

# ENCHANTED OBJECTS

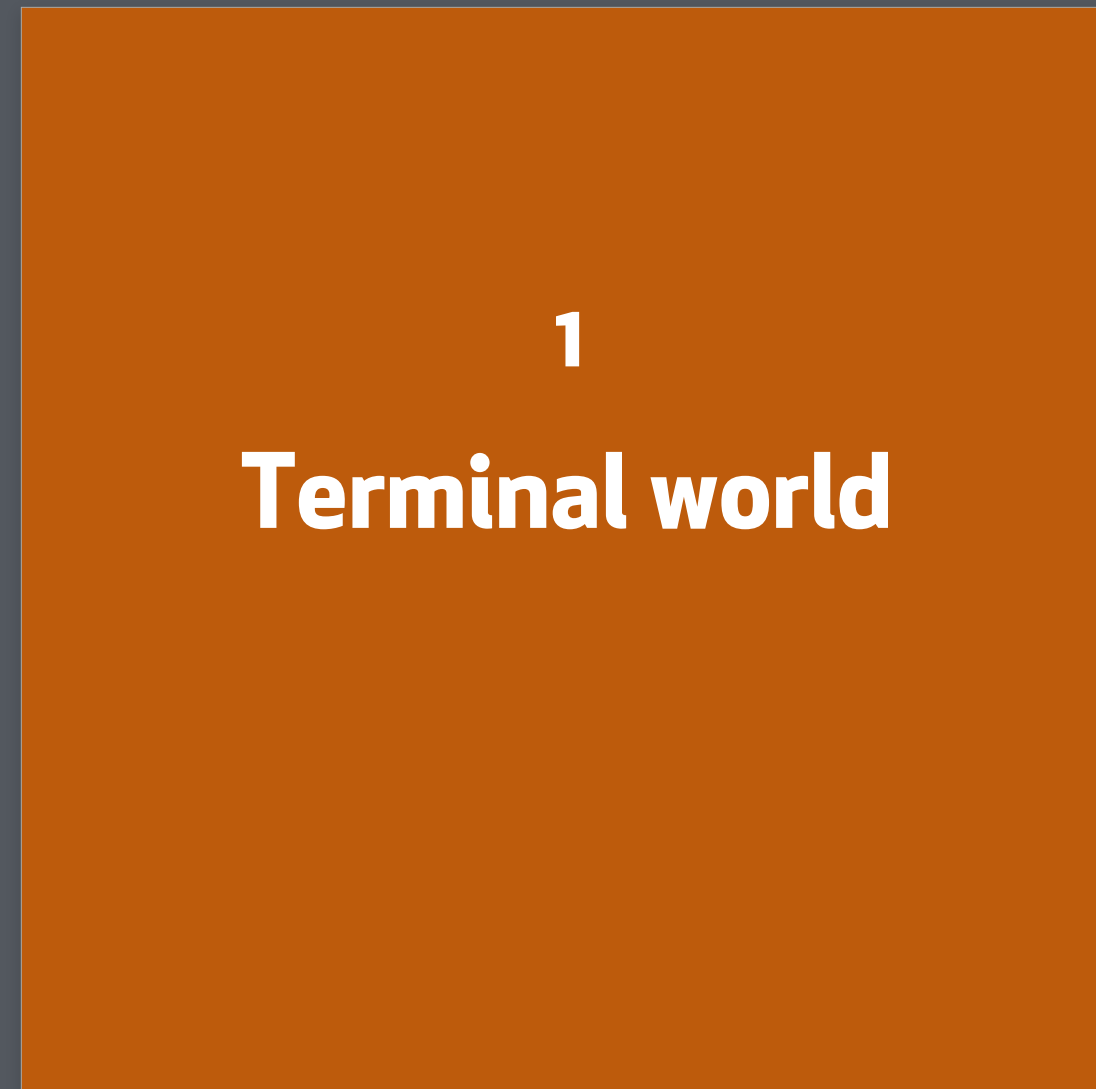


@DavidRose

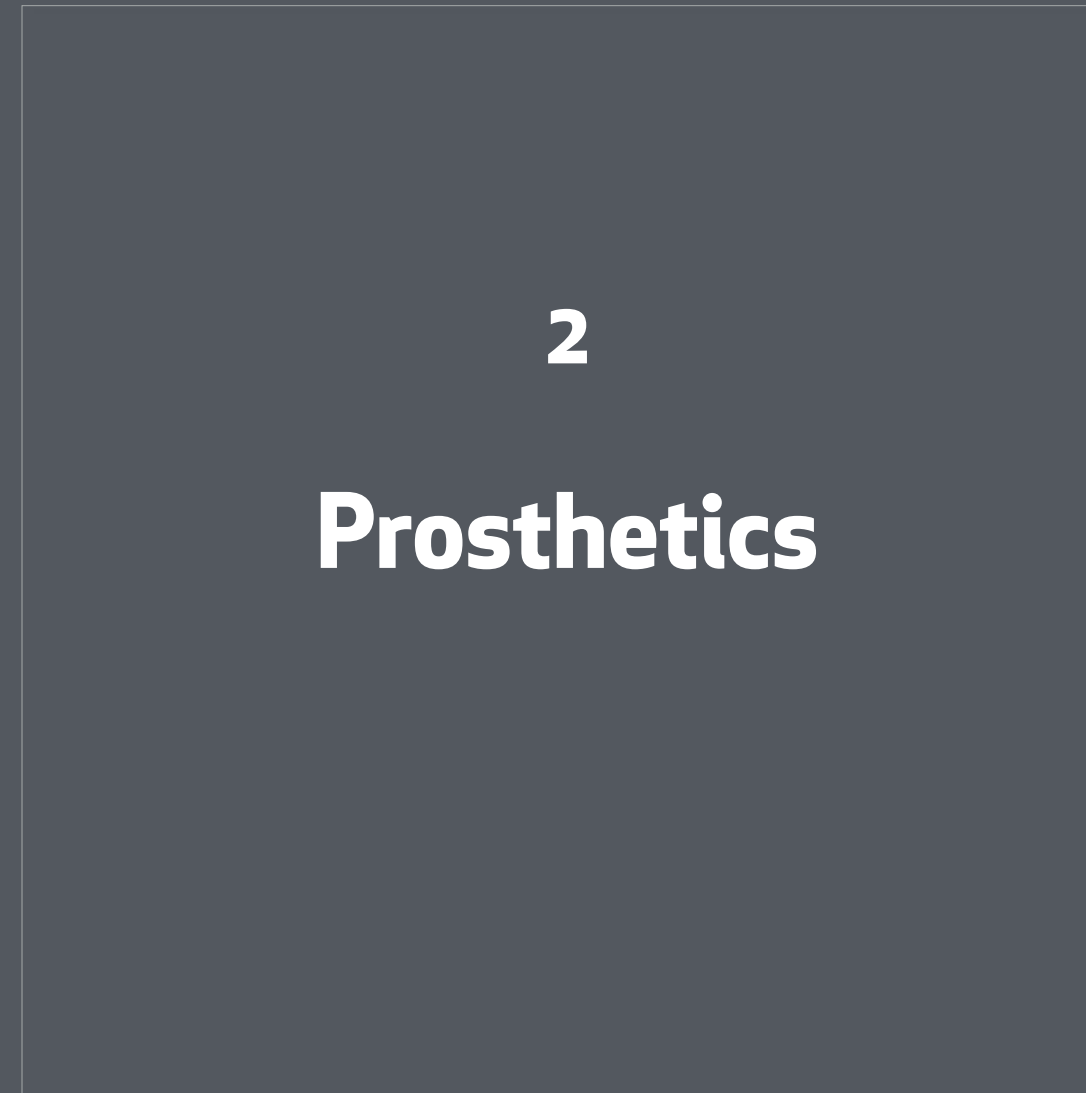
drose@media.mit.edu



# FOUR FUTURES



**1**  
**Terminal world**



**2**  
**Prosthetics**

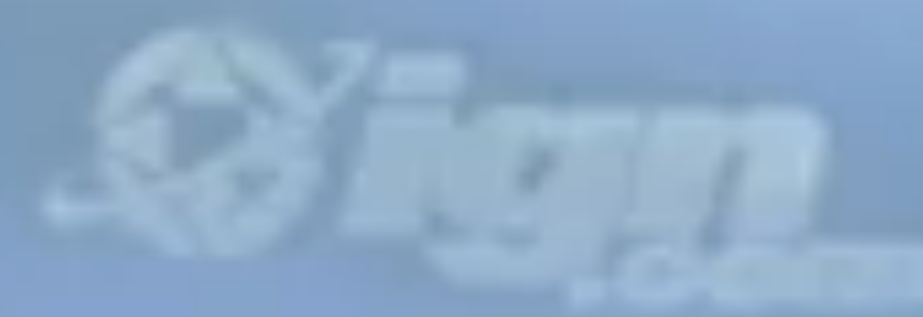


**3**  
**Animism**



**4**  
**Enchanted Objects**







*Advertising wants pixels*





# FOUR FUTURES





*superpower fantasy*





*Digital*







1980



1985



1991



1995




1998

*technology on the face harms social interaction*



*glasshole*

Sergey Brin & Diane von Furstenberg

NEW YORK TIMES BESTSELLER  
**THE FILTER BUBBLE**  
"Well-timed... a powerful endorsement" — The New York Times  
HOW THE  NEW  
PERSONALIZED   
WEB IS    
 CHANGING WHAT  
WE READ  AND  
 HOW WE THINK  
ELI PARISER



# FOUR FUTURES

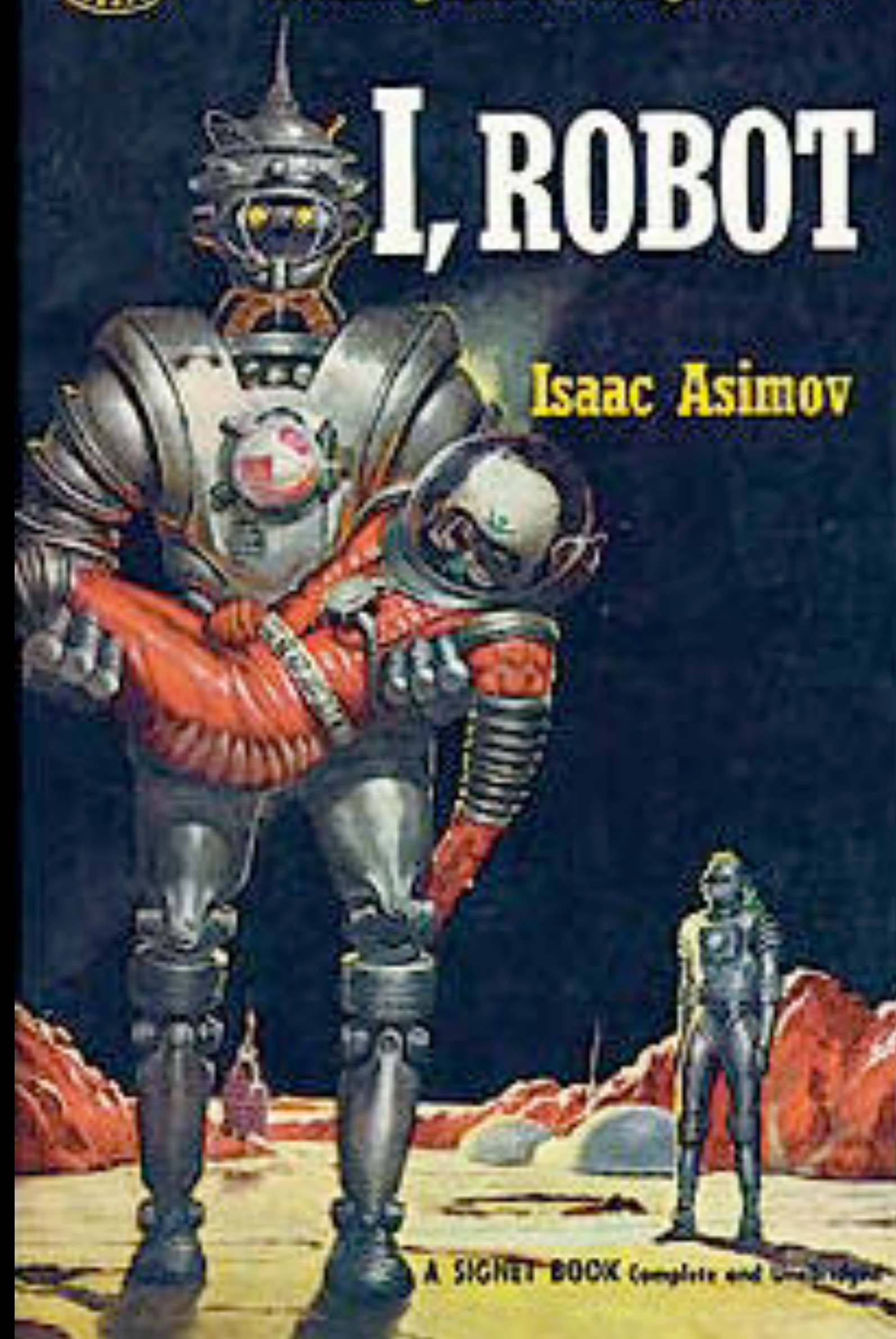
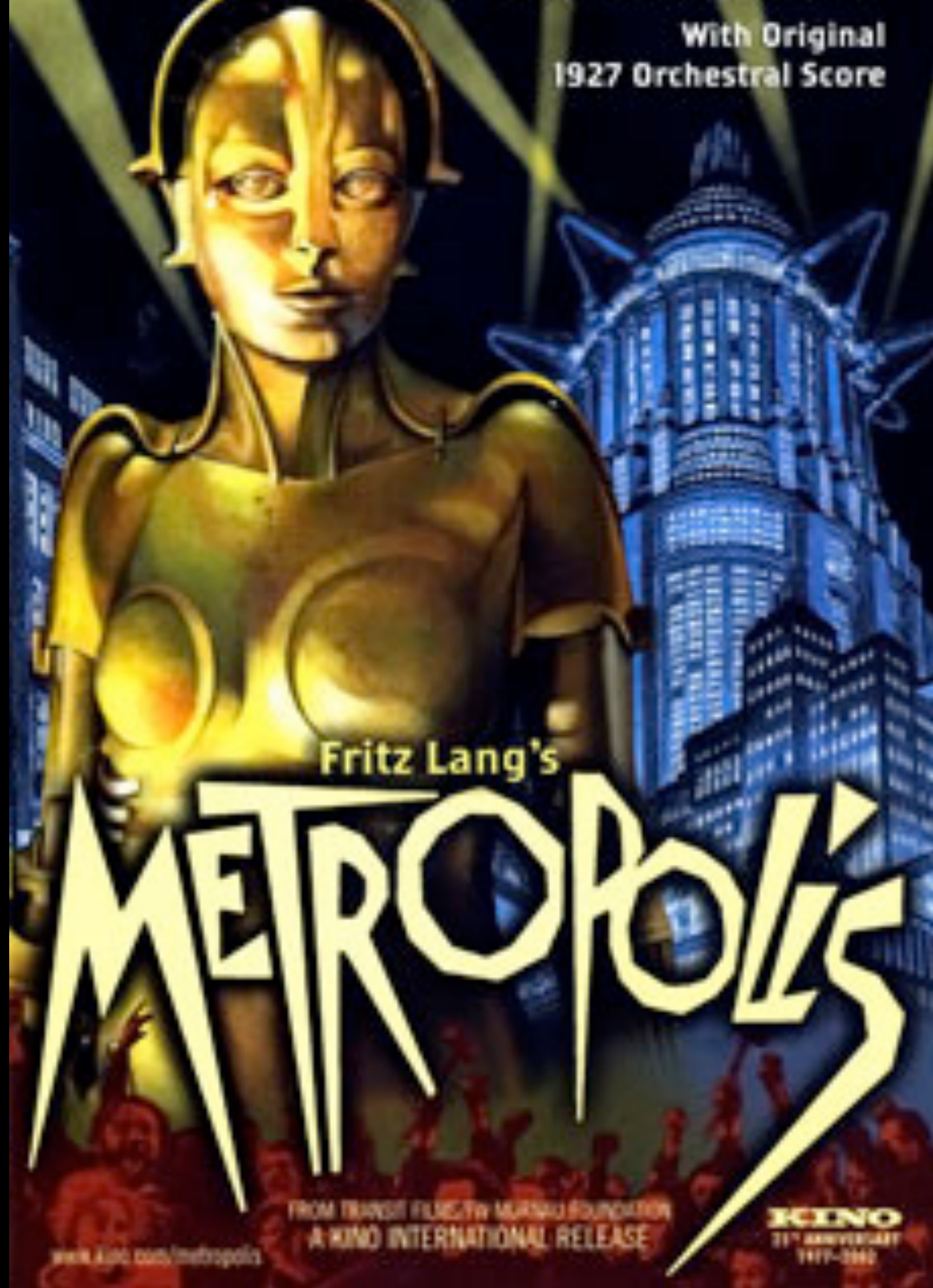
**1**  
**Terminal world**

**2**  
**Prosthetics**

**3**  
**Animism**

**4**  
**Enchanted Objects**





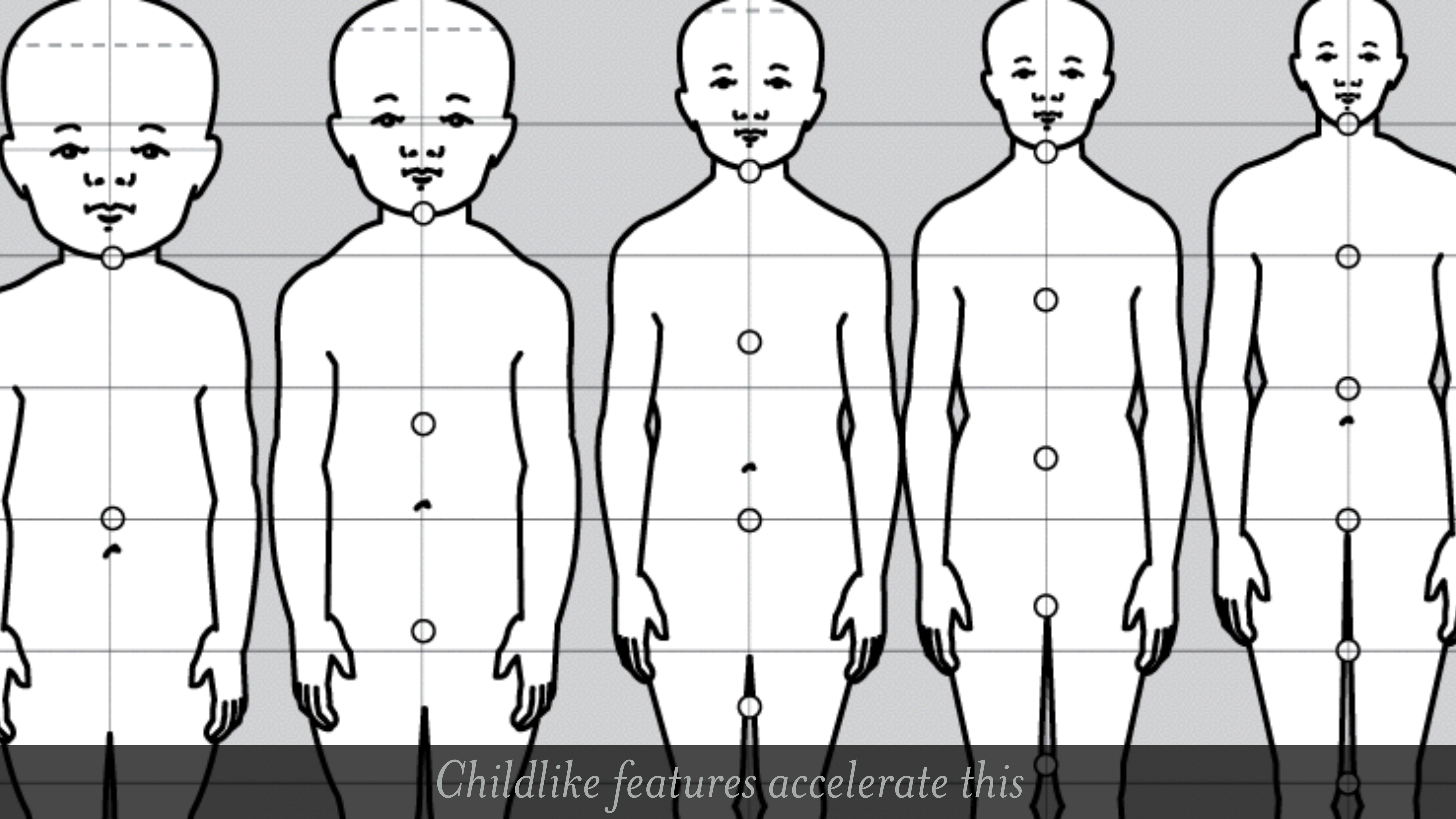
*Are interfaces on the way to humanness?*



# *Social robots*







*Childlike features accelerate this*



*Can Neoteny motivate healthier eating?*



AUTOM







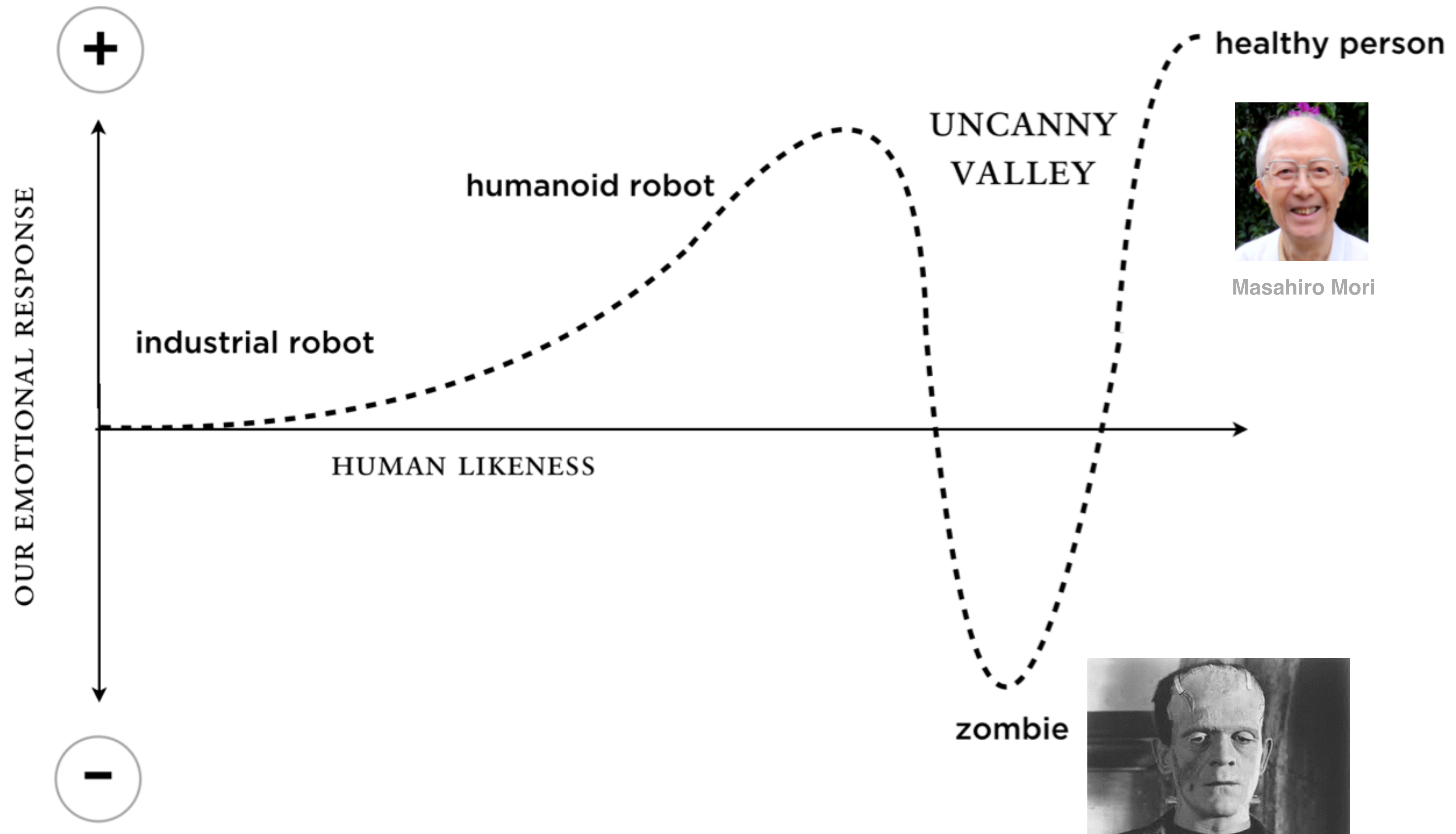


*Category confusion threatens our sense of self*



# THE INEVITABLE ISSUE WITH ANDROIDS

*The uncanny valley theory predicts that we will reject almost-human robots*





# FOUR FUTURES

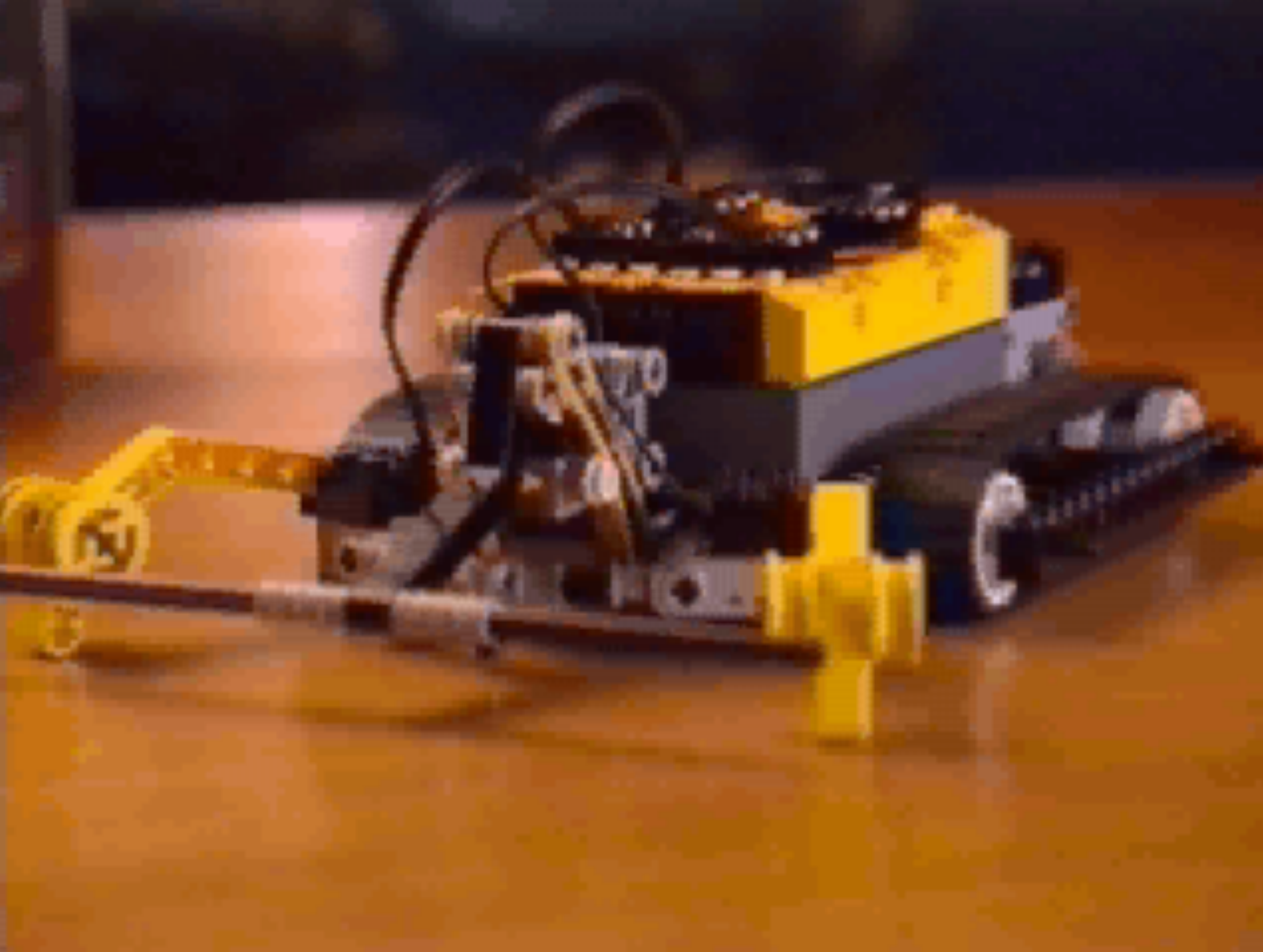
**1**  
**Terminal world**

**2**  
**Prosthetics**

**3**  
**Animism**

**4**  
**Enchanted Objects**





Mindstorms





# ENCHANTED OBJECTS

DAVID ROSE

DESIGN, HUMAN DESIRE AND  
THE INTERNET OF THINGS

@DavidRose  
drose@media.mit.edu





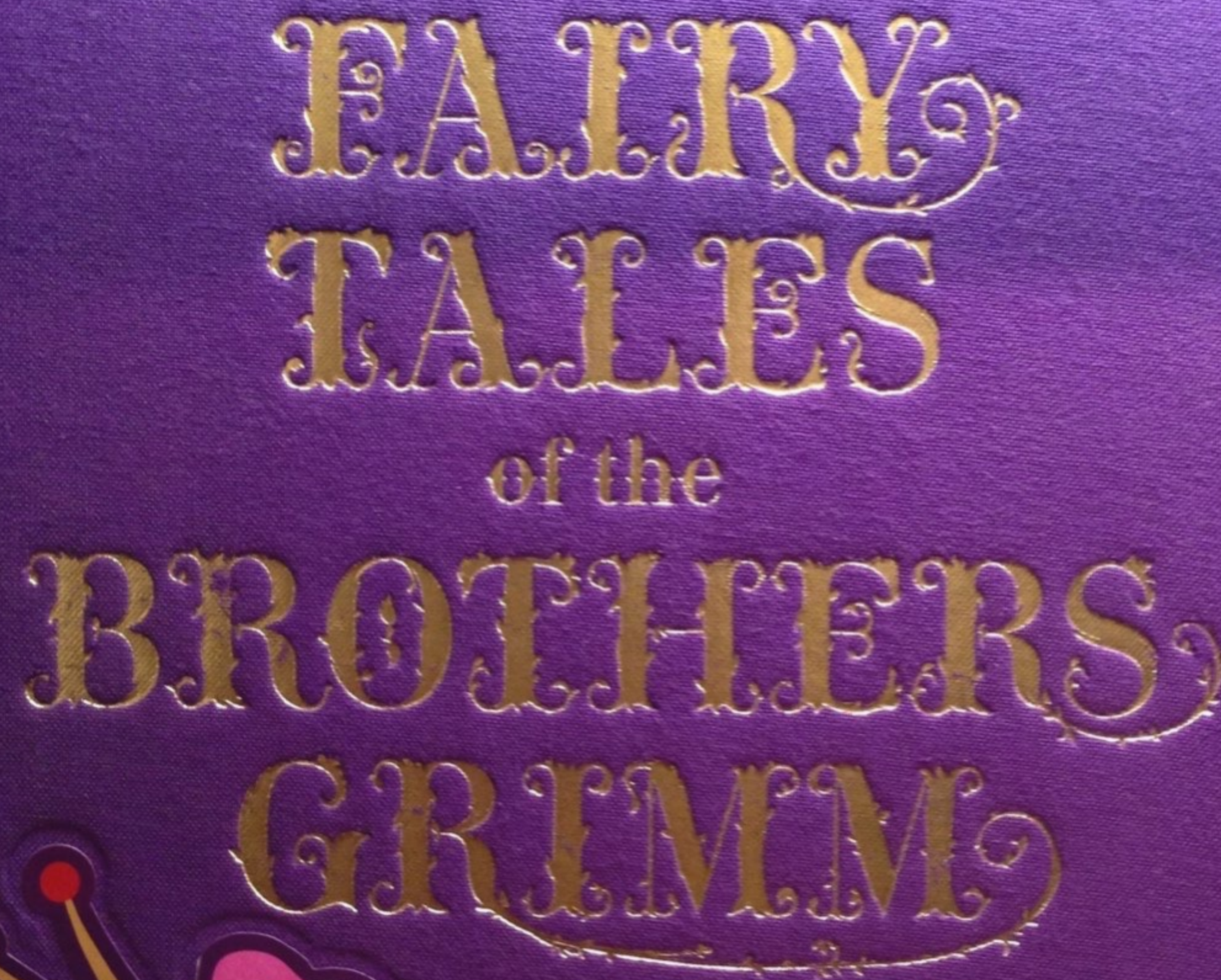
Ambient Umbrella





*Teleportation shoes*





# FAIRY TALES of the BROTHERS GRIMM

**Objects that defy expectations:**

**The flying carpet that transports us**

**The invisibility cloak that hides us from danger**

**The crystal ball that enables us to know the future**

**The horn or whistle that summons help**

**The spyglass through which we can see anything**

**Winged shoes**

**Potion that heals**

**Everlasting Gobstoppers**

*these stories run in our cultural bloodstream*





*who is the fairest of them all?*





memomi

Neiman-Marcus



*Enchanted Objects are ordinary things,  
augmented, connected.*





*now a pen needs a cloud*



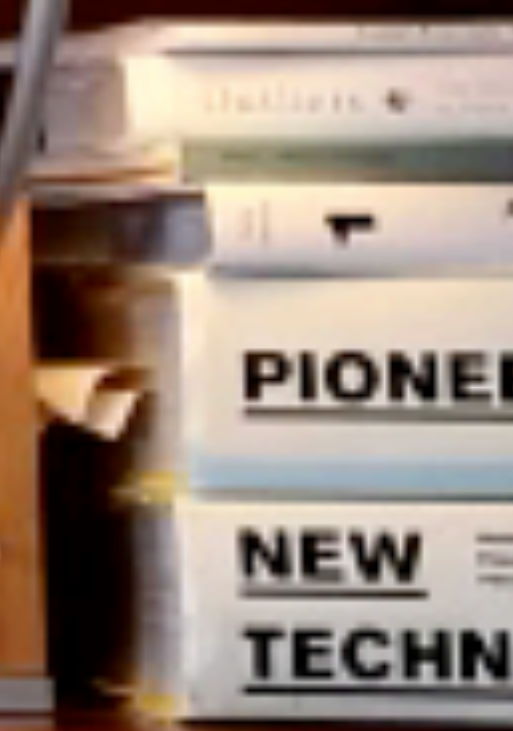
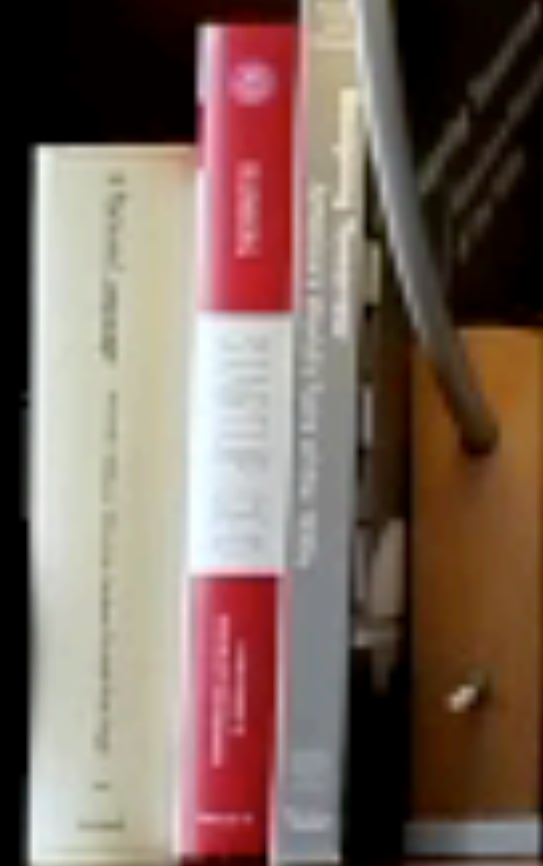
## **Anoto pen**

Records audio and time-stamps everything you write



*Objects are avatars for services*







# ENCHANTED OBJECTS

ORGANIZING THE INTERNET OF THINGS BY HUMAN DESIRES

## OMNISCIENCE

1

The desire to know all

AMBIENT JOULE



IO BULB, LUMINAR



AMBIENT ORB



ENERGY CLOCK



PROVERBIAL WALLETS



PEBBLE WATCH



WEATHER FORECASTER



CUSTOMER FEEDBACK TOWER



FACEBOOK COFFEE TABLE



NABAZTAG RABBIT



GOODNIGHT LAMP



LUMITOUCH FRAMES

## TELEPATHY

2

The desire for human connection



LOCKITRON



FLOWER POWER



NEST THERMOSTAT



ROOMBIA VACUUM



AMBIENT UMBRELLA

3

## SAFEKEEPING

To protect and to be protected



MIMO BABY SHIRT



TILE TAG



GLOWCAP



SUNSPRITE SUN MONITOR



FITBIT PEDOMETER



BEAM TOOTHBRUSH



AMAZON TRASHCAN



HAPI FORK



JAWBONE BRACELET



BLU CIGARETTE



BEAM TOOTHBRUSH



PANDORA CHAIR



COPENHAGEN WHEEL



QUADCOPTER DELIVERY SERVICE



WITHING SCALE



ISO-WALK CANE

## TELEPORTATION

5

To move effortlessly



AMBIENT BUS POLE



MIT CITYCAR



WIRELESS PARKING METERS



IO BRUSH



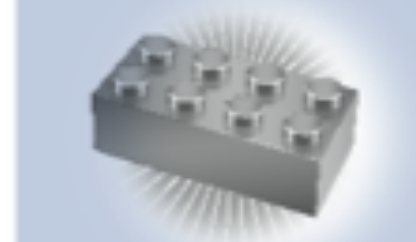
SIFTED BLOCKS



BABOLAT PLAY RACQUET



GUITAR HERO



LEGO MINDSTORMS

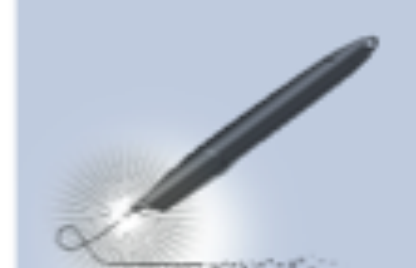


NARRATIVE LIFE-LOGGING CAMERA



6

To create, make and play



ANOTO PEN





IO BULB, LUMINAR

# OMNISCIENCE

1

The desire to  
know all



AMBIENT ORB





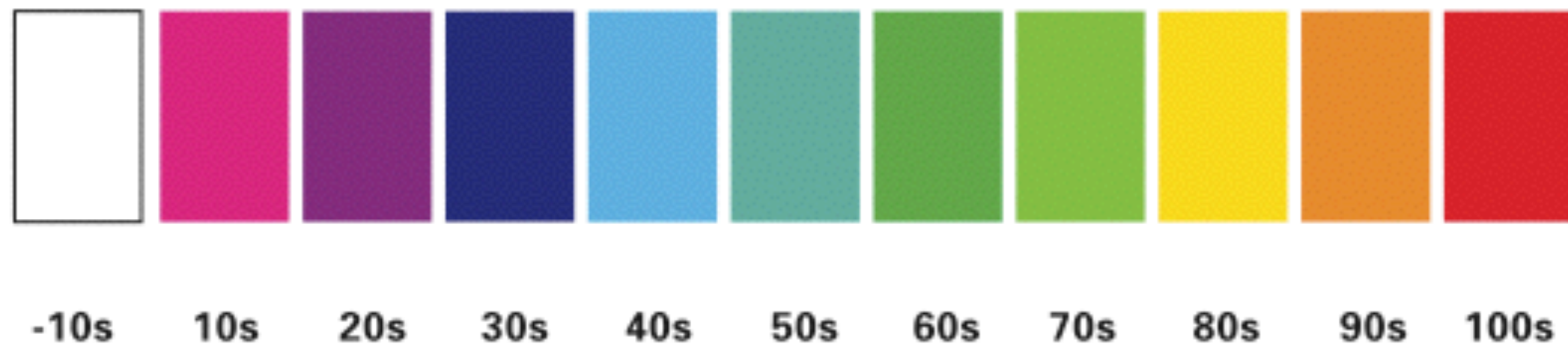




*A single pixel browser*



Orb



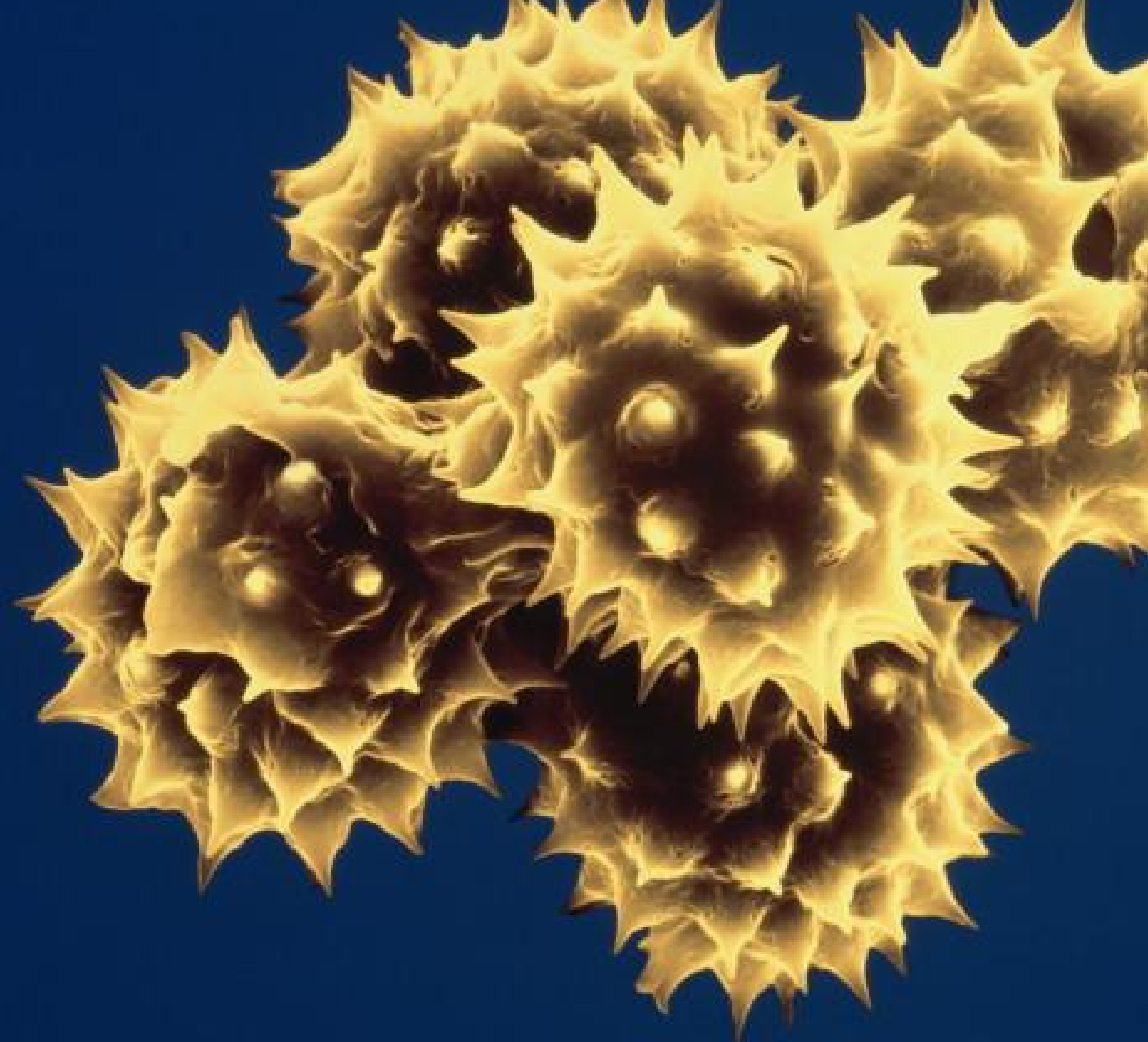


# Pollen

Pollen count for today, after 6pm shows pollen forecast for tomorrow.



1 2 3 4 5 6 7 8 9 10 11 12





# Sailing

Wind speed.



too calm

ideal

too windy





# Fishing

Changes in barometric pressure predict when fish are biting.



poor

decent

ideal





# Gardening

Recent rain accumulation helps you know when to water your garden or lawn.



very dry

average rainfall

very wet





*Pervasive is persuasive*



**Energy Joule** encourages 20% energy conservation for *Hydro One and others* with a realtime, in-home display







*Public  
is even more persuasive*



LUMITOUCH FRAMES



FACEBOOK COFFEE  
TABLE

## TELEPATHY

2

The desire for  
human connection



ROOM





Dick Tracy had FaceTime™







**send your heartbeat** as a bio-signal emoji





Weasley's clock





A magnificent full-color illustrated book and long-playing record



Walt Disney Presents

# PETER AND THE WOLF

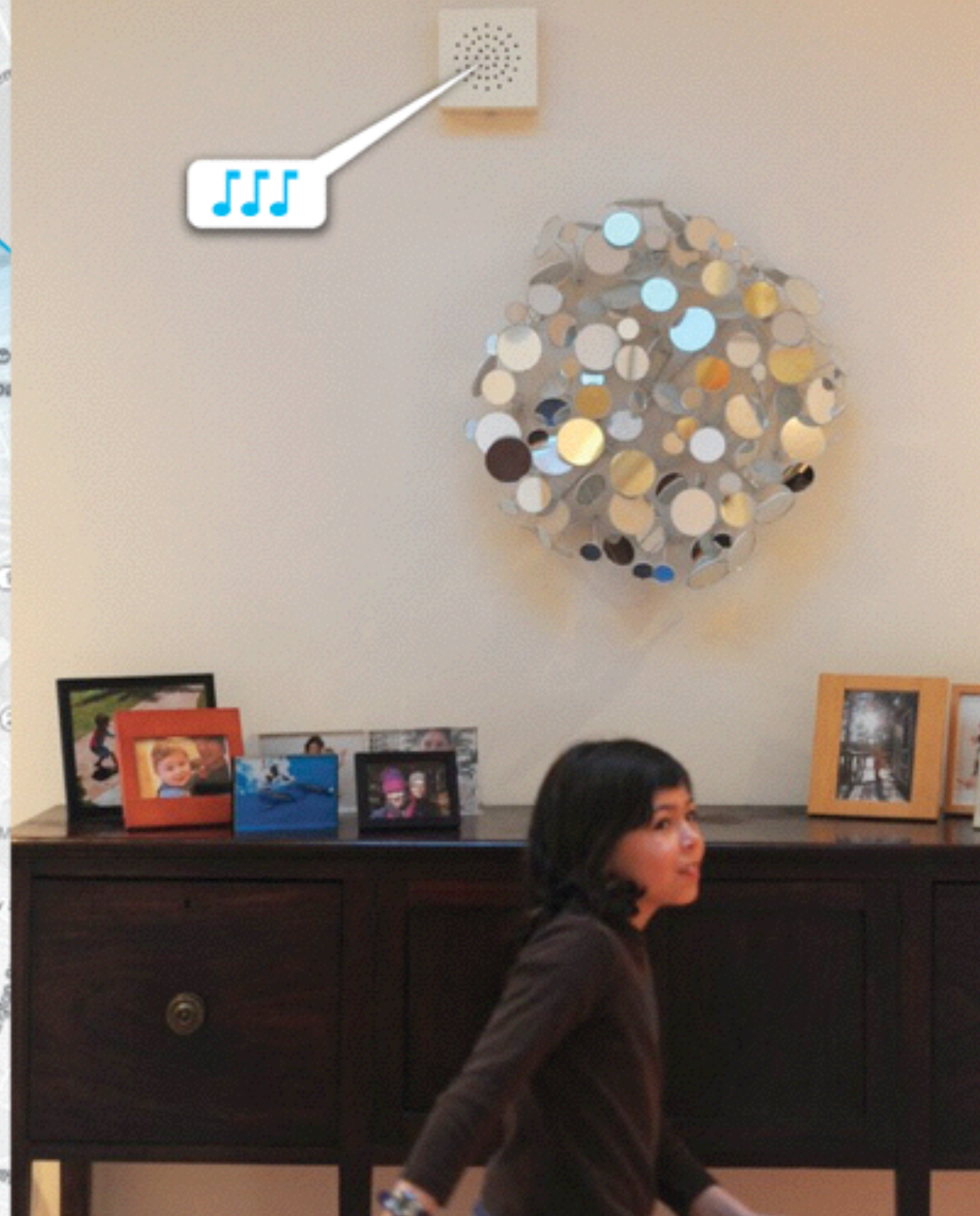
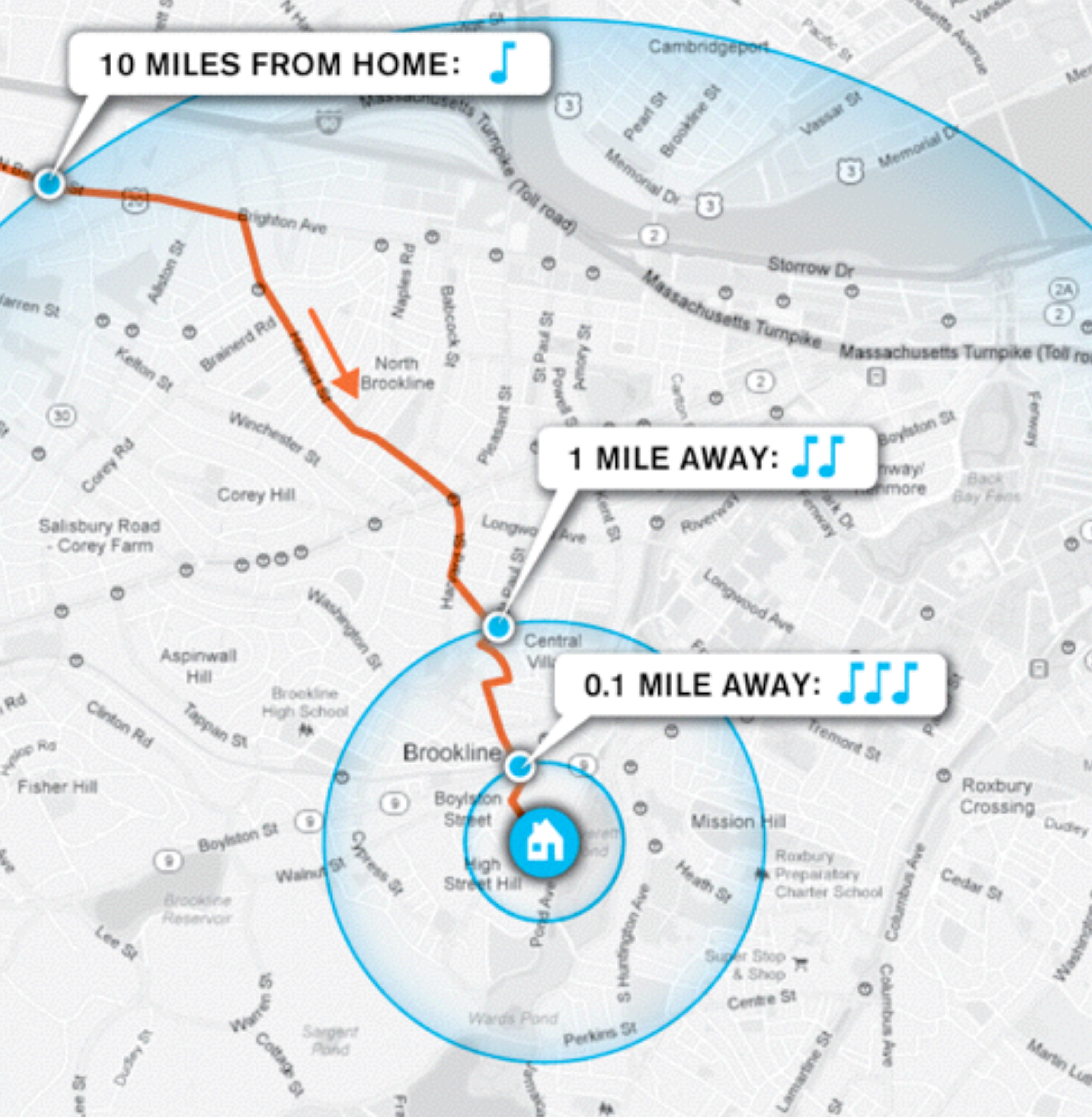
Prokofiev's Classic Narrated by STERLING HOLLOWAY



plus...  
**The Sorcerer's Apprentice**  
DUKAS

PROKOFIEFF  
PETER AND THE WOLF, Op. 67  
A Musical Tale for Children









INDIEGOGO

EXPLORE

HOW IT WORKS

START YOUR CAMPAIGN



# Smartstones: Communicate by Touch



Santa Barbara, California, United States



Technology

1.1k

Share

904

Tweet

18

+1



Email



Embed



Link



Following

Story

Updates 4

Comments 59

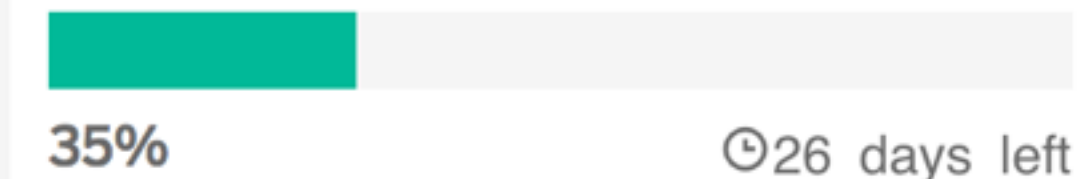
Funders 81

Gallery 24



**\$17,405** USD

RAISED OF \$50,000 GOAL



This campaign started on Feb 10 and will close on March 20, 2015 (11:59pm PT).

Flexible Funding ?

Select a contribution amount below:

☐ \$1 ☐ \$50 ☐ \$100

☒ \$ USD



LOCKITRON

AMBIENT UMBRELLA



FLOWER POWER

**SAFEKEEPING**

**3**

To protect and  
to be protected







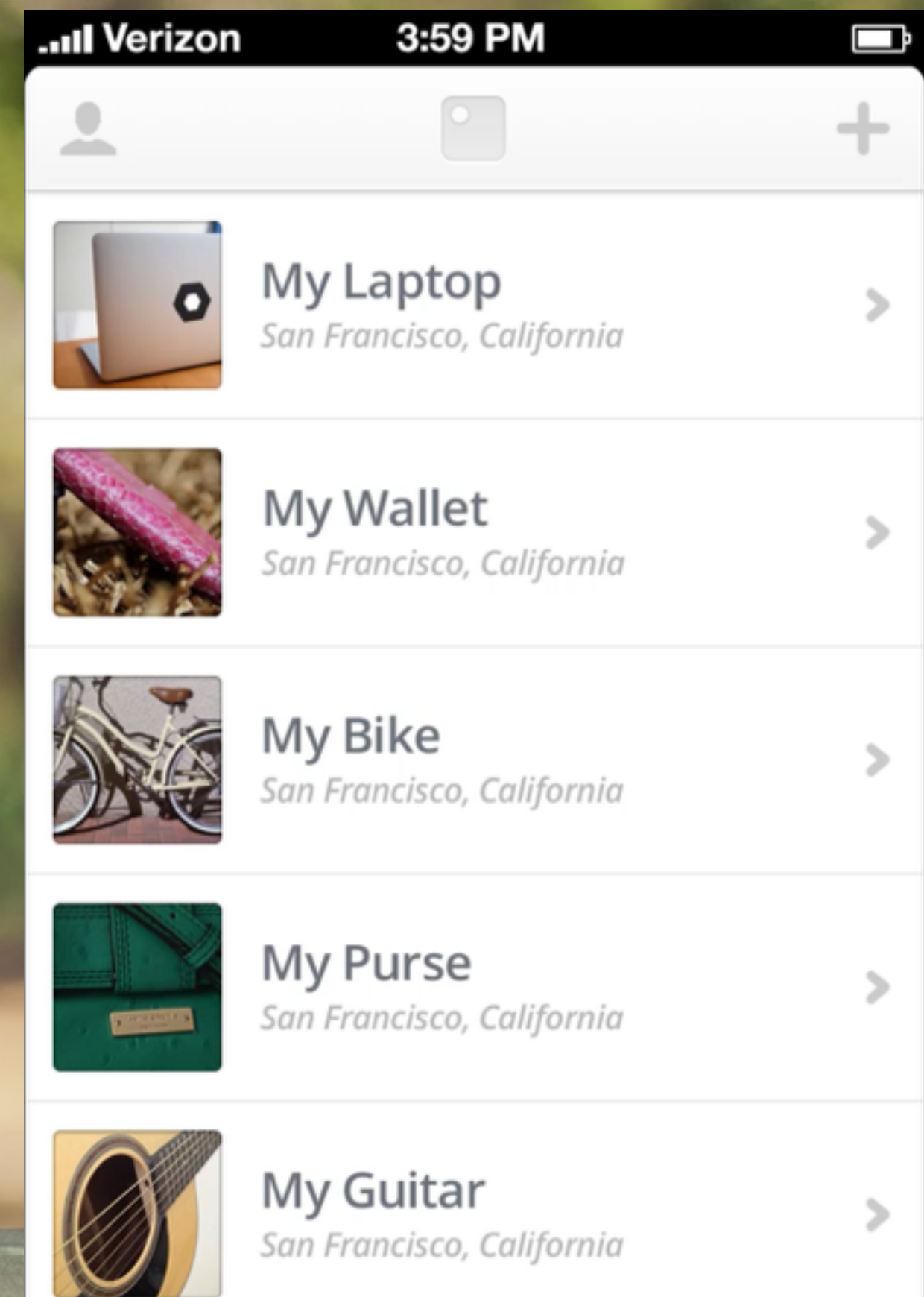




**Tagg** for the whereabouts of your best friend











Proverbial Wallets (MIT)





FITBIT PEDOMETER

BLU CIGARETTE



BEAM TOOTHBRUSH

IMMORTALITY

4

To be healthy  
and vital



WITHING SCALE











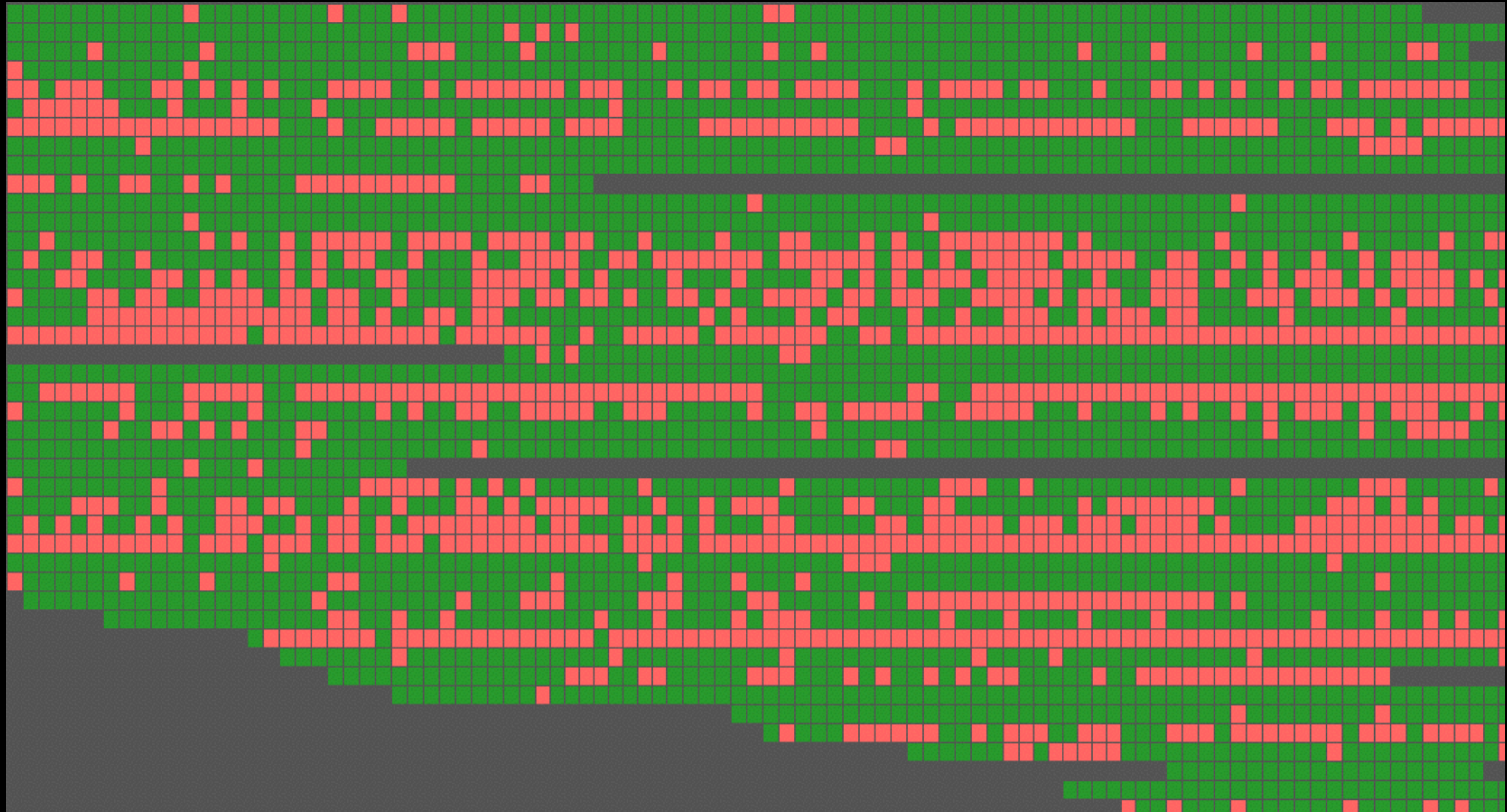






# This is what poor-adherence looks like...

Each row is person, each column is a day. Red indicates a missed dose.



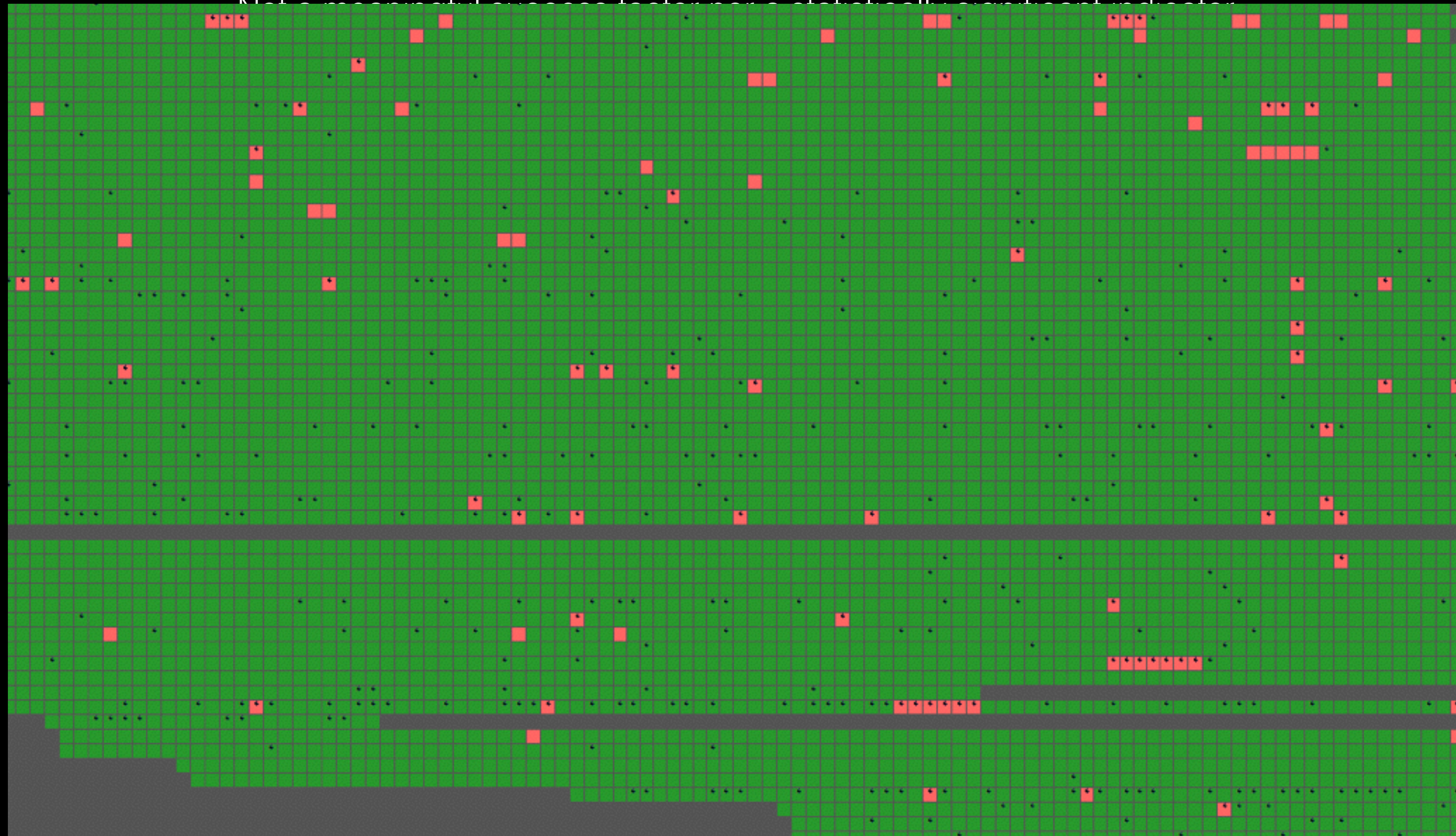
Control group=71% of doses taken



# This is what adherence looks like with GlowCaps

Participants report that the GlowCap experience is useful (70% selected 4 or 5 boxes)

Not surprisingly, adherence factors are statistically significant predictors



Over 95% of doses taken over 6 months



DUMB

71%  
ADHERENCE



SMART

98%  
ADHERENCE















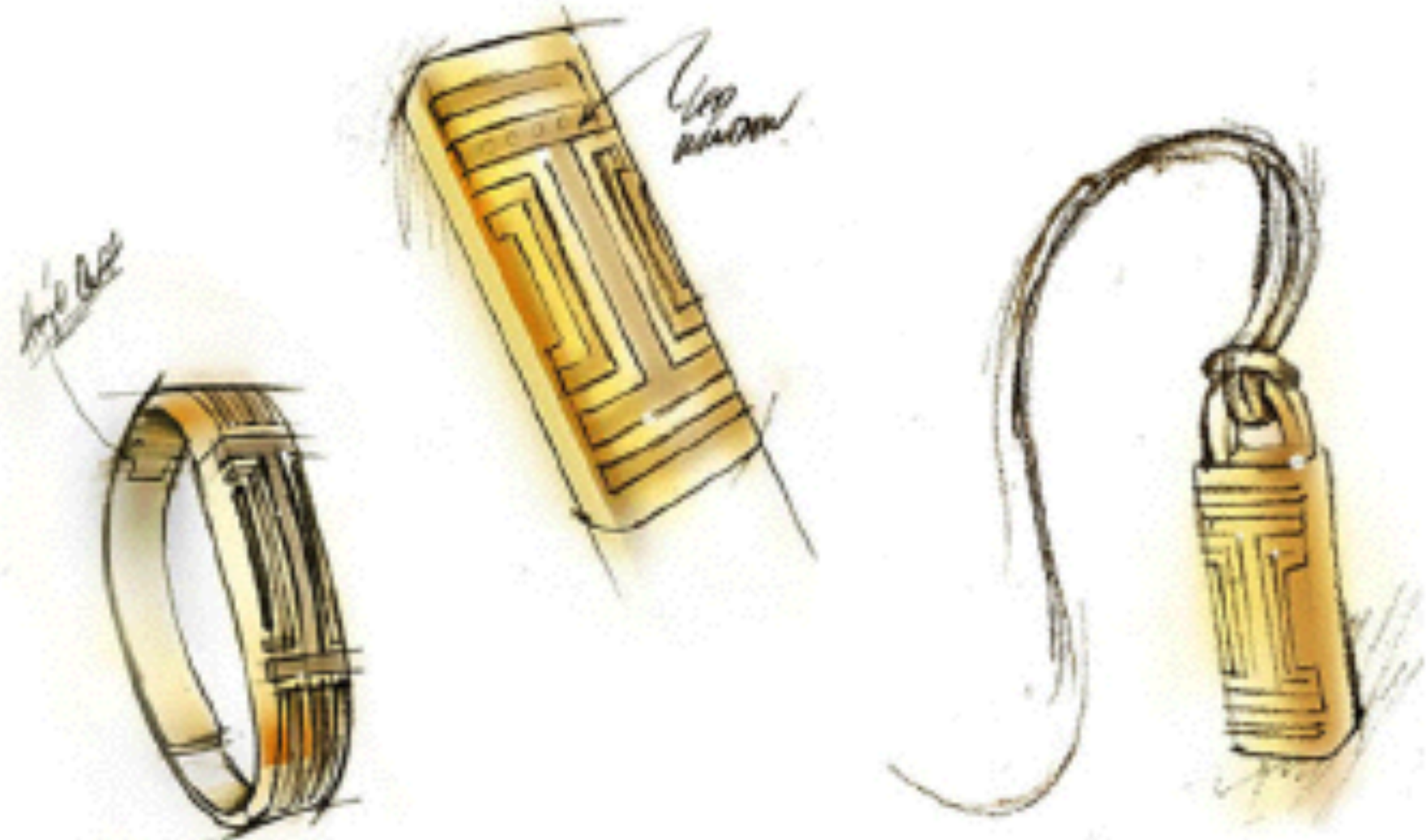


*Fashion first*





## *Fashion first*



Tory Burch and Fitbit Deluxe share renders for a new line of bracelet and necklace activity trackers.



Ringly, created by CEO Christina Mercando, is one of the most talked about mergers between fashion and technology, focusing on notifications.





# SWAROVSKI SHINE SLAKE SET

\$169.99



Shine with the Slake bracelet carrier in light gray Alcantara® fabric with crystals. Swarovski Shine used with the white silicone sport band is waterproof to 50 m. Both bands are adjustable and are also compatible with Misfit





*Fashion first*



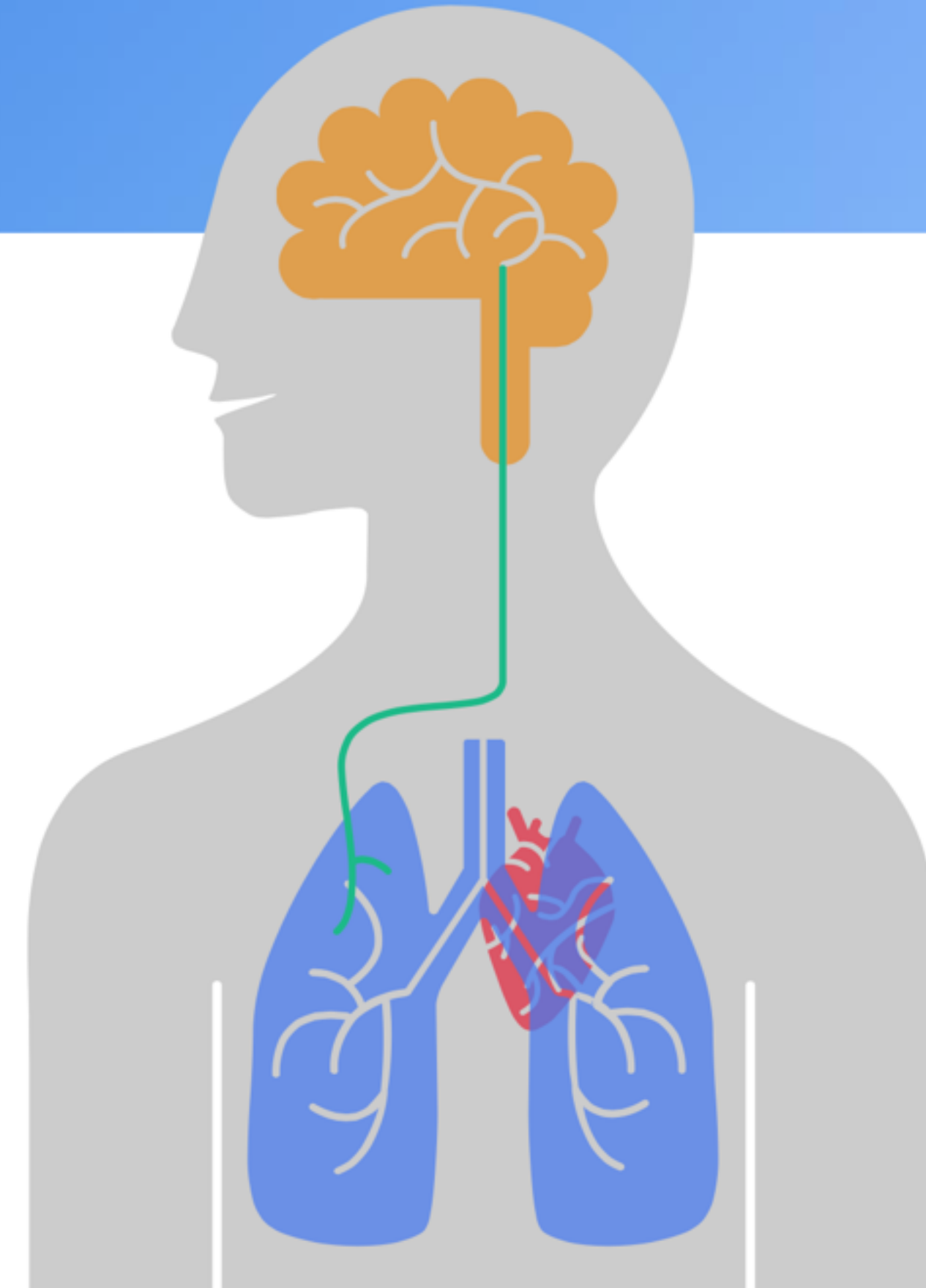
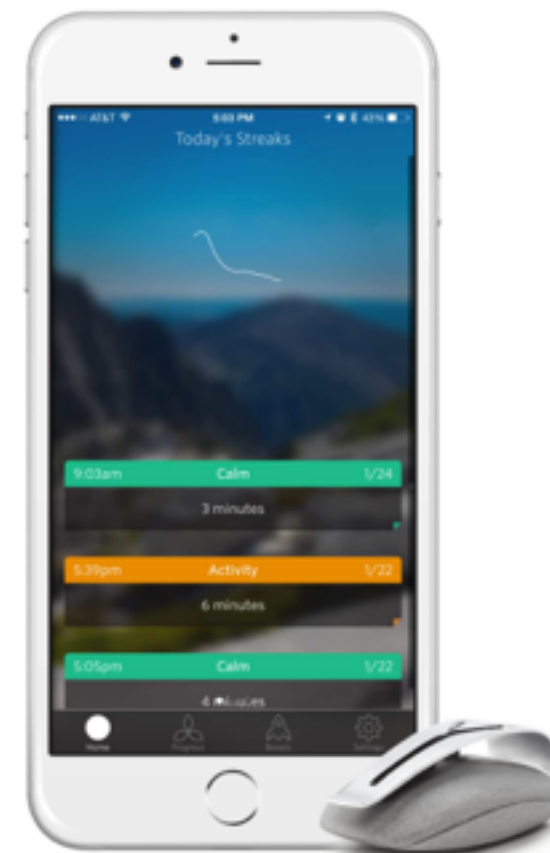


Breathing and controlling your breath is one of the easiest ways to improve mental and physical health.

**THE WALL STREET JOURNAL.**

## Control your breathing. Control your state of mind.

Studies have shown how simply controlling our breathing can lower blood pressure, reduce tension and increase endorphins. Spire measures respiratory patterns to detect subtle changes in your state of mind and gives you tools to achieve greater calm and focus.







### Energy

Bright light increases energy and vitality. Wake up with a pop in your step.

### Sleep

Bright light regulates the secretion of melatonin, resulting in better quality sleep and more energy in the morning.

### Mood

Bright light is recommended by doctors as a front-line treatment for both seasonal and non-seasonal depression.



# CHRONA Deep Sleep Pillow

Low-frequency sound boosts restorative sleep  
Get the effect of an 8-hour sleep, in only 6.5 hours

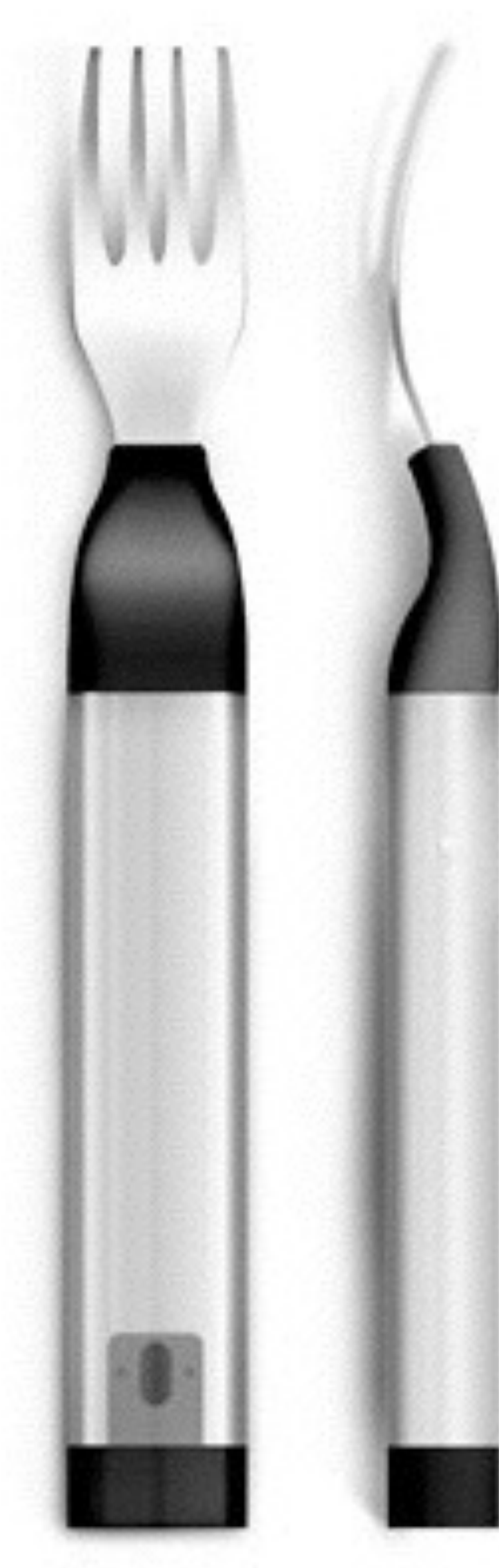






*Enchant the most common objects*





# HapiFork

## Specs

- Length : 7.87 inches // 200 mm
- Width : 1 inch // 24.5 mm
- Height : 2/3 inches // 15.70 mm
- Weight : 0.14 pound // 65 gr

## Electronic Key

- Micro USB connector
- Batterie Lithium Polymere + 3.7 V
- Microchip Cortex M3 ST Micro electronic
- Capacitive detection
- Return to user : 1 vibrator + 2 leds
- 2 component plastic shells

## Handle Fork

- Fits both electronically and mechanically with the electronic key

## Patents : The technology is covered by four patents

1. Measure of the hand to mouth
2. Capacitive detection
3. Specific mechanical cooperation in between electronic and fork
4. Special cooperation between apps and data platform

## Definition

**HAPIfork** is a connected fork which looks for a healthy eating behavior.

- Eat at the right time
- Eat at the right pace : not too fast
- Share with your coach : download his feedback alarm.
- Share with the community



# Vessyl

## IT KNOWS WHAT'S INSIDE

It's not magic, but close to it... the Vessyl knows and aggregates everything you drink. No more guessing or journaling. It keeps track of what's important to you... all automatically.

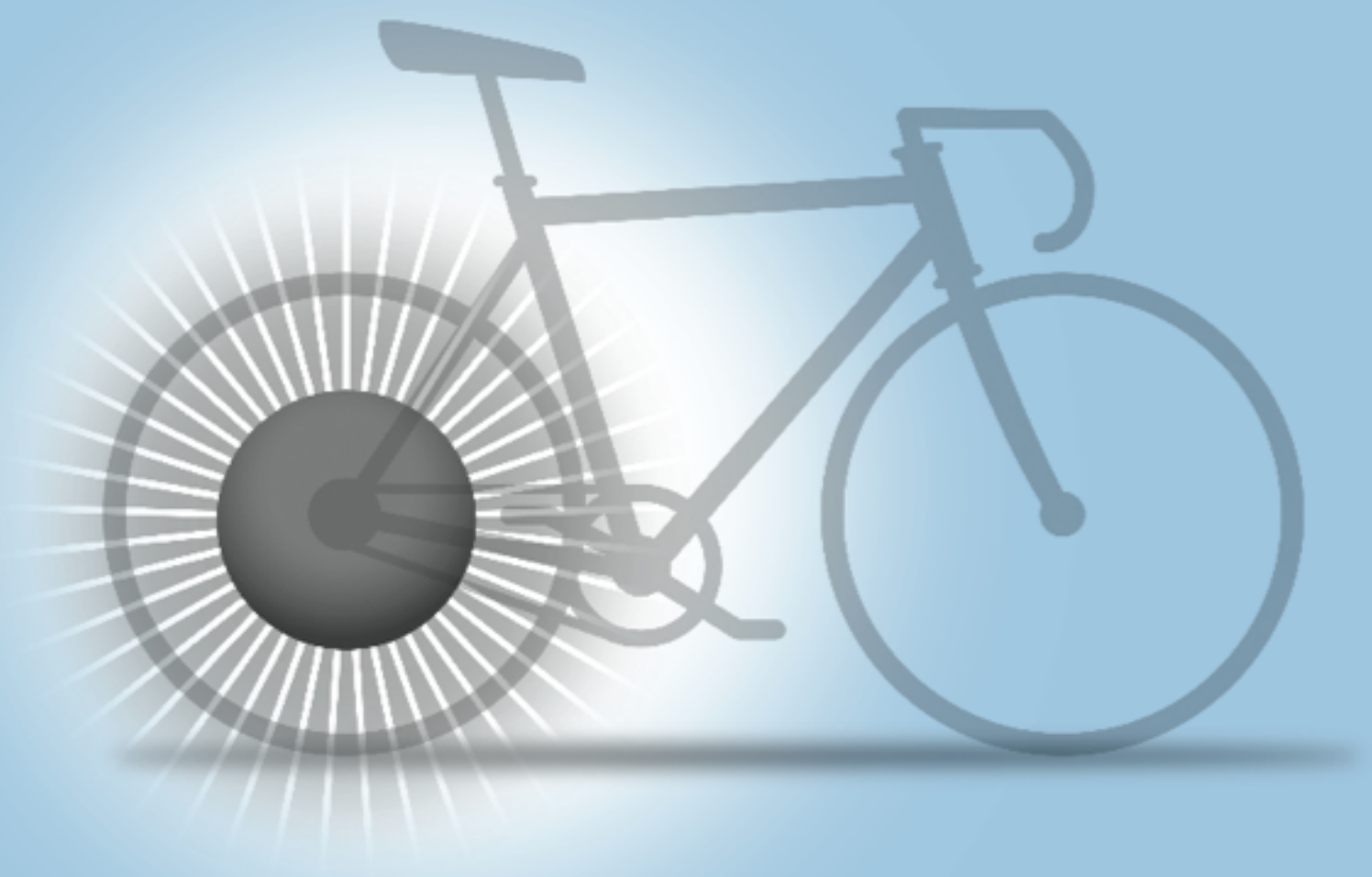




*Monetize the secondary effects of behavioral change*







COPENHAGEN WHEEL

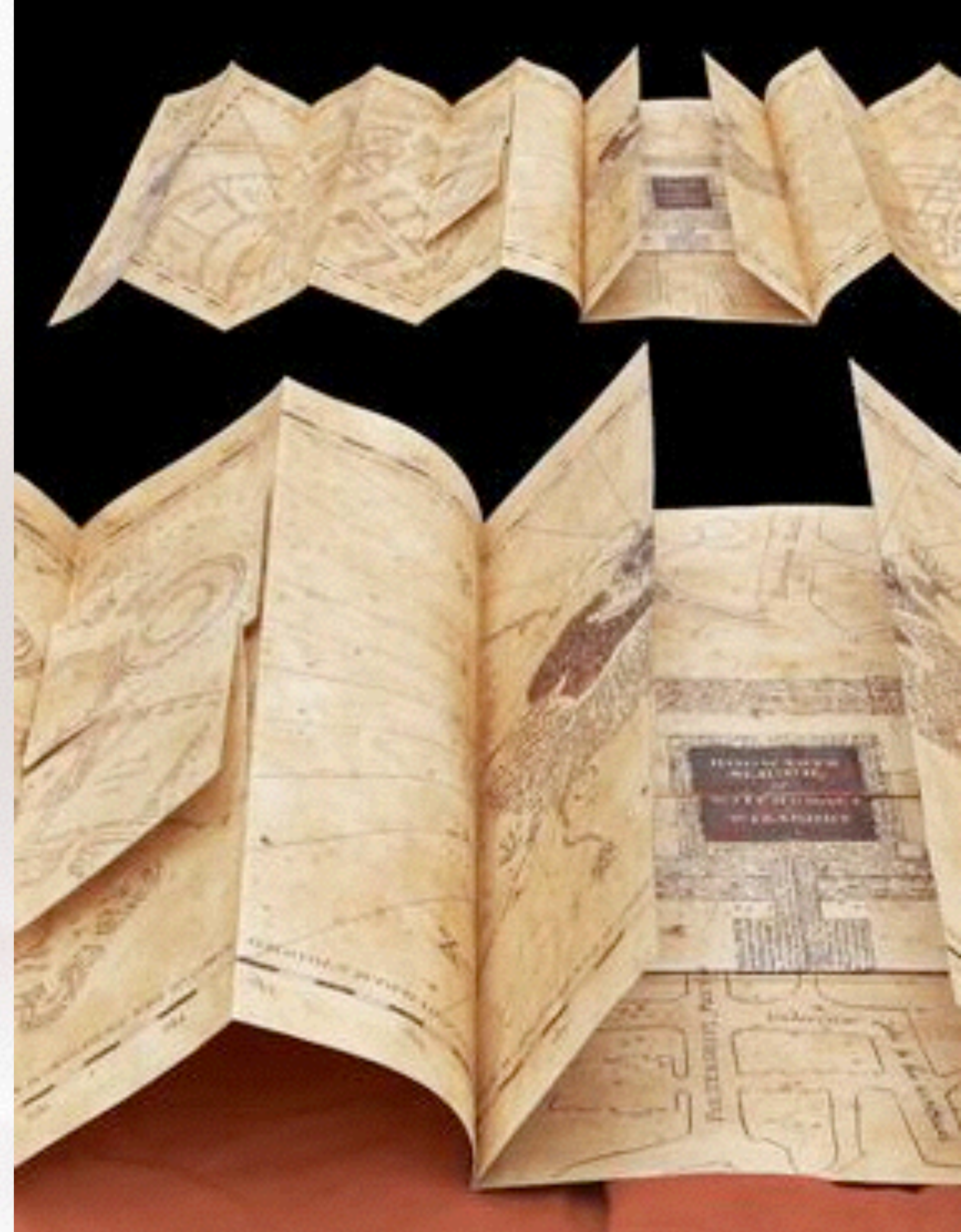
## TELEPORTATION

5

To move  
effortlessly









## About NextBus

- How It Works
- Powered by NextBus
- Help
- Wireless Access
- cool My NextBus (Web Alerts)

**View a Real-Time Arrival**

Zoom Out

Zoom In

Routes...

Help...





# Increase bits to decrease busses



**In SF**

**\$500M budget**

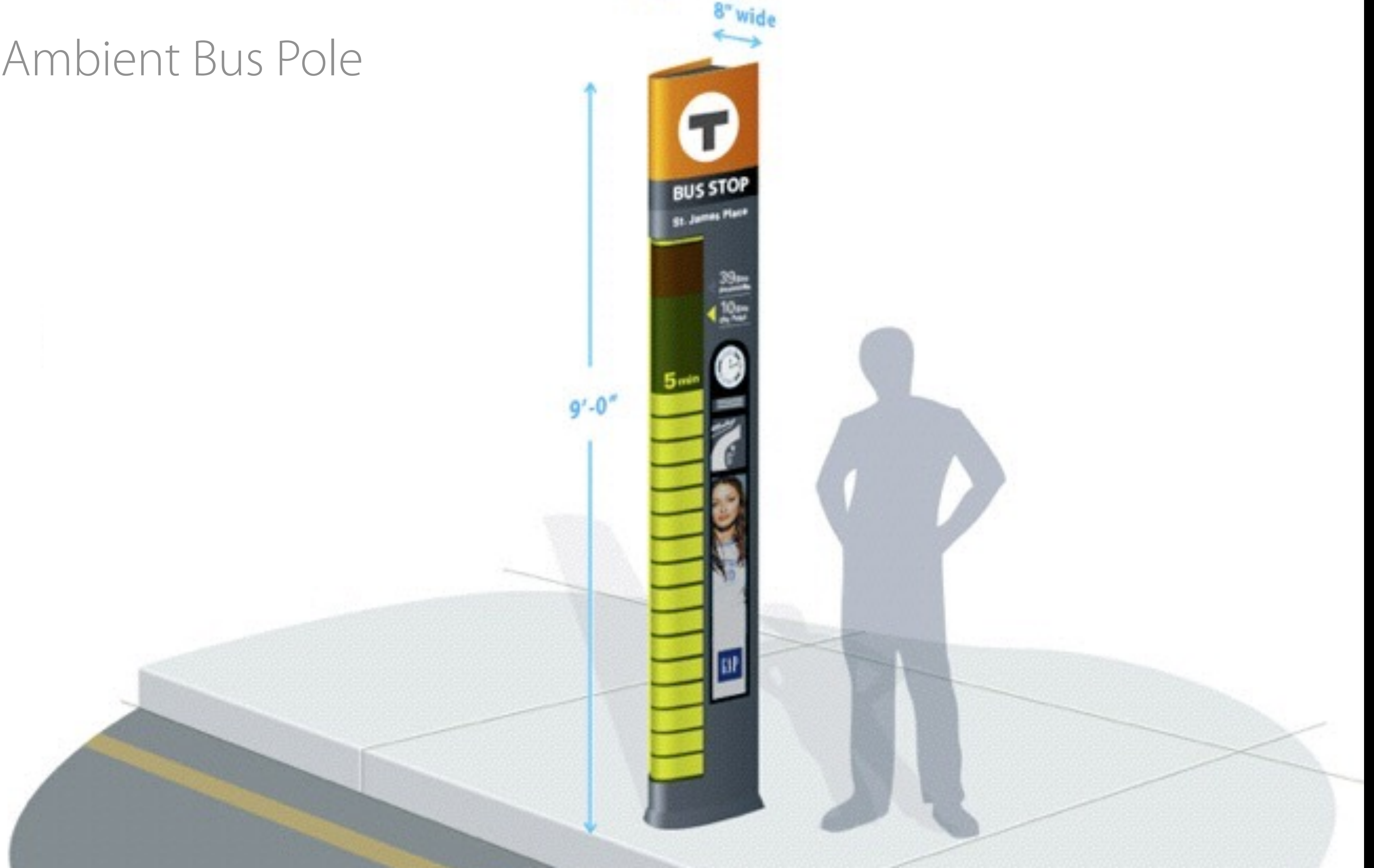
**To serve 450K  
households (\$1k+/home)**

**to drive busses around  
every 15 min**

**at <25% capacity**



# Ambient Bus Pole













A close-up photograph of the rear wheel and drivetrain of a bicycle. The wheel has a black tire and silver spokes. A large, bright red fender covers the rear half of the wheel. A black frame tube is visible, connecting to the rear hub. A silver chain is attached to the hub and extends towards the right. The background is a light-colored, textured wall.

*Retrofit with existing infrastructure*





*OTA updates make smart furniture sustainable*

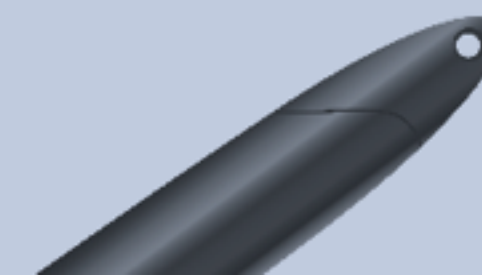


NARRATIVE  
LIFE-LOGGING CAMERA

## EXPRESSION

6

To create, make  
and play









HOME

ABOUT THE GAME

MEDIA

COMMUNITY

TRACKS

PARTNERS

# GUITARIII HEROIII LEGENDS of ROCK



UNLEASH YOUR  
INNER ROCK LEGEND



Welcome to the Jungle

BUY  
THIS  
SONG

BUY THE GAME





The Babolat Play Pure Drive sensor-packed racket and mobile device app







*Life-logging*



# *Life-logging*

cambridge july 10th



sped up 300x

copenhagen june 27





# 1.8 Billion photos are shared every day!



ditto.us.com





Reading photos for 5000 brands, 1000 objects, 500 scenes







Ditto uses computer vision to discover products, faces, logos, clothing, and scenes in public social photos on Twitter, Instagram, and Tumblr to glean insights for marketers.

## PRODUCTS



Users who post images of things like beer or ski equipment may be flagged for those interests. Marketers also look for correlations between interests, such as which beverages people drink while eating Kraft Macaroni and Cheese.

## CLOTHING



Ditto has started classifying objects like purses or



## FACES

Human faces can give context. If a logo appears above a face - such as Smith ski goggles in this picture - it can indicate the person is wearing apparel. Smiles help advertisers



## LOGOS

Ditto detects thousands of logos, such as the Pabst Blue Ribbon can and Marmot jacket here. An advertiser may search for photos featuring rival brands to try to steal customers.



## SCENES

Whether a photo was shot in a bar or on a snowy mountain can give advertisers clues about where and how customers use their products.







# Brands are blind to these photos



**Damn That's Cool**  
@DamnThatsCool



Follow

We all need this for the weekend  
[pic.twitter.com/Oe8yQ6D3Pa](https://pic.twitter.com/Oe8yQ6D3Pa)

← Reply ↻ Retweet ★ Favorite ⋮ More



**danielle**  
@sodanielle

happy dani and haley  
[pic.twitter.com/TQRJfdegqU](https://pic.twitter.com/TQRJfdegqU)

← Reply ↻ Retweet ★ Favorite ⋮ More



NO SEARCHABLE TEXT  
*Monster*



**Cat**  
@sisisirenaaa



Don't worry, to be jealous is a natural  
reaction 🌸🌸 [pic.twitter.com/UkIad8](https://pic.twitter.com/UkIad8)

← Reply ↻ Retweet ★ Favorite ⋮ More



NO SEARCHABLE TEXT  
*Band Aid/Hello Kitty*



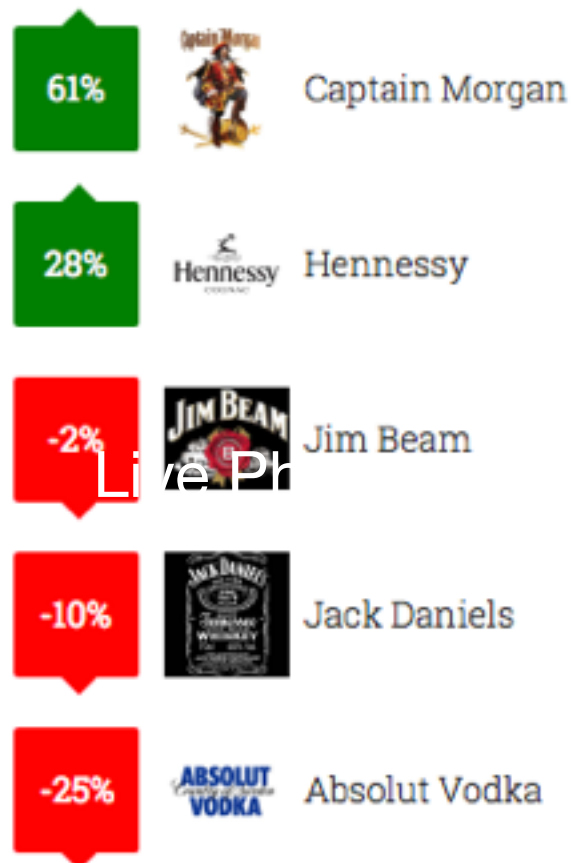


# See realtime matches from Twitter and Tumblr

## [streamditto.com](http://streamditto.com)

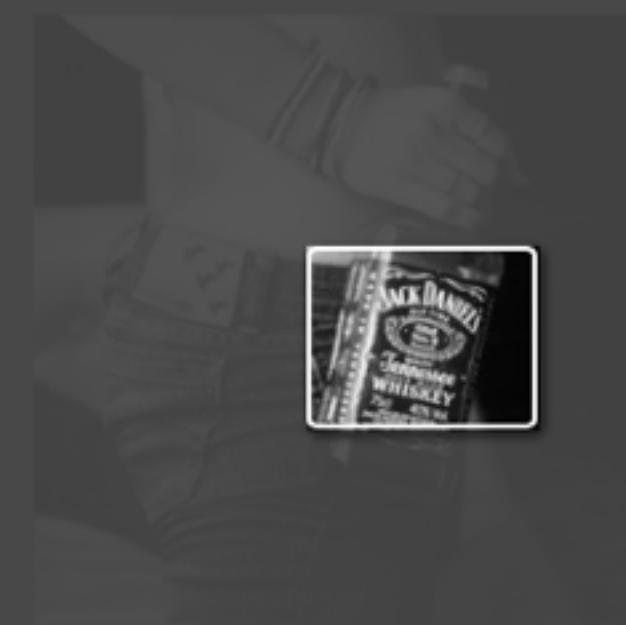
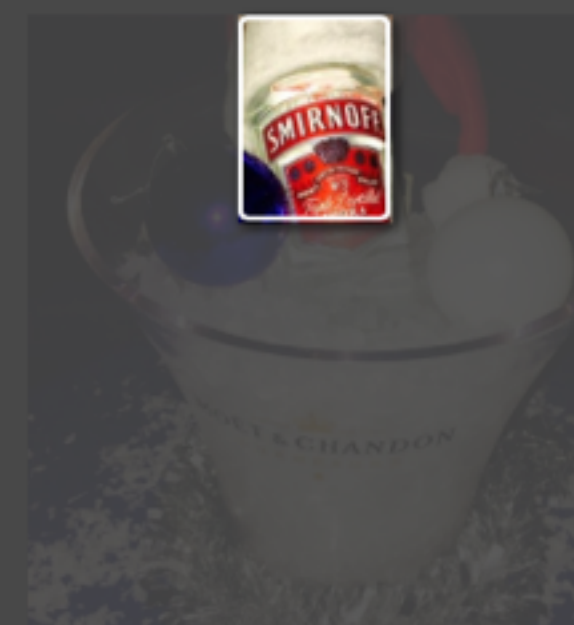
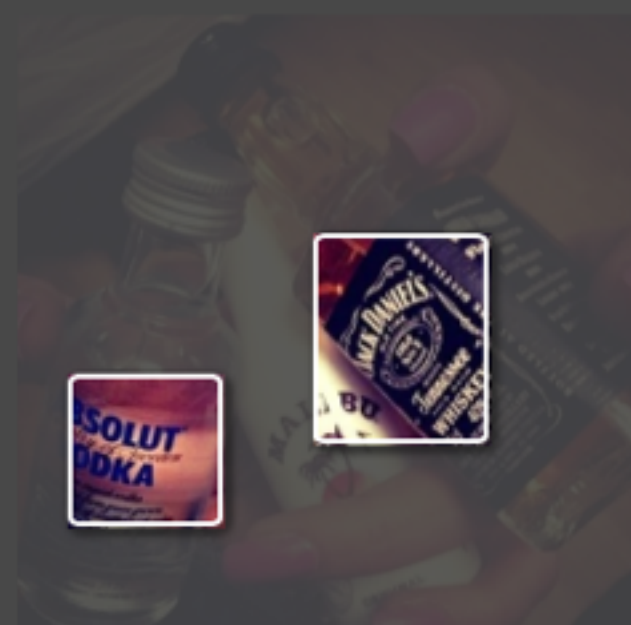
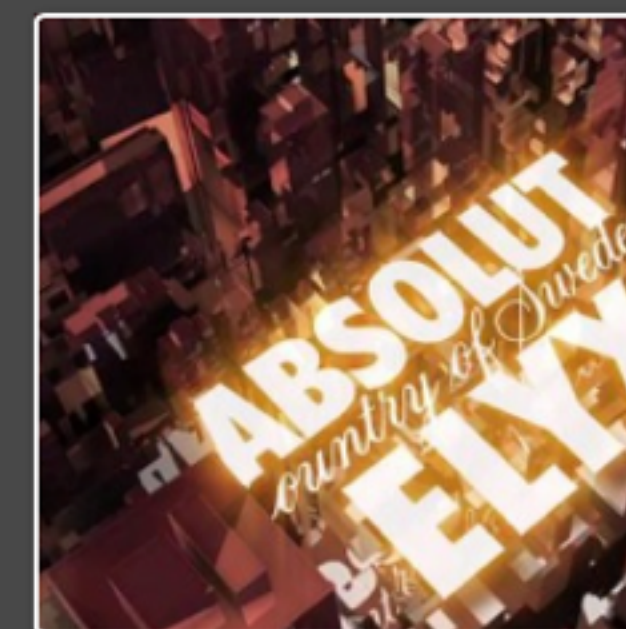
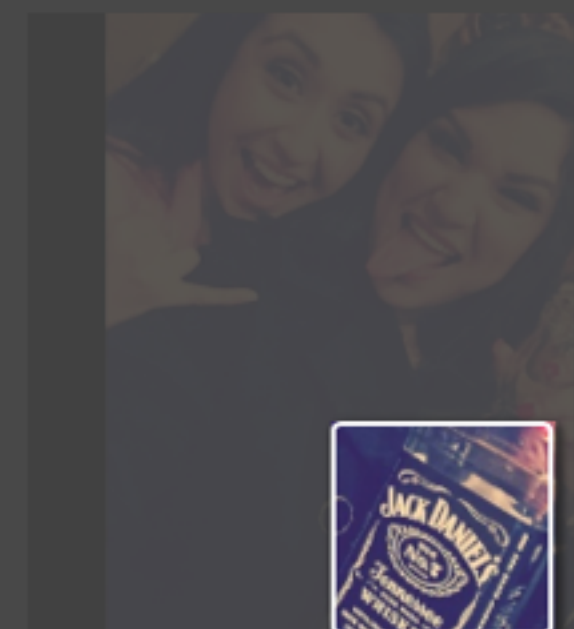
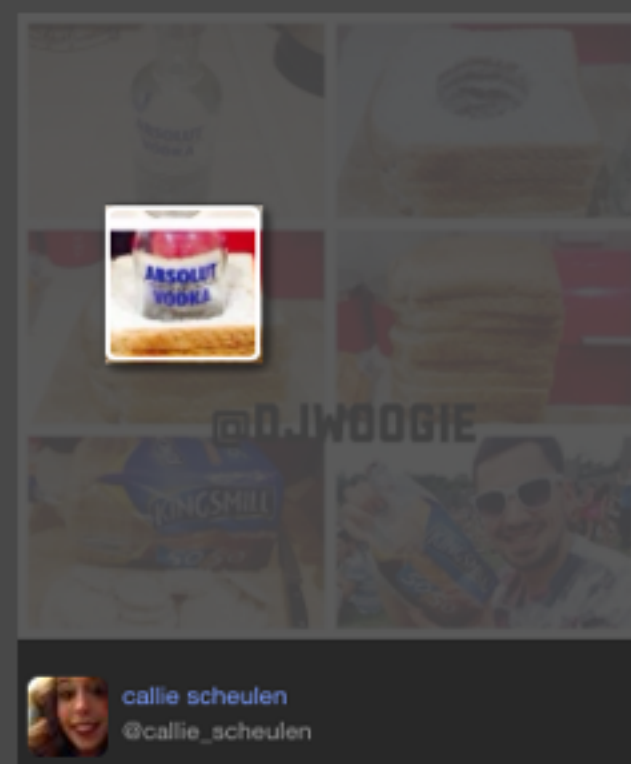
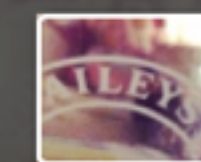
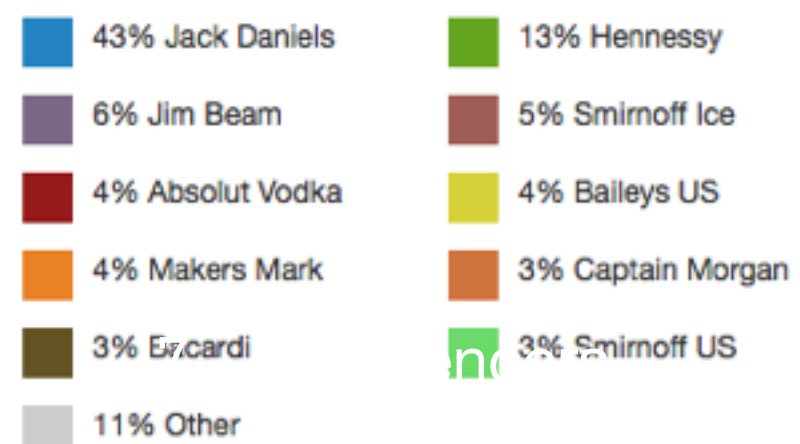
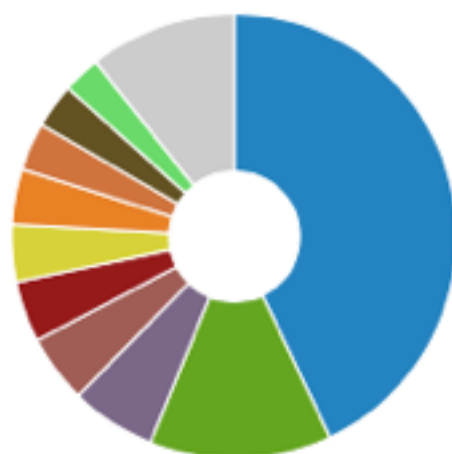
### Weekly Trends

For the trailing week



### Photo Share


Calculated last week












# Hilton is blind to 97% of these photos


 Hilton


Compare To





  


 SOCIAL PHOTOS


 PROFILE SHOTS

 ANALYTICS

 AFFINITIES

 INFLUENCERS

 WORD CLOUD

 HEAT MAP

## Social Photos 97% of these photos can't be found by hashtag: #hilton

SHOWING IN THE LAST SORTED BY  
All Photos All Time Posted

EXPORT TO CSV

INFO


OFF

Stepping out in Dubai today with #CelineParis #gucci #VictoriaBeckham at #Marriot #JBR #dubai #Dress...  
<https://t.co/t51QT01yMe>  
04/12/2015 11:15AM GMT

 130




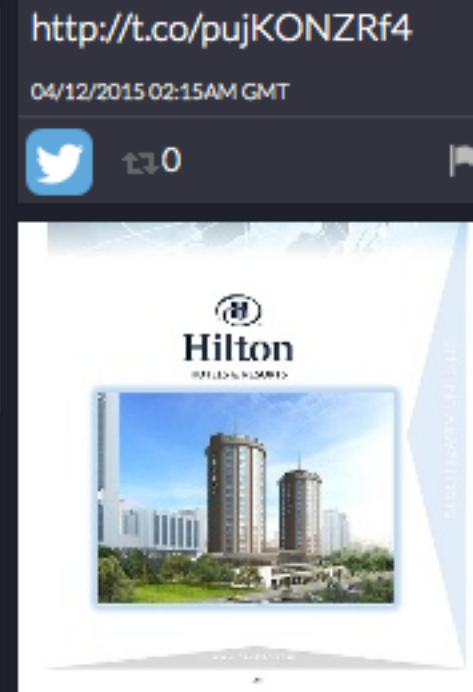
@FarmsSwine 40  
RT @FarmsNews: Hilton Hotels Changes Animal Welfare food sourcing policies: cagefree eggs & group housed pork  
<http://t.co/G47SUIyEPi>  
<http://t.co/G47SUIyEPi>  
04/08/2015 06:24PM GMT

 8



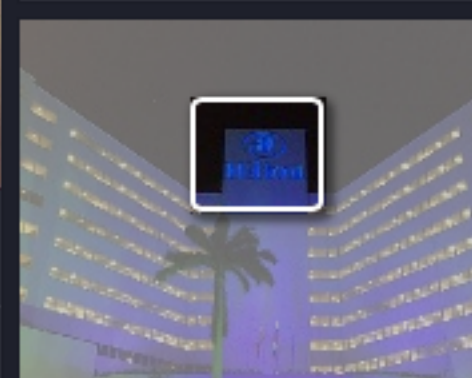
@hotelsyes 57  
At <http://t.co/3OLzrzoan> --  
At the -sharing my  
#HiltonStory -so cool!!  
<http://t.co/pujKONZRf4>  
04/12/2015 02:15AM GMT

 130



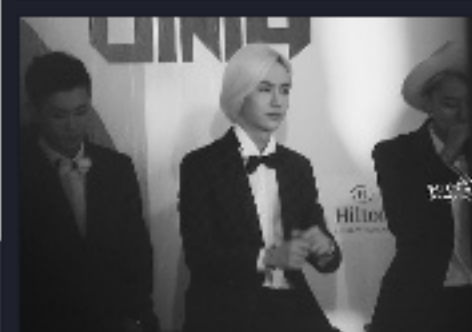
@devisso  
Referanslar hilton oteli  
(Devis'So Akademi)  
04/08/2015 06:10PM GMT

 130




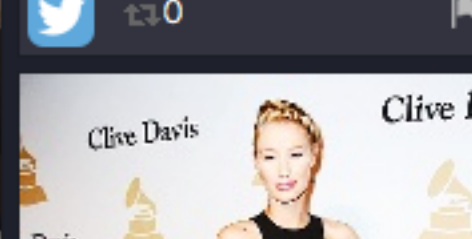
@J\_Sitruc 24  
Best hotel out here. Yup.  
#Cartagena #Vacation  
<https://t.co/QmbnprkzV>  
04/10/2015 09:04AM GMT

 130



@only\_yibo 31  
[HQ] 150306 #UNIQ #Yibo  
at Press Conferece in BKK.  
Cr. seungyouboy  
<http://t.co/dlLthKUaWe>  
04/06/2015 04:14PM GMT

 130

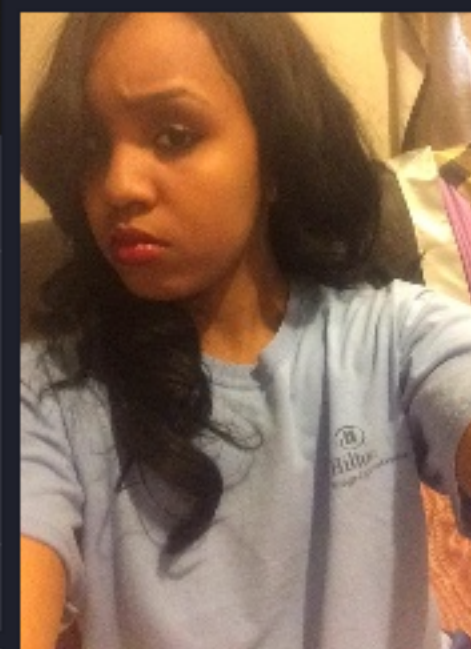


 130  
Neydi bu kızın adı  
Hangi kız?  
San saçlı trabul trabul diye şarkısı var  
sarilsekmi:  
Taylor swift görse kendini asar  
1,018 yorum



@busnrbd  
:D Taylor görse kendini asar  
04/09/2015 05:45PM GMT

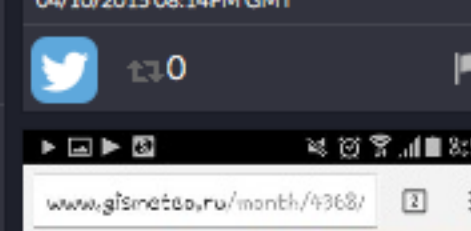
 130



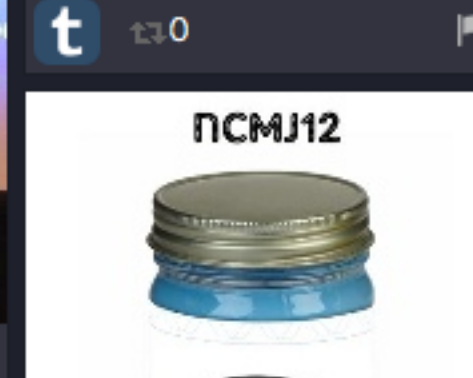
@deetorii 47  
why am I still here



@CPHarbour 35  
Thank you Elizabeth!! RT  
@CoxBrand: Thank you,  
Cliff, for a wonderful year as  
CSCC President!  
#csc2015  
<http://t.co/n4TSZfoysq>  
04/10/2015 08:14PM GMT



@ArinkaLarinka 16  
Мне нравится эта



@SnugZUSA 46  
Part IV of #Zen  
Chronicles:Our Mason Jar is  
12oz of Aromatic Pleasure.  
Available in all Scents  
<http://t.co/NLus4rYSnD>  
<http://t.co/3vAIGX4JLY>  
04/08/2015 07:00PM GMT




@quartzbunny  
04/05/2015 02:07AM GMT



@StarkvilleArts 43  
As part of our  
#SponsorshipAppreciatio...  
for #CDAF we would like to  
thank our sponsors. If you...  
<https://t.co/fPFuJB2mYr>  
04/11/2015 05:01PM GMT

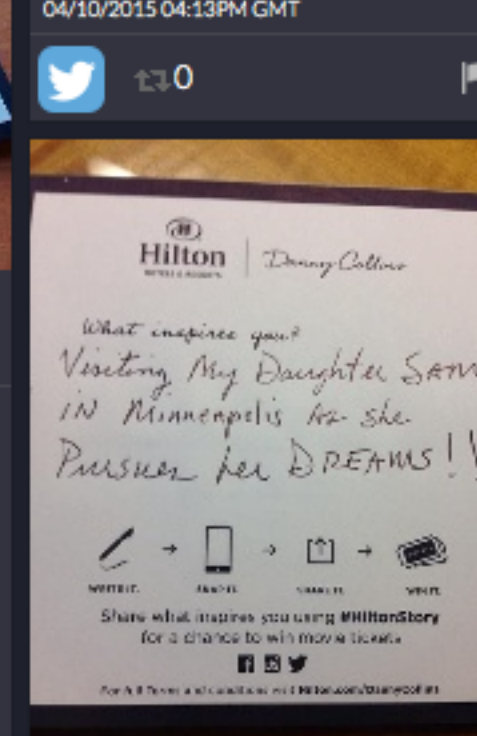


@MilleniumHil... 45  
Share your #HiltonNow  
story on your special Danny  
Collins notepad found in  
your room for a chance to  
win tickets!  
<http://t.co/QU6KOVtbrh>  
04/08/2015 04:00PM GMT

 130



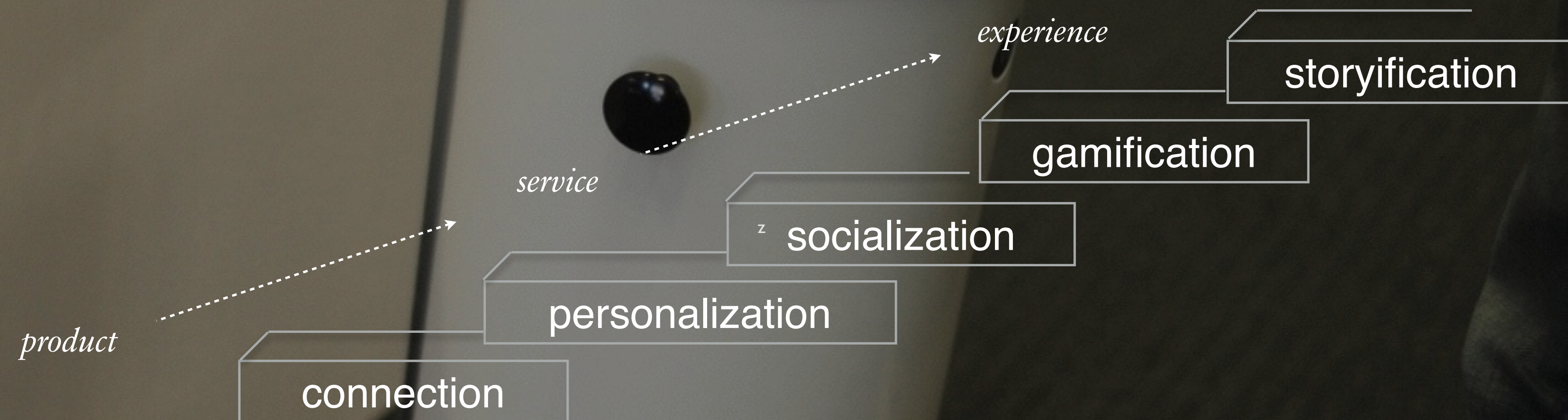
@LeeLambert3 48  
It was a honor and pleasure  
to be this mornings keynote  
speaker at the APAHE  
conference. #APAHE2015  
<http://t.co/bCNnd9ESAO>  
04/10/2015 04:13PM GMT



@SamSchlicht 34



# ladder of enchantment



Amazon Trash Can



“Coconut water shipped all the way from Asia?!”

Audible commentary on the products you consume offers perspective, humor and helpful information. Below are some examples.

	+	-
GREEN	“Locally sourced, nice job!”	“Coconut Water shipped all the way from Asia?!”
NUTRITION	“Blueberry juice - lots of antioxidants!”	“hmmm... third box of cookies this week?”
COST	“Chewy granola bars, 20% off!”	“Out of season strawberries – very expensive!”









# enchanted systems



**10:00pm update  
temperature for better  
sleep to approximately  
3500K**

by [squint](#) on May 17, 2013  
used 28 times



**If it begins to rain then  
change the light colors to  
blue**

by [walderwo](#) on May 17, 2013  
used 55 times



**change colors when  
somebody send me a  
message**

by [elmore](#) on May 20, 2013  
used 29 times

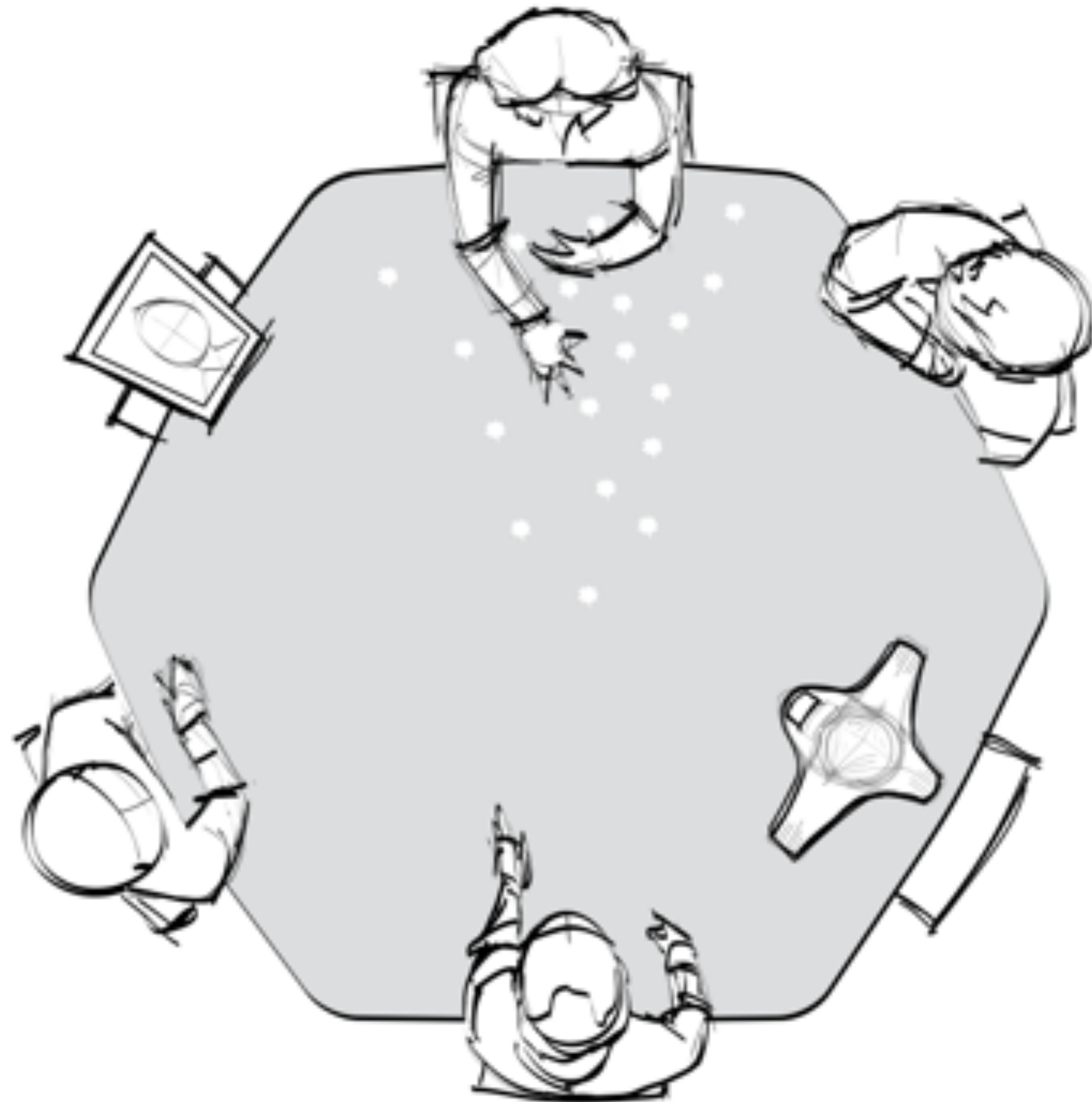




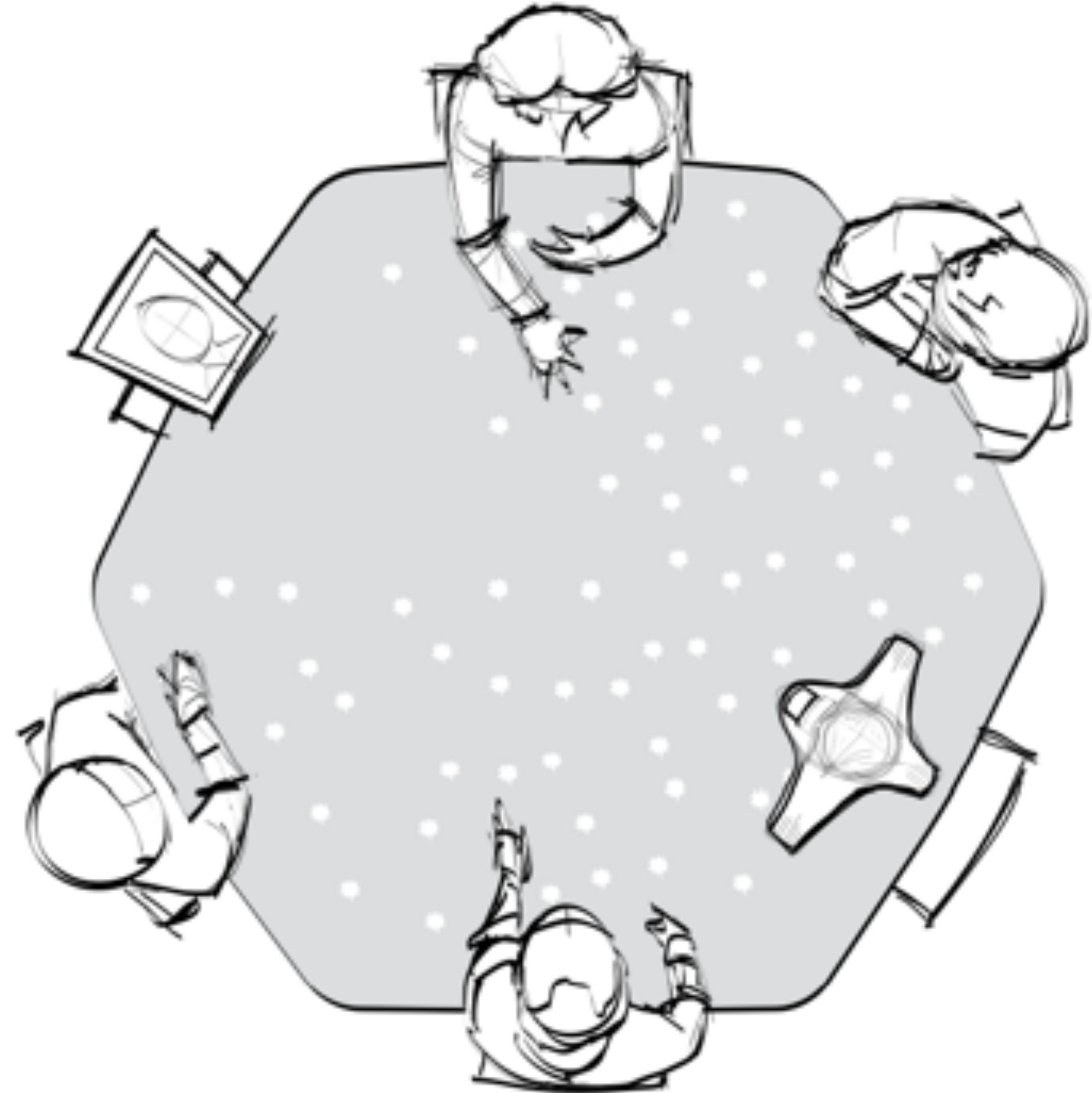
**Imagine a table centerpiece that listens to the room's conversation, and provides visual feedback about the balance of conversation.**



*dominating*



*balanced*



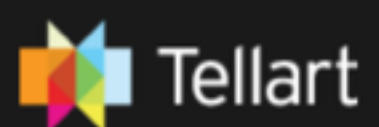
Balance Table



*a table for meeting mindfulness*



*...with no memory*

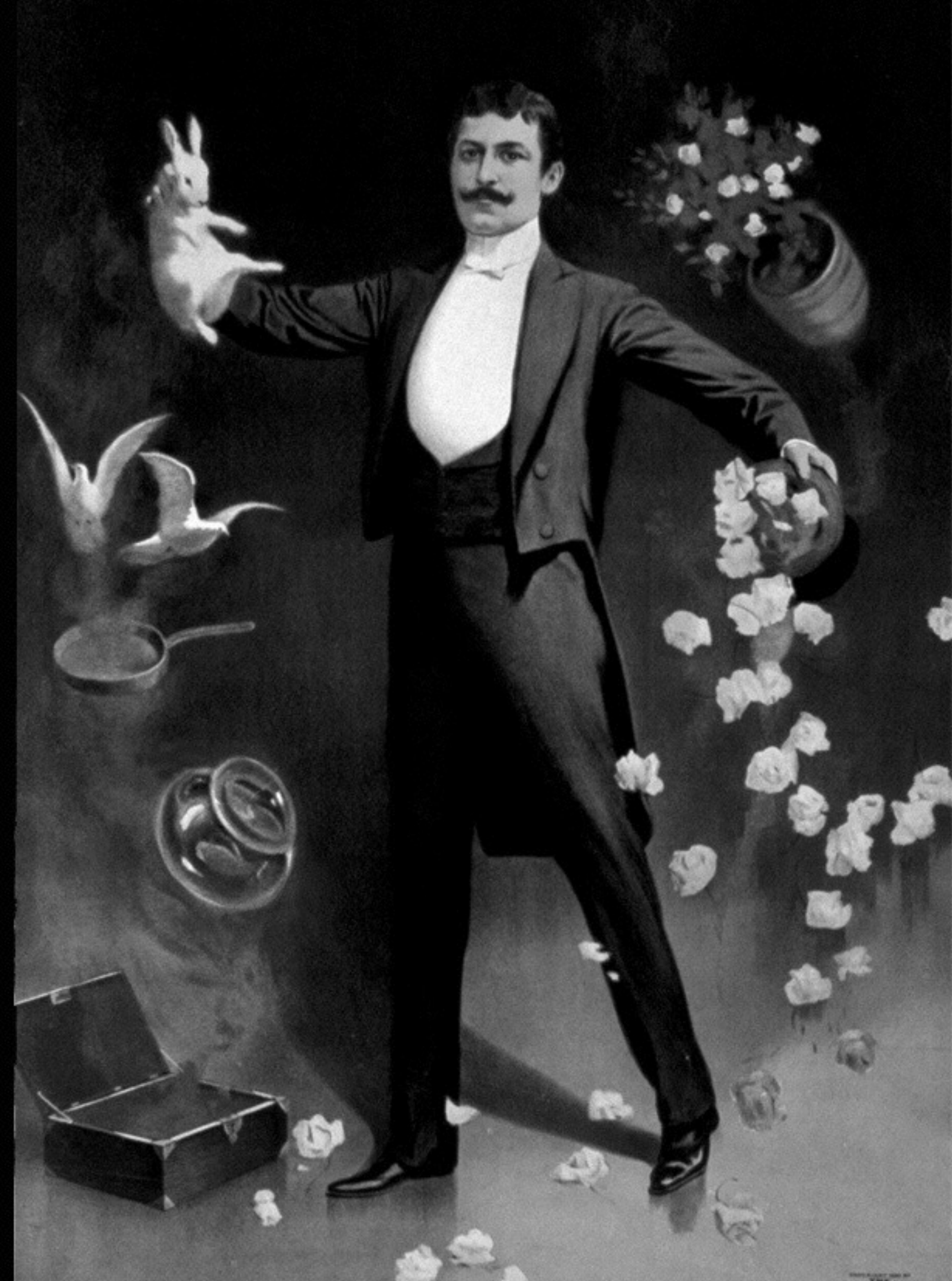


Balance Table



# There are many effect classifications:

- Production (appearance, creation, multiplication)
- Vanish (disappearance, obliteration)
- Transposition (change in location)
- Transformation (change in appearance, character or identity)
- Penetration (one solid through another)
- Restoration (making the destroyed whole)
- Animation (movement imparted to the inanimate)
- Anti-gravity (levitation and change in weight)
- Attraction (mysterious adhesion)
- Sympathetic Reaction (sympathetic response)
- Invulnerability (injury-proof)
- Physical Anomaly (contradictions, abnormalities, freaks)
- Spectator Failure (magician's challenge)
- Control (mind over the inanimate)
- Identification (specific discovery)
- Thought Reading (mental perception, mind reading)
- Thought Transmission (thought projection and transference)
- Prediction (foretelling the future)
- Extrasensory Perception (unusual perception, other than mind)









# Smart Hangers

Anders Erlendsson  
Hsiang-Lin Yang  
Simon Herzog

Music : All Inside - Bondax  
Thanks to : Adrian Westway & David Rose

**CIID** COPENHAGEN  
INSTITUTE OF  
INTERACTION  
DESIGN

/ **DK:**  
design  
copenhagen  
kolding







# ENCHANTMENT PRIVACY PRINCIPLES

*#1 Enchantment Must be Evident (pen)*

*#2 Obfuscate details with Ambient Displays (orb)*

*#3 Make Wireless Connections Explicit (glowcap)*

*#4 Design Incremental Opt-in Services (glowcap)*

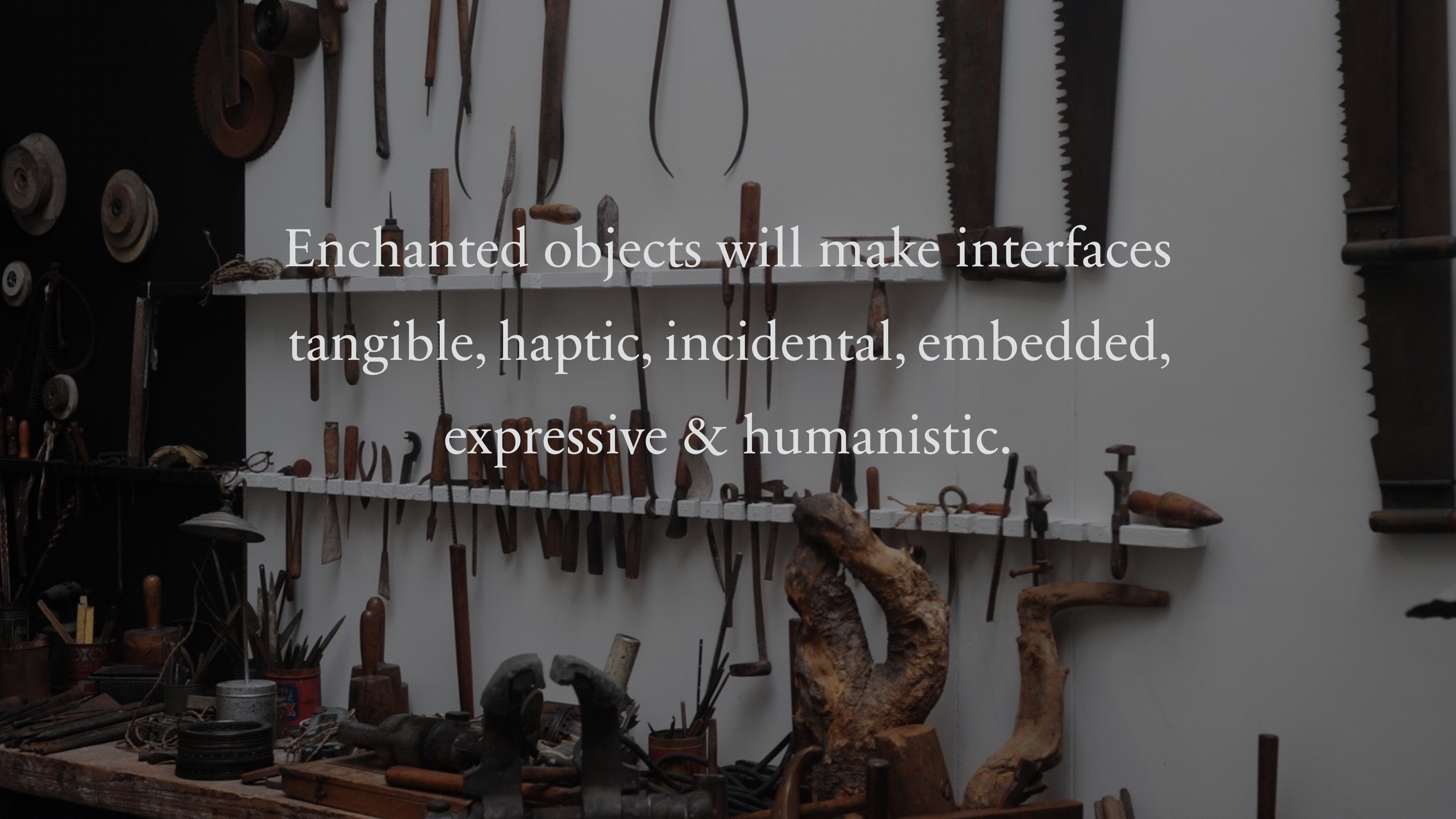
*#5 Add More Levels to 'Public' (ditto)*

*#6 Avoid Storing Information (balance table)*

@DavidRose

drose@media.mit.edu



A workshop filled with various tools and objects, including saws, hammers, and driftwood, illustrating the concept of enchanted objects.

Enchanted objects will make interfaces  
tangible, haptic, incidental, embedded,  
expressive & humanistic.





# ENCHANTED OBJECTS

DAVID ROSE

DESIGN, HUMAN DESIRE AND  
THE INTERNET OF THINGS

Enchanted objects will change how we:

1- understand information

2- connect with others

3- stay safe

4- enjoy a long healthy life

5- move effortlessly around the world

6- play, learn and create

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