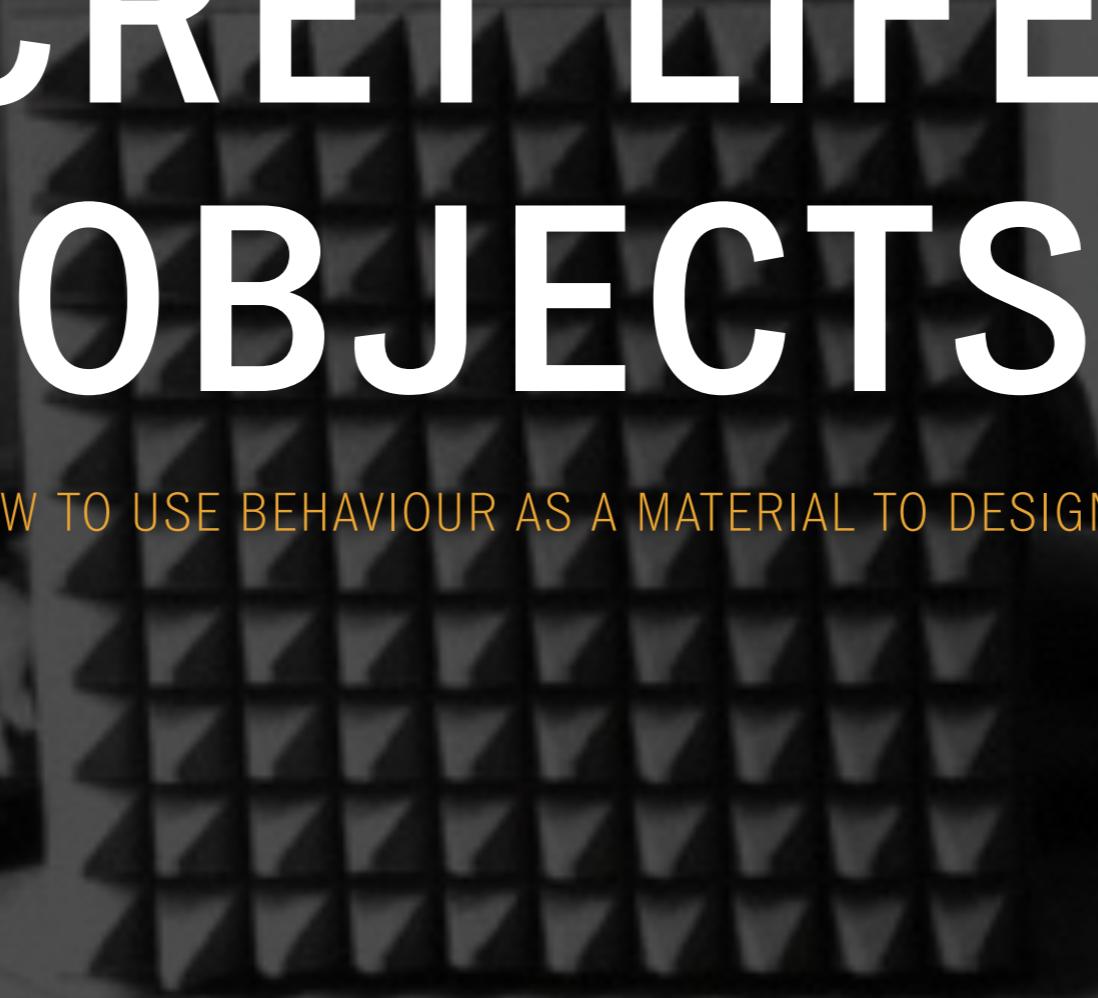


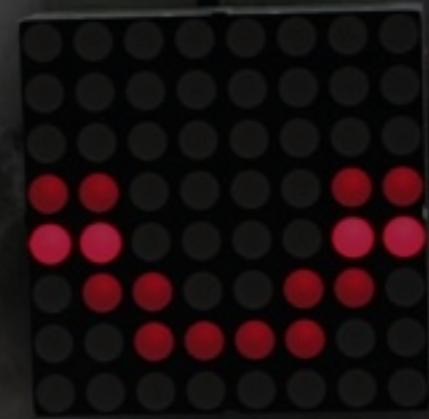
SECRET LIFE OF OBJECTS



OR HOW TO USE BEHAVIOUR AS A MATERIAL TO DESIGN WITH



JOSHUA NOBLE
can talk to aaaaany machine



SIMONE REBAUDENGO

needs machines to express emotions for him



secret life of whaaaaat?



Electronic objects are not only "smart", they "dream" in the sense that they leak radiation into the space and objects surrounding them, including our bodies. Despite the images of control and efficiency conveyed through a beige visual language of intelligibility and smartness, electronic objects... are irrational - or at least allow their thoughts to wander. Thinking of them in terms of dreaminess rather than smartness opens them to more interesting interpretations.

- Anthony Dunne, Hertzian Tales

OBJECTS+BEHAVIOUR+CODE
we are going to play with these three things

OBJECTS+BEHAVIOUR+CODE

the easier one

OBJECTS+BEHAVIOUR+CODE

a bit more hairy we will get back to this in a bit...

OBJECTS+BEHAVIOUR+CODE

i'm so happy that Josh is here

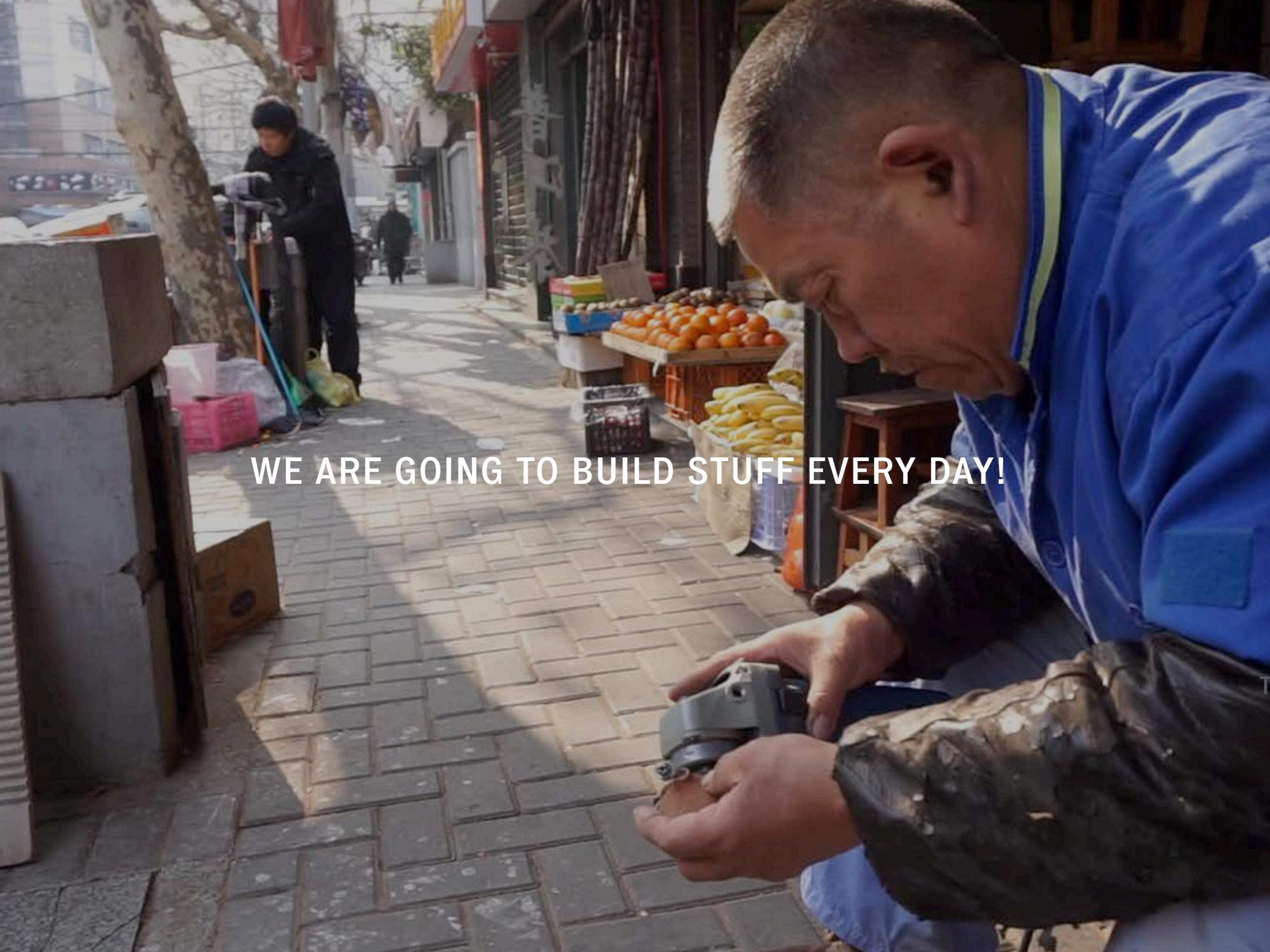
WHAT ARE WE GOING TO DO?

week 1

Intro	Check + Lecture	Check + Lecture	Check + Lecture	Check + Brief	
am	
pm	Profile a behaviour	Making things behave with colour and movements	Making things communicate with each others	Making things Perceive	Making things learn and evolve Let's start the project

week 2

think a bit	run	run	run	run
am
pm	run	run	run	run Expo+ beers!

A photograph of a man in a blue jacket and camouflage pants working on a wooden structure with a power drill. In the background, a woman in a black coat pushes a cart filled with various items, including boxes and bags, through a narrow street lined with buildings.

WE ARE GOING TO BUILD STUFF EVERY DAY!

SO WHY IS THIS ANY RELEVANT?

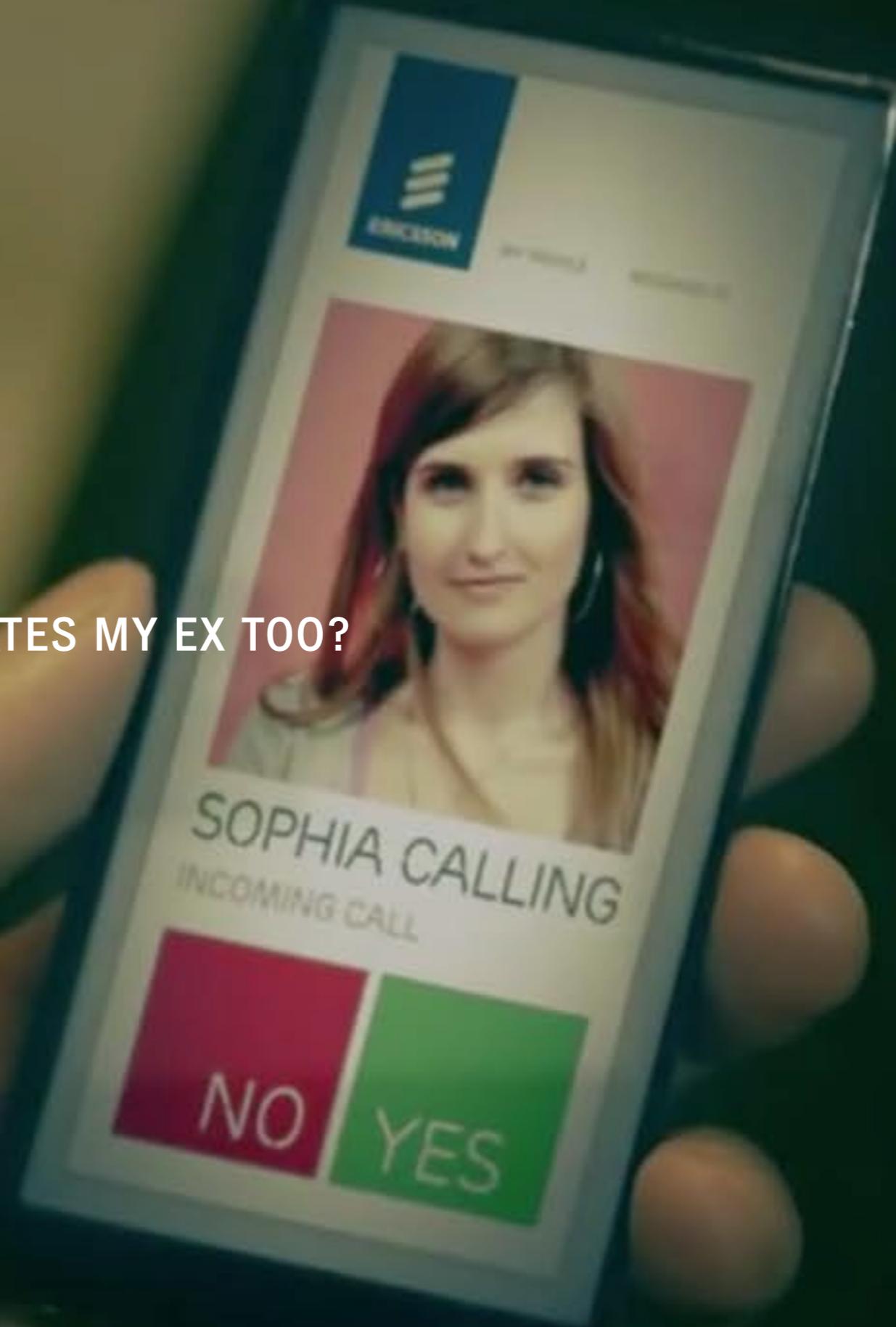
Ericsson, Social web of things (2012)
<https://www.youtube.com/watch?v=i5AuzQXBsG4>



A SECRET TRIO OF CARPET/SOFA/ROOMBA
A DEFINITELY SINGLE MICROWAVE
AN ASSHOLE UMBRELLA



WHY DOES MY HOUSE HATES MY EX TOO?





NOT ONLY THIS “AUTONOMOUS”

THE UI WITHOUT YOU

A photograph of a person from the waist down, wearing a white apron with a colorful floral pattern. They are leaning over a dark wooden desk, their hands resting on a vintage-style computer keyboard. To the left of the keyboard sits a small potted plant with yellow flowers. The background is a solid orange color.

WE MUST “DWELL” WITH
COMPUTERS, NOT JUST INTERACT
WITH THEM...

- MARK WEISER, OPEN HOUSE



HOW SMART DOES YOUR BED HAVE
TO BE, BEFORE YOU ARE AFRAID TO
GO TO SLEEP AT NIGHT?

- RICH GOLD

changeist.com/backchanneled

Back in the kitchen he fished in his various pockets for a dime, and, with it, started up the coffeepot. Sniffing the – to him – very unusual smell, he again consulted his watch, saw that fifteen minutes had passed; he therefore vigorously strode to the apt door, turned the knob and pulled on the release bolt.

The door refused to open. It said, "Five cents, please."

He searched his pockets. No more coins; nothing. "I'll pay you tomorrow," he told the door. Again he tried the knob. Again it remained locked tight. "What I pay you," he informed it, "is in the nature of a gratuity; I don't have to pay you."

"I think otherwise," the door said, "Look in the purchase contract you signed when you bought this conapt."

In his desk drawer he found the contract, since signing it he had found it necessary to refer to the document many times. Sure enough; payment to this door for opening and shutting constituted a mandatory fee - not a tip.

"You discover I'm right," the door said. It sounded smug.

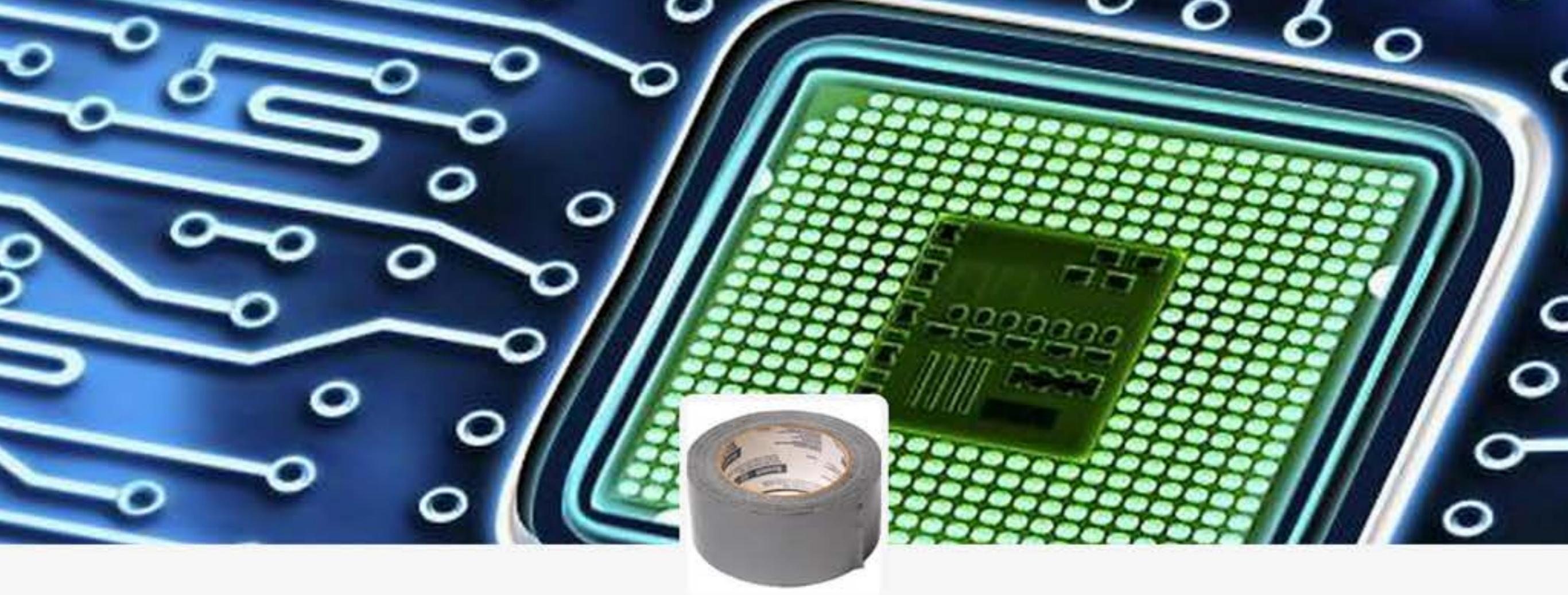
From the drawer beside the sink Joe Chip got a stainless steel knife; with it he began systematically to unscrew the bolt assembly of his apt's money-gulping door.

"I'll sue you," the door said as the first screw fell out.

Joe Chip said, "I've never been sued by a door. But I guess I can live through it."



WE WILL LIVE WITH THESE OBJECTS...



We put a chip in it!

It was just a dumb thing. Then we put a chip in it. Now it's a smart thing.

facebook.com

All of these devices are real: smart... - The Wall Street Journal | Facebook >

All of these devices are real: smart socks, toothbrush, plate, cup, fork, cutting board, stove knob, jump rope, frying pan.



Michael's computer
is looking for a
place to backup

LISTENING

A close-up photograph of a person's hands holding a black smartphone. The screen of the phone displays a young woman with long brown hair and blue eyes, smiling warmly at the camera. The phone is held in landscape orientation. The background is dark and out of focus.

KNOW YOU TOO WELL

Karen





Curiosity Rover @MarsCuriosity · Nov 5

@Philae2014 Relax, take it one step at a time, and know we're rooting for you.
#CometLanding



180

241

...



Philae Lander

@Philae2014



Follow

.@MarsCuriosity Thanks for your support! I'll do my best. Keep up the amazing work on #Mars. Heard you made it to Mt Sharp. Excited?



...

RETWEETS

24

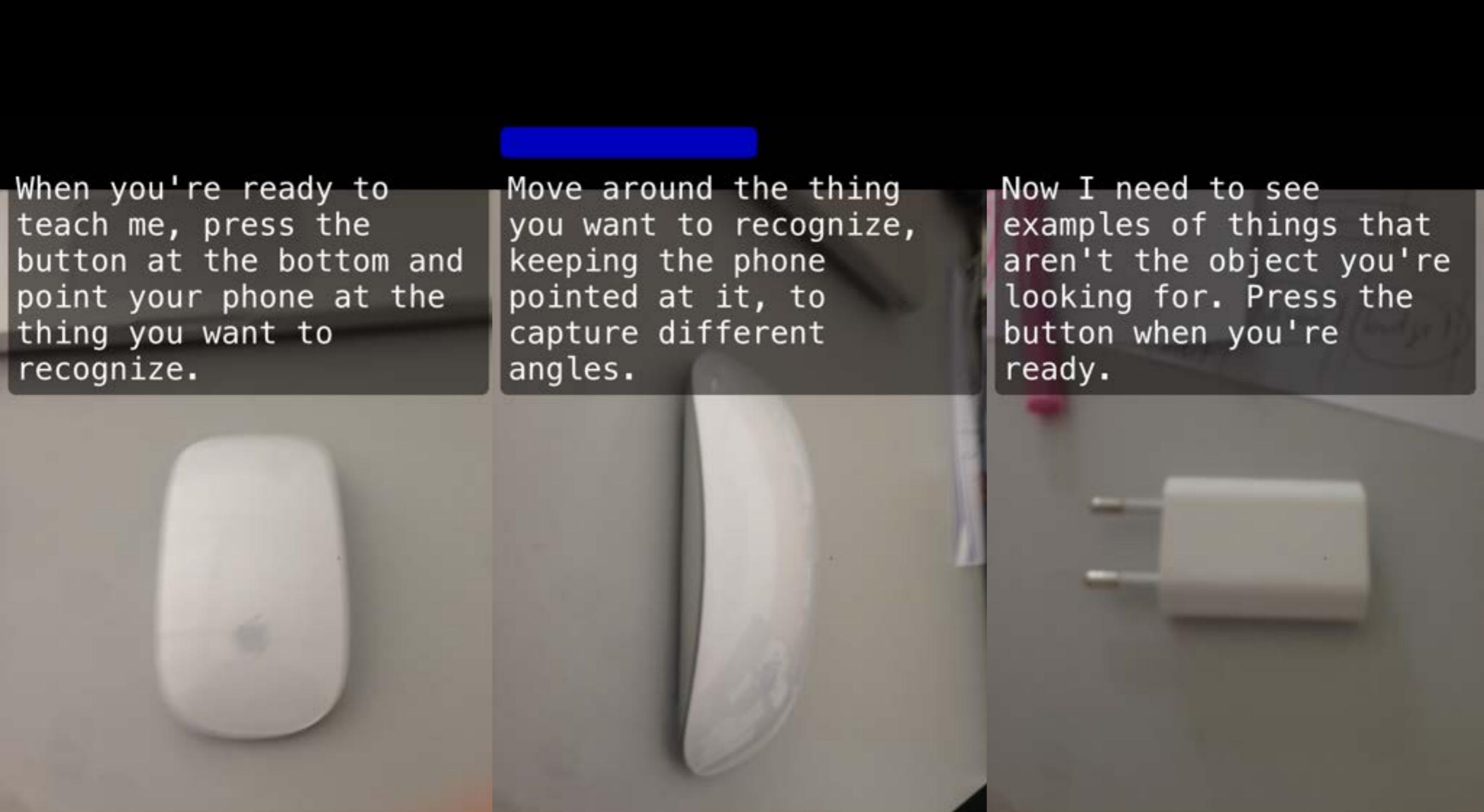
FAVORITES

39



1:13 AM - 6 Nov 2014

CHATTING



When you're ready to teach me, press the button at the bottom and point your phone at the thing you want to recognize.

Move around the thing you want to recognize, keeping the phone pointed at it, to capture different angles.

Now I need to see examples of things that aren't the object you're looking for. Press the button when you're ready.

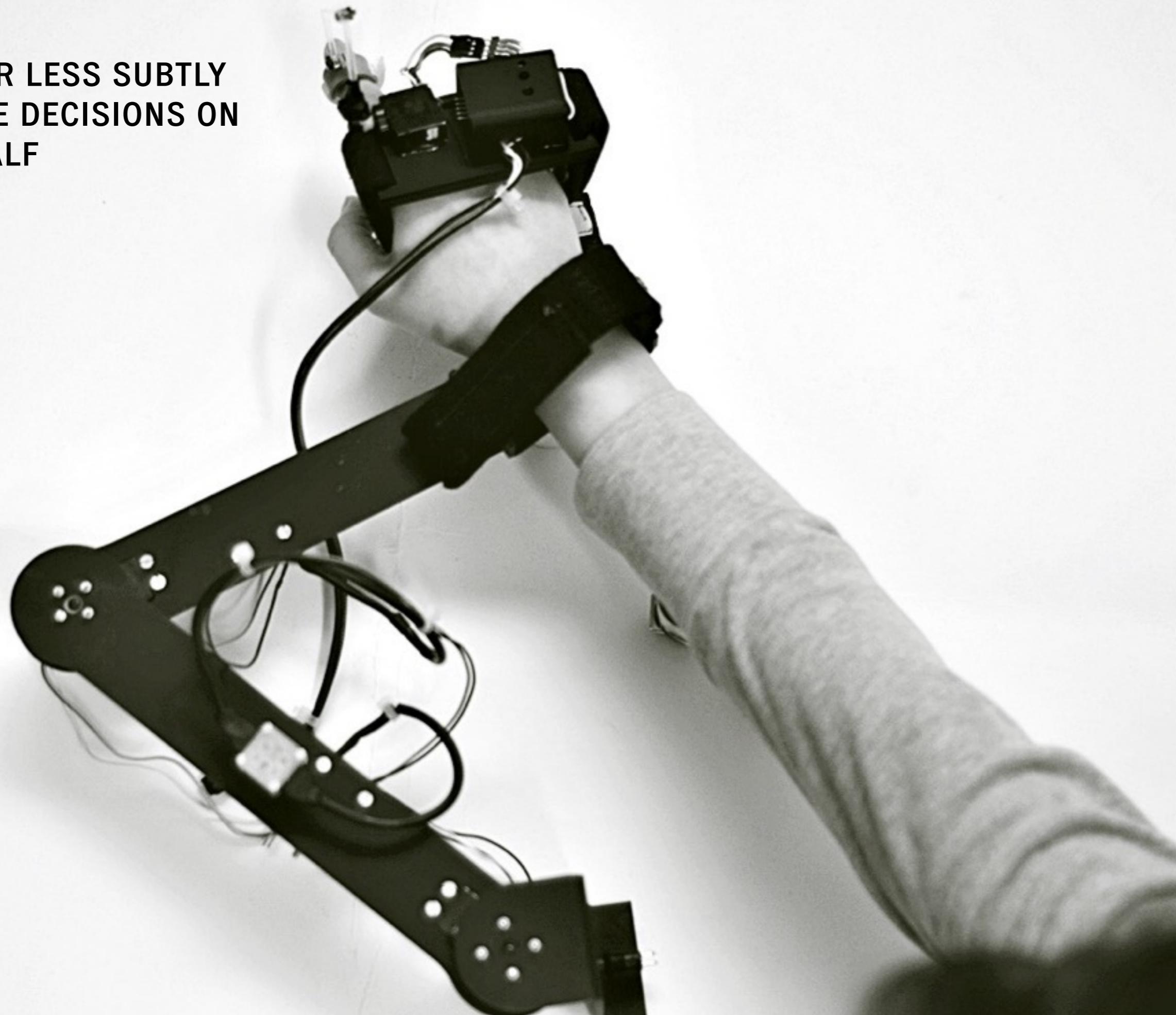
Start Learning

Learning

Continue Learning

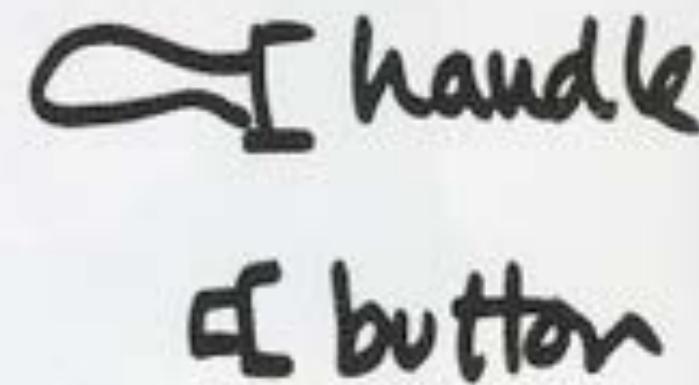
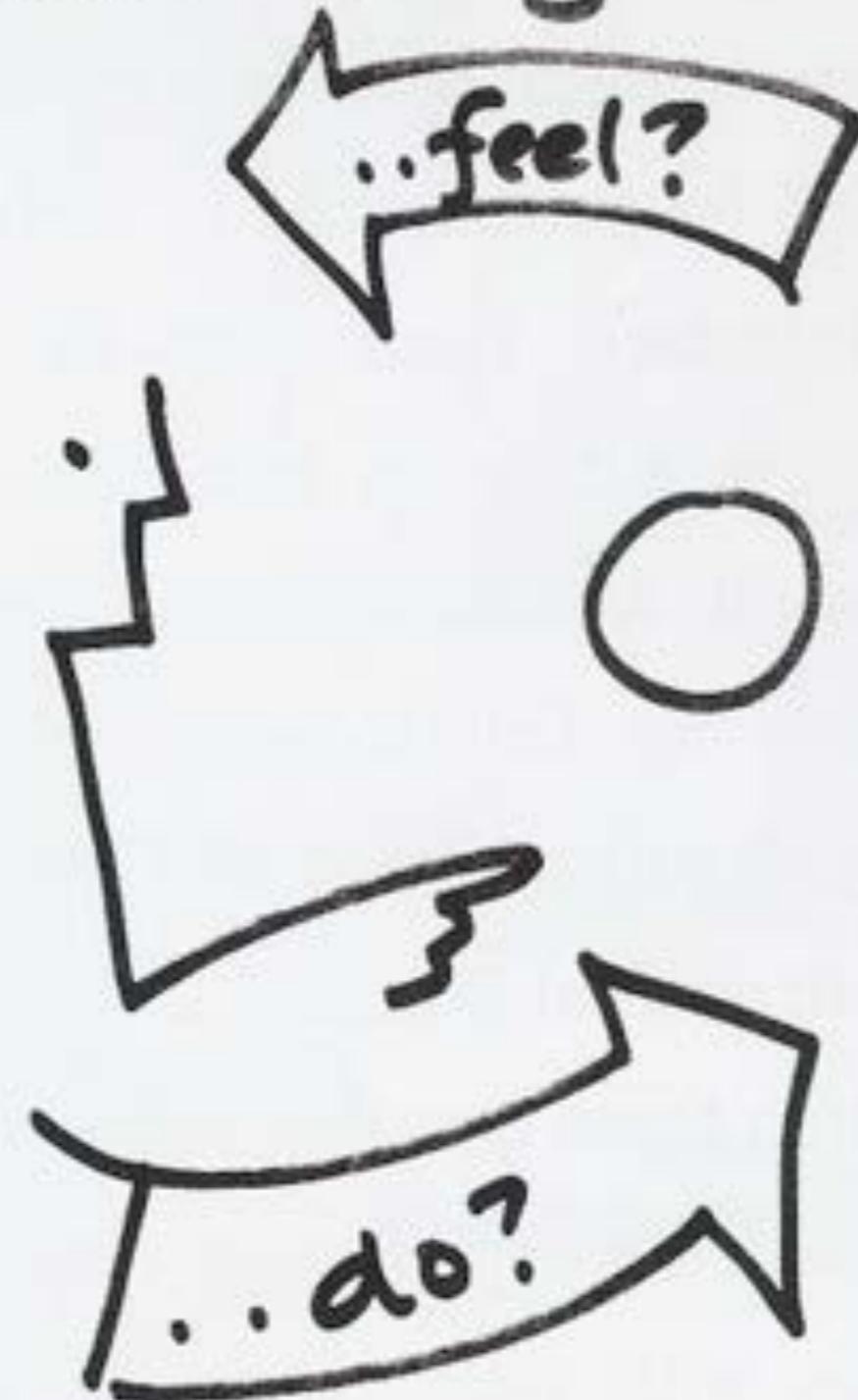
ASKING US TO DO WEIRD THINGS

SUBTLY OR LESS SUBTLY
THEY TAKE DECISIONS ON
OUR BEHALF



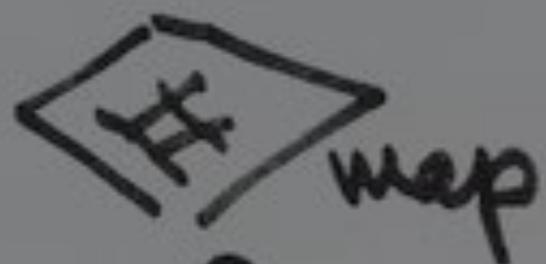
INTERACTION

How do you ...



INTERACTION

How do you ...



"SMART" THINGS POSE NEW
COMPLEXITIES ON US AS
WHAT THEY DO IS NOT AS
SIMPLE TO UNDERSTAND

...feel?



...do?

I handle
button



**"The Nest is doing its own [thing]
and doesn't tell you what it is
doing."**

http://rayang.people.si.umich.edu/links/NestStudy_RayoungYang.pdf

ation as an invisible interface
ber 3, 2012 from 6:30-9pm

Practical Guide to
designing the Invisible

BERT MILLS Foreword By MARK BOULTON

ign me
oss who
the right
everyday life

ibla

This Won't Hurt a Bit
Designing Invisible Interfaces for Health
Care Providers

DEBRA REICHENSTEIN

Good design is invisible: an interview
with iA's Oliver Reichenstein

By Sam Wyndham

relates to function
er than appearance.

the Invisible to Tell Better
on the Web

le Side of Design

RAINER SAX Invisible Design

<http://www.elasticspace.com/2013/03/no-to-no-ui>

Making Your Interface Invisible

Leeds, May 2009

Good Design is Invisible



Next Wave: Creating Services for the Invisible Interface

Added by Aymne Valencia

[View Events](#)

Turning Technology Invisible

A long time IT leader doing technology in a new way... by getting technolo...

"Good design, when it's done well, becomes invisible. It's only when it's done poorly that we notice it."

Jared Spool

inspire

Posted September 13, 2012

- The best interface is no interface is about we interact with that no longer require el minimal user interfaces to get things done doors, it's about giving form to objects so

IT'S NOT ABOUT HIDING

Good D Is Invisible

Kara DeLost ON 2012-03-20

See the Power of Invisible Design

Great Designs Should Be Experienced and Not Seen

BY JARED M. SPOOL

Originally published: May 24, 2008

Editor's note: Thanks to Marco Dini translating the [article to Hebrew](#). If

"Good design is invisible."

published 25 JULY 2012

Oliver Reichenstein, in an interview with The Verge:

Good screen design happens in the subatomic level of micro (the exact definition of a typeface), the invisible grid of

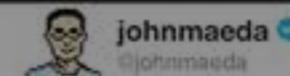
MASS
The Invisible

Oct 25, 2011 - 9:57AM PT

Could Siri be the invisible interface of the future?

Visible vs. Invisible Design

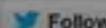
Francisco Inchauste



johnmaeda

@johnmaeda

Computers are Going to



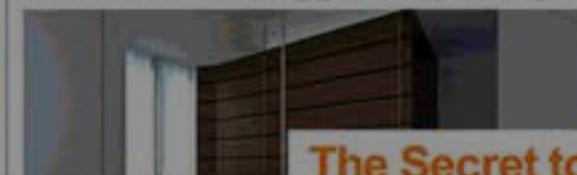
Good design is often invisible, but it can contribute to reshaping the way our society works. risd.cc/VJzRQS for @CNNOpinion

Invisibility is all around us

In a world that is totally designed there is a lot of invisibilit...

Power of Invisible Design

The Cult of Disappearing Design



The Secret to Wow Factor



Design's Invisible C

Good Design is Invisible

6 Replies

it detects the keys in your pocket.

Have you ever asked a web designer to give you some "wow" invisible and bringing the experience to the surface!

Design As the

September 23rd, 2012

By Camille Koué

IN
ORIGINAL
INTERVIEW
AUGUST 1

4. **Good design makes a product understandable**

It clarifies the product's structure. Better still, it can make the *product talk*. At best, it is self-explanatory.

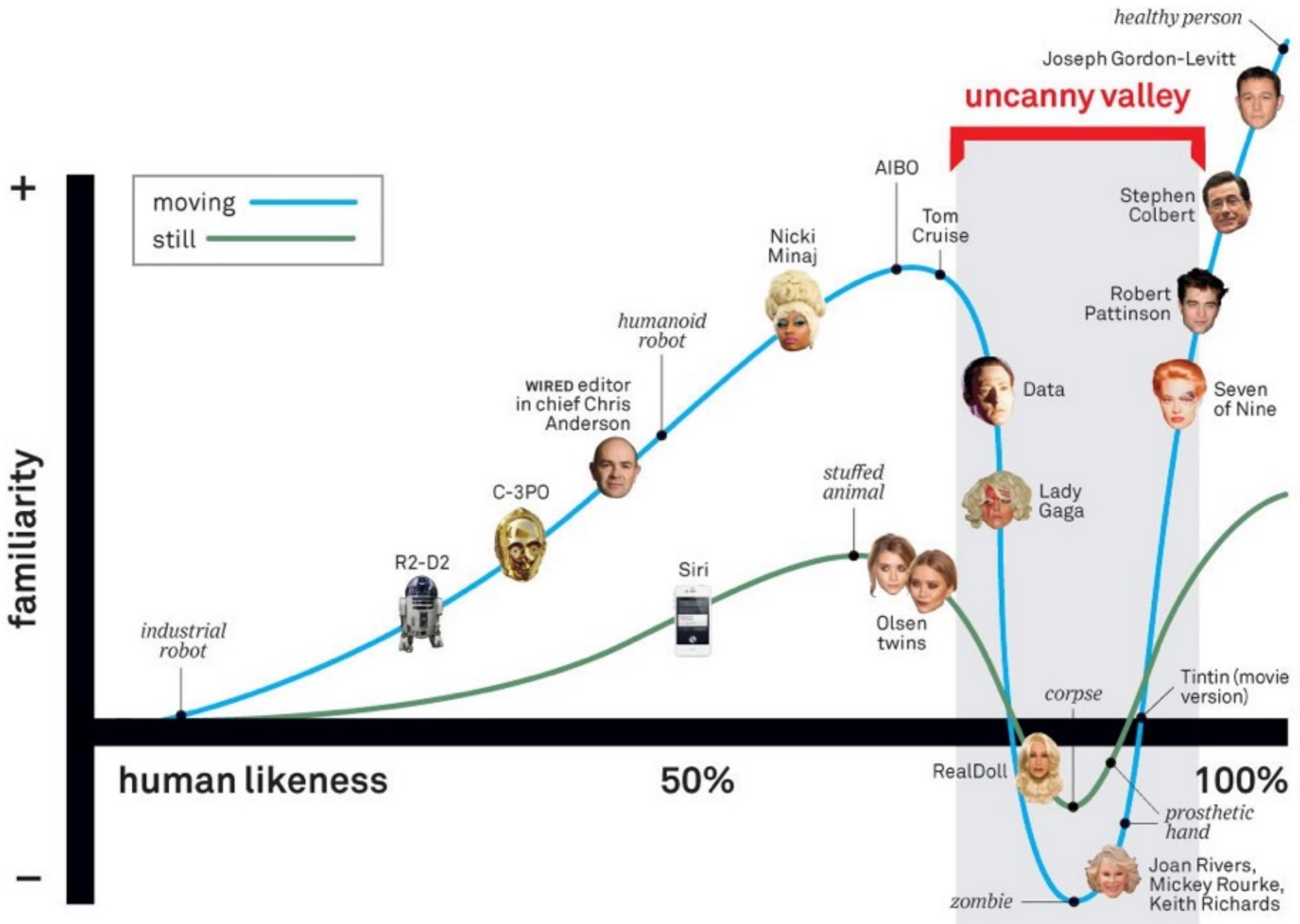


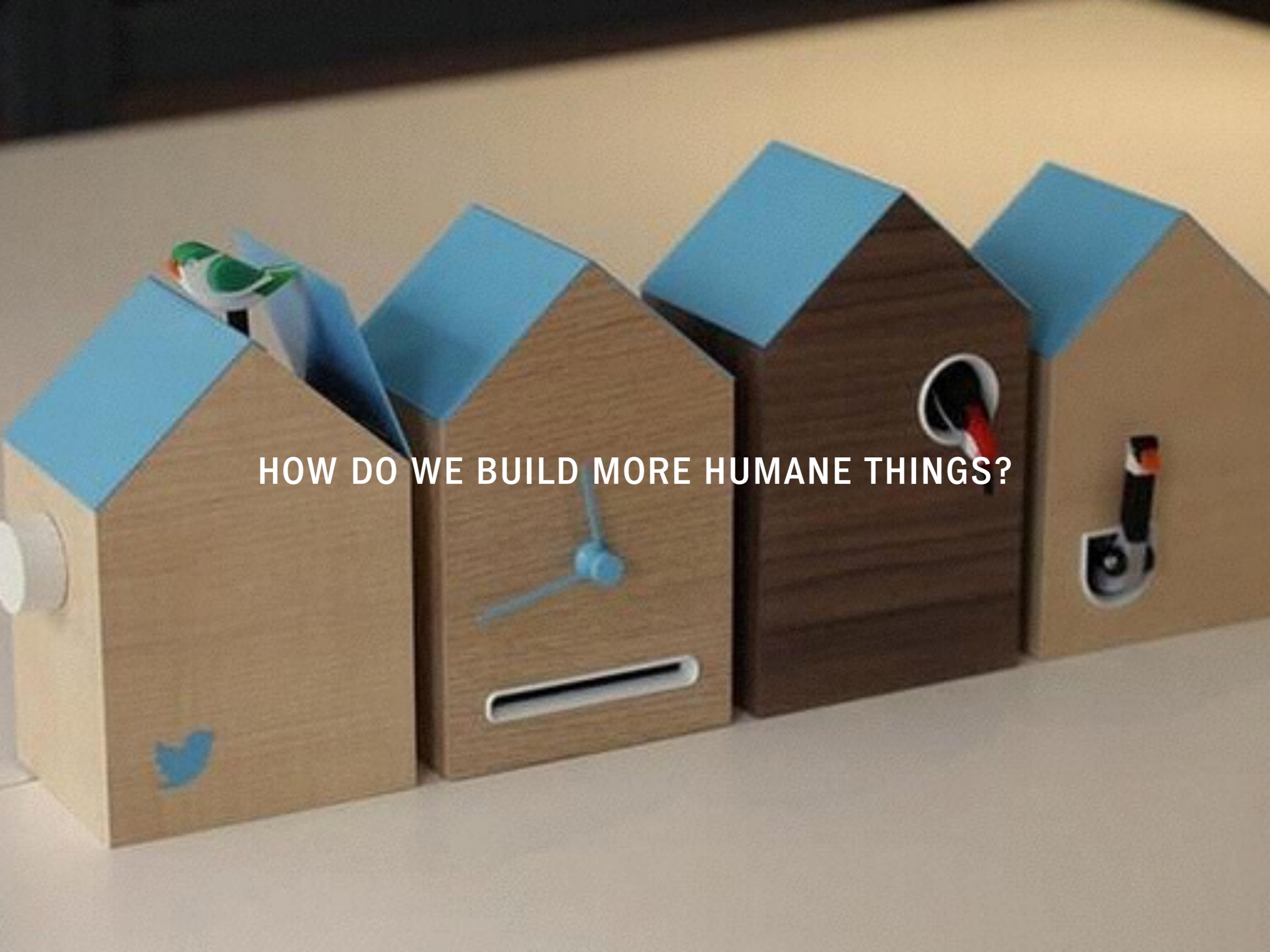


HOW DO WE KEEP FROM BECOMING ONLY INPUTS?

A man with short brown hair and glasses, wearing a plaid shirt under a grey vest and dark jeans, stands next to a large, orange and black robot. The robot has a spherical head with a smiling face, a segmented torso with orange panels, and black arms and legs. It is standing on a black base with two large wheels. They are both positioned against a solid green background.

IT'S NOT ABOUT MAKING MORE "HUMAN" THINGS



A photograph of a row of birdhouses made from light-colored wood. Each birdhouse has a blue roof and a small entrance hole. The birdhouses are arranged in a staggered pattern on a light-colored wooden surface. A small green bird is perched on top of the first birdhouse.

HOW DO WE BUILD MORE HUMANE THINGS?

BUT LET'S GO BACK TO BEHAVIOUR

“Externally visible activity of an animal, in which a coordinated pattern of sensory, motor and associated neural activity responds to changing external or internal conditions” (Beck et al. 1981)

“A response to external and internal stimuli, following integration of sensory, neural, endocrine, and effector components. Behavior has a genetic basis, hence is subject to natural selection, and it commonly can be modified through experience” (Starr and Taggart 1992)

“Observable activity of an organism; anything an organism does that involves action and/or response to stimulation” (Wallace et al. 1991)

“What an animal does” (Raven and Johnson 1989)

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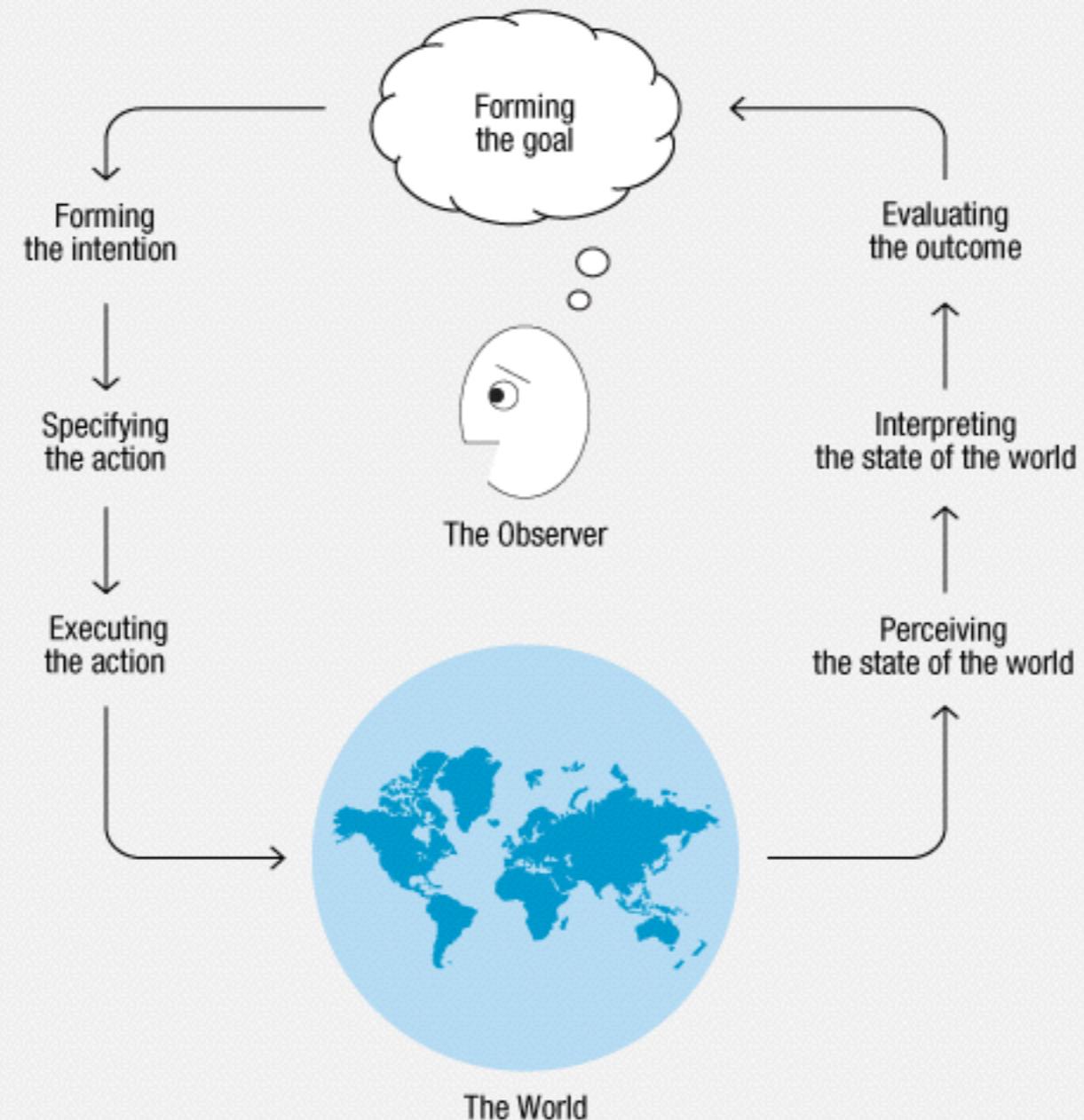
“What an animal does” (Raven and Johnson 1989)

SOMETHING THAT HAPPENS IN RESPONSE TO AN INPUT

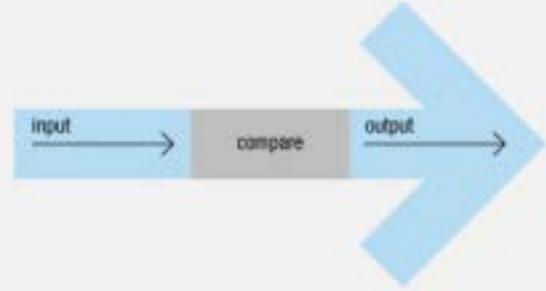
THERE IS SOME “NEURAL” ACTIVITY THAT RESPONDS TO THE INPUT

THERE IS SOME PERCEIVABLE ACTION AS A RESULT

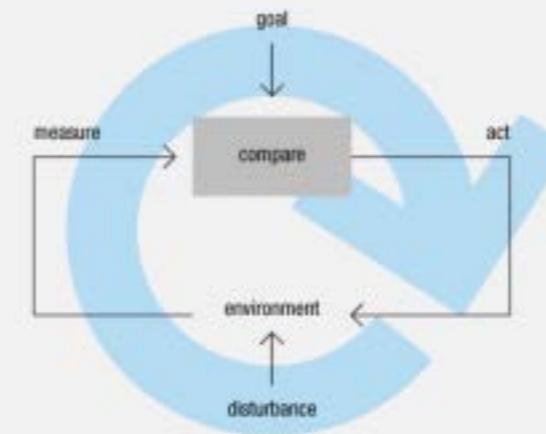




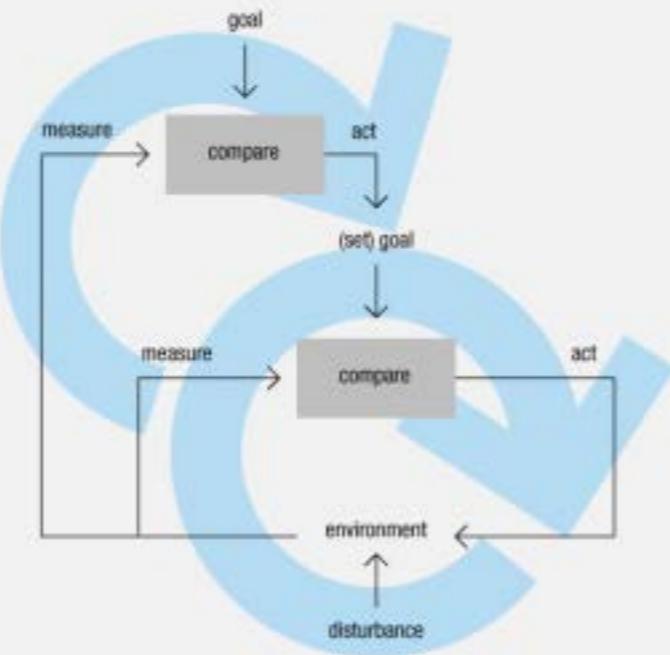
<http://www.dubberly.com/articles/what-is-interaction.html>



LINEAR



SELF-REGULATING



LEARNING



REACTING
LINEAR INPUT TO
ANOTHER LINEAR



REGULATING
SELF REGULATING+EXTERNAL
GOAL



LEARNING



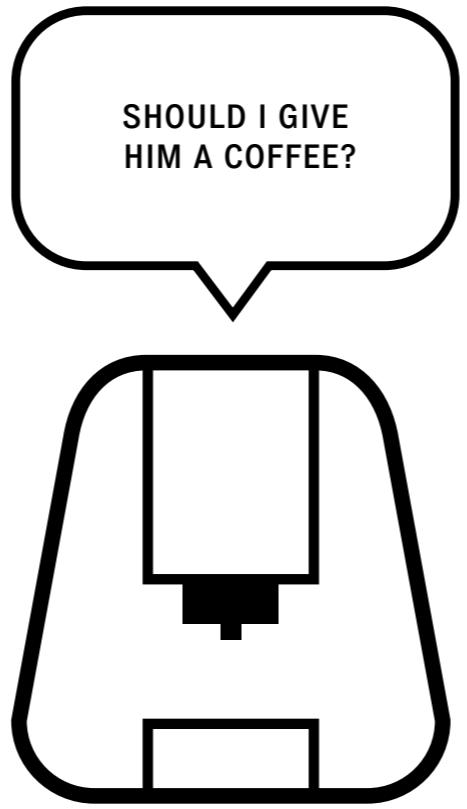
BALANCING
SELF BALANCING FEEDING OTHER
SELF BALANCING



ENTERTAINING



CONVERSATIONAL



**SO WHEN WE THINK ABOUT AN OBJECT THAT WILL
BE IN SOME WAY “SMART” AND AUTONOMOUS**

OBJECTS WILL KNOW

BEST

OBJECTS WILL KNOW

BEST

- ITS OWN USAGE
- USAGE OF OTHER OBJECTS
- ENERGY CONSUMPTION
- FOOD CONSUMPTION
- TIME OF THE DAY
- WEATHER
- LOCATION
- CALENDAR ACTIVITIES
- HEALTH DATA
- PROJECTED HEALTH
- DNA READING
- PERSONAL ECONOMY
- NATIONAL ECONOMY
- SOCIAL METRICS
- TRENDS
- GLOBAL ISSUES
- LASER CATS

...

FLOODS IN BRAZIL

PRODUCERS STRIKES

COFFEE PRICES

MY ACCOUNT

WHAT IF MY COFFE MACHINE KNOWS ABOUT MY STRESS LEVEL?

MY WORK SCHEDULE

MY COMPANY PROFIT

GARTNER HYPE CURVE

OBJECTS WILL BE
SMART

OBJECTS WILL BE

~~SMART~~

CHRISTIAN

MUSLIM

JEHOVA WITNESS

SELFISH

SWISS

ITALIAN

QATARI

BUDDHIST

CAPITALIST

HUMANIST

JEWISH

USER-FRIENDLY

USER-UNFRIENDLY

ECOLOGIC

PROFIT-BASED

SUPERSTITIOUS

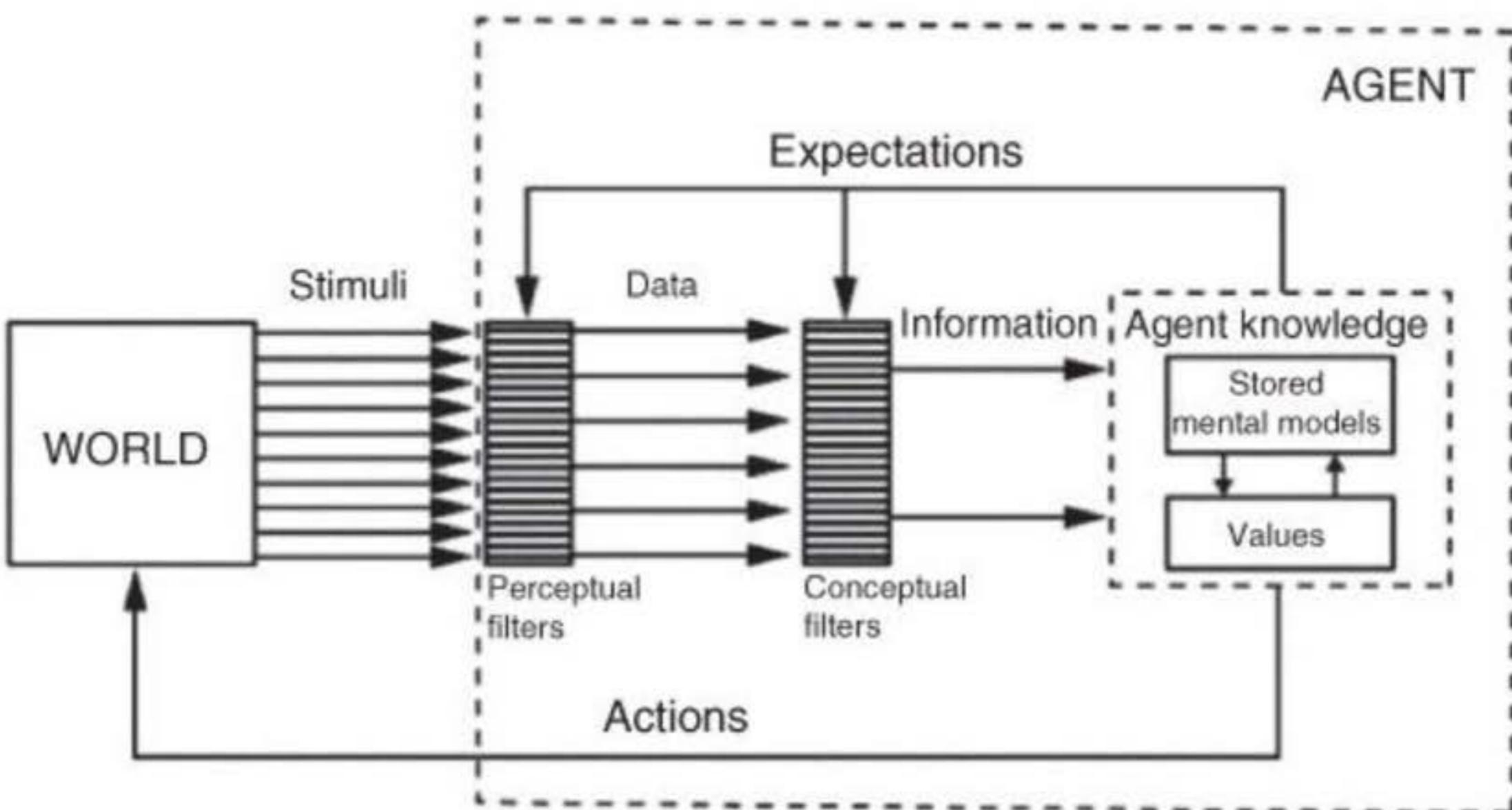
UTILITARIAN

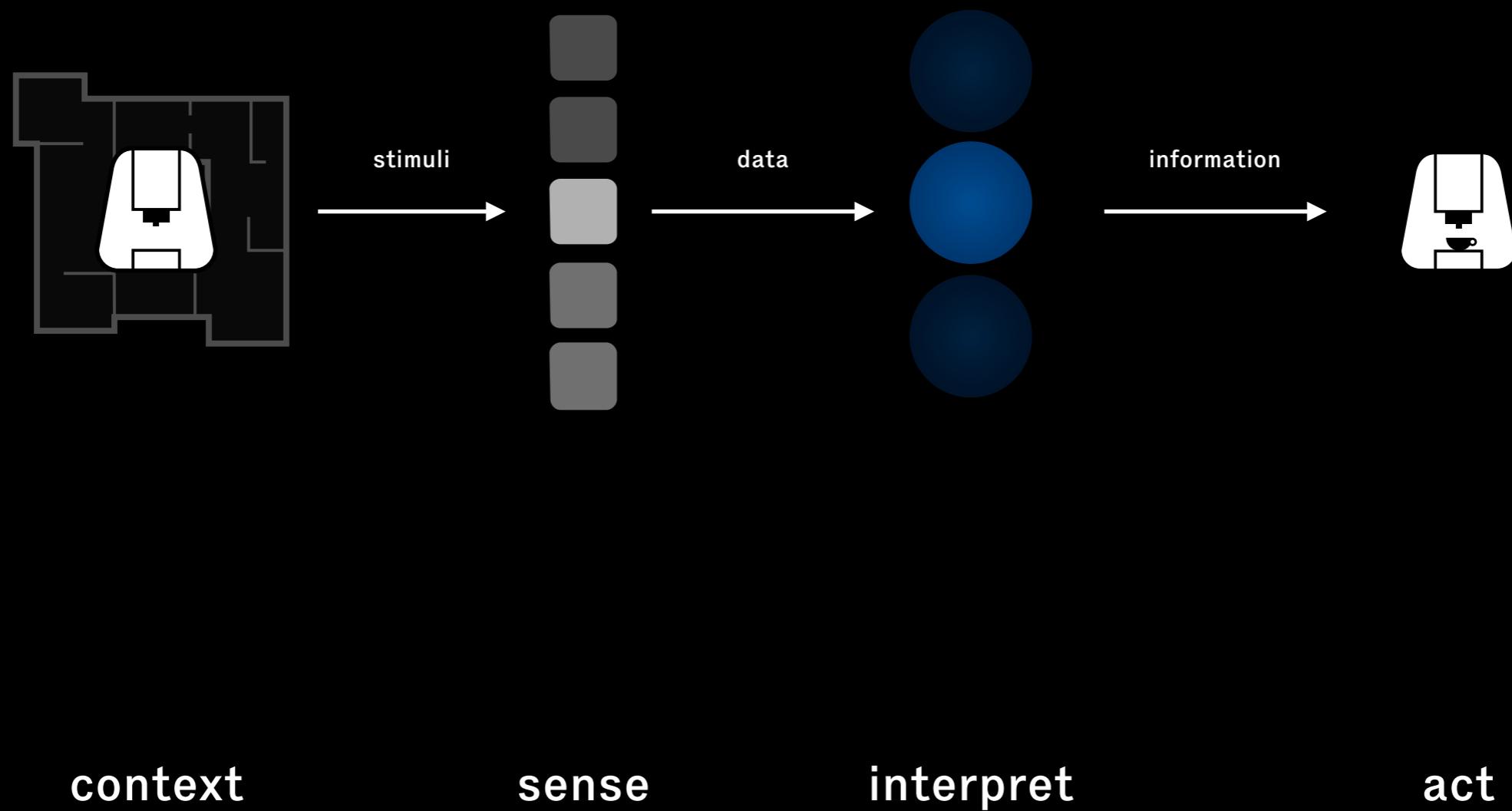
...

PUBLIC HEALTH DRIVEN
PERSONAL HEALTH DRIVEN
PRODUCTIVITY DRIVEN

WHAT IF MY COFFE MACHINE IS PROFIT BASED?

ITALIAN
VEGAN
JEWISH



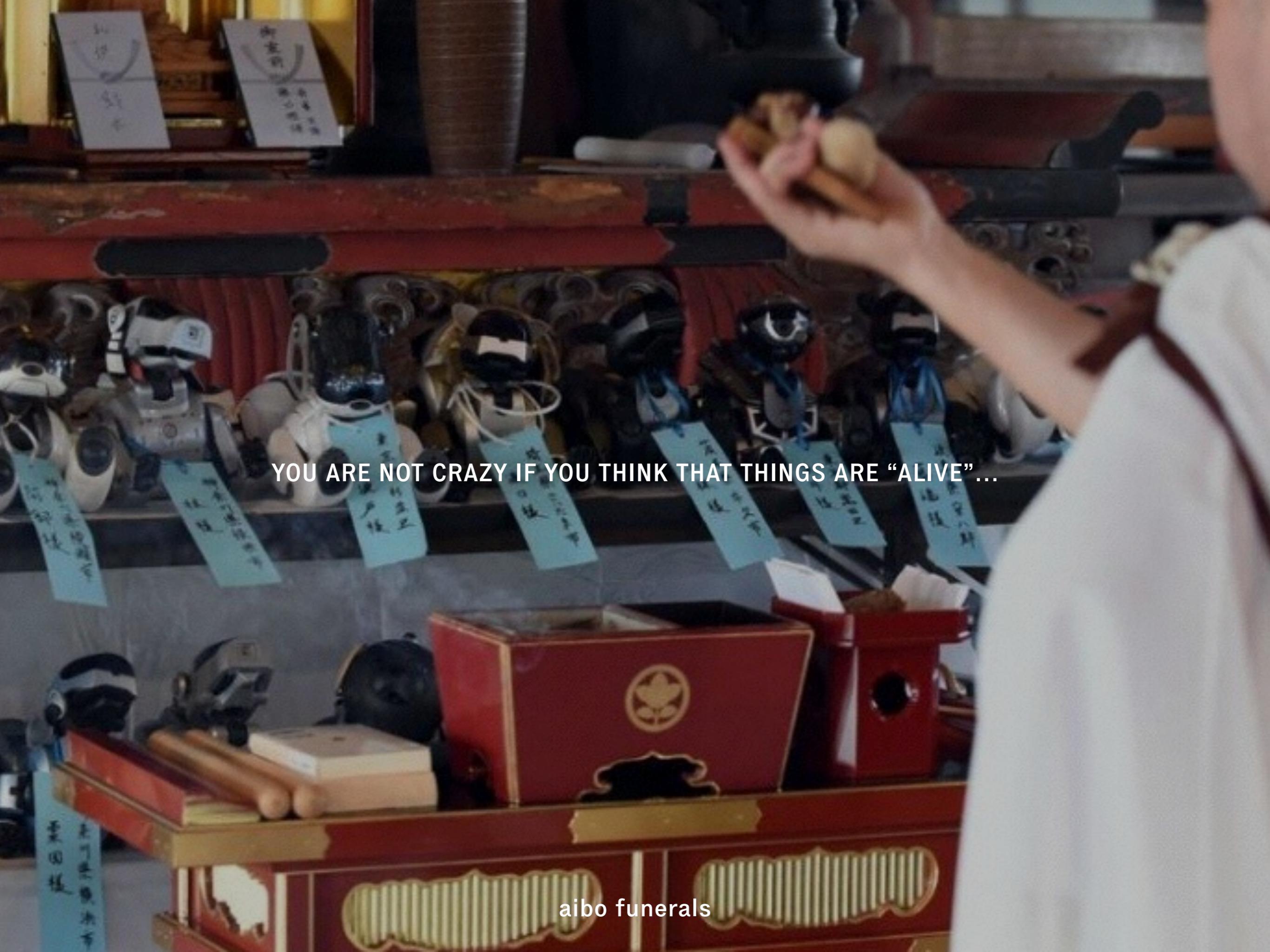


SOMETHING THAT HAPPENS IN RESPONSE TO AN INPUT

THERE IS SOME “NEURAL” ACTIVITY THAT RESPONDS TO THE INPUT

THERE IS SOME PERCEIVABLE ACTION AS A RESULT

AND NOW LET'S TALK ABOUT PERCEPTION
AND OBJECTS...

A photograph of a traditional Japanese funeral scene. In the foreground, a red wooden casket is open, revealing several Sony Aibo robots arranged in a row, dressed in black funeral attire. Above the casket, a person's hand holds a small white flower. The background shows a room with traditional Japanese elements like sliding doors and paper lanterns.

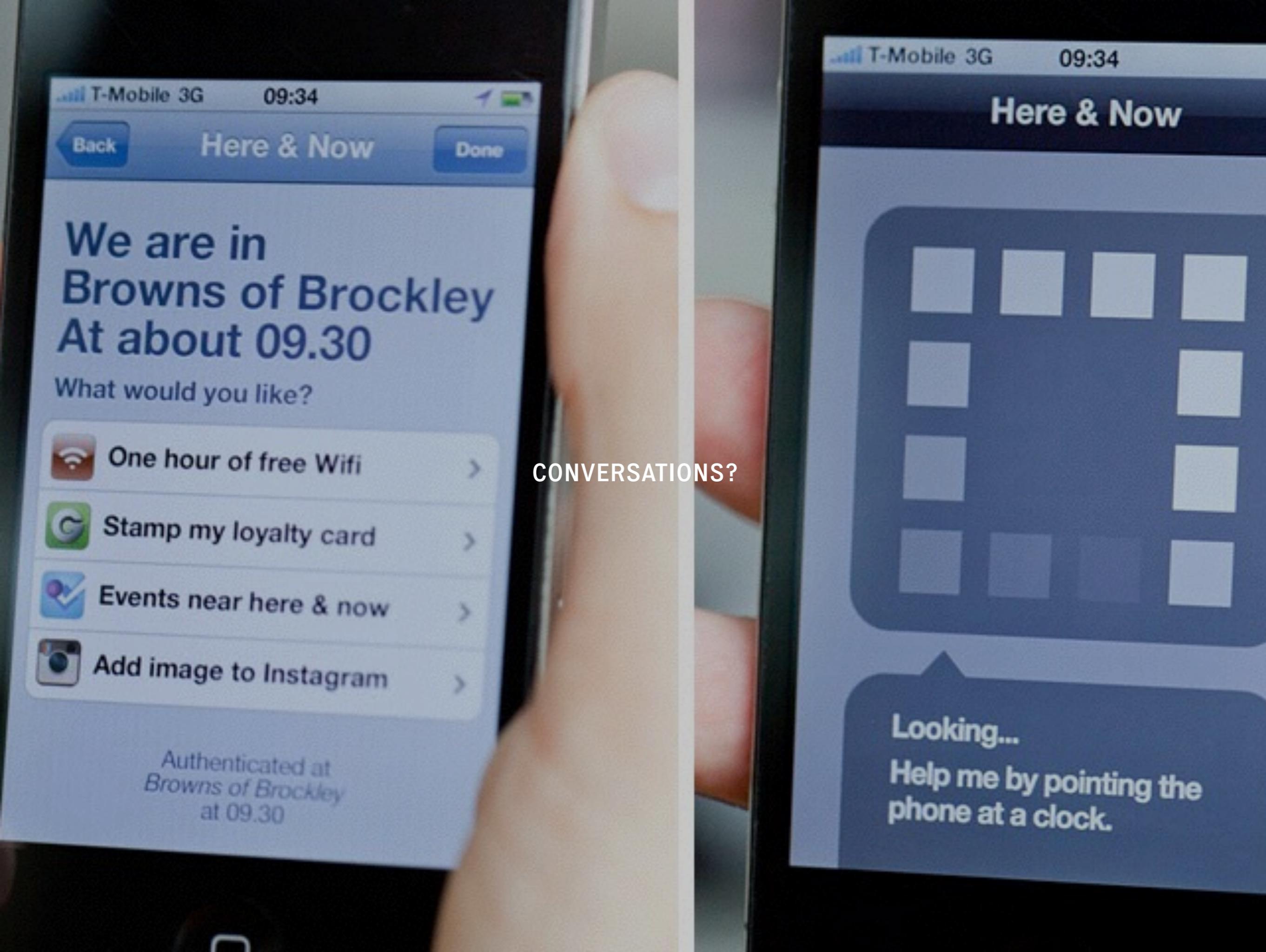
YOU ARE NOT CRAZY IF YOU THINK THAT THINGS ARE “ALIVE”...

aibo funerals



PERCEIVED INTELLIGENCE

pleo



T-Mobile 3G

09:34

Back

Here & Now

Done

We are in
Browns of Brockley
At about 09.30

What would you like?

One hour of free Wifi

Stamp my loyalty card

Events near here & now

Add image to Instagram

Authenticated at
Browns of Brockley
at 09.30

Here & Now

09:34

CONVERSATIONS?

Looking...

Help me by pointing the
phone at a clock.

"Listen," said Ford, who was still engrossed in the sales brochure, "they make a big thing of the ship's cybernetics. A new generation of Sirius Cybernetics Corporation robots and computers, with the new GPP feature."

"GPP feature?" said Arthur. "What's that?"

"Oh, it says Genuine People Personalities."

"Oh," said Arthur, "sounds ghastly."

A voice behind them said, "It is." The voice was low and hopeless and accompanied by a slight clanking sound. They spun round and saw an abject steel man standing hunched in the doorway.

"What?" they said.

"Ghastly," continued Marvin, "it all is. Absolutely ghastly. Just don't even talk about it. Look at this door," he said, stepping through it. The irony circuits cut into his voice modulator as he mimicked the style of the sales brochure. "All the doors in this spaceship have a cheerful and sunny disposition. It is their pleasure to open for you, and their satisfaction to close again with the knowledge of a job well done."

As the door closed behind them it became apparent that it did indeed have a satisfied sigh-like quality to it. "Hummmmmmmmyummmmmmm ah!" it said.

Animation from:
Heider, F. & Simmel, M. (1944).
An experimental study ofapparent behavior.
American Journal of Psychology, 57, 243-252.

Courtesy of:
Department of Psychology,
University of Illinois, Urbana

WE PERCEIVE A LOT OF THINGS FROM VERY SIMPLE ACTIONS
<https://www.youtube.com/watch?v=n9TWwG4SFWQ>

Evolved Virtual Creatures

Karl Sims

AND MOVEMENTS



olars



FACES!



NEEDS

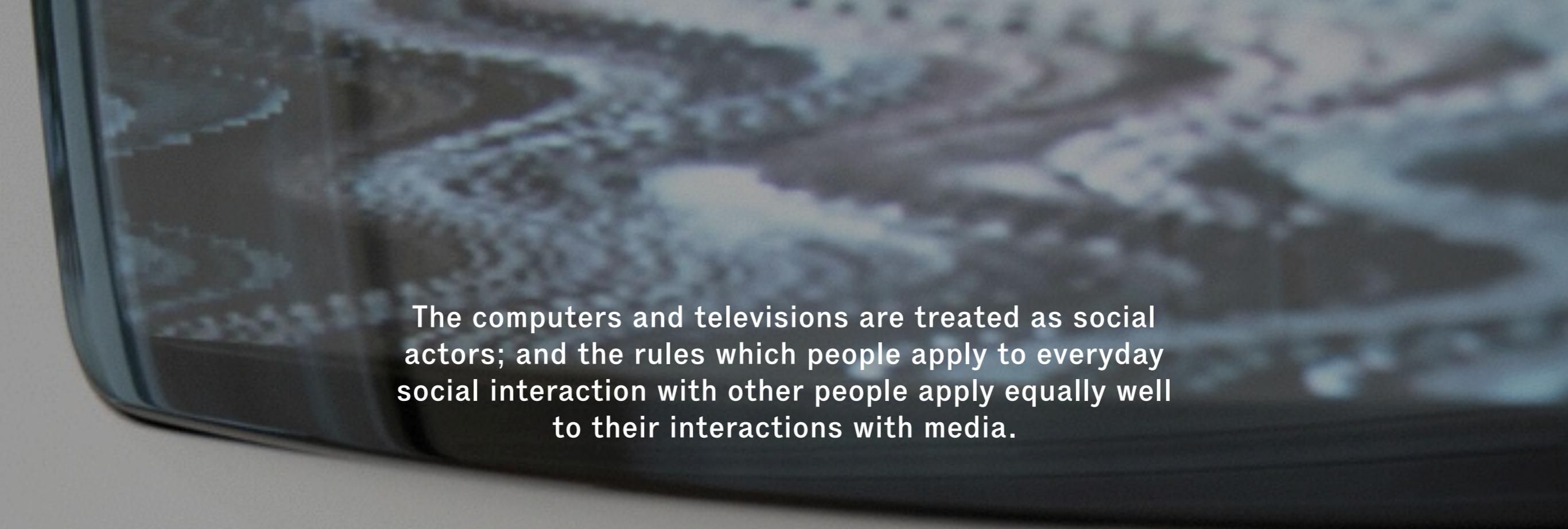


GRUMPINESS



EVEN LOVE...

https://www.youtube.com/watch?v=h93Q_RruQJY



The computers and televisions are treated as social actors; and the rules which people apply to everyday social interaction with other people apply equally well to their interactions with media.

...
SMILE TO WATCH

Perception of reality is far more influential than the actual objective reality. A person can know that a computer is a box made of wires and processors but can still assign a personality to it. The important point to remember is that these responses are just part of being human and participating in a communication event.

Find one(or more) objects.

It can be as simple as a door or personal as a toy or even public...

**Describe its behavior, both mechanisms and motivations, and the character of that behavior:
how do you perceive the object to be and why?**

What micro interactions and characteristics give you the perception that you have?

Demonstrate how that behavior influences the interaction with the object.

1-3 minute video

EXAMPLES OF WHAT WE MEAN

<http://ahointeractiveproducts2014.tumblr.com/post/98298163646/one-minute-films-about-product-and-system>

<https://vimeo.com/9968270>