

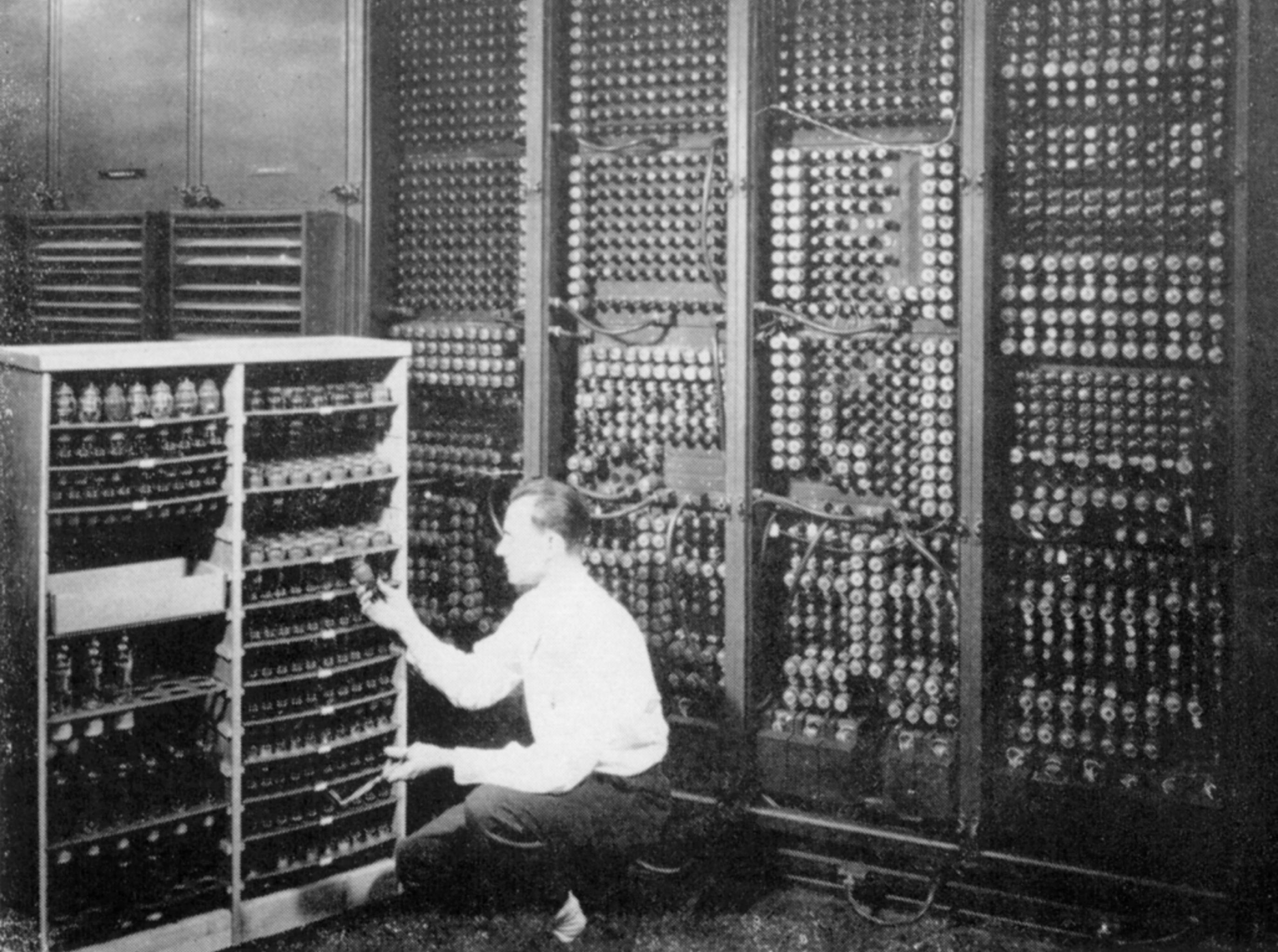
11:45 - 12:30

# JAMES BOX & CENNYDD BOWLES

THE MUSIC OF INTERACTION DESIGN

# Why music and IxD?







H:INTRO PAGE 1 LINE 9 COL 11

INSERT ON

<<<		M A I N		M E N U		>>>	
--Cursor Movement--		-Delete-		-Miscellaneous-		-Other Menus-	
^S char left	^D char right	^G char	^I Tab	^B Reform	(from Main only)		
^A word left	^F word right	DEL chr lf	^V INSERT ON/OFF	^J Help	^K Block		
^E line up	^X line down	^T word rt	^L Find/Replce again	^Q Quick	^P Print		
--Scrolling--		^Y line	RETURN End paragraph	^O Onscreen			
^Z line down	^W line up		^N Insert a RETURN				
^C screen up	^R screen down		^U Stop a command				
!----	!----	!----	!----	!----	!----	!----	!-----R

## 1. Introducing WordStar

WordStar is highly flexible and very visible. Watch the screens as you give commands, and information in various parts of the screen will guide you. You won't see all the information all the time, but it will be there when you need it.

### WHERE YOU ARE

The seven WordStar menus are your greatest aids. They are like signposts at the top of your screen, showing you where you are.

1HELP 2INDENT 3SET LM 4SET RM 5UNDLIN 6BLDFCE 7BEGBLK 8ENDBLK 9BEGFIL 10ENDFIL

Now that there's  
a computer you can  
actually use, here's how  
you can actually use it.





“What is design? It's where you stand with a foot in two worlds - the world of technology and the world of people and human purposes - and you try to bring the two together.”

—Mitch Kapor



# Ineffability



A

Handwritten musical score for a multi-staff piece. The score is written in black ink on aged paper. It features multiple staves with various musical notations including notes, rests, and dynamic markings. A large blue circle with the number '19' is drawn around a specific measure in the upper section. A red vertical line is drawn through the score, separating it into two parts. The word "delirio" is written in cursive above one of the staves in the lower section.

Fl  
Ob  
Ce

Handwritten musical score for woodwinds, specifically Flute (Fl), Oboe (Ob), and Clarinet (Ce). The score is written in black ink on aged paper. It features multiple staves with various musical notations including notes, rests, and dynamic markings. The word "delirio" is written in cursive above one of the staves. There are red markings and annotations in this section, including a red vertical line and some red text.

This image shows a page of handwritten musical notation for piano. The score is written on ten staves, organized into two systems of five staves each. The notation includes various musical symbols such as notes, rests, and dynamic markings. The first system begins with a treble clef and a key signature of one flat (B-flat). The music is characterized by long, sweeping melodic lines and dense chordal textures. Dynamic markings include *sf* (sforzando), *sfz* (sforzando), and *pp* (pianissimo). A prominent handwritten annotation, "J. Schinkel", is written across the middle of the first system. The second system features a *pp* marking at the beginning. The notation is dense and expressive, typical of 19th-century piano music.



3

Hand-drawn rectangular box representing a content area or post body.

Name:

Email:

Site:

Comment:

POST

5



Comment...

Hand-drawn rectangular box representing a comment input area.

4

Hand-drawn rectangular box representing a second content area or post body.

Actor/Event	Page Load	Mouse Over Input Field	Input Field Gains Focus	User Input Detected on Input Field	AC Item Requested
<i>API Event (on AC object):</i>	(use DOM event)	(use DOM event)	<code>textboxFocus</code> Event	<code>textboxKeypress</code> Event	<code>dataRequest</code>
<i>Page</i>					
<i>Input Field</i>			May highlight, depending on browser.		
<i>Cursor</i>		Automatically becomes text cursor.			
<i>Carat</i>			Carat blinks in text field.		
<i>AutoComplete Container</i>	Not visible.	Not visible.	Not visible.	AC container unaffected until after	Default Unaffected Animation

Arrow Away from AC Item	Arrow to AC Item	Arrow Away from AC Item	Selection Made	Selection Cleared	Input Field Loses Focus
<code>mousedown</code> , <code>mouseup</code> , <code>mousemove</code> , <code>mouseout</code> , <code>mouseover</code> , <code>click</code>	<code>mousedown</code> , <code>mouseup</code> , <code>mousemove</code> , <code>mouseover</code> , <code>click</code>	<code>mousedown</code> , <code>mouseup</code> , <code>mousemove</code> , <code>mouseout</code> , <code>mouseover</code> , <code>click</code>	<code>mousedown</code> , <code>mouseup</code> , <code>mousemove</code> , <code>mouseover</code> , <code>click</code>	<code>mousedown</code> , <code>mouseup</code> , <code>mousemove</code> , <code>mouseover</code> , <code>click</code>	<code>mousedown</code> , <code>mouseup</code> , <code>mousemove</code> , <code>mouseover</code> , <code>click</code>
			After selection is made, return or enter in the input field may post form.		
				Contents of field automatically cleared.	Loses default browser highlighting.
			Is auto-select mode, delimiter is added and carat moves to end of input field for further text entry.	Carat reappears in text input field.	Carat disappears.
No impact.	If necessary, scrolls to reveal pre-selected item.	No impact.	Closes, close event fires.	If open, the Container closes.	Closes, close event fires.
Highlighting is removed.	Pre-selection is removed, which is stronger than <code>mouseover</code> highlighting, applied.	Pre-selection is removed, return is asked or <code>mouseover</code> is applied.			
No impact.	Item being pre-selected gets pre-selection treatment.	Pre-selection treatment is removed.			
What happens when the AC widget is closed by the user?	What happens when an item is pre-selected using arrow keys?	What happens when an item in the AC container is de-selected using arrow keys?	What happens when a selection is made, via mouse click, enter key, or tab key?	What happens when the AC widget clears the input field because user selection did not match any valid options?	What happens when the input field loses focus (user clicks or tabs away, or submits the form)?

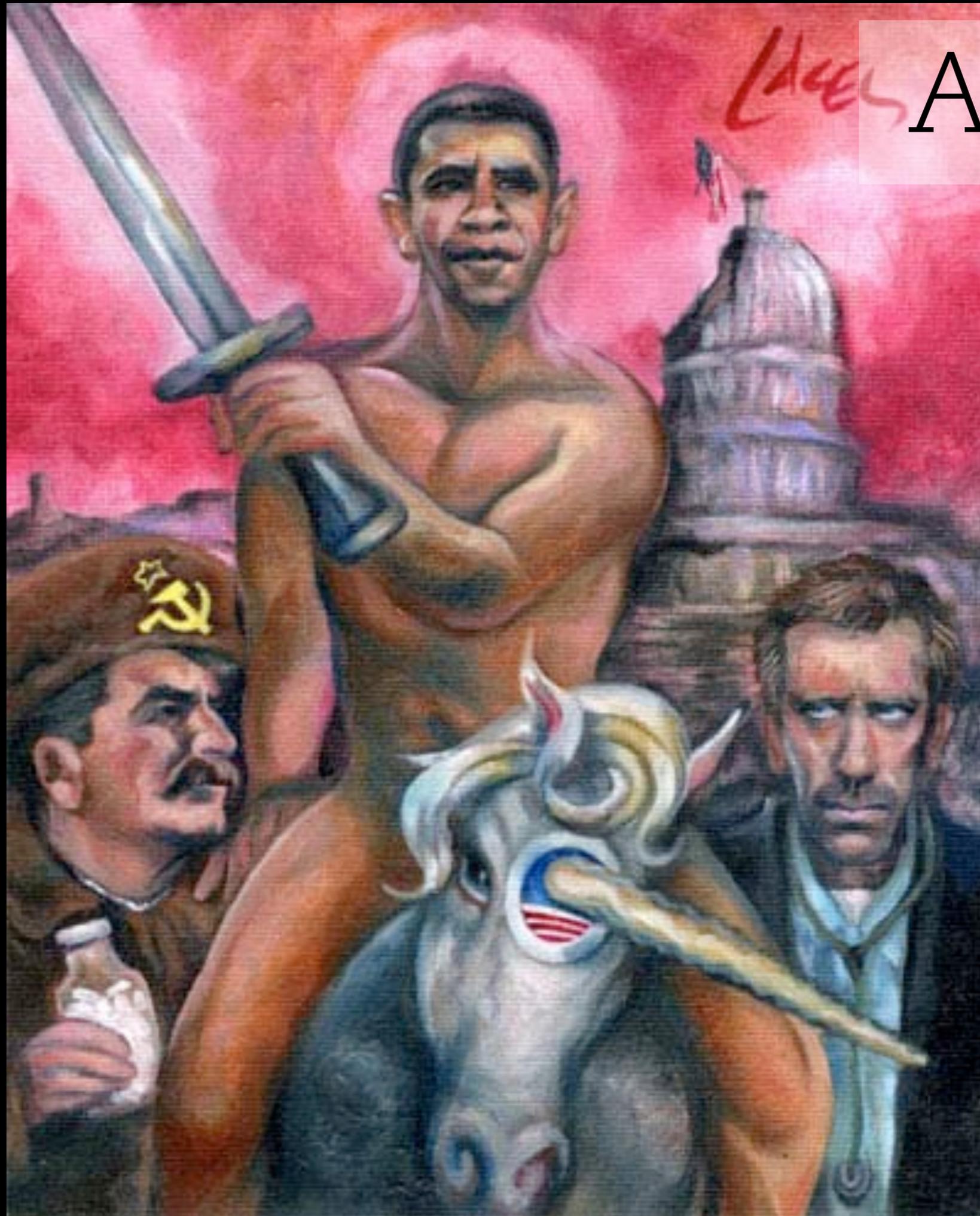
<sup>1</sup> `TypeAhead` is an optional setting; when selected, the AC widget will "complete" the user's entry with the characters needed to complete the first item in the returned set. The completion characters are "selected" in the input field, so additional typing deletes them. The first item in the AC container becomes pre-selected, as it would if arrowed to.

<sup>2</sup> Safari does not support `textSelection` text selection; `TypeAhead` does not prepopulate the input field in Safari.

<sup>3</sup> An item becomes "pre-selected" by navigating to it via the arrow keys. It is not a *selection*, because it does not convey a final decision. However, it is a stronger gesture than when an item is `mouseover`, which is not taken to indicate a decision at all — but may convey an interest in the item or a desire for more information.

# Affect, Behaviour, Cognition





Affect

# Affect

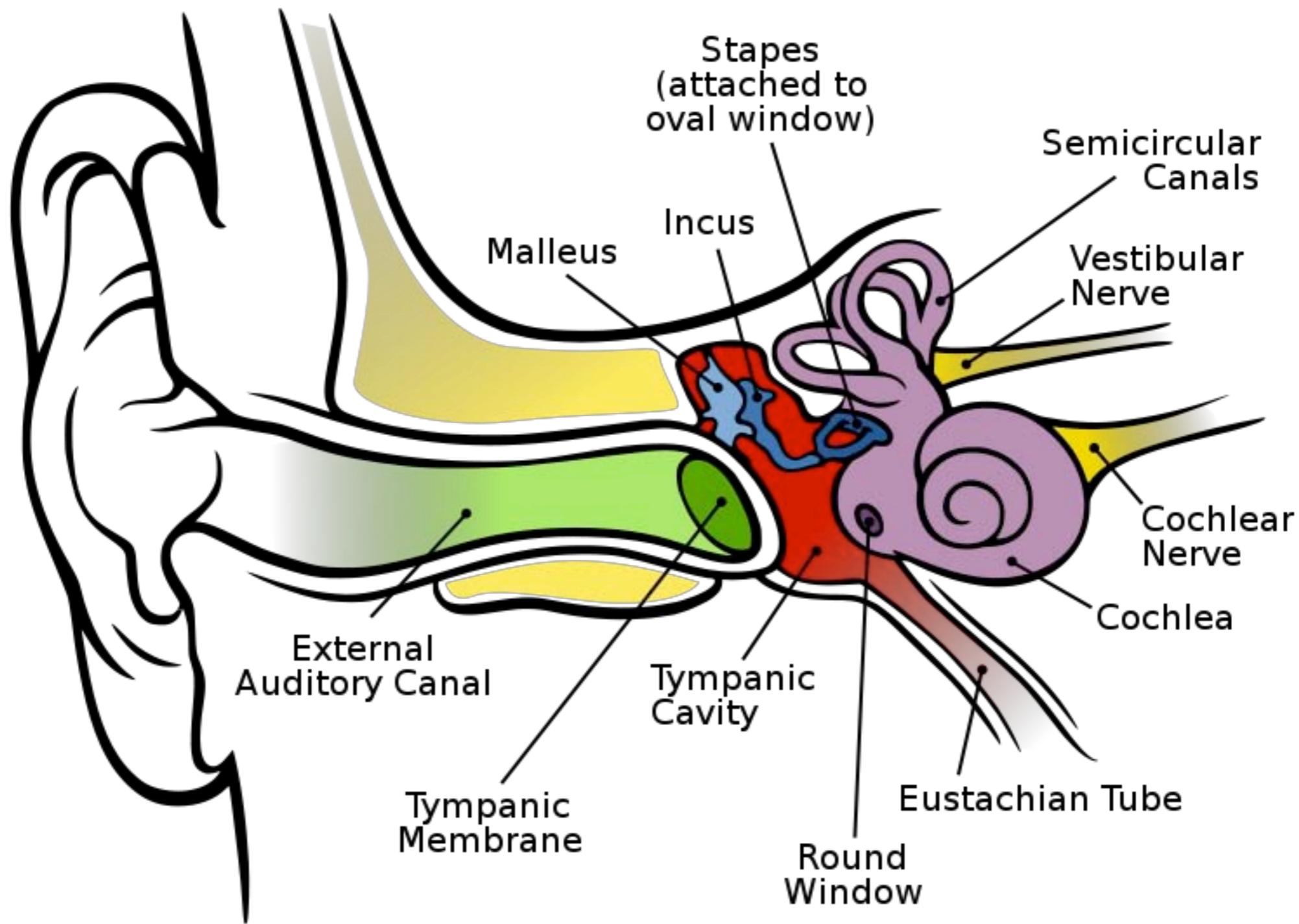


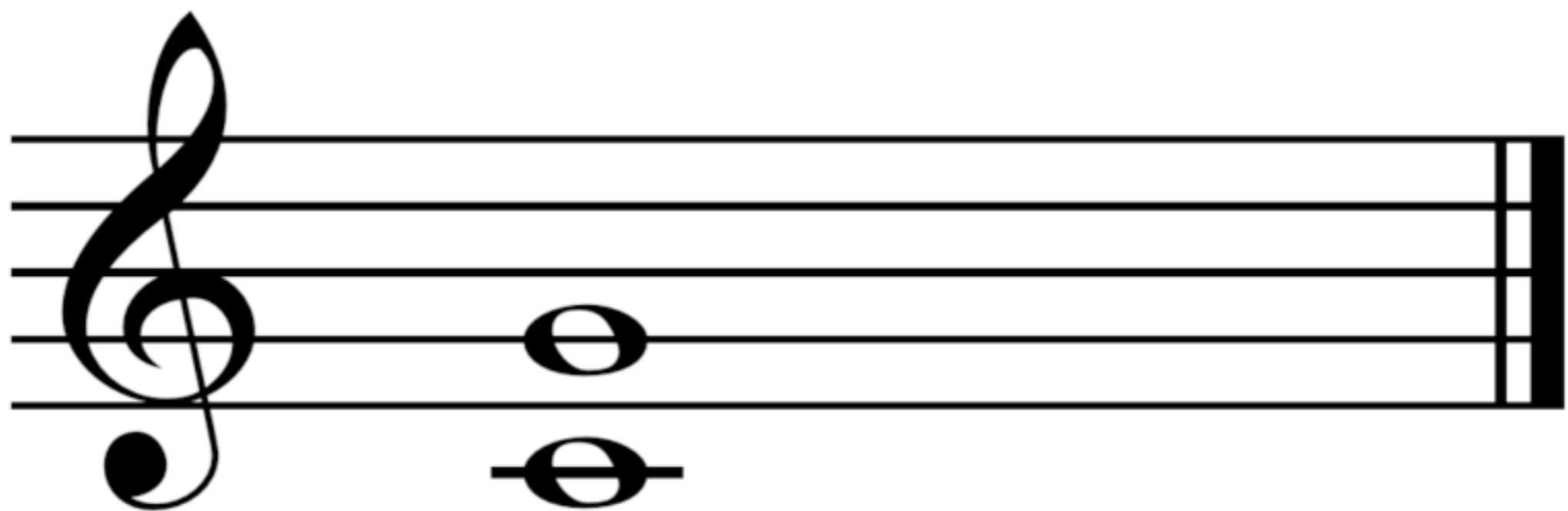
## Notes & Neurons: In Search of the Common Chorus

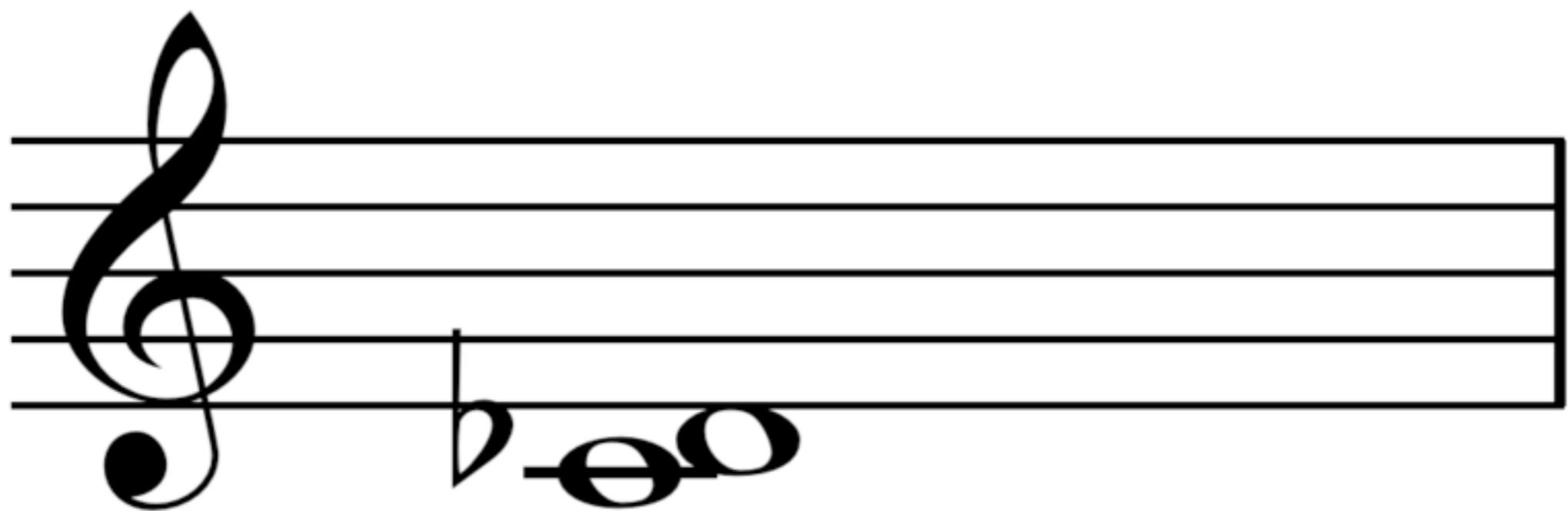


# Emotional response



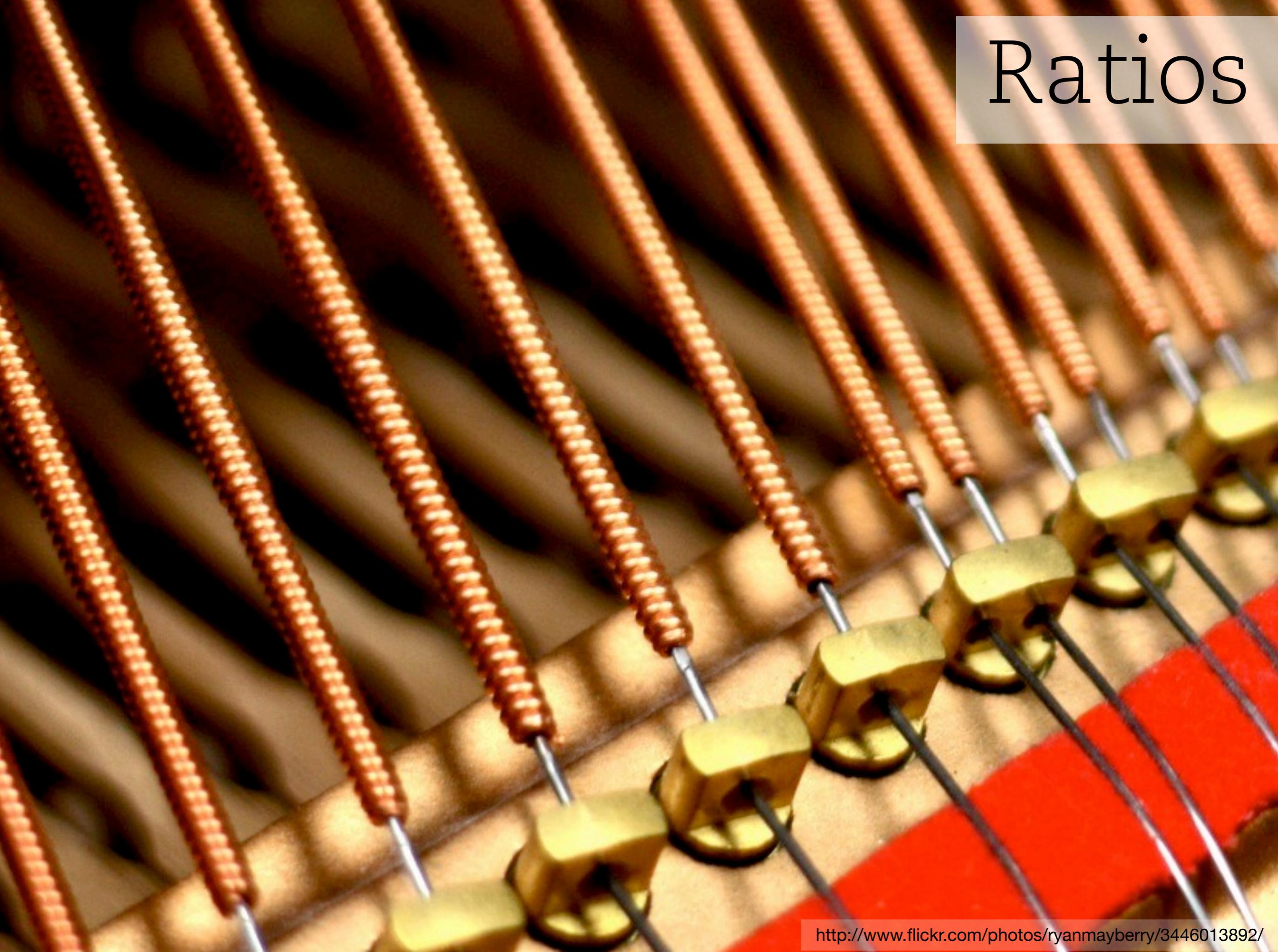








# Ratios





# The Grid System

The ultimate resource in grid systems.

*" The grid system is an aid, not a guarantee. It permits a number of possible uses and each designer can look for a solution appropriate to his personal style. But one must learn how to use the grid; it is an art that requires practice. "*  
Josef Müller-Brockmann

# Rhythm

## Articles

### Rule of Thirds

A Wikipedia entry that defines the Rule of Thirds and how it should be applied.

08.Oct.2009

### Making a Perfect Grid-aligned Website using Gridfox and Firebug

Have you ever sliced a layout, only for it not to be grid-aligned once it's scripted?

## Tools

### Adaptive Grid System based on the Golden Section

A two column grid system based on Mark Boulton's Adaptive Grid Systems article.

08.Oct.2009

### 45+ CSS Grid Systems, Layout Generators and Tutorials

In this article tripwire magazine presents a large collection of CSS Grid Systems, online generators and tutorial on how to use

## Books

### Designing for the Web

A Practical Guide to Designing for the Web has written explanations of the core principles of graphic design in relation to the web.

08.Oct.2009

### The Way of Typography

The book also goes into depth on how to create grid systems by hand with only pencil, straightedge and compass.

18.Sep.2009

## Templates

### Photoshop 4 Column Grid

A free 4 Column Photoshop grid template for a 1024x768 screen resolution by Ray Gulick.

08.Jun.2009

### InDesign 568x792 Grid System (12)

By Dario Galvagno. Adobe InDesign file with a grid system for a 568pts x 792pts page that is divided into 12 columns and rows using the Golden Ratio. Includes a 12pt

## Blog

### Evo4 CMS Wordpress Theme

A Wordpress theme based on a 4-column grid system.

08.Oct.2009

### Build Typeface

Build is a grid based handset typeface designed by Steven Bonner to give a structured, geometric look to short passages of type such as headlines and is

perfect for display usage.  
24.Aug.2009

## Ins

### Ace

### Aisle

### Athle

### BBD

### Blan

### Build

### Corp

### Cour

### David

### Desig

### Dirty

### Expe

### Form

### Grafi

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### I Lov

### Lame

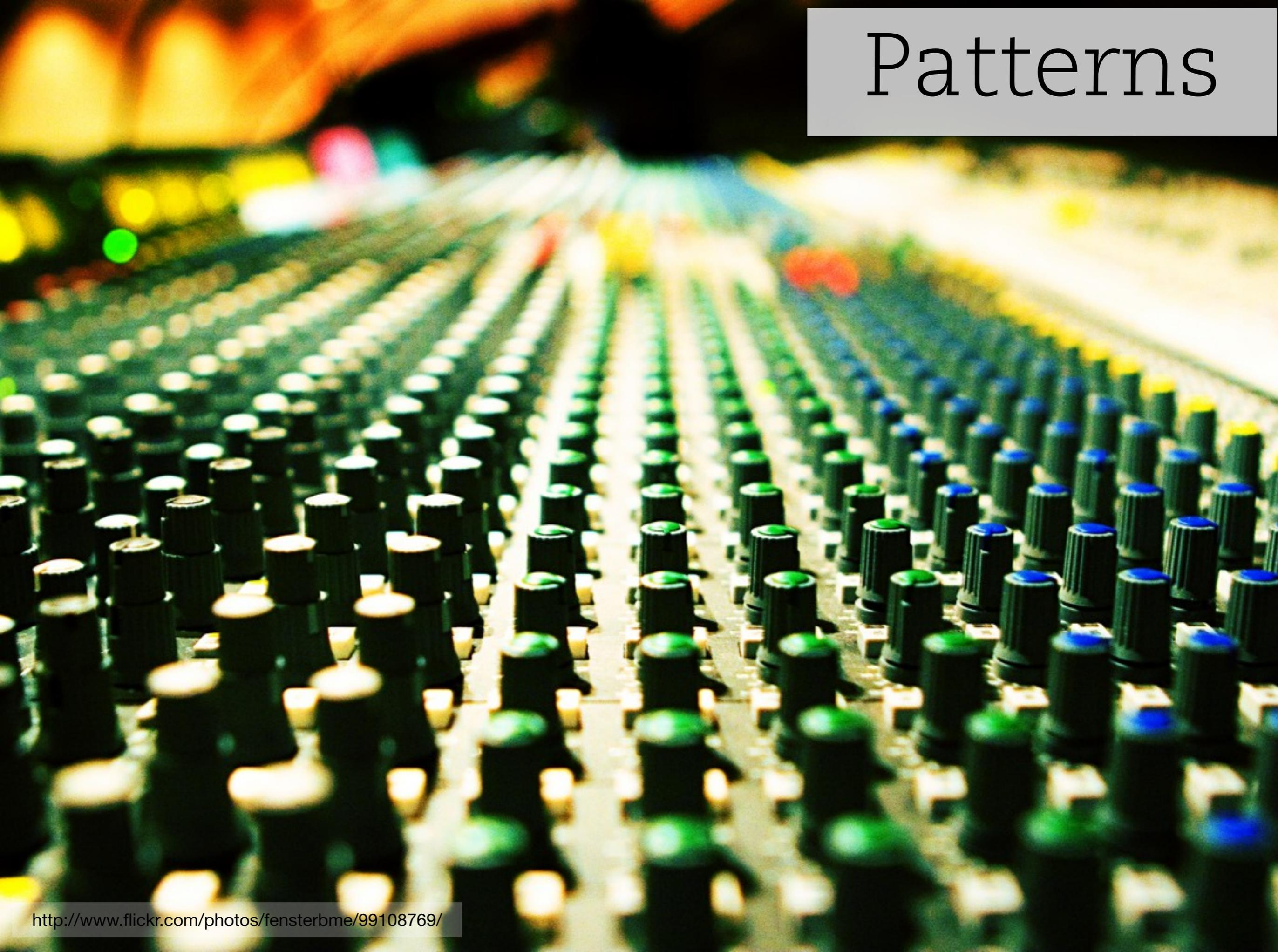
### Mark

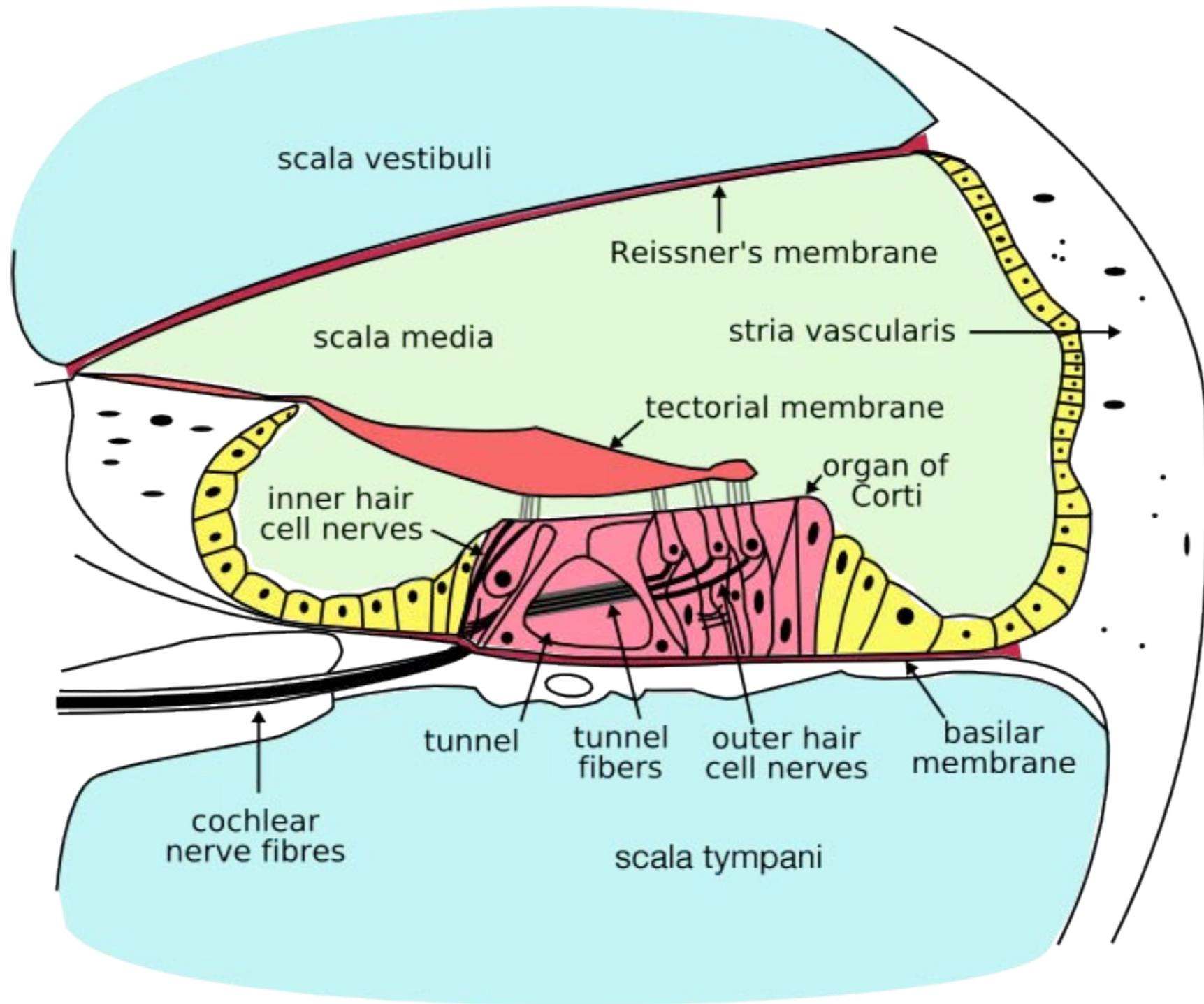
### Minir

### Mon

### Neu

# Patterns





Batch Organize

Sets & Collections

Groups

Map

Set: Letterpress printing a...

Your photos



Arrange Batch edit NEW Order prints Delete this set

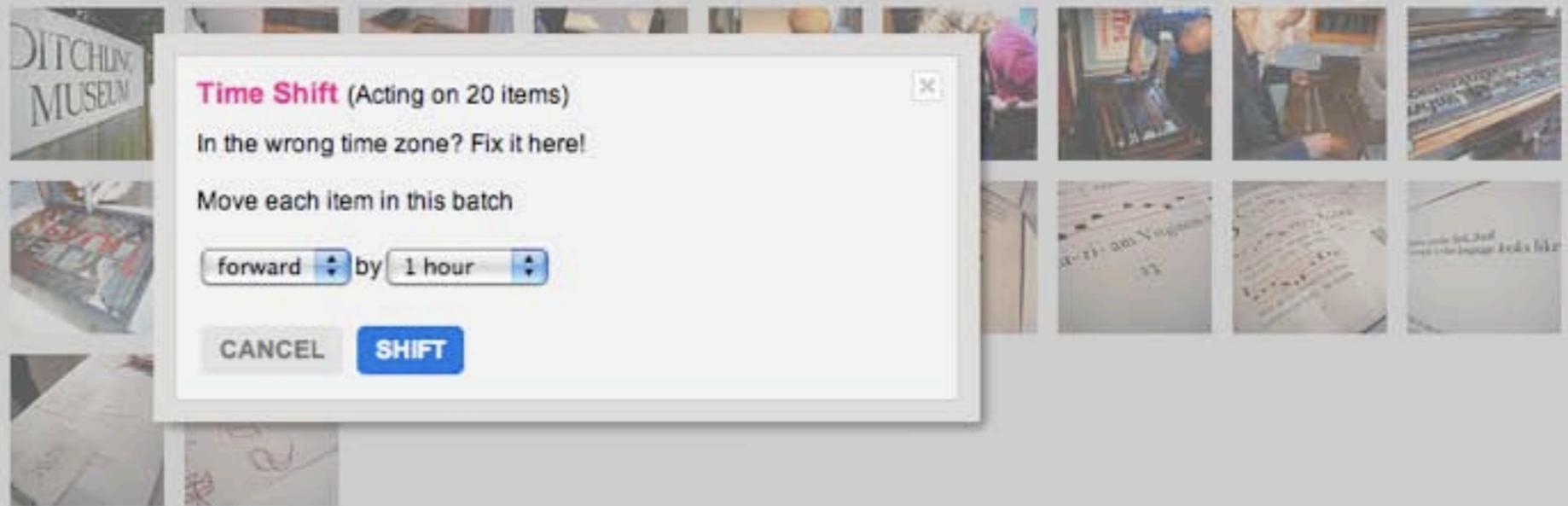


20 items in the set

### Letterpress printing at



SAVE CANCEL



#### Time Shift (Acting on 20 items)

In the wrong time zone? Fix it here!

Move each item in this batch

forward by 1 hour

CANCEL SHIFT

Open set page

All your content

SEARCH

More options

Jump to date

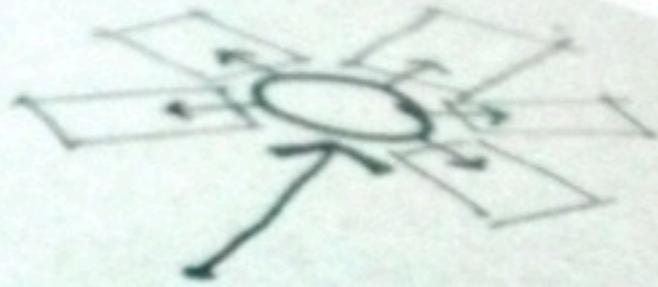
1,524 items 10 selected | Select all





“Music is the pleasurable overflow of information.”

—Jonah Lehrer



101 Things I Learned  
Architecture School  
Matthew Frederick

“Beauty is due more to harmonious relationships among the elements of a composition than to the elements themselves... It’s the dialogue of the pieces, not the pieces themselves, that creates aesthetic success.”

—Matthew Frederick

# Elements in dialogue

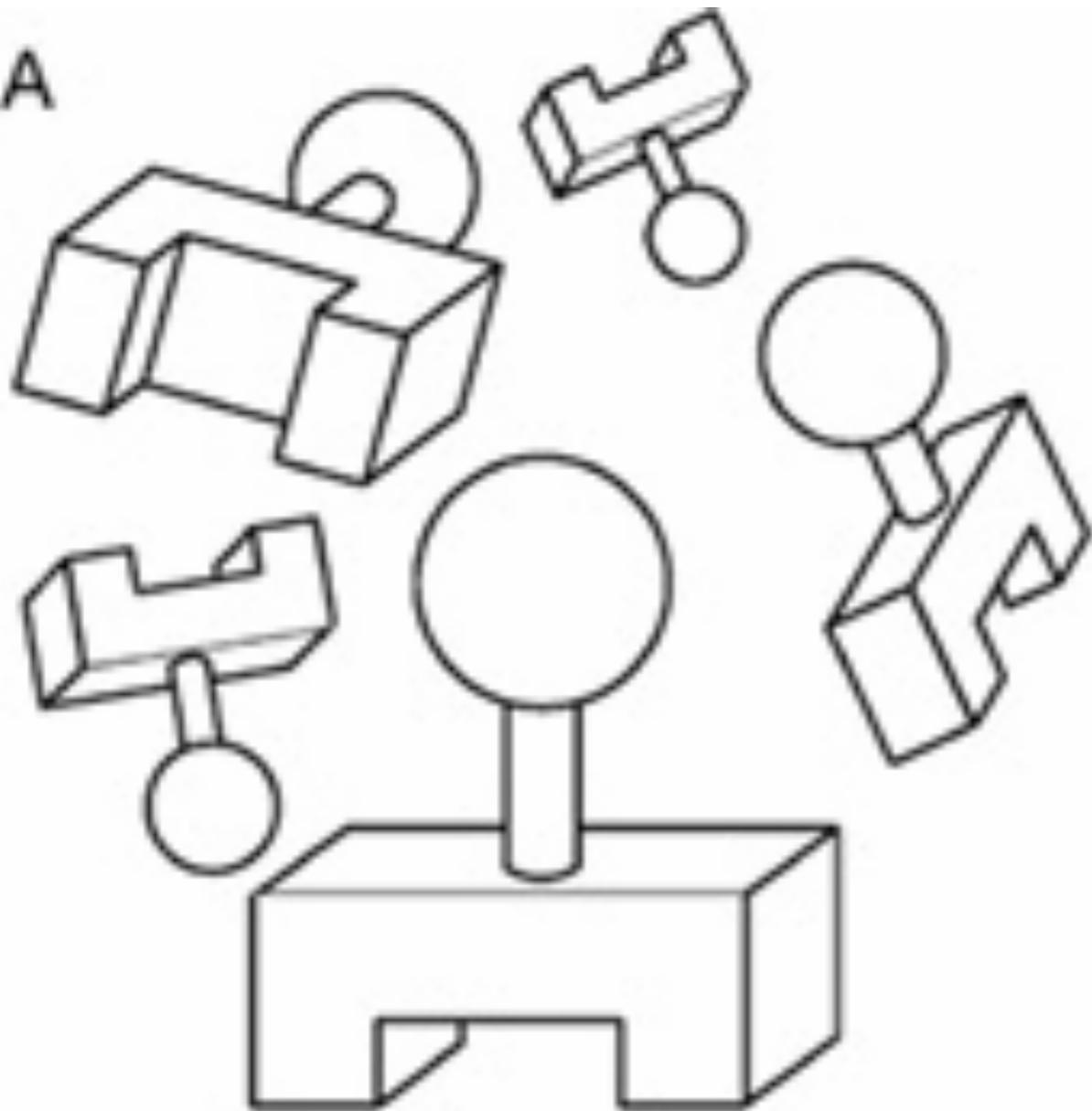


# Figure & ground



# Emergence

A



B

# Invariance



C



D



# Texture

A musical score for piano in 4/4 time, key of D major (two sharps). The score is written for a grand staff with a treble and bass clef. The texture is homophonic, with a single melodic line in the treble and a supporting bass line in the bass. The first measure shows a whole note chord in the treble (D4, E4, F#4, G4) and a whole note bass (D3). The second measure shows a whole note chord in the treble (D4, E4, F#4, G4) and a whole note bass (D3). The third measure shows a whole note chord in the treble (D4, E4, F#4, G4) and a whole note bass (D3). The fourth measure shows a whole note chord in the treble (D4, E4, F#4, G4) and a whole note bass (D3).

**BRAUN**



Klangfarbe

Balance

Lautstärke

ein. aus    Phono    LW    MW    UKW

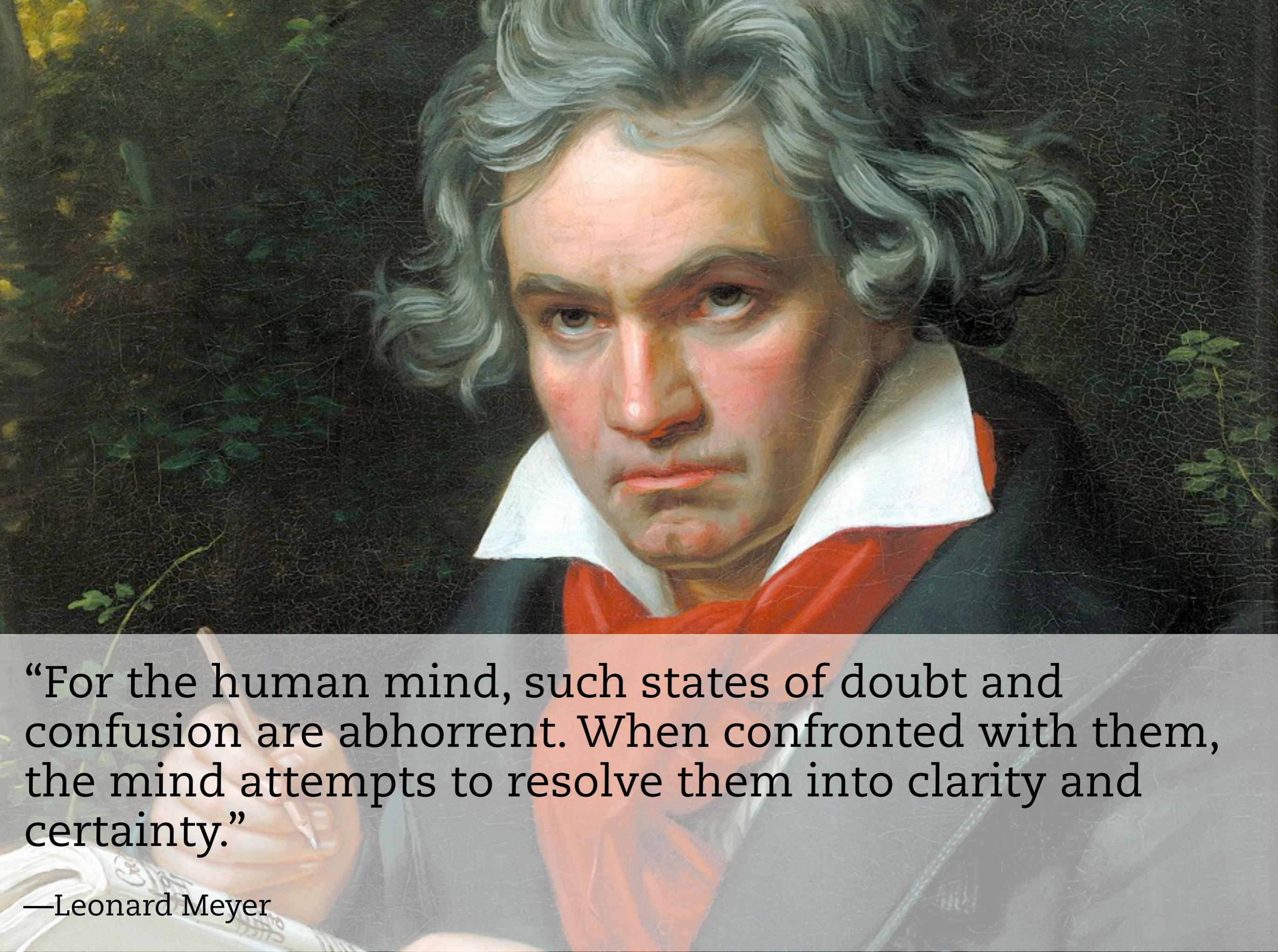




“A subtle urge to synchronize is pervasive in nature indeed.”

—Albert-László Barabási

*Telefonica*



“For the human mind, such states of doubt and confusion are abhorrent. When confronted with them, the mind attempts to resolve them into clarity and certainty.”

—Leonard Meyer

FRUSTRATION  
DISSONANCE

FLOW

CONSONANCE  
BOREDOM

# Innovation









The Rite of Spring  
Part I (Adoration of the Earth): **I. Introduction**

London Symphony Orchestra



**The Rite of Spring  
Part I (Adoration of the Earth): II. The Augurs Of Spring**

London Symphony Orchestra



“We could hear nothing, as a matter of fact I never did hear any of the music of the Sacre du Printemps because it was the only time I ever saw it and one could literally not, throughout the whole performance, hear the sound of music.”

—Gertrude Stein

IGOR STRAWINSKY

LE SACRE DU PRINTEMPS

“The music of Le Sacre du Printemps baffles verbal description. To say that much of it is hideous as sound is a mild description... it has no relation to music at all as most of us understand the word.”

—Musical Times (August 1, 1913)



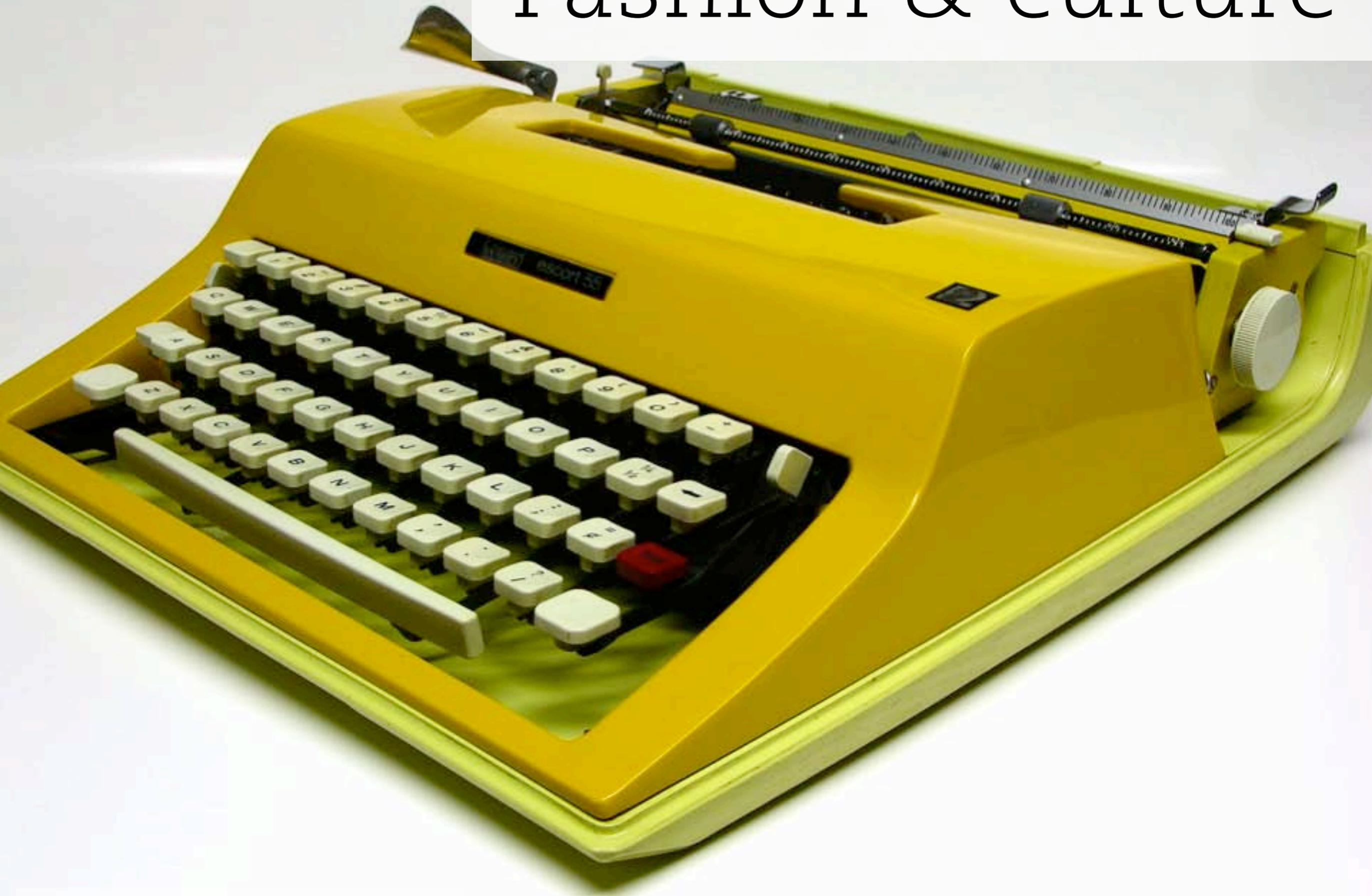
“...it’s also got the best dissonances anyone ever thought up, and the best asymmetries and polytonalities and polyrhythms and whatever else you care to name.”

— Leonard Bernstein



[http://www.youtube.com/watch?v=-gZbMOq\\_Ge8](http://www.youtube.com/watch?v=-gZbMOq_Ge8)

# Fashion & culture







# 2001: A SPACE ODYSSEY

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The background features a gradient from light green at the top to yellow at the bottom. Three black power lines run diagonally across the frame. Numerous black silhouettes of birds are perched on these lines and flying in the sky. A white horizontal band is centered across the image, containing the text.

# Thank you.

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