Pre-birth - 2 hearts, all ears - learning CHILD MOTHER
Non-ear hearing: bone conduction, vibrations through bladder (28Hz), feet, hands: Laurie Anderson piece
LISTENING/HEARING = range of hearing based on BIOLOG necessity
* We live in a 3d sound world. Two ears and a brain interpret the combination of what we hear + what heads and outer ears mask and reflect. We are a differential detecting system, realtime rendering. designed to detect motion in all directions. SOUND OF STRESS. NOISES INTERTWINED. steady state? as a matter of survival, eat or be eaten.

3d world or 3d sound techniques, one system, ambisonic: x, y and z, + W axes
Hearing spaces Memory of sounds and spaces. Rhetoric. Orators.

Recording = 100 years Liberation of sound from Source
Written word, music notation, RECORDING/PHOTOG
Mono, stereo, surround sound recording and playback X, Y, Z, Cultural alternatives
DREAM SONG - SEANCE VS VISION
NEW DYNAMIC - now sound MOSTLY with movies, games and frontal entertainment,
3D sound presentation is a hot topic these days, do a quick Google search = Unlike surround and quadraphonic formats, 3D is not just in the ear level listening plane often w
= frontal experience on screen or stage. Many 5.1 surround mixes: "the best seat in the house.”
= up/down z axis, dramatic possibilities, no fixed front and back.
= is to surround ambiances as swimming is to a shower.

TRAIN

3D sound vocabulary -
a) 3D recordings, B Format. convolving sound. parallel to video green screen, 30 years of history. recreate location ambience on demand, audio translocation:
3D sound track for a forthcoming independent feature film.
PLAYGROUND
HALLS - ACOUSTIC MODELING
COMET, FIRE, WATER
MOTORCYCLE - virtual horizon.

3D Cubes sweet spot at center point where beams converge, visceral effect. heard to be inside the listener.
IN THE MUSIC, IN THE SOUND.
CUBE DEMO
BEES
A 3D work scales to different sizes, the Master from the studio is shapeable
Content determines spatial results.
b) Creating, mixing in 3D. Placing sounds and moving them spatially in new compositions and mixes.
Recreating the past for museum and education, entertainment. ANIMIX, Sonic Image, HURON
SCALABLE
c) combinations of techniques a and b
d) mixtures of spatialized sounds and computerized projection architectural spaces as multimedia spaces. Here minimal images with spatial sound tell stories + deliver messages on architectural surfaces, alternative to large screen production. atrium experiences.

CMA studios create and master 3D works. Lake Technology spatializers. MAX/MSP and SPAT & ProTools and Logic.
KITCHEN SHOW

FUTURE: LOSS OF HEARING, BEARINGS - normalizing human audio system in nature.
More typing + hand/body signals
ENVIRONMENTAL LAW
DESIGN OF EVERYTHING = whose dream sound?
LAST BREATH