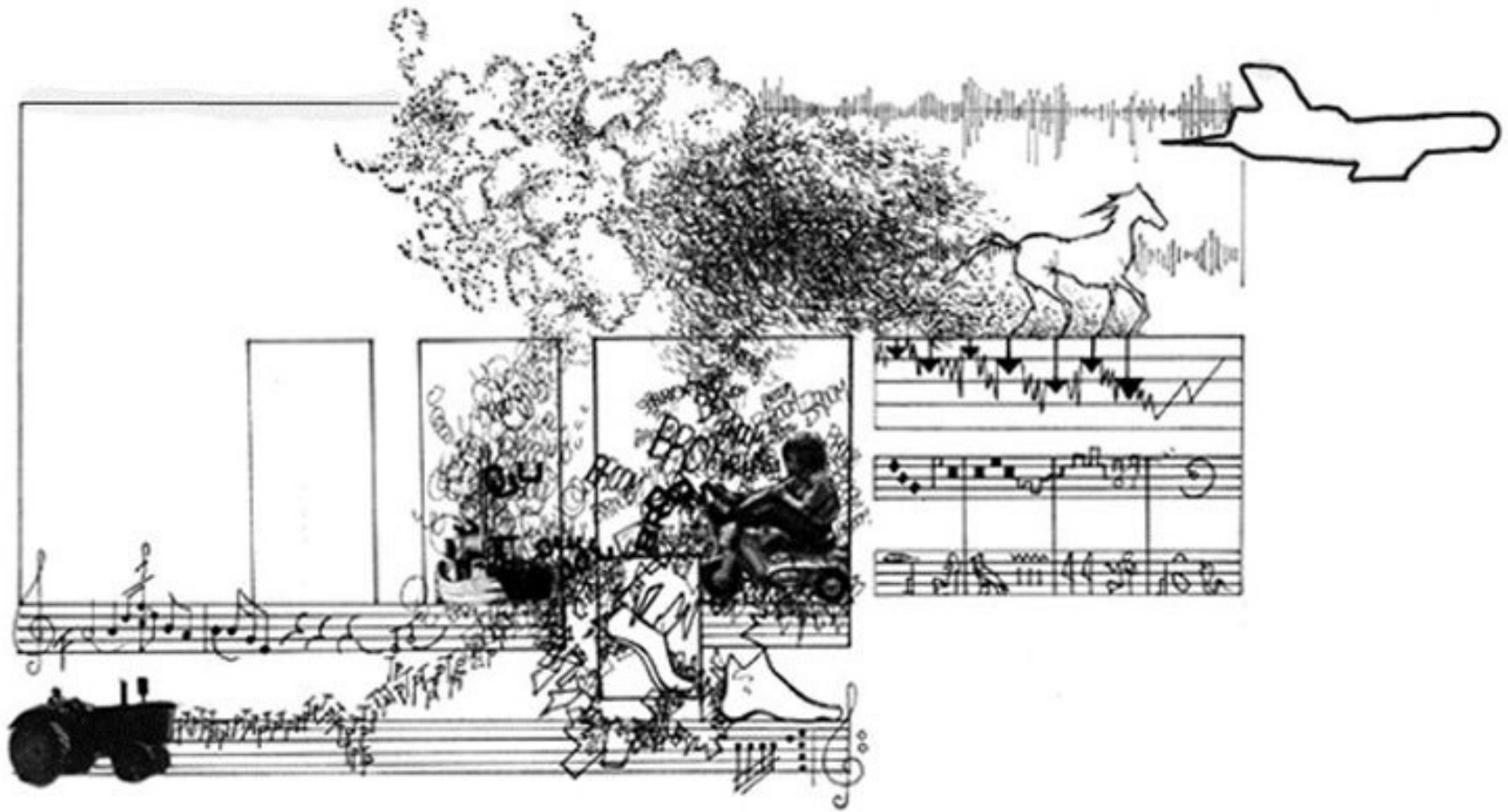


The **study** of the soundscape.

The active **critique** and **design**
of the soundscape.



The soundscape is a musical **composition**.



Rather than experience it passively, we are all **participants**,
invested in the well-being of the soundscape.

Our society is dominated by the visual

Eye Culture

at the expense of the aural.



Listening is a skill that needs to be practiced.

The passive act of HEARING vs.
the active process of LISTENING.

Sonic Literacy

Elements of the Soundscape

The background of the slide is a photograph of a modern building with a red brick facade and a grey section, set against a dark, stormy sky with green trees in the foreground.

Keynote

Signal

Soundmark

(boats in the marina, wind in the palm trees)

Keynote

Background Sounds

We may not always notice them,
but they are critical to the sonic character of a place.

Keynote

Related to the underlying note in music around which a composition is resolved.

Serves as the **GROUND** in the figure/ground relationship borrowed from visual art.

Has a deep and pervasive impact on our moods
and behavior.

Created by the specific geography,
climate, and infrastructure of the place.

Keynote

Sonic warnings or directional instructions (examples ?)

Any keynote (background) sound can become
a signal (figure) if we notice it.

Serves as the **FIGURE** in the figure/ground relationship.

Signal

Soundmark

Derived from “landmark.”

A natural or cultural sound in the community that has acquired special meaning and presence.

Waterfalls

Carriages in Central Park

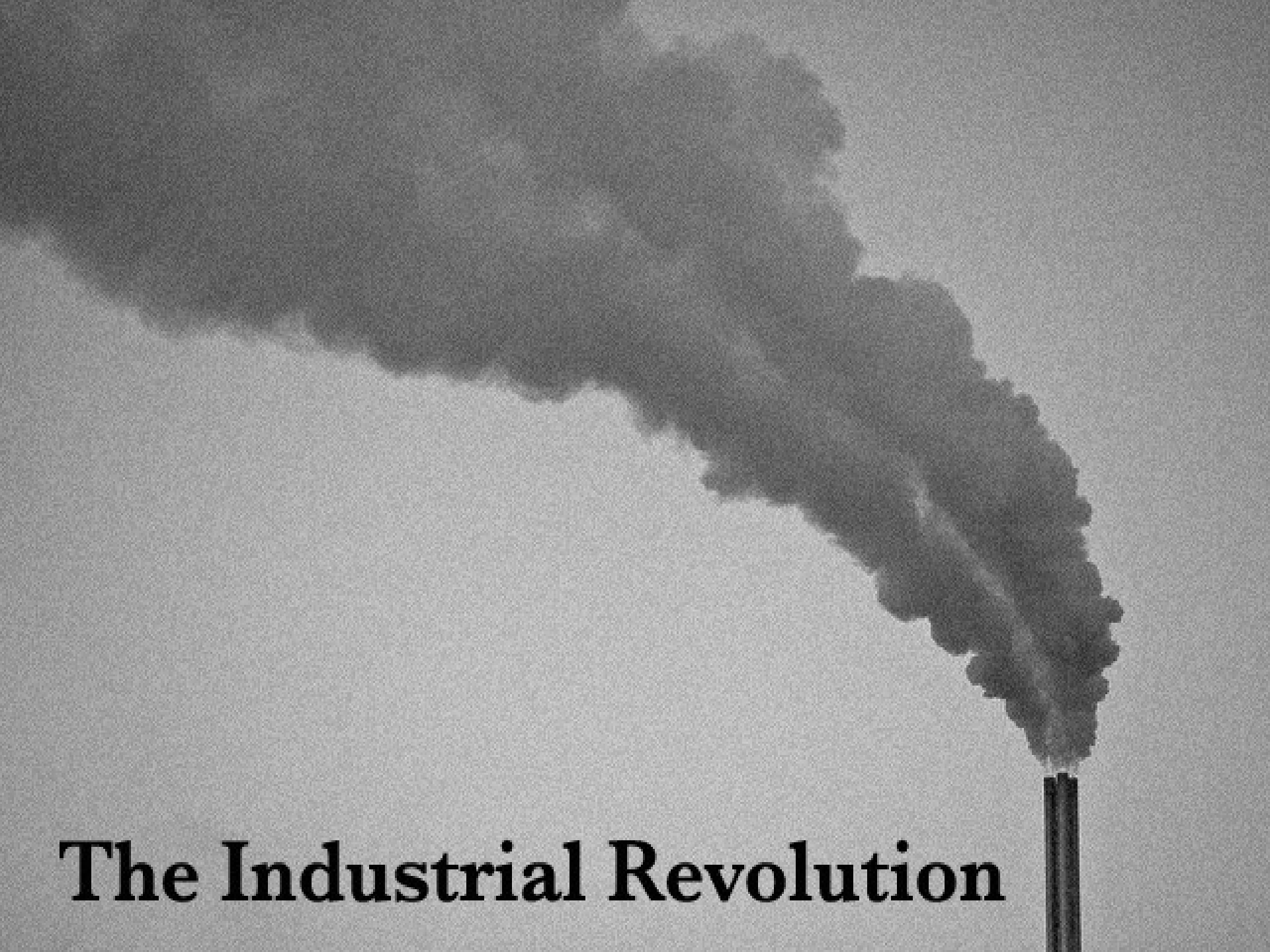
Calls to prayer.

The Soundscape =
Keynotes + Signals + Soundmarks

The Soundscape

Determines the sonic character of a place.

A place can be remembered more vividly because of its soundscape rather than its visuals.



The Industrial Revolution

High Fidelity

A crucial transition in the sonic architecture
of the planet and society.

(Mechanization, Electricity)

Low Fidelity

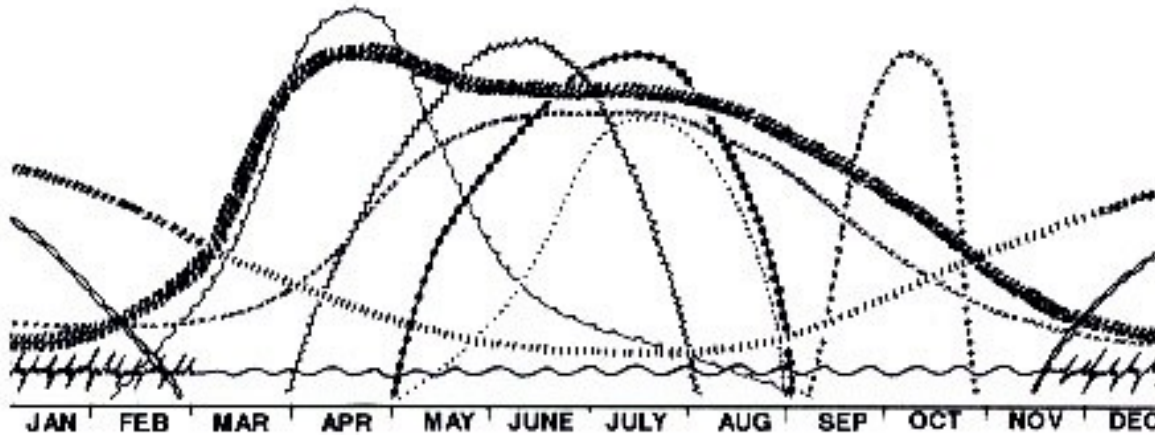
High Fidelity

Pre-Industrial Revolution sounds existed in a sonic space that allowed for clear audition and identification.

Sounds did not overlap very often.

Definitive figure/ground relationship.

High Fidelity



In hi-fi environments, the level of natural elements vary in repeating cycles.

High Fidelity

Vocal “give and take.”

Natural equilibrium in the sonic spectrum.

Animal and insect vocalizations occupy small bands
of frequencies.

High Fidelity

Spectral “niches” where wildlife can insert themselves to be heard.

Hi-fi characterized by a lack of **masking**, the covering-up of sounds by noise or other louder sounds.

This allows fewer sounds to fill the soundscape and still sound rich and vibrant.

High Fidelity

Lack of masking allows for acoustic coloration, echoes or reverb caused by natural surfaces, weather, climate, etc.

Coloration gives listener spatial clues to the listener about the shape and size of the space.

Fosters a sense of place.

Lo-Fi: as urban areas spread, the fidelity of natural sonic niches compromised.

Unique soundscapes, especially soundmarks, lost in a sea of noise.

A person's sonic "space" is reduced.

Low Fidelity

Lo-Fi: when you can no longer hear your own footsteps.

Individual sounds are submerged in the wall of sound.

The low-end rumble takes over, reducing the variety and nuance of sounds that by themselves could be wonderful.

Low Fidelity

Quiz. 1

1. List the three elements of the soundscape.
2. TRUE or FALSE: a **Hi-Fi** soundscape allows for a more definitive figure/ground relationship among sounds.

Credits

http://photo.net/photodb/photo?photo_id=3308095
<http://www.dogmediasolutions.com/sound-design.php>
<http://wfae.proscenia.net/>
<http://www.dijitalfix.com/blog/category/art-culture/inspirations/>
http://acousticecologyaustralia.org/?page_id=309