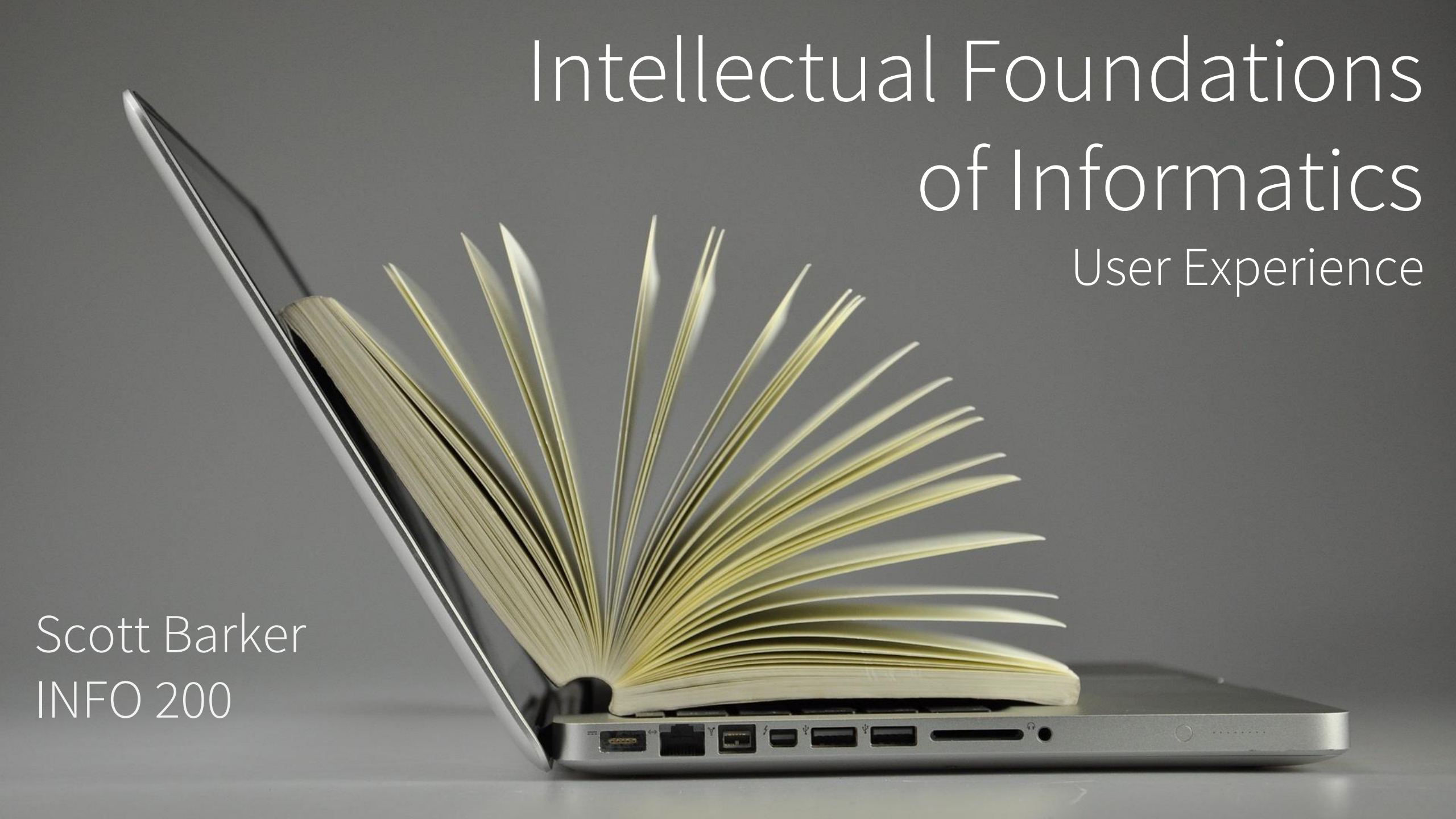
Intellectual Foundations of Informatics

User Experience

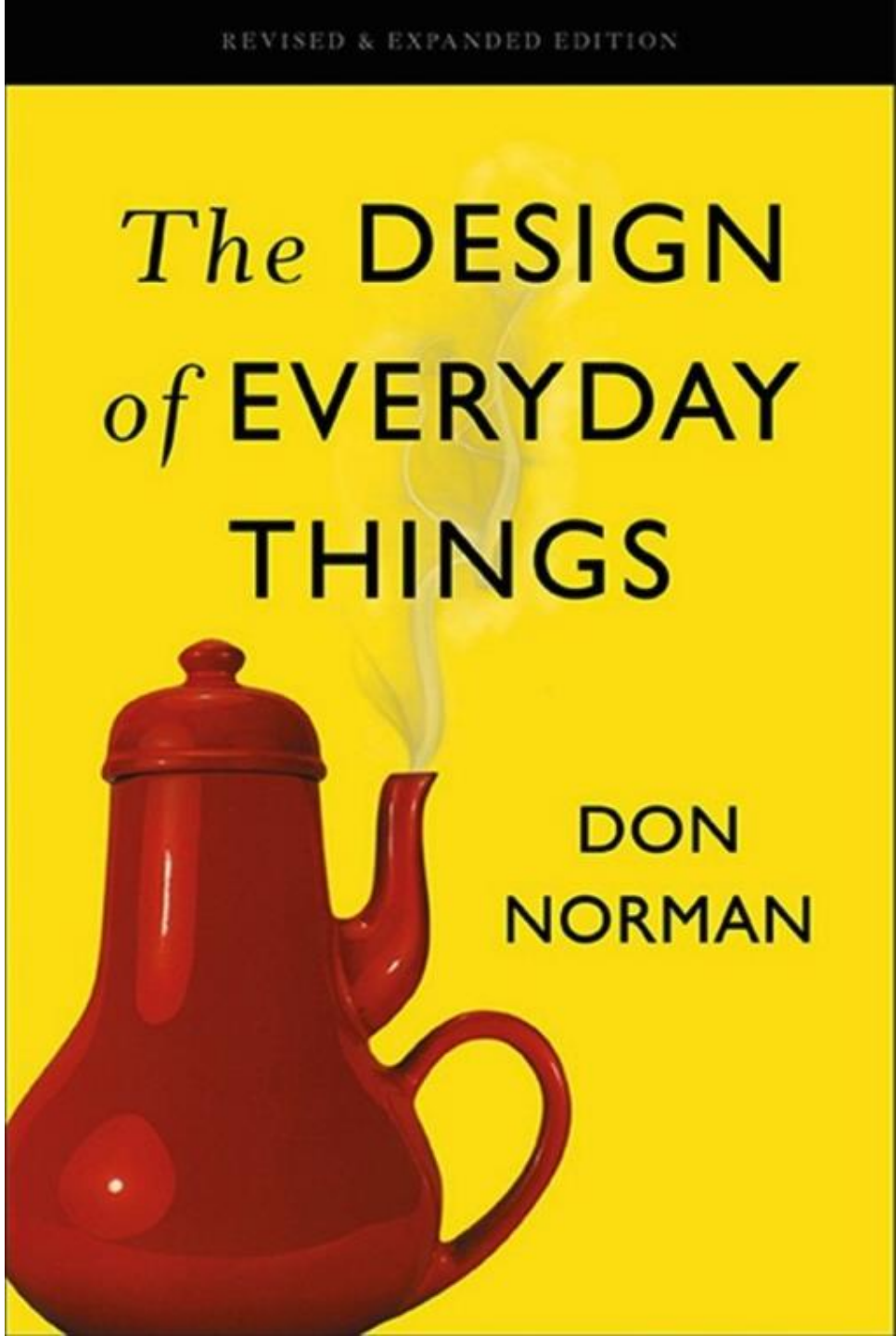


Scott Barker
INFO 200

User Experience (UX) Design

“The practice of designing products, processes, services, events, and environments with a focus placed on the quality and enjoyment of the total experience…

No product is an island. A product is more than the product. It is a cohesive, integrated set of experiences”



It is not a movie poster you are creating.

It is an experience.

Example: CARS

What is a good user experience?

Ford Focus:
It’s a City Car

- Needs to be small, easy to park
- Economic
- Should carry 2-4 people

BMW 5 Series:

It’s a luxury car

- Needs to be comfortable
- Lots of features
- Fuel Economy not very important
- Should carry 4 people

Porche 911:

It’s a sports car

- Needs to be *FAST FAST FAST*
- Highly responsive
- Lots of features
- Fuel Economy not very important
- Brand-name likely matters a lot

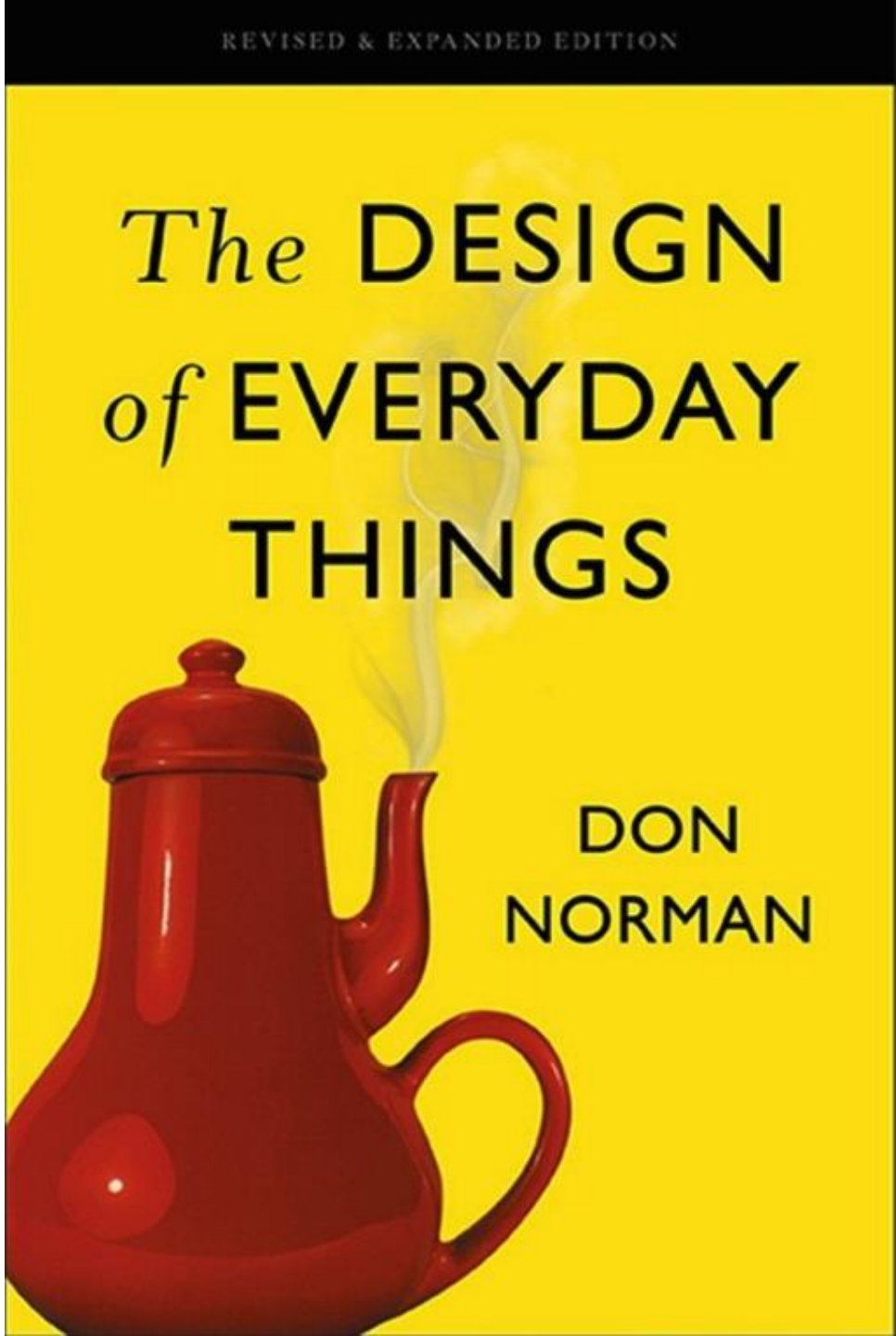
What if you have a family and need to take your kids to soccer practice?

- Different Users
- Different Requirements
- Different desired User Experiences
- Aside from the car itself is the entire car buying experience, they are not necessarily relatated

User Experience (UX) Design

Consider a product, an app, a place to go (like a restaurant), or an event where you've had a **FABULOUS** user experience or a **TERRIBLE** user experience

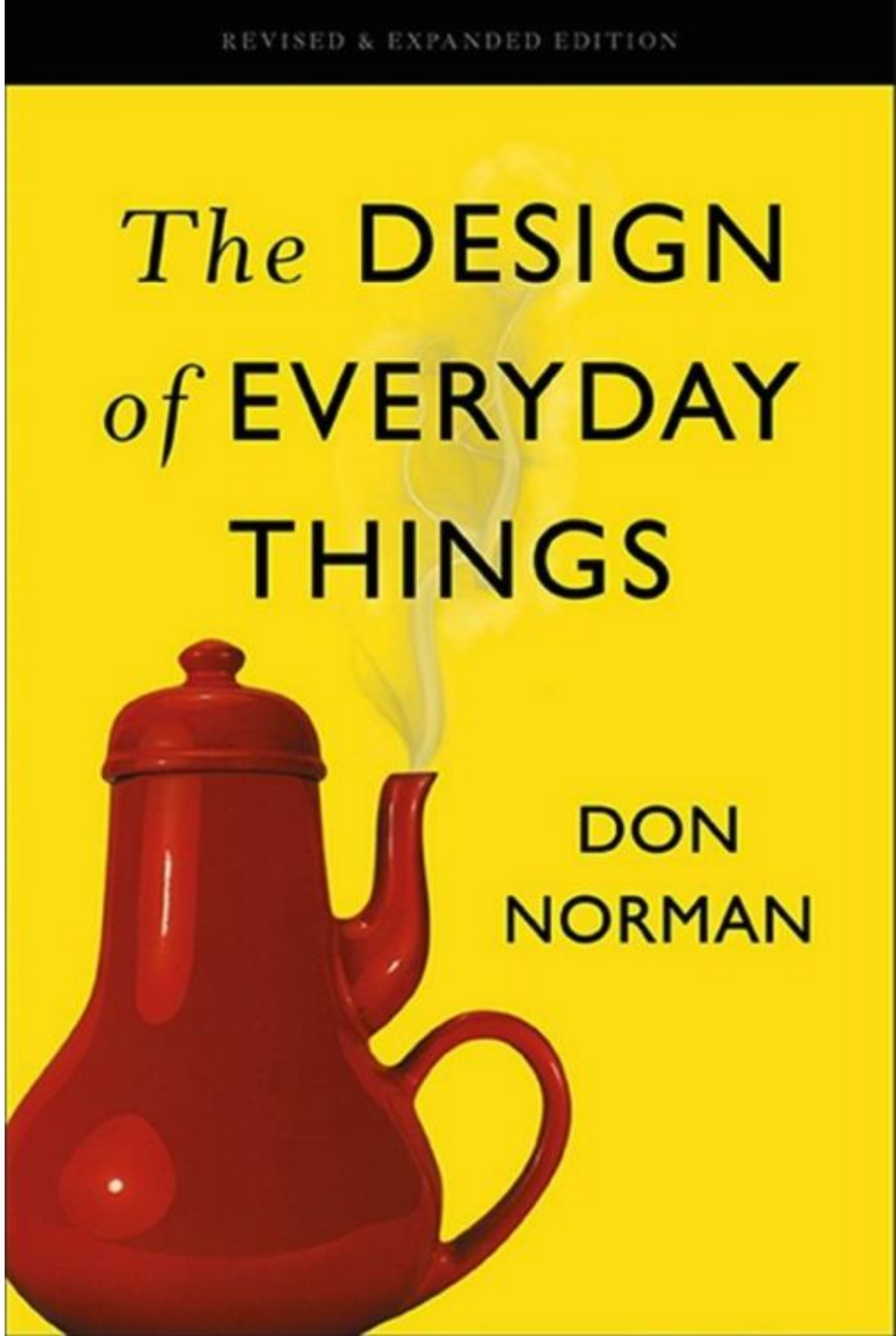
What made it so?



User Experience (UX) Design

- Is there universal agreement between all people that a particular thing has a “good” or “bad” user experience?

- Is user experience only determined by the “design” of that thing or were there other factors at play?



How did Disney use the MagicBand to create a “magical” user experience?

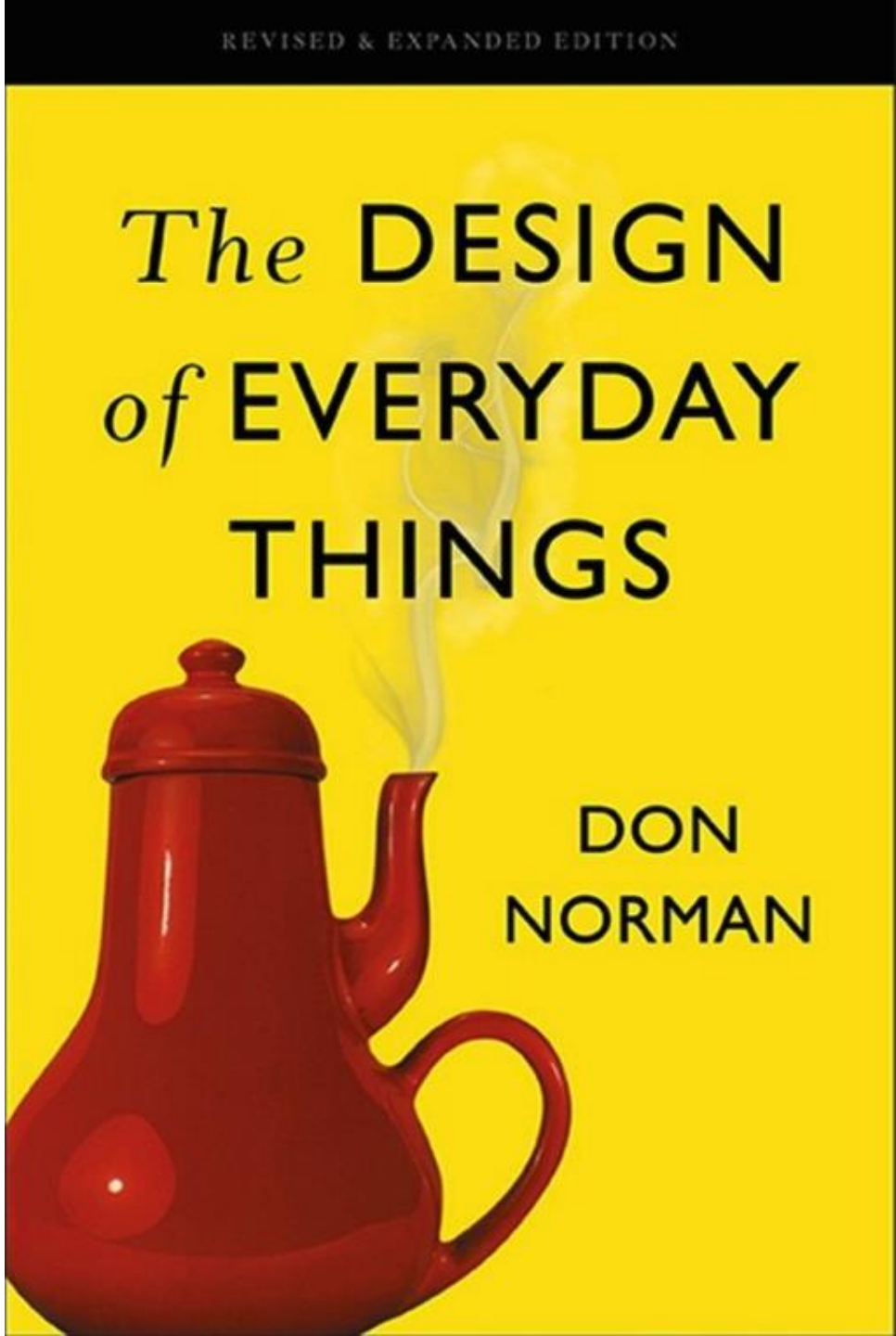
http://www3.gehealthcare.com/en/products/categories/accessories_and_supplies/adventure_series_for_mr/space_runways

Interaction Design

How people interact with artifacts, either through direct physical manipulation, or indirect software-based interfaces

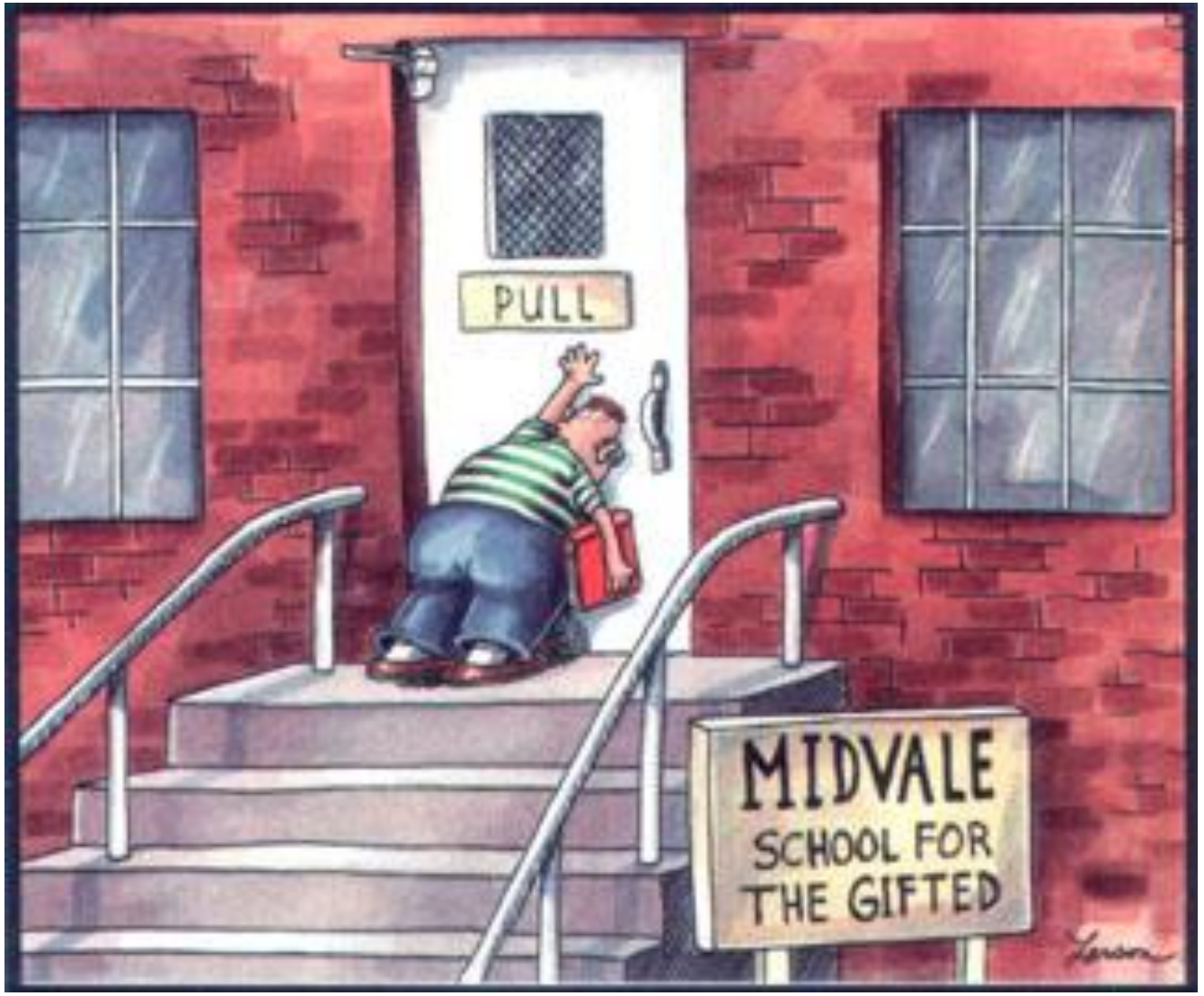
Goal is to make things ‘intuitive’

Different than “visual design” which has more of an art perspective.




Design
is not just what it looks like and feels like.
It is how it works
-Steve Jobs

Affordances and Signifiers



What is an Affordance?

"…the relationship between a physical object and a person (or for that matter any interacting agent, whether animal or human, or even machines and robots)…that determines just how the object could possibly be used.

The presence of an affordance is **jointly determined** by the qualities of the object and the abilities of the agent that is interacting.

A chair affords (is used for) support and therefore affords sitting. Most chairs can be carried by a single person so they afford lifting, but for some (those that are weak and can't lift the chair) it does not afford lifting."

Discoverability

To be effective, affordances have to be discoverable

When you look at something you should be able to “discover” what operations you can do

You shouldn’t need an instruction manual or sign to figure it out

With many systems and computer apps there may be poor discoverability

For some, even simple things like answering your phone are not discoverable

Signifiers

Affordances determine what actions are possible, while signifiers communicate where the action should take place

We need both

Signifiers communicate the purpose, structure, and operation of the device to the people who use it

May be deliberate and intentional (e.g. a PUSH sign) or unintentional (e.g. presence of a worn path on the grass showing a short-cut on a walk way

Signifiers

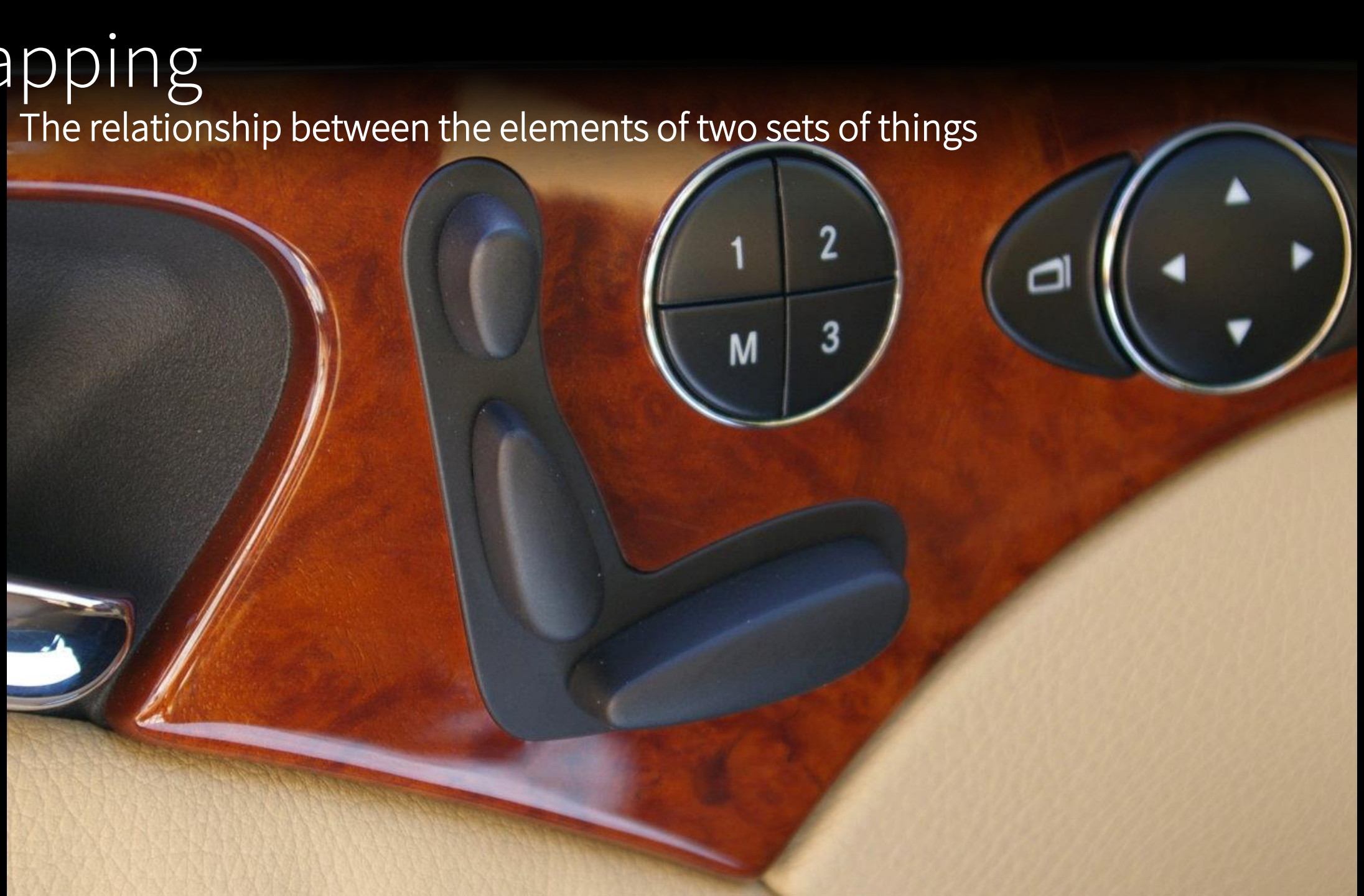
What happens if the signifier doesn’t match the action?


PUSH
You can HAVE IT YOUR WAY® and pull it you want, but this hinge is pretty stubborn
AMERICAN EXPRESS
Pull
BURGER KING

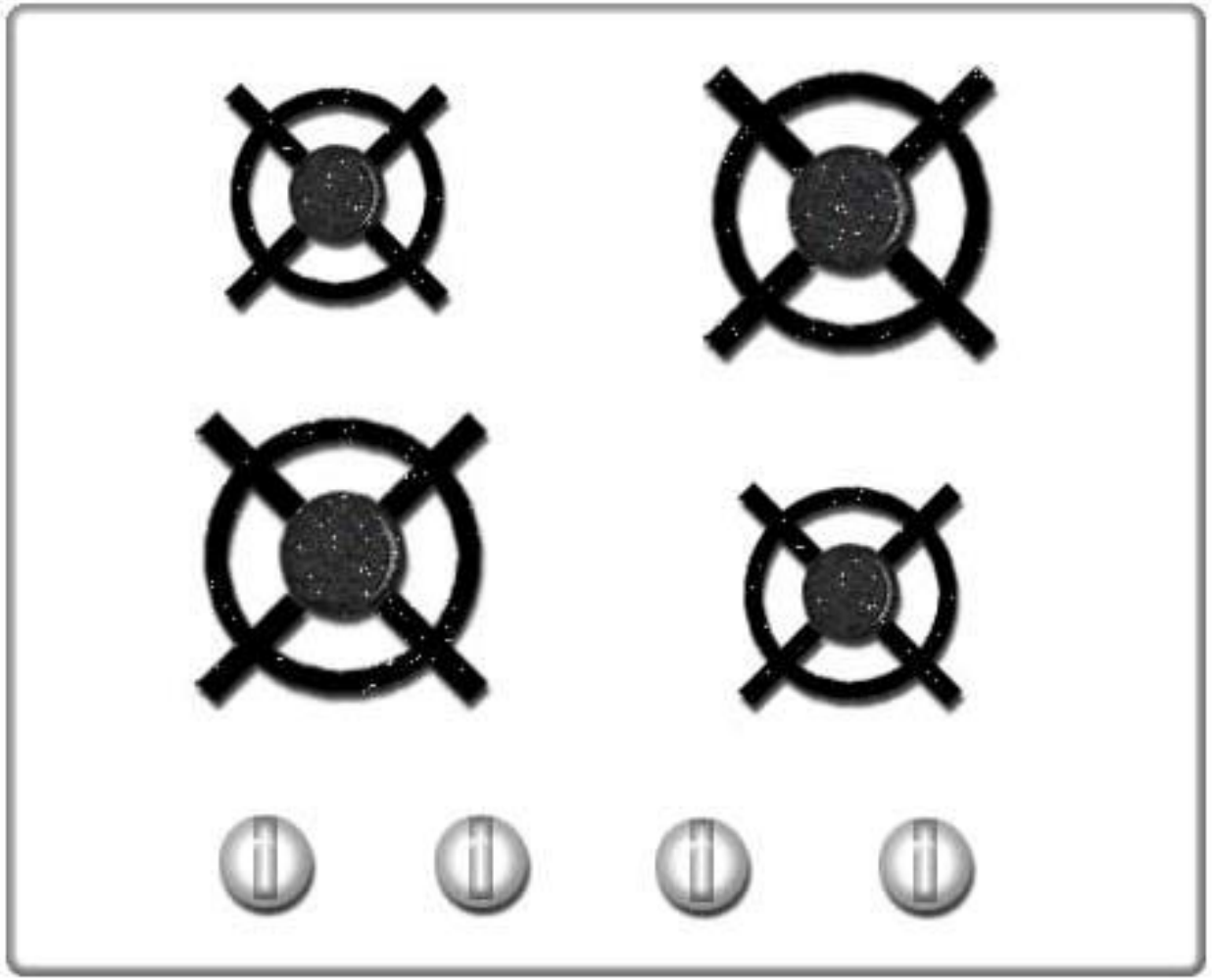
Norman Doors

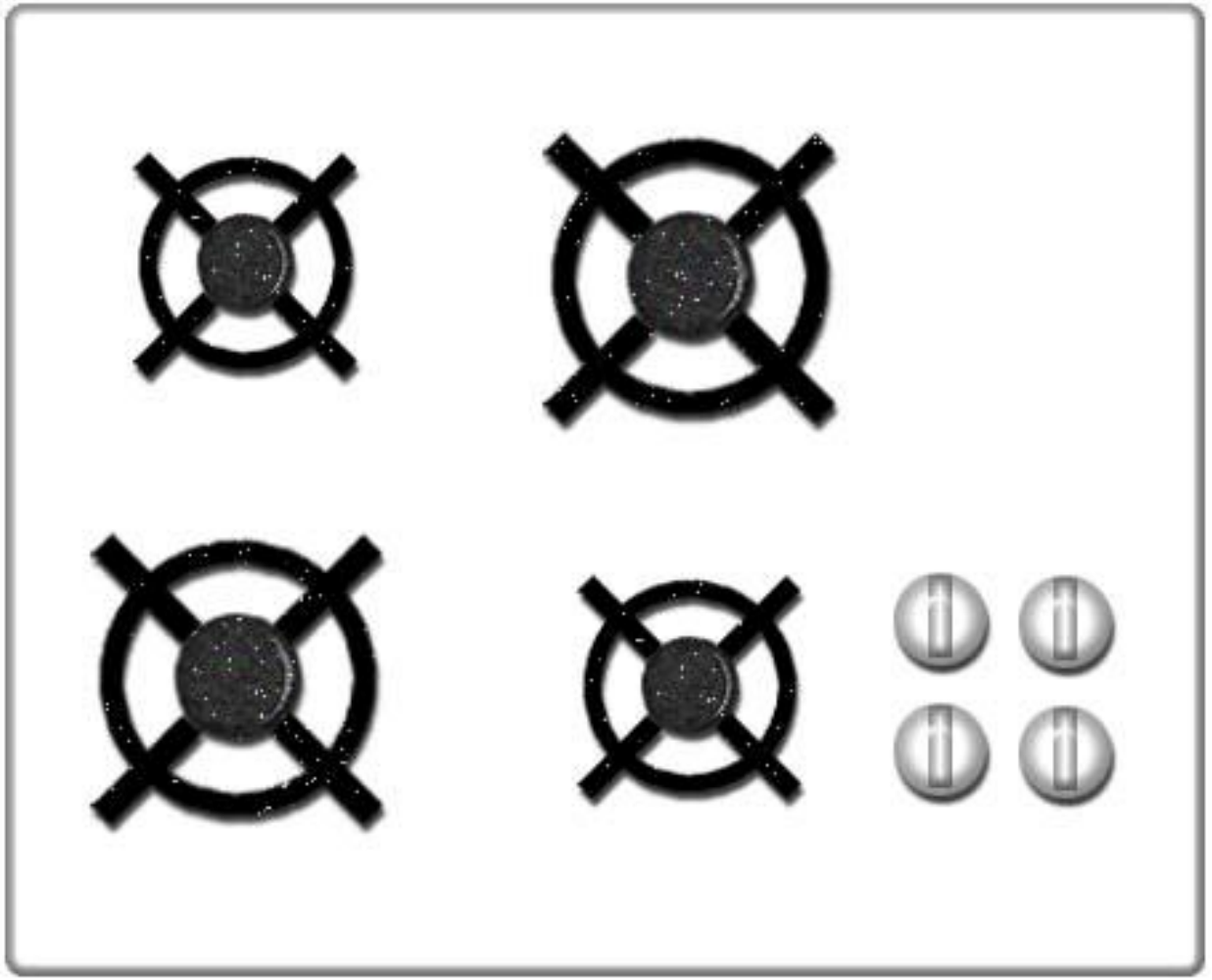
Mapping

The relationship between the elements of two sets of things

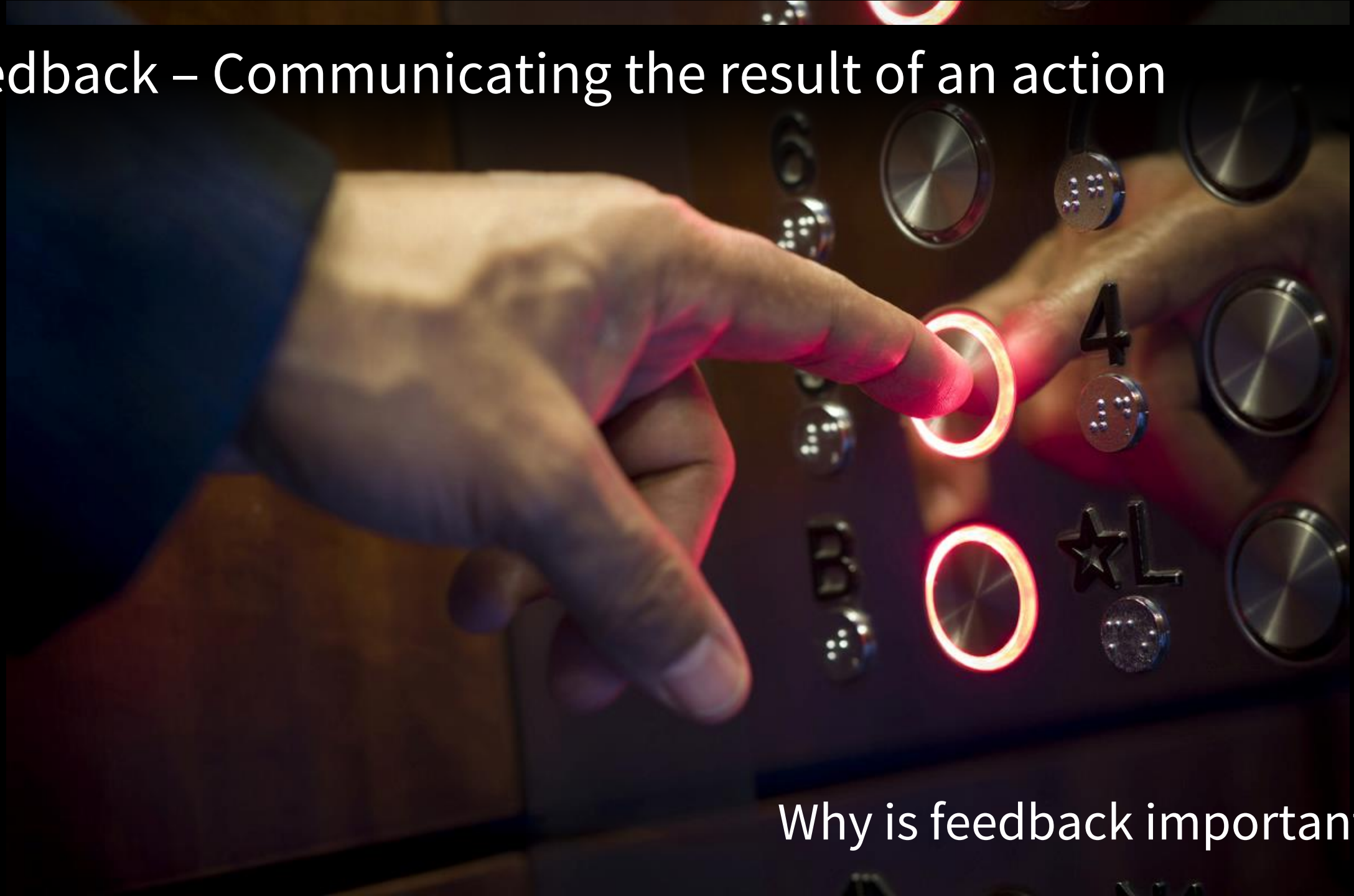


Mapping – which of these is better?





Feedback – Communicating the result of an action



Why is feedback important?

Why do people press traditional crosswalk buttons multiple times expecting the light to change faster?

In fact, do these buttons do anything at all?

Constraints

Design elements that make it difficult or impossible to use a device incorrectly or unsafely

USB Connectors – from constraints to no constraints. Why?

Paying attention to single parts of a design may improve that one element, but doesn’t necessarily insure a better overall “user experience”

Apple’s latest MacBook Pro has switched to USB C connectors only.

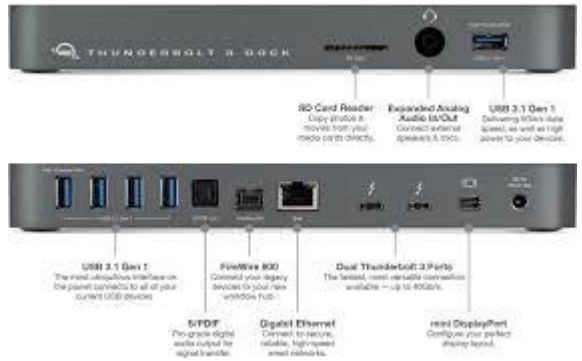
Is this a better “user experience”?
If so – for whom?

Ethernet dongle
$30

Apple Multiport Adapter
$69

USB C Hub
$70

OWC Thunderbolt 3 Dock
$299



Conventions

Long established patterns that become learned signifiers or expected mappings

Which is hot and which is cold?

What are some other conventions we use?

End Lecture