How do individual headphones influence the socialization of a community through its shared environment? This research looks at portability, public and private spaces, types of devices, and change over time to formulate an understanding of peoples' experience with others and music. Based on social findings and user interests, headphones have typically isolated the individual from public interaction Design offers an opportunity to plug back into public life. The outcome of this investigation provides hybrid of a shared yet personal space that encourages engagement via music to alleviate

### Jose Molina Professor Zaid Qureshi Gerald D. Hines College of Architecture and Design

Opera Hall ANCHORED

EVOLUTION OF HEADPHONES

KOSS SP-3

1st Stereo Headphones (Live sound experience) "Private Listening System" Attached to Home's LP **ANCHORED** 14

KOSS ESP-6 1st Electrostatic Headphones [Decreases distortion] 2 lbs

ANCHORED 14

PUBILC VS PRIVATE

Sony The Walkman Less than 50 grams PORTABLE 14

2001

12 grams

PORTABLE 14

# 2008

BEATS HEADPHONES Beats by Dr. Dre 7.58 oz PORTAB<sub>4</sub>E

## NEUROSCIENCE

# NUCLEUS ACCUMBENS

This part of the brain contributes to the "reward's circuit" which activates behavioral conduct like motivation and desire. It utilizes high levels of the chemical **DOPAMINE** during satisfying activites (drugs, sex, food). 9 10

Dr. Valorie Salimpoor of McGill University in Montreal, Canada conducted a series of experiements which resulted in direct correlation between music, nucleaus accumbens, and dopamine activations. 8

The study included 20 people who listened to never before heard music that fell under their preference. They listened to 30-second clips and their brains were later scanned. 8

DOPAMINE

n. "a neurotransmitter that helps control the brain's reward and pleasure centers. Dopamine also helps regulate movement and emotional responses, and it enables us not only to see rewards, but to take action to move toward them."

HEADPHONES USAGE

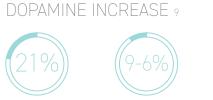
WHAT DO YOU USE YOUR HEADPHONES FOR?

Psychology Today 5

CAUSES: Pleasure

LACK: Depression, Addiction. Alzheimer's, Parkinson's RIGHT AMOUNT: Risk-takers, Sensation-seekers, Motivation Expectation 4 EXCESS: Euphoria, Aggression, Drug Effects 4





**PSYCHOLOGY** 

REWARD = ANTICIPATION 17



### STATIONARY VS PORTABLE



Emilie Berliner The Gramophone Co. Delicate to movement 1

VINYL RECORD

**2840 lbs** 13

Company Services

Columbia Records Dr. Peter Goldmark



MOTOROLA (5271 prototype) Paul and Joseph Galvin 1st car dashboard radio Attached in Studebaker



3.96 in x 2.5 in 1.48 oz 6 RADIO RECORDER 19 69 (BOOMBOX) Philips

Handle 6.608 lbs Any Batteries 15 THE WALKMAN (TPS-L2)

Sony

Fidelipac cartridge

Belt Clip 14 ounces 2 AA Batteries COMPACT DISC (CD)

Philips and Sony 4.72 inches .58 oz 11

THE DISCMAN (D-5) 20.8 oz 6 C Batteries

Steve Jobs' Apple 6.5 oz .78 inches thick 10-hour battery life 12

itunes Apple MP3 format Digital data No Weight 12

BEATS HEADPHONES Beats by Dr. Dre 7.58 oz

SPOTIFY Daniel Ek & Martin Lorentzon Streaming

No Weight PILL SPEAKER Beats by Dr. Dre 10.93 ounces Rechargeable

Lithium ion

30, 2017. Accessed September 13, 2017. https://www.thought co.com/emile-berliner-history-of-the-gramophor e-Cole, Samantha. "How Music Affects Your Productivity." Fast Company. January 21, 2015. Accessed September 18, 2017. https://www.fastcompa

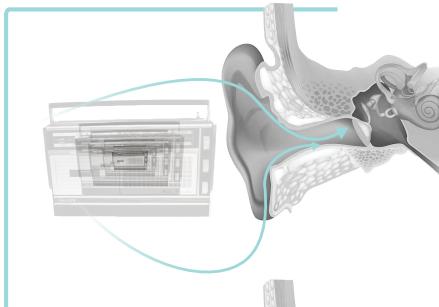
3. Dave. "The Headphone Breakdown." Metal-Fi. June 11, 2014. Accessed Septer ber 12, 2017. http://www.metal-fi.com/headphone-breakdown/. . Deans, Emily. "Dopamine Primer." Psychology Today. May 13, 2011. Accessed 5. "Dopamine." Psychology Today. Accessed September 18, 2017. https://www.psy

5. "History of Compact Cassette:." Vintage Cassettes. Access<mark>e</mark>d September 12, 2017

"Invention." History of the LP Record. Accessed September 12, 2017. http://lpre

and SELF

1 PERSON



MORE PERSONAL Family gatherings Small rooms

1-4 PEOPLE

Auditoriums

Restaurants 3-50+ PEOPLE



Car space



leighborhood Streets Jrban Streets -10+ PEOPLE



Sense-of-being 1 PERSON [Public still heard]



[Public still heard]





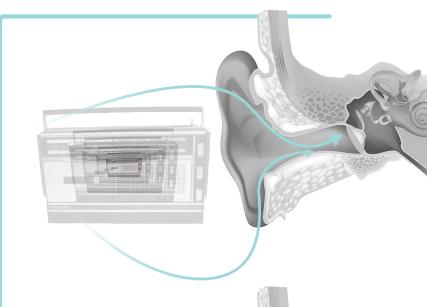
Mind 1 PERSON [Public NOT heard] Closed off



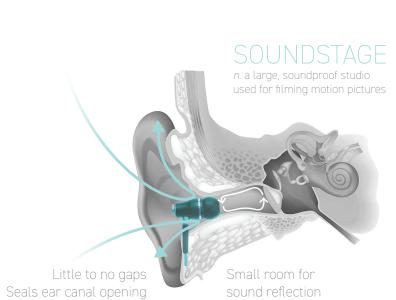
Bedroom Small setting -10 PEOPLE



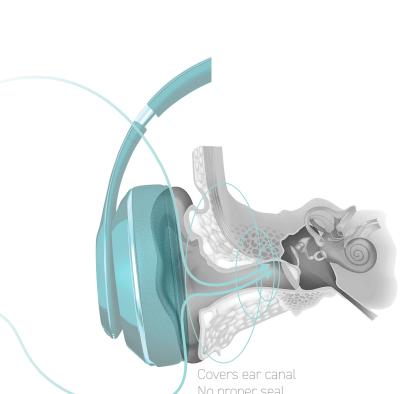
Ambient Noise



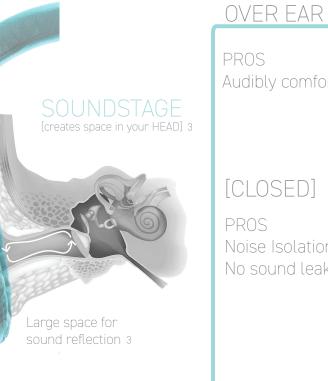
CONS Painful Shape

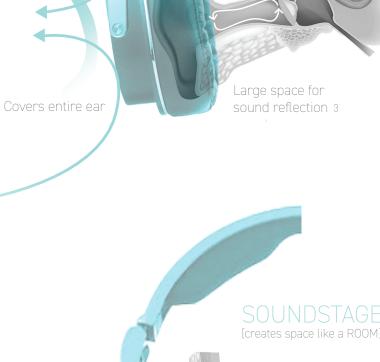


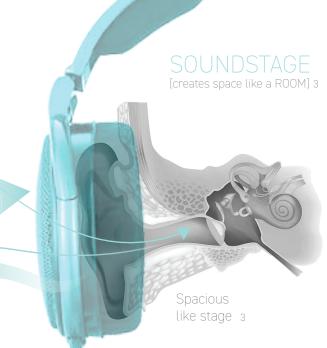
PROS Lightweight No ambient noise Popular



PROS Low music Lightweight Foldable Design







### FREE, OPEN EAF

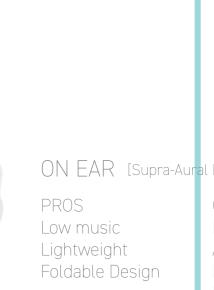
PROS CONS Forced Music Healthy Social Connection Barrier Connection Facilitator

EARBUD [Intra-Concha Headphones]

PROS small estate Outside Noise Heard portable Ergonomically unfit cheap











High fidelity music



ON EAR [Supra-Aural Headphones] CONS Low quality music Ambiant noise Ear irritation Moisture & warmth

## PROS PROS Noise Isolation No sound leakage

PROS

CONS Heavy (neck ache) Not easily portable Ear Dampening

Not easily portable

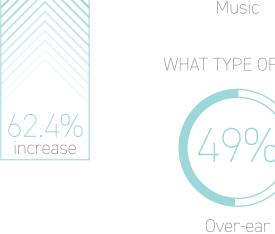


ON-DEMAND AUDIO STREAMS

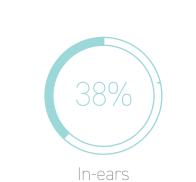
2017

2016

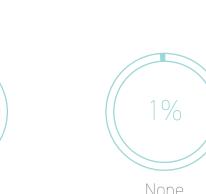
streams







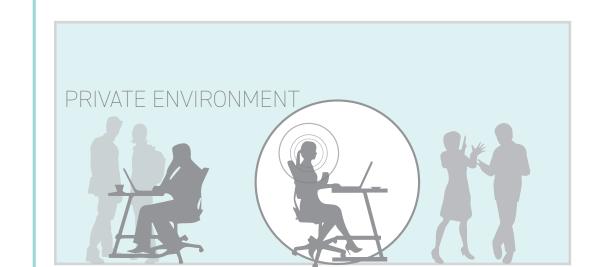




Quality:



Conversation. Open. Connection, Distraction



Personal space. Closure. Disconnection, Relaxation

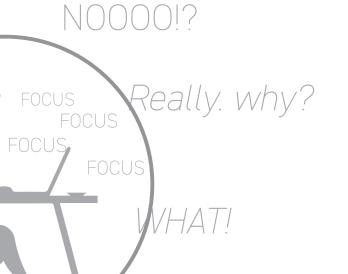
LANGUAGE TASKS:

Prevents absorption

Instrumental music 2

Slows output

LYRICS N0000!? Its due



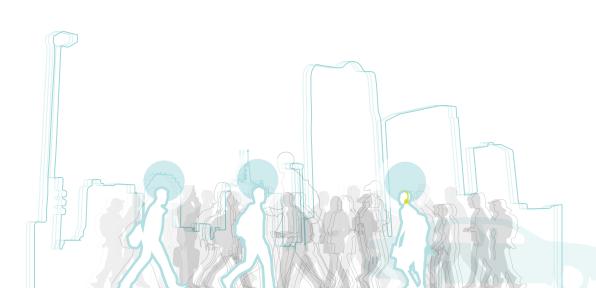




Earbuds

Elements: Cityscape Running cars People

Dense Tight Distracting Conversation Reality Movement Participatory



PRIVATE ENVIRONMENT Elements: Quality: Your being Dissolution Imagination Introverted Thoughts Observation Aloof



PUBLIC MUSIC Boombox Others'

SHARED Uncontrollable personalities Attractive Repulsive

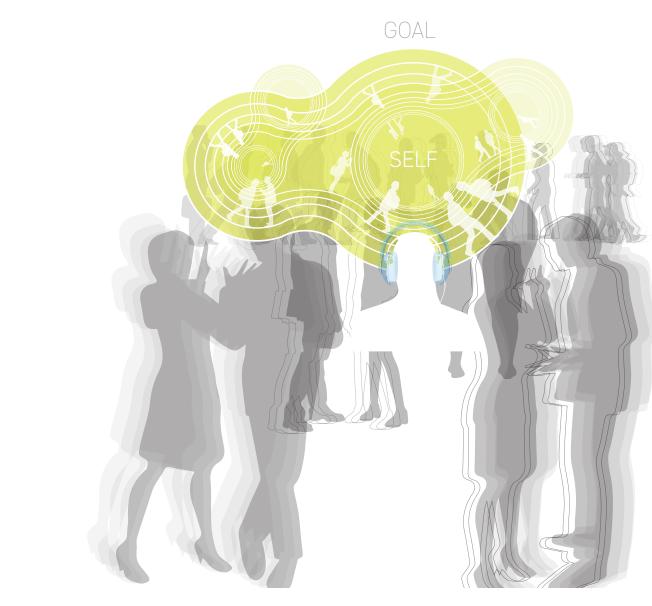
PRIVATE MUSIC Elements: Your music Your identity

Quality: Decided ALONE Controllable Anti-social

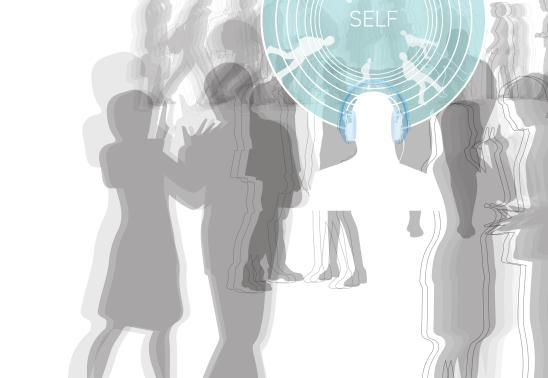
Quality:

FORCED









Constant

Air flow