

iPhone Specialist Lab

Lab 01: HCI Principles

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<http://hci.rwth-aachen.de/iphone>



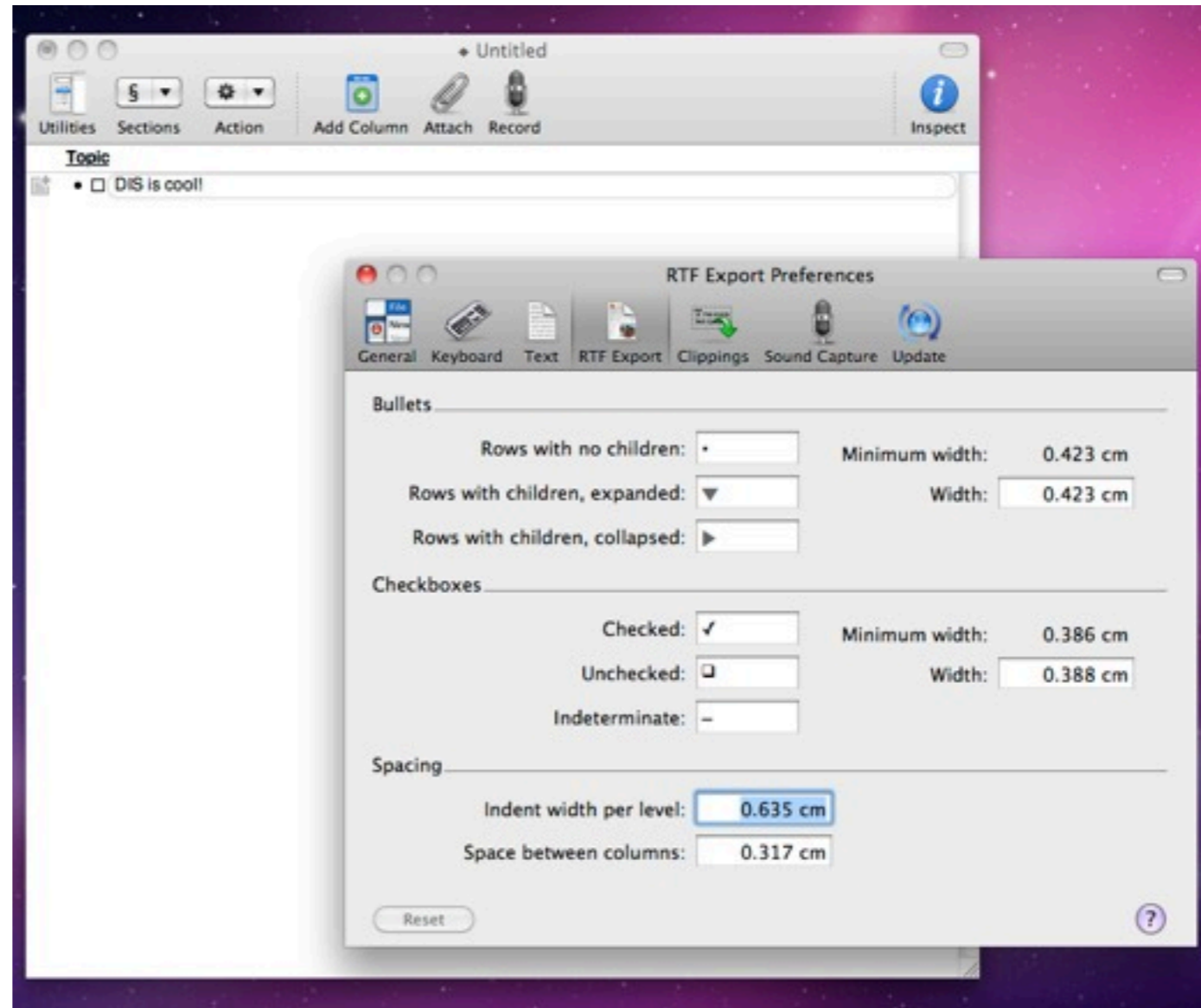
Gestalt Theory

- Köhler, Koffka, Wertheimer (Berliner Schule):
“*Gestaltpsychologie*”, 1912
- What do humans perceive as belonging together spatially or temporally?
- Basis of order in perception, movement, memory, thinking, learning, and acting
- Overall 100+ Gestalt laws



Why should I care?

- Simple rules for visual (and auditory) UI design
- Hints how users will react to

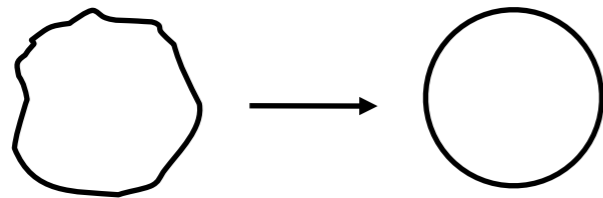


- Good UIs respect and use Gestalt laws for understandability and intuitiveness



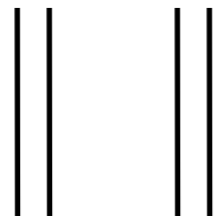
Law I: Good Shape

- In-class experiment:
Drawing
- Perception has tendency towards remembering things as “good” / clear / simple shapes
- “Cognitive compression algorithm”!



Law 2: Proximity

- In-class experiment:

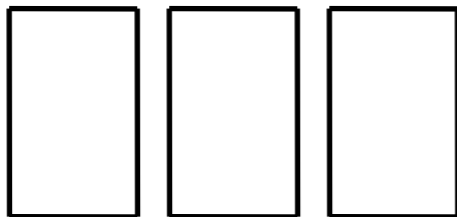


- Spatially (or temporally!) close objects (events) are perceived as belonging together.
- Advantage: allows for order by position only, without other aides
 - Helps to keep the interface simple



Law 3: Closure

- In-class experiment:



- Closed shapes appear as belonging together
- Temporally?
- Foundation of window metaphor
- But: Don't Overdo It.

Contact Info

Name

First: John

Last: Abercrombe

Address

Number: 123

Street: Pleasant St.

City: Cleveland

State: OH ▼

Zip Code: 12345

Assets

Salary

<=20K

>20-40K

>40-60K

>60-80K

>80K

Real Estate

Home

Rental

Farm

Other

Bank

Name: Bank of the West

Accounts

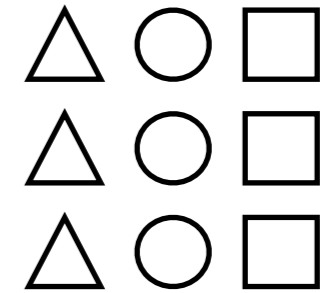
Checking: \$2500.24

Savings: \$52,465.37

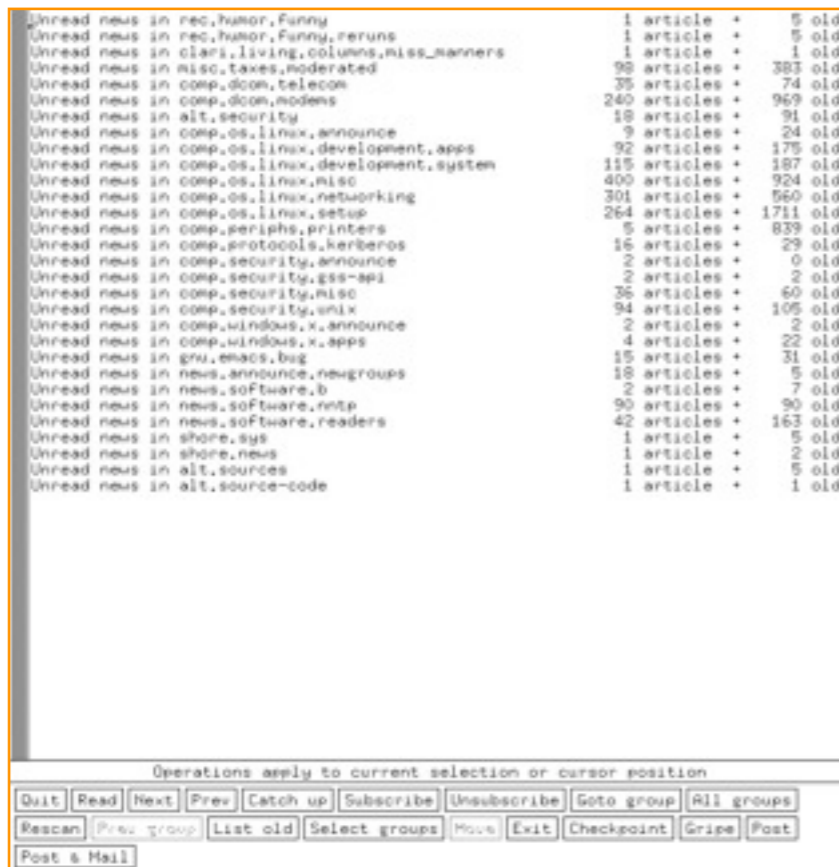
Too many boxes.
(From Johnson: *GUI Bloopers*)



Law 4: Similarity



- In-class experiment:



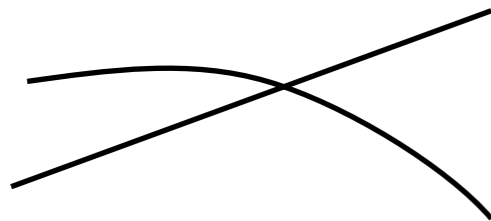
Bad button design in xrn

- Similar shapes appear as belonging together
- Temporally?
- Different objects have higher information content (i.e., cognitive effort)
 - This can be A Good Thing or A Bad Thing
- “Similar” is not necessarily “constant”
 - Linearity, “elegant curve”,...



Law 5: Continuity

- In-class experiment:

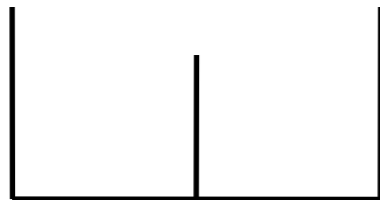


- A.k.a. “Law of the Good Curve”
- Continuous shapes appear as belonging together
- Temporally?
- Example: music



Law 6: Experience

- In-class experiment:

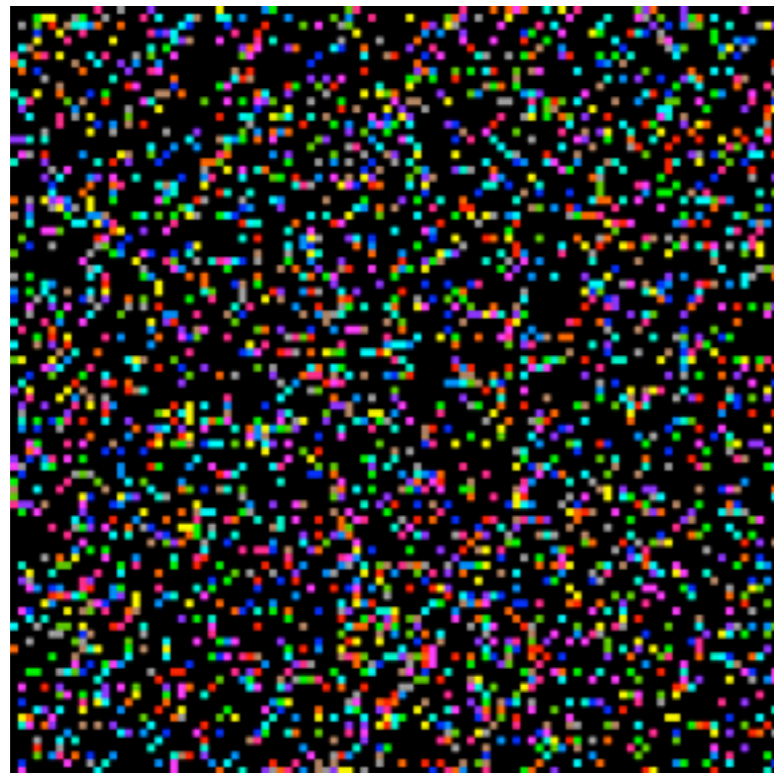


- We tend to “file” new things into categories we already know
- Uses existing knowledge, thereby saving learning effort and memory
- Foundation for the success of **metaphors** in UI design
 - Analog to real-world models
 - E.g., desktop metaphor



Law 7: Common Fate

- In-class experiment:



- A.k.a. “Law of Common Movement”
- Animated objects within a static environment appear as a group

