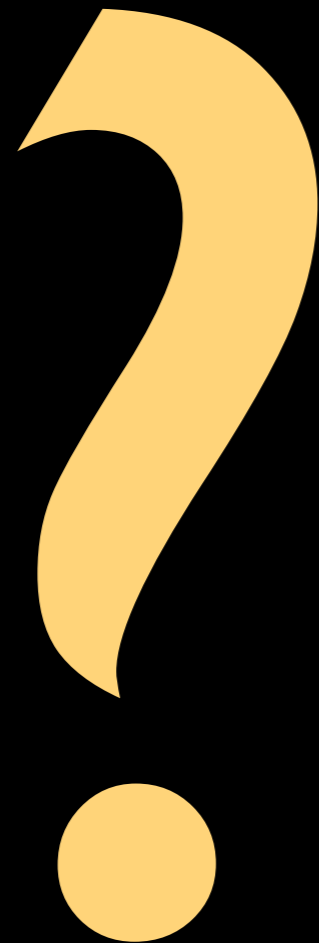


# Environmental sound

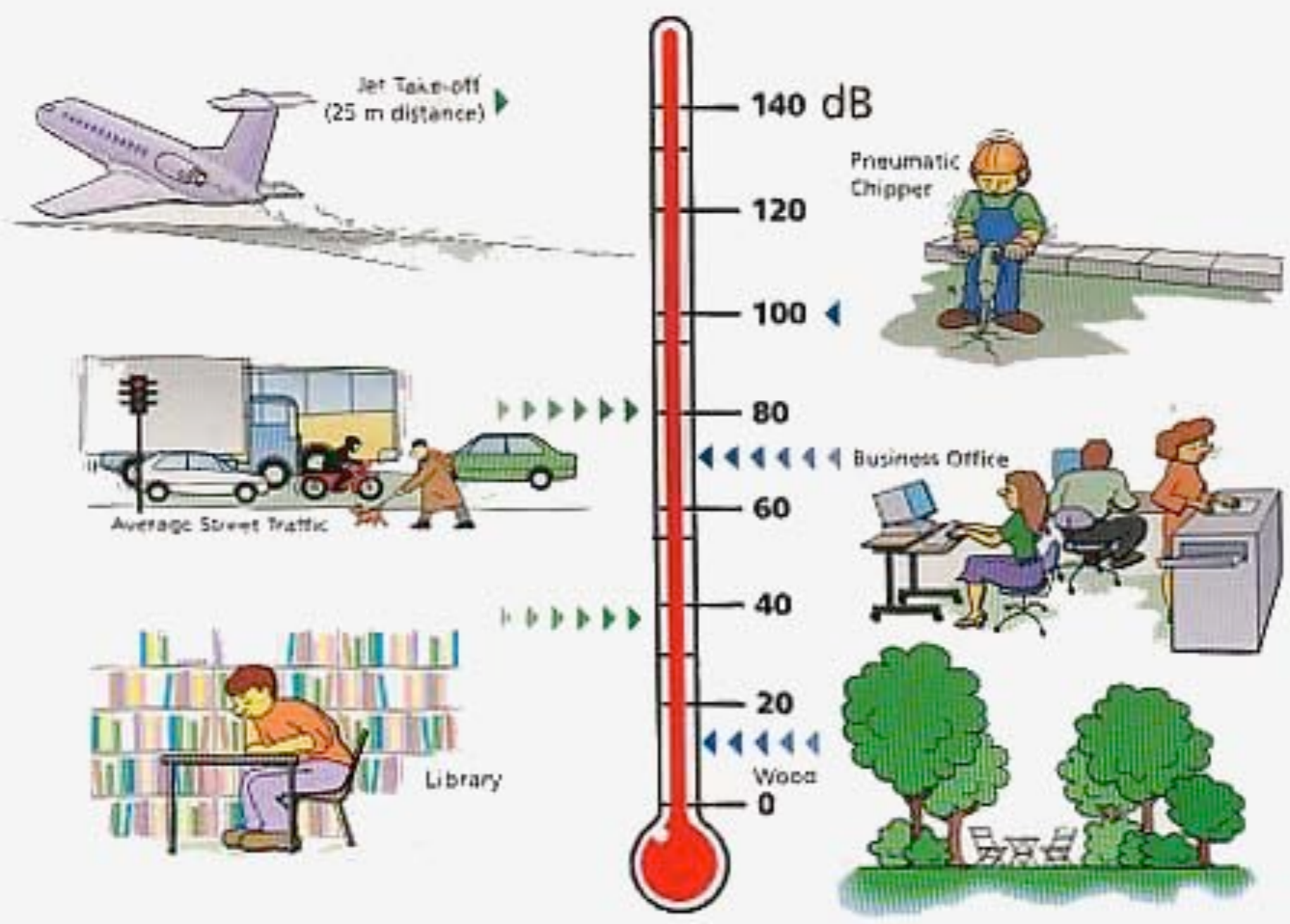
Alexander Refsum Jensenius  
MUS2800 Sound Theory I H2010  
University of Oslo

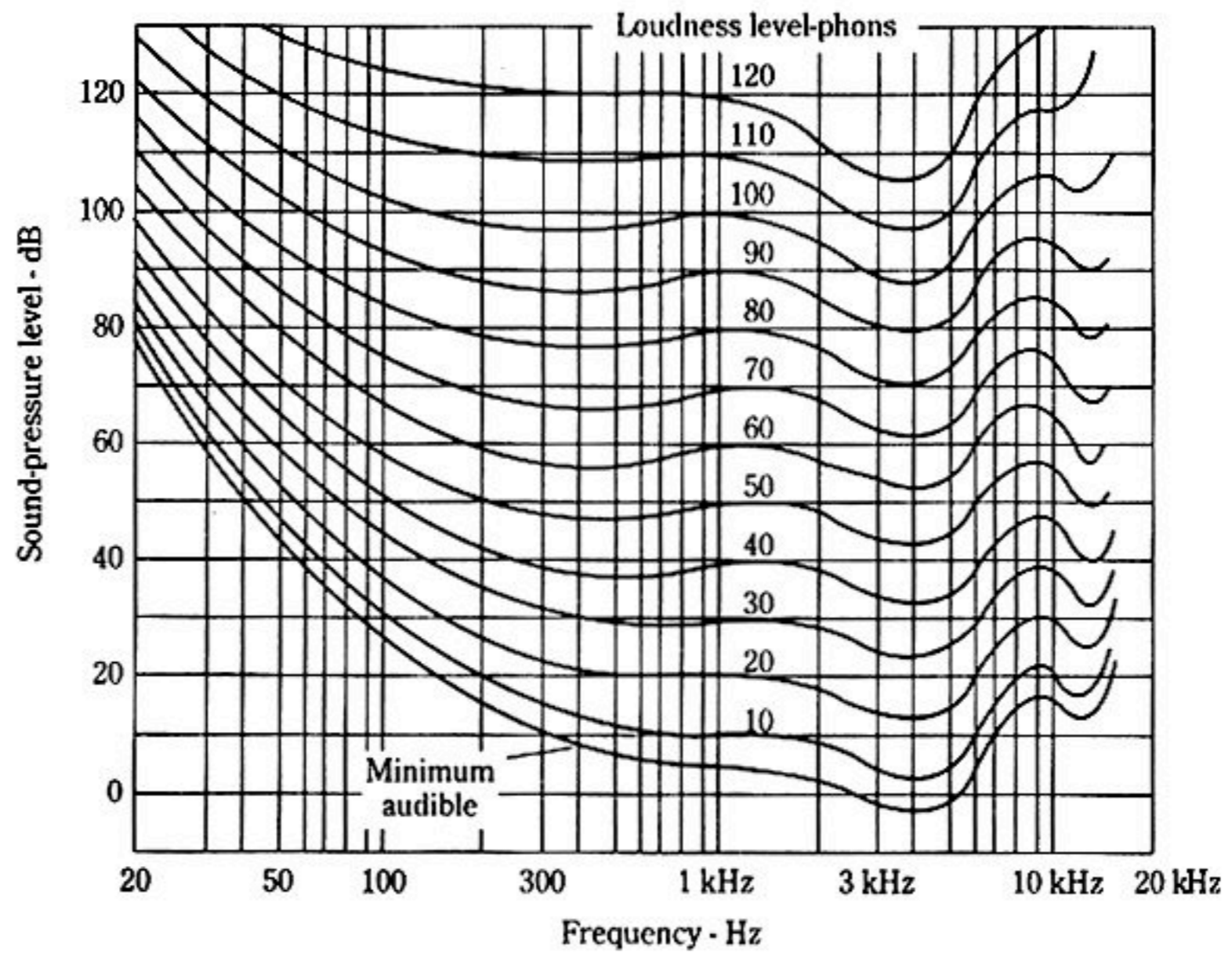
sound  
noise  
silence

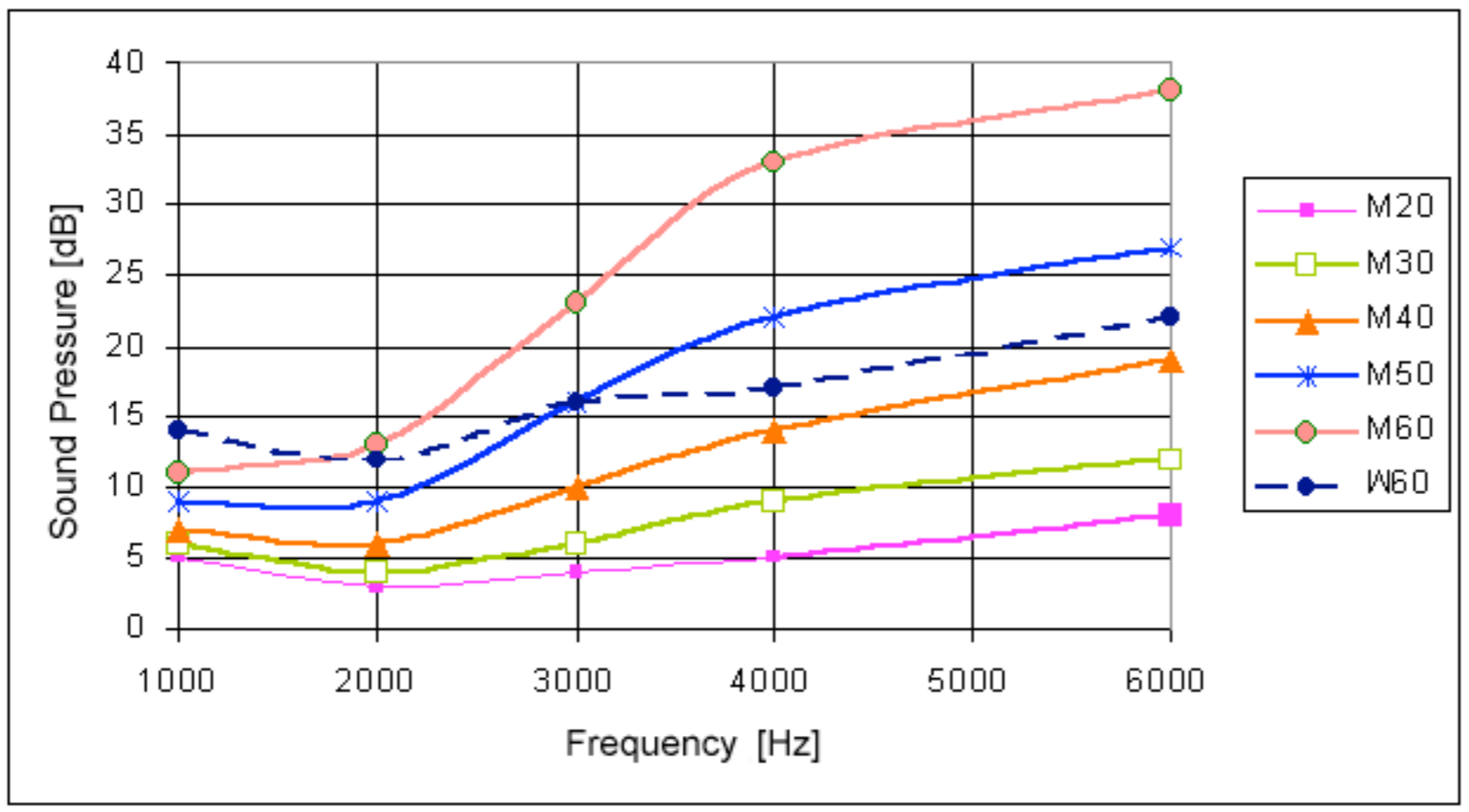
noise



unwanted sound  
unmusical sound  
any loud sound  
disturbance in any signaling system





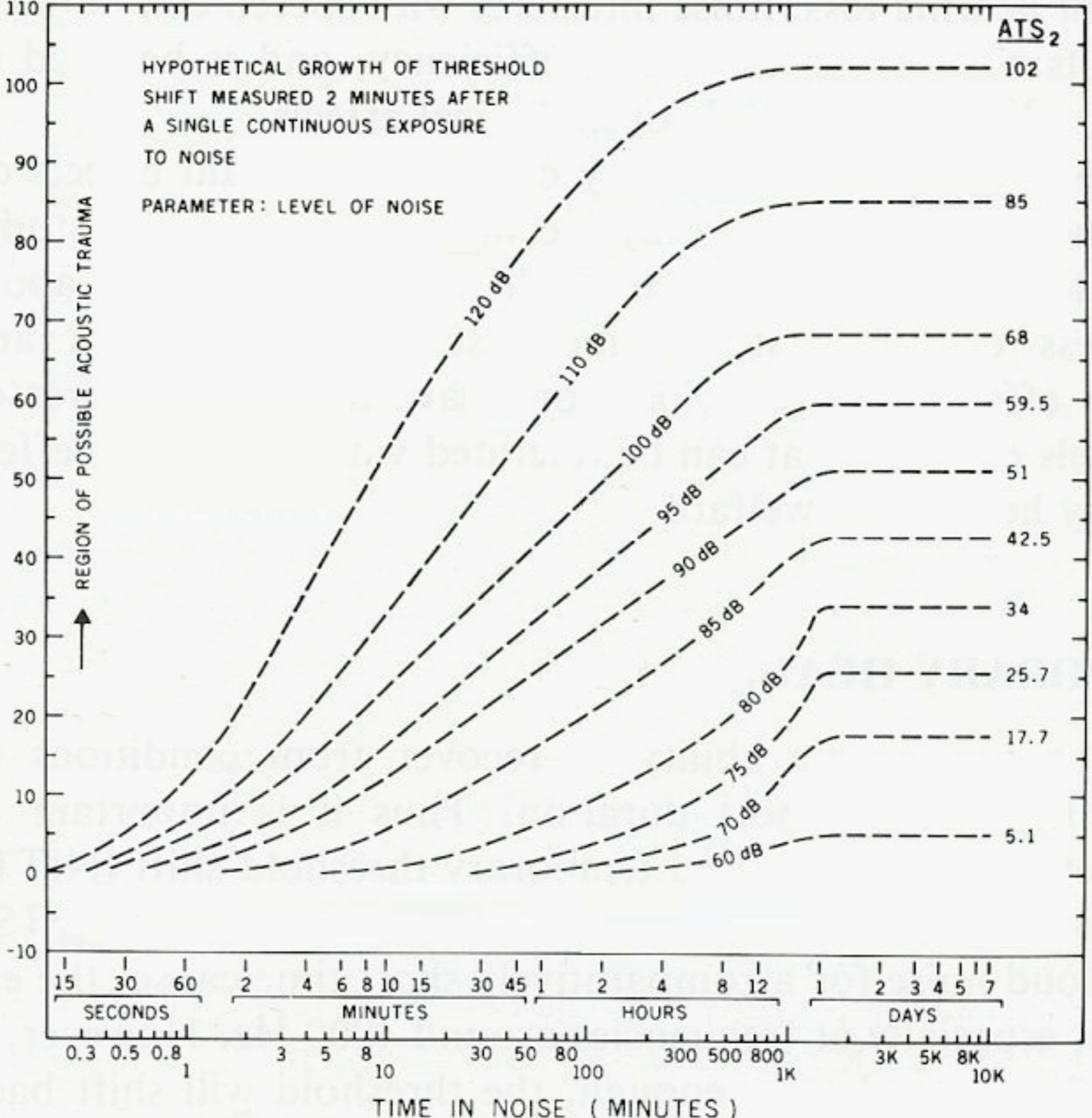


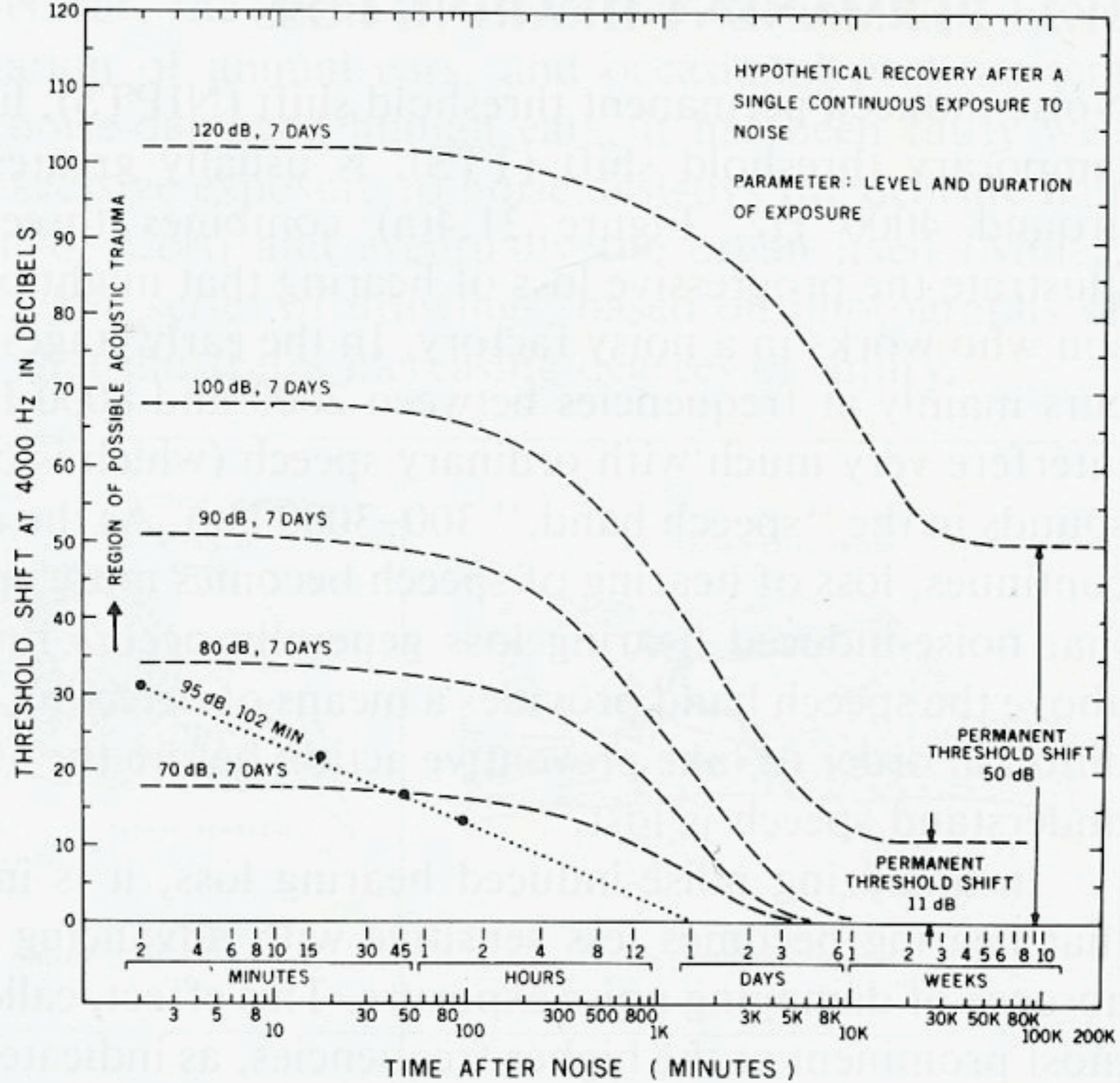
Hearing loss





THRESHOLD SHIFT MEASURED 2 MINUTES AFTER EXPOSURE AT 4000 HERTZ







Mild: 27 – 40 dB (adults)

Moderate: 41 – 55 dB

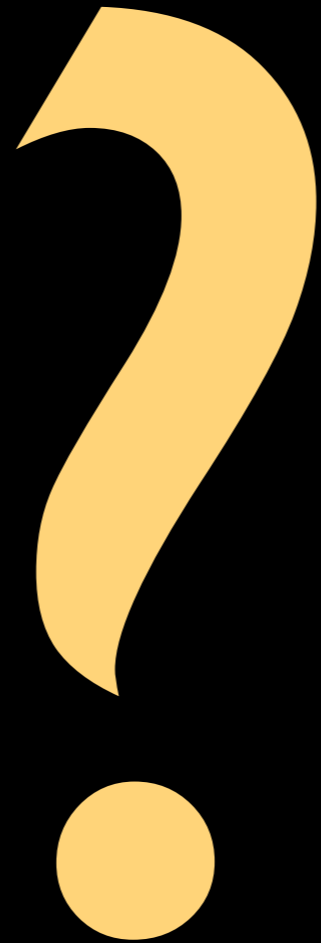
Moderately severe: 56 – 70 dB

Severe: 71 – 90 dB

Profound: 90+ dB

silence

what do you hear



silence

4'33''

<http://www.youtube.com/watch?v=hUJagb7hL0E>

listen











noise -> music

Pierre Schaeffer (1948): etude aux chemins du fer

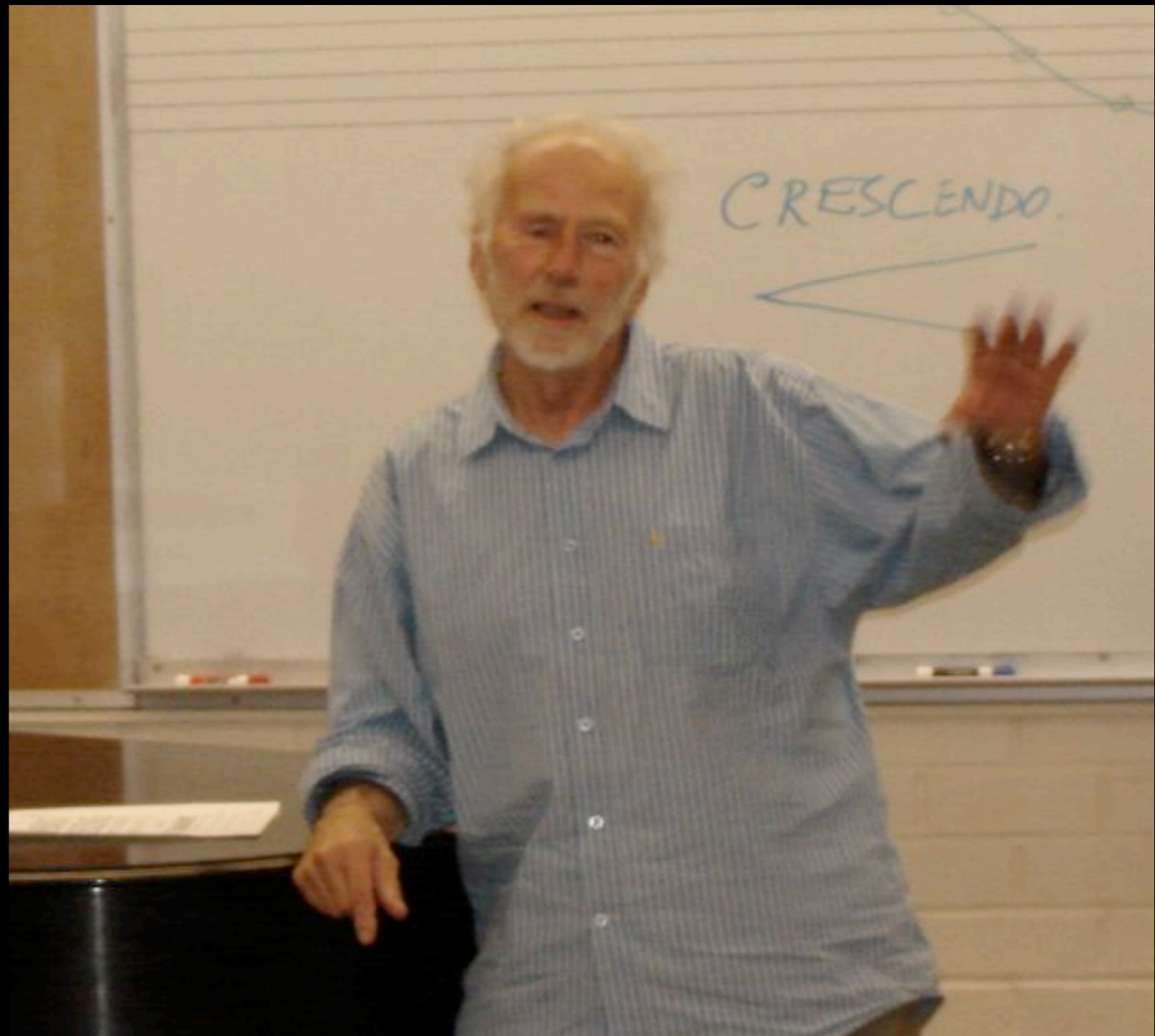
music -> noise

Muzak



soundscape

R. Murray Schafer



natural sounds

environmental sounds

Keynote sounds

Sound signals

Soundmark



acoustical ecology

## Acoustics

what sounds are  
physicist, engineer

## Psychoacoustics

how sounds are perceived  
physiologist, psychologist

## Semantics

what sounds mean  
linguist, communicator

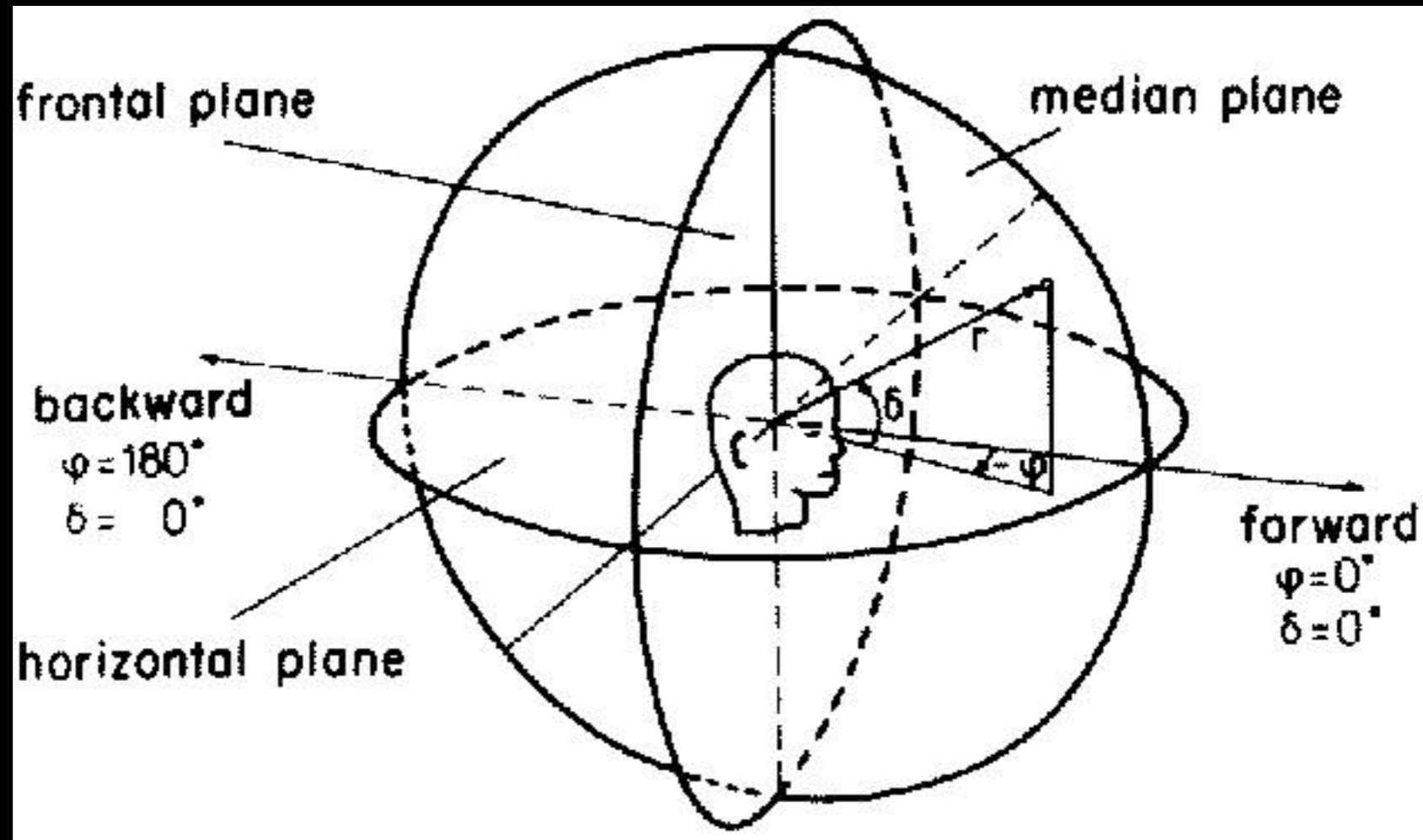
## Aesthetics

if they appeal  
poet, composer

Soundwalkers by Raquel Castro  
<http://vimeo.com/1737899>

# Spatialization







Multimodality

ecological psychology

James G. Gibson (1904-1979)

