

# SECRET LIFE OF OBJECTS

DAY 2, COLOR MOVEMENTS & MORE

**SHOW US WHAT YOU GOT!**  
**VIDEOS!**

Find one(or more) objects.

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

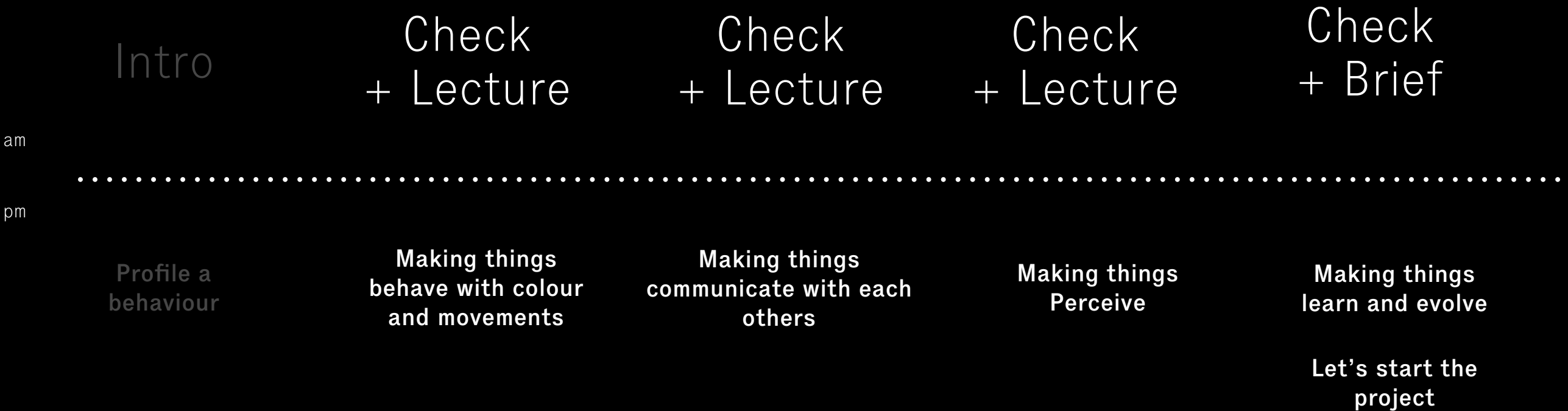
Describe its behavior, both mechanisms and motivations, and the character of that behavior:  
how do you perceive the object to be and why?

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

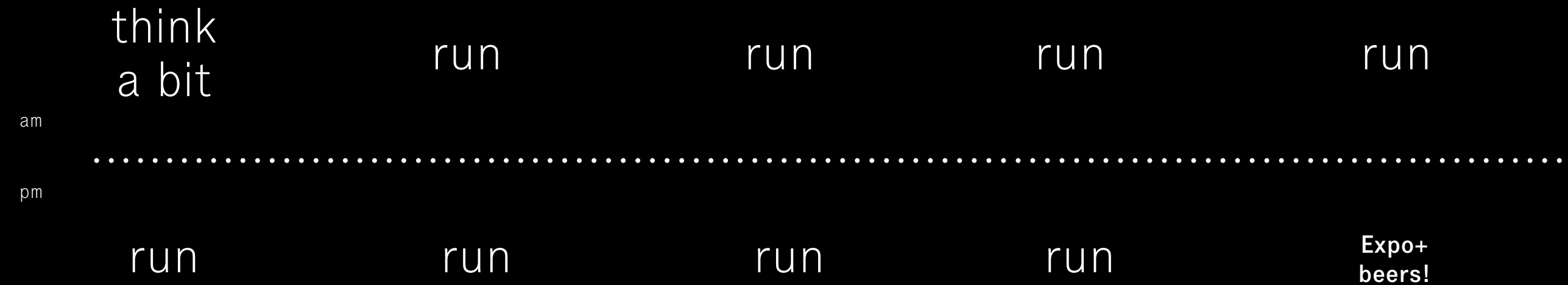
Demonstrate how that behavior influences the interaction with the object.

1-2 minute video

week 1



week 2



# SHOWING BEHAVIOURS

things telling things

SENSE



INTERPRET



ACT

or

or

or THE REACTION

product abuse

<https://vimeo.com/4456013>

## COLORS

You have 3 color cones: Red, Green, Blue.

You can perceive about 10 million colors.

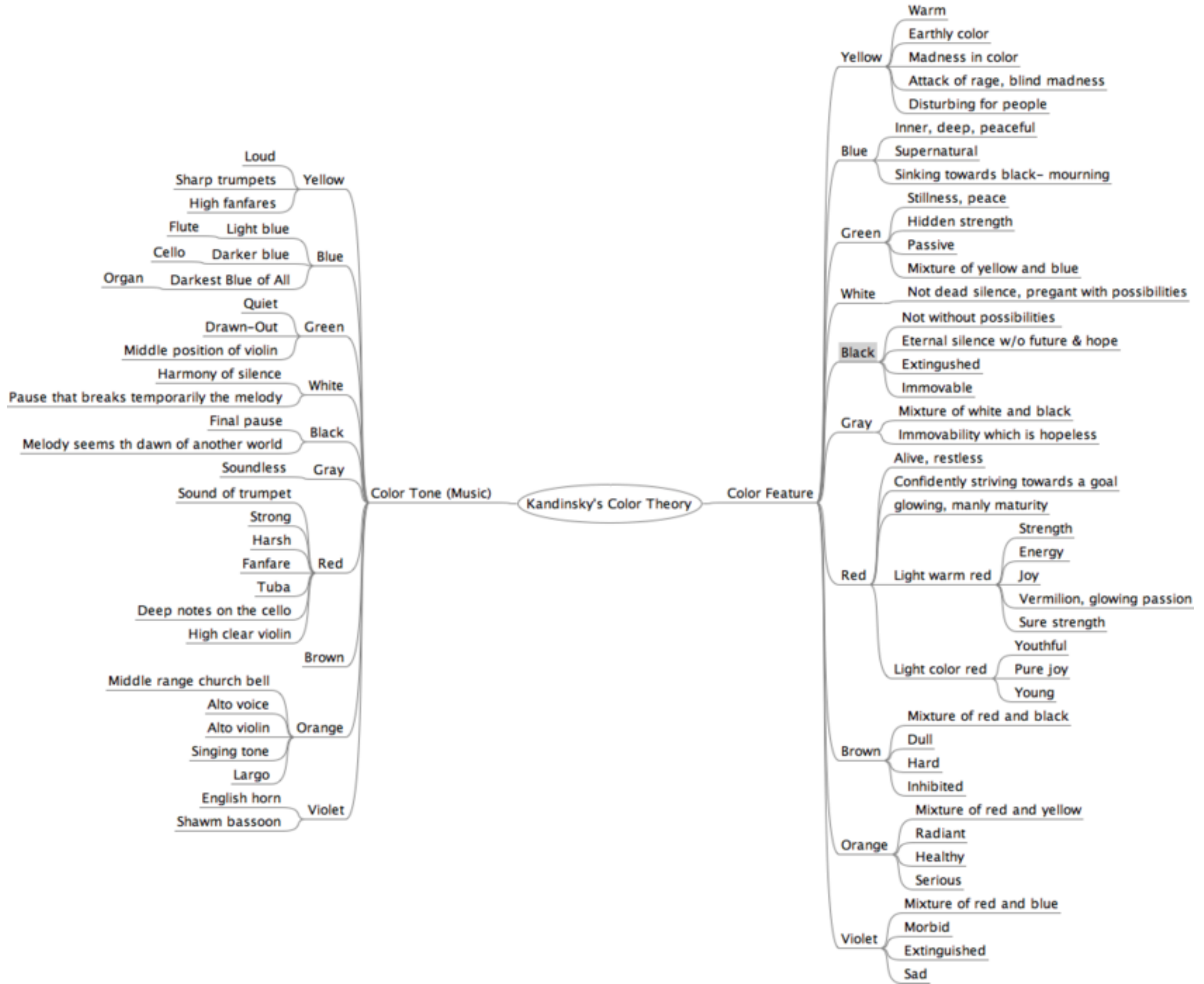
Perceived color is highly environmentally dependent.

Color perception varies dramatically per person.

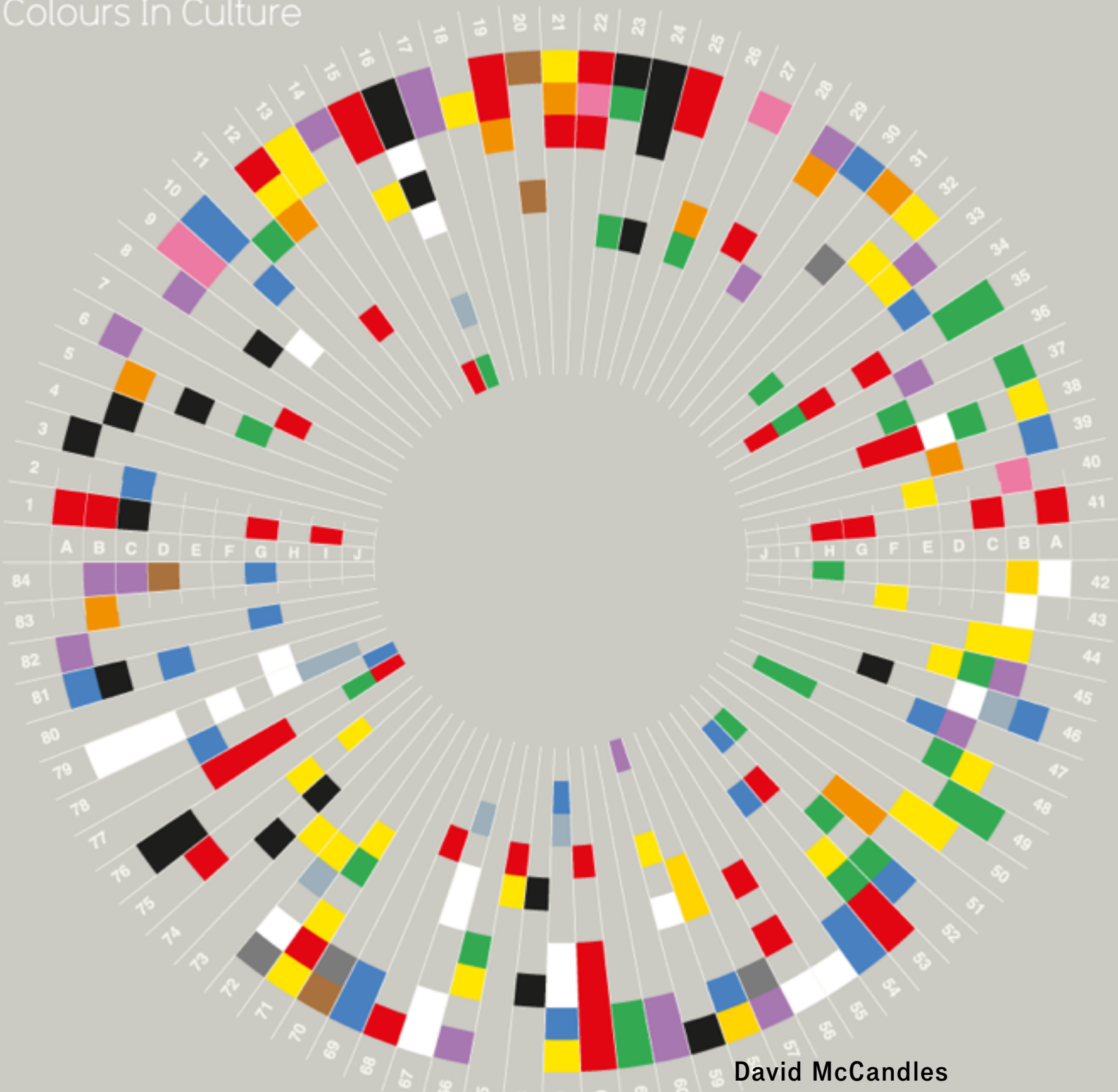


## COLORS

effect on the eye+“inner resonance”  
physical + psychological



# Colours In Culture



- |                      |                    |                |
|----------------------|--------------------|----------------|
| A Western / American | 1 Anger            | 19 Desire      |
| B Japanese           | 2 Art / Creativity | 20 Earthy      |
| C Hindu              | 3 Authority        | 21 Energy      |
| D Native American    | 4 Bad Luck         | 22 Erotic      |
| E Chinese            | 5 Balance          | 23 Eternity    |
| F Asian              | 6 Beauty           | 24 Evil        |
| G Eastern European   | 7 Calm             | 25 Excitement  |
| H Muslim             | 8 Celebration      | 26 Family      |
| I African            | 9 Children         | 27 Femininity  |
| J South American     | 10 Cold            | 28 Fertility   |
|                      | 11 Compassion      | 29 Flamboyance |
|                      | 12 Courage         | 30 Freedom     |
|                      | 13 Cowardice       | 31 Friendly    |
|                      | 14 Cruelty         | 32 Fun         |
|                      | 15 Danger          | 33 God         |
|                      | 16 Death           | 34 Gods        |
|                      | 17 Decadence       | 35 Good Luck   |
|                      | 18 Deceit          | 36 Gratitude   |

- |                 |                   |                     |
|-----------------|-------------------|---------------------|
| 37 Growth       | 55 Luxury         | 73 Royalty          |
| 38 Happiness    | 56 Marriage       | 74 Self-cultivation |
| 39 Healing      | 57 Modesty        | 75 Strength         |
| 40 Healthy      | 58 Money          | 76 Style            |
| 41 Heat         | 59 Mourning       | 77 Success          |
| 42 Heaven       | 60 Mystery        | 78 Trouble          |
| 43 Holiness     | 61 Nature         | 79 Truce            |
| 44 Illness      | 62 Passion        | 80 Trust            |
| 45 Insight      | 63 Peace          | 81 Unhappiness      |
| 46 Intelligence | 64 Penance        | 82 Virtue           |
| 47 Intuition    | 65 Power          | 83 Warmth           |
| 48 Religion     | 66 Personal power | 84 Wisdom           |
| 49 Jealousy     | 67 Purity         |                     |
| 50 Joy          | 68 Radicalism     |                     |
| 51 Learning     | 69 Rational       |                     |
| 52 Life         | 70 Reliable       |                     |
| 53 Love         | 71 Repels Evil    |                     |
| 54 Loyalty      | 72 Respect        |                     |

- |        |        |
|--------|--------|
| Yellow | Grey   |
| Gold   | Silver |

David McCandless  
<http://www.informationisbeautiful.net/visualizations/colours-in-cultures/>

Feeling All

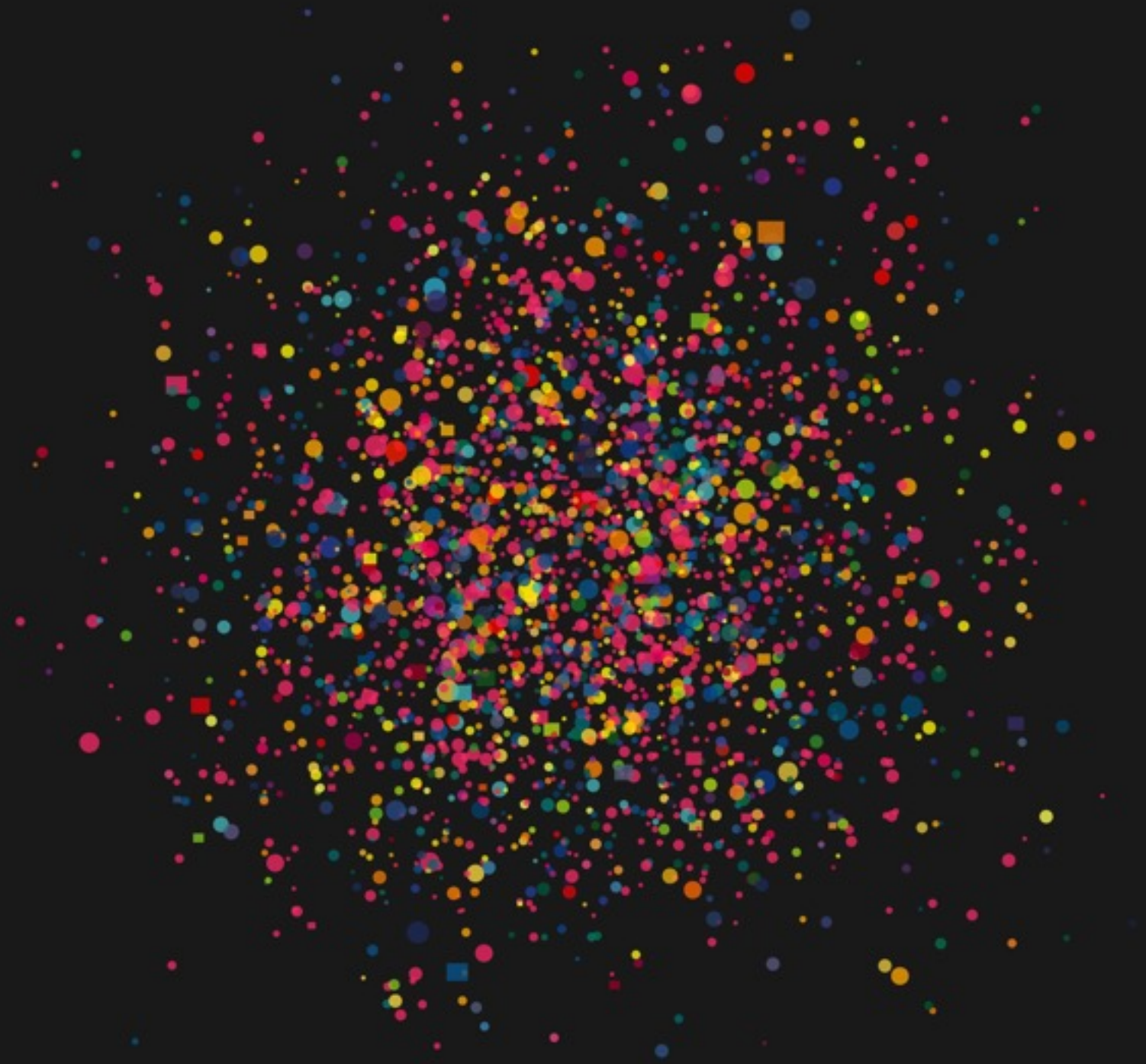
Gender Both

Age All

Weather All

Location All

Date All



Madness  
Murmurs  
Montage  
Mobs  
Metrics  
Mounds

We feel fine, Jonathan Harris and Sep Kamvar  
<http://wefeelfine.org/>



i feel so selfish when i think my life is terrible when they yell and scream  
and tell me to do this and that and i think that my life is the worst  
possible way to live

7 hours ago / from someone

information about me and more interests / wanted

Madness  
Murmurs  
Montage  
Mobs  
Metrics  
Mounds





Madness  
 Murmurs  
 Montage  
 Mobs  
 Metrics  
 Mounds

Feeling  
 Gender  
 Age  
 Weather  
 Location

Feeling breakdown of feelings from people in the last few hours

We feel fine, Jonathan Harris and Sep Kamvar  
<http://wefeelfine.org/data/files/feelings.txt>

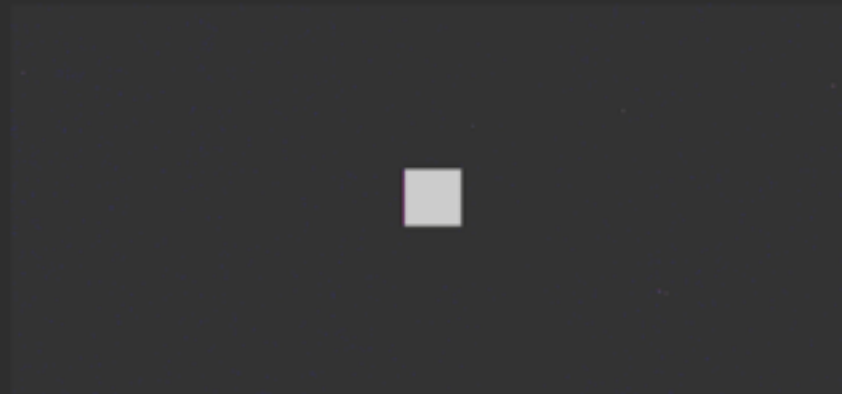
## MOVEMENT

The brain can perceive changes as fast ~1 millisecond.  
The mind can understand changes about as fast ~8 milliseconds.  
The eye can only focus on a single spot at a time.  
It floats between focuses (saccades).  
The vision system is blind as it moves.

## MOVEMENT

Screen animation often consists of impossible or absurd frames because of **motion blur**.





STAGING



ANTICIPATION



SLOW IN & SLOW OUT



ARCS

Cento Lodigiani  
<https://vimeo.com/93206523>

## MOVEMENT

Physical movement consists of marrying multiple movements together .

## ANIMATRONICS

The motor determines the speed and the rig determines everything else

The rig and the skin are the puppet, the motors are the hands

Speed and synch all require a good motor driver



Pors and Rao, Pygmies

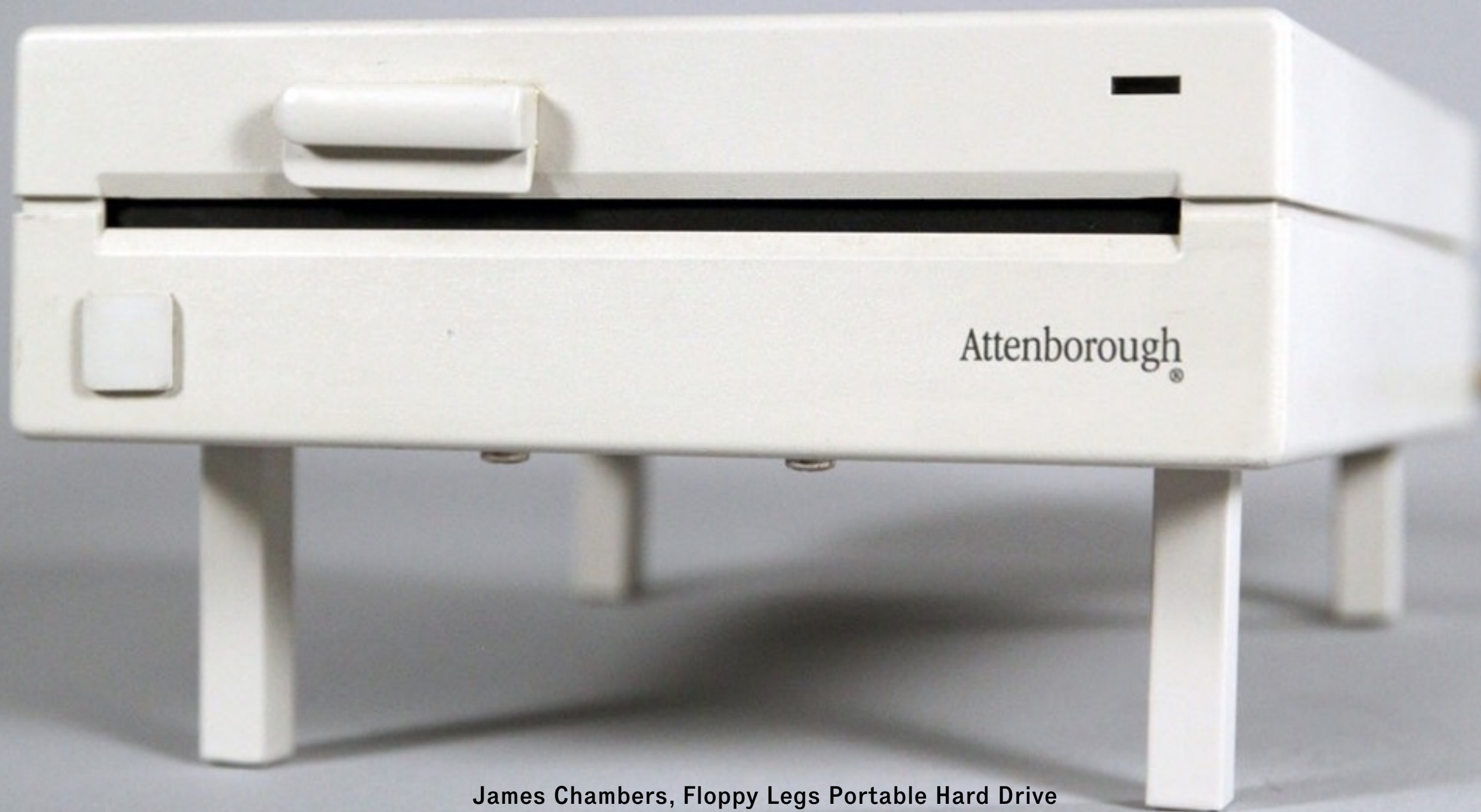
<https://www.youtube.com/watch?list=PL0FENsu9mmkTtjmpdrYAz0p9P49Qiecmd&v=HrvSr1RcJ3g>





James Chambers, Gesundheit Radio  
<https://vimeo.com/53476316>





James Chambers, Floppy Legs Portable Hard Drive  
<https://vimeo.com/12767988>





Adam Ben-Dror, Pinokio  
<https://vimeo.com/53476316>



Ruari Glynn, Fearful Symmetry  
<https://www.youtube.com/watch?v=TEq3oczAt7o>





Ruari Glynn, Motives Colloquia  
<https://vimeo.com/25792567>

## PERCEPTION

Motion blur is usually hidden but shapes how we perceive movement

Apophenia: perceiving patterns in randomness

Pareidolia = focus on “the eyes”

Confirmation bias reigns supreme

Correspondence bias

Anthropomorphism

A scared circle

# What makes it scared?

Stimulus:

Things which

can be understood

to be frightening

Reactions:

Hides

Shrinks

Widens “eyes”

# Minim

A library for sound

# What it does

Plays back files

Saves files

Reads the microphone

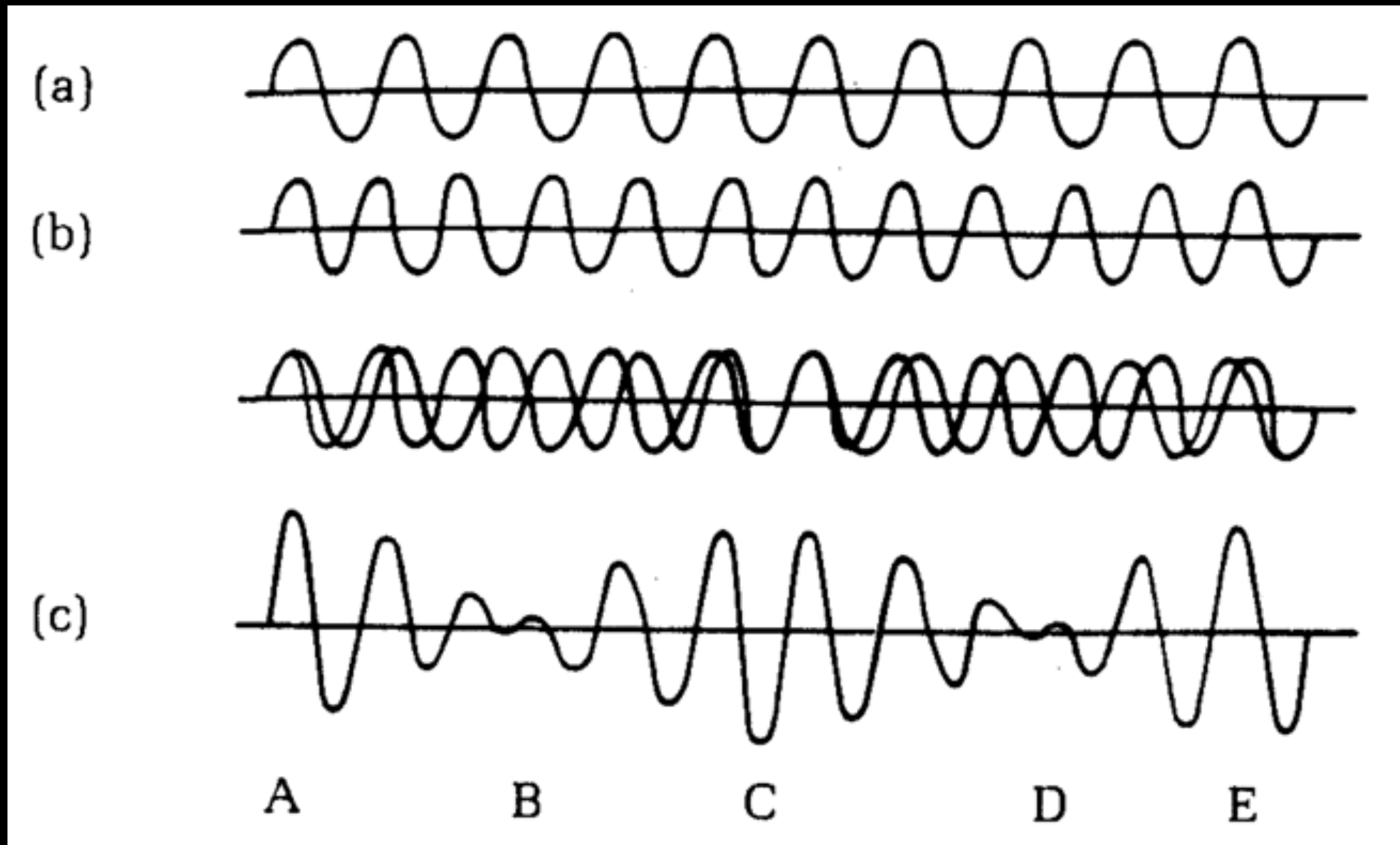
Does very basic sound analysis

# Reading the mic

```
minim = new Minim(this);  
  
in = minim.getLineIn();  
  
float soundSum = 0;  
  
for(int i = 0; i < in.bufferSize(); i++) {  
    soundSum += in.left.get(i);  
    soundSum += in.right.get(i);  
  
}
```

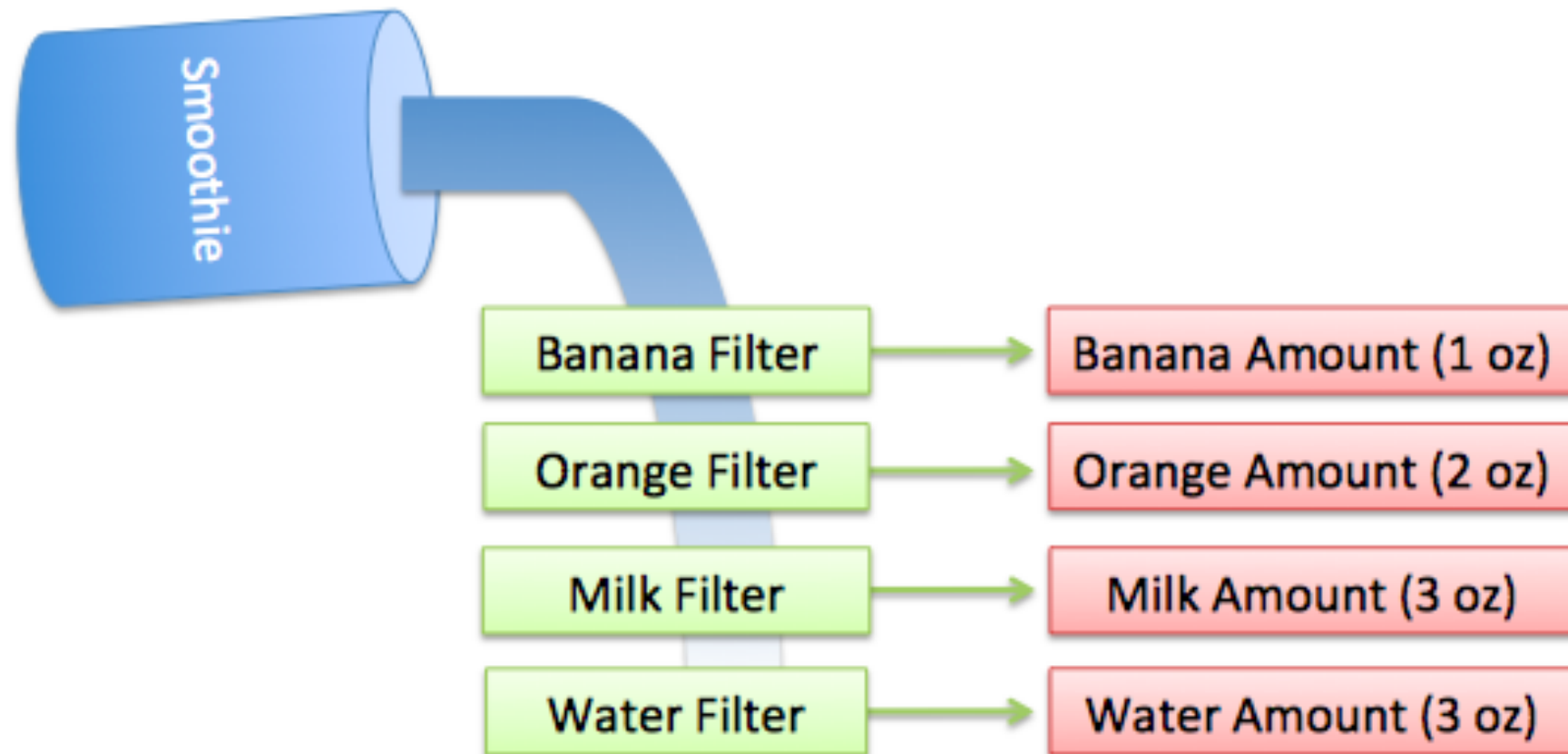
Better than just volume:  
sharpness





What's a sound wave?

# Smoothie to Recipe



Consumer Viewpoint

Transformation

Producer Viewpoint

# Fast Fourier Transform

# Minim fft

```
fft = new FFT(bufferSize, sampleRate());  
fft.forward( in.mix );  
for(int i = 0; i < fft.specSize(); i++) {  
    rect(i * 5, 0, (i * 5) + 4,  
fft.getBand(i));  
}
```

# Ani

A library for animation



An animation library by [→Benedikt Groß](#) for the programming environment [→Processing](#). Last [→update](#), **2013/02/28**.

Ani **2.5** is a lightweight library for creating animations and transitions. Easily spoken Ani helps you to move things around on the screen or a bit more abstract, to animate any numeric variable.

Most of the time a single line of code like the following one is enough:

**Ani.to(object, duration, variable name, target position, easing);**

Target **object** ("this" or any reference to an object), **duration** of animation specified in seconds or frames, **variable name** (which numeric variable is used), **easing** (the characteristic of motion) ... I think you got the concept. There are also a few more advanced features, like custom easings, callbacks and delays etc. or the possibility to group animations into a sequence (AniSequence), which is basically a simple to use timeline. For more and how to use everything in detail see the examples and the java doc reference.

The syntax of Ani is created with simplicity of use in mind. The "model" for the syntax of Ani was the [→Tweenlite](#) actionscript library by Greensock. The math for the animation engine under the hood is based on equations by [→Robert Penner](#).

Feedback is very welcome, but please use the processing [→discourse](#) forum for that. If you want a quick answer: drop simultaneously an email to me (benedikt at looksgood dot de), including the link to the post (i'm a very infrequent reader of the processing discourse).

## Download

Download Ani version 2.5 in [→.zip format](#).

↑Up

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- Examples ●
- Demos ●
- Reference ●

### Reference

Have a look at the [→javadoc reference](#) for a comprehensive overview. A copy of the reference is included in the distribution

### Easing Cheat Sheet

The easing cheat sheet provides an easy and visual overview of all easings functions (characteristic of motion) of Ani. Download the pdf file below.



Object with the property	Length of animation	Name of the property	Value to animate to
-----------------------------	------------------------	-------------------------	------------------------

```
Ani.to(this, 2, "xValue", 100);
```

```
PVector v = new Vector(2,2);  
Ani.to(v, 2, "x", 100);
```

```
PShape s = loadShape("bot.svg");  
Ani.to(s, 3, "width", 100);
```

# Nice features

Easing types: Cubic, Quartic, Radial, etc...

Sequences

Callbacks for everything

Second or Frame timing

# Beads

<https://www.youtube.com/watch?v=5J2kc4oZTVU>



# What is it?

A library for sound playback AND generation

How is it different than Minim?

Unit Generation based (UGs)

A chaining library

# Some important things

AudioContext

Buffer (e.g. Buffer.SINE)

WavePlayer

Glide