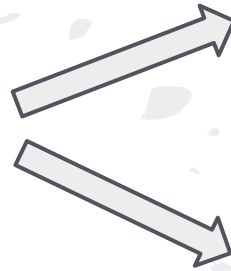


Value-Sensitive Design

Informatics 161: Group 2

Overview

- What is Value Sensitive Design (VSD)?
- Definition of values
- Tripartite Methodology
 - Conceptual
 - Empirical
 - Technical

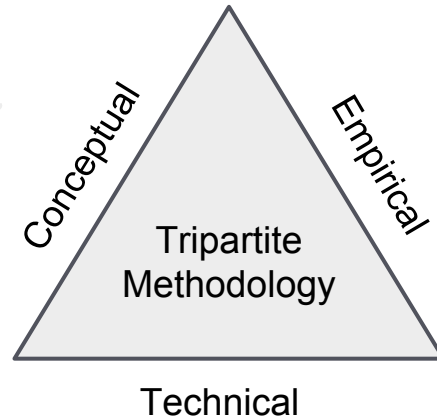


HUSH

HORIZON

What is VSD?

- Design approach that keeps human values at the forefront of the design process



What values?

“what a person or a group of people consider important in life”

e.g. privacy, ownership and property, physical welfare, freedom from bias, universal usability, autonomy, informed consent, trust or nice manners, art, morning tea, friendship etc.

Conceptual Investigations

- Identifying & understanding stakeholders
 - their values
 - values conflicts that might arise for these stakeholders through the use of the technology
 - identify if moral values \geq non-moral values?

Empirical Investigations

- qualitative or quantitative design research studies
 - inform the designers' understanding of the users' values, needs, and practices
- “How” questions
- Takes a social science approach:
 - focus on the groups that *use* the technology
 - what people say vs. actually do
 - which values do people consider throughout the design process?

Technical Investigations

- Examination of how existing systems reflect human values
- Design of the systems to support values identified in the conceptual and empirical investigations

The World's First Smart Earplugs.

“Hush lets you block out all the noise that keeps you up at night while letting you rest easy knowing that you’ll still be woken up by the things that matter most.”



HUSH

Conceptual Investigations

Stakeholders:



The creators/managers

Consumers



Backers

HUSH

What matters?

Creators/Managers:

Cost efficiency, funding, social responsibility, perceived brand value

Consumers:

Need for selective sound blockage, safety, durability, affordability, comfort, health impacts, brand image, aesthetics, compatibility/sync with devices

Backers:

Profitability, success, return on investment

HUSH

Possible conflicts

- *Safety: In case of fire breakout > burnt to death*
- *Over-reliance on other devices > what if battery of phone dies/bad connectivity? (e.g. for alarm clock/phone calls)*
- *Fitting of ear device > subjective for individuals*
- *Free returns > affects profitability?*

HUSH

Empirical Investigations

- *Will the earplugs be comfortable?*
 - *“The process was highly iterative as we had multiple people sleep through entire nights with the prototypes to provide real-world feedback so that we could learn and adjust accordingly.”*
- *What if the batteries die while I’m sleeping?*
 - *The Hush device can stay powered for over 10 hours*
- *What if I misplace the earplugs?*
 - *Using the Hush App, you can make your Hush emit a sound that you can track*

HUSH

Empirical Investigations

Hush “tested almost every foam earplug [they] could find on the market and 3D printed hundreds of housing shapes to find the ideal design that would accommodate a broad range of ears.”

HUSH



Memory Foam

Heat-sensitive memory foam molds to the inside of your ear to provide a secure but comfortable fit

Silicone Padding

Contoured silicone material provides ergonomic cushion for side sleepers

Angled Design

Reverse angle speaker port follows natural curve of ear canal

Curved Exterior

Rounded back allows freedom to roll around while sleeping

Technical Investigations

Systems Design: Peace of mind, power conservation, comfort, convenience

- *Hush App on phone syncs to earbuds and sets an alarm*
- *Conservative use of power allows for over 10 hours of battery life*
- *If there is no response to the first alarm in 30 seconds, a failsafe alarm is issued on the phone*

HUSH

HORIZON



*“Never look down to test the ground before taking your next step; only he who keeps his eye fixed on the far **horizon** will find the right road.” -Anonymous*

HORIZON

- Mobile app for college students
- Guides a student in achieving his/her goals
 - Academic and social
- Maximize student's life
- Increase involvement in activities

Values

Balance

- Finding a medium between academic and social life

Self-Fulfillment

- Reaching one's full potential

Organization

- Recordkeeping one's daily, weekly, and monthly agendas

Conceptual Investigations

Creators

- Fulfilling social responsibility and providing guidance

Consumers

- Focused path in college, improve time management, de-stressing, decluttering, challenging oneself, and organization

Backers

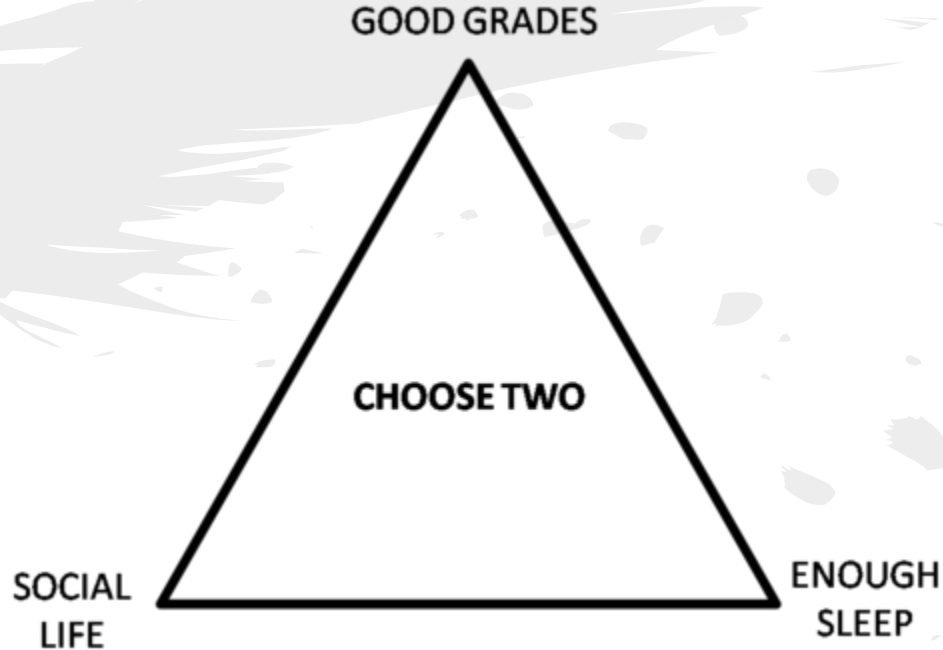
- Profit, return on investment, success, and longevity

Empirical Investigations

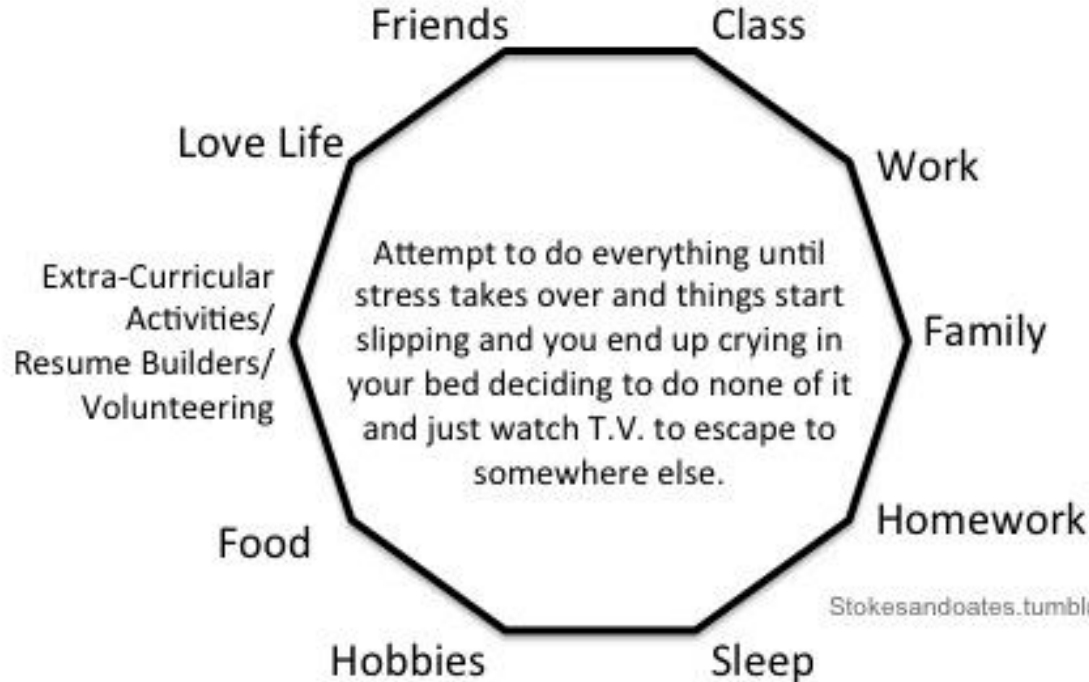
Questions

- What have you done this week?
- What do you plan to accomplish this month?
- When was the last time you found time to be social?
- Are you satisfied with your answers?

Empirical Investigations



Empirical Investigations



Empirical Investigations

Assumed Responses/Results

- “...class, meal with friends, and worked.”
- “Get by with classes.”
- “O my god... good question” / “Last night/Last weekend/Right now”
- (both sides of the spectrum)

Technical Investigations

What makes an existing planner successful?

- *Stylish?*
- *Format of the interface?*
- *How feasible or convenient is it to use?*
- *How will we help the student organize different activities?*
- *How will we help the student distinguish between social and academic goals?*

Values

Balance

- *Allow both a separation and integration of academic and social life*

Self-Fulfillment

- *Having enough space available without it being demoralizing*
- *Inspire the student to actively fill in goals and accomplishments
(i.e, daily inspirational quotes)*

Organization

- *Split into weekly vs. monthly for short term vs. long term goals*



Any questions?