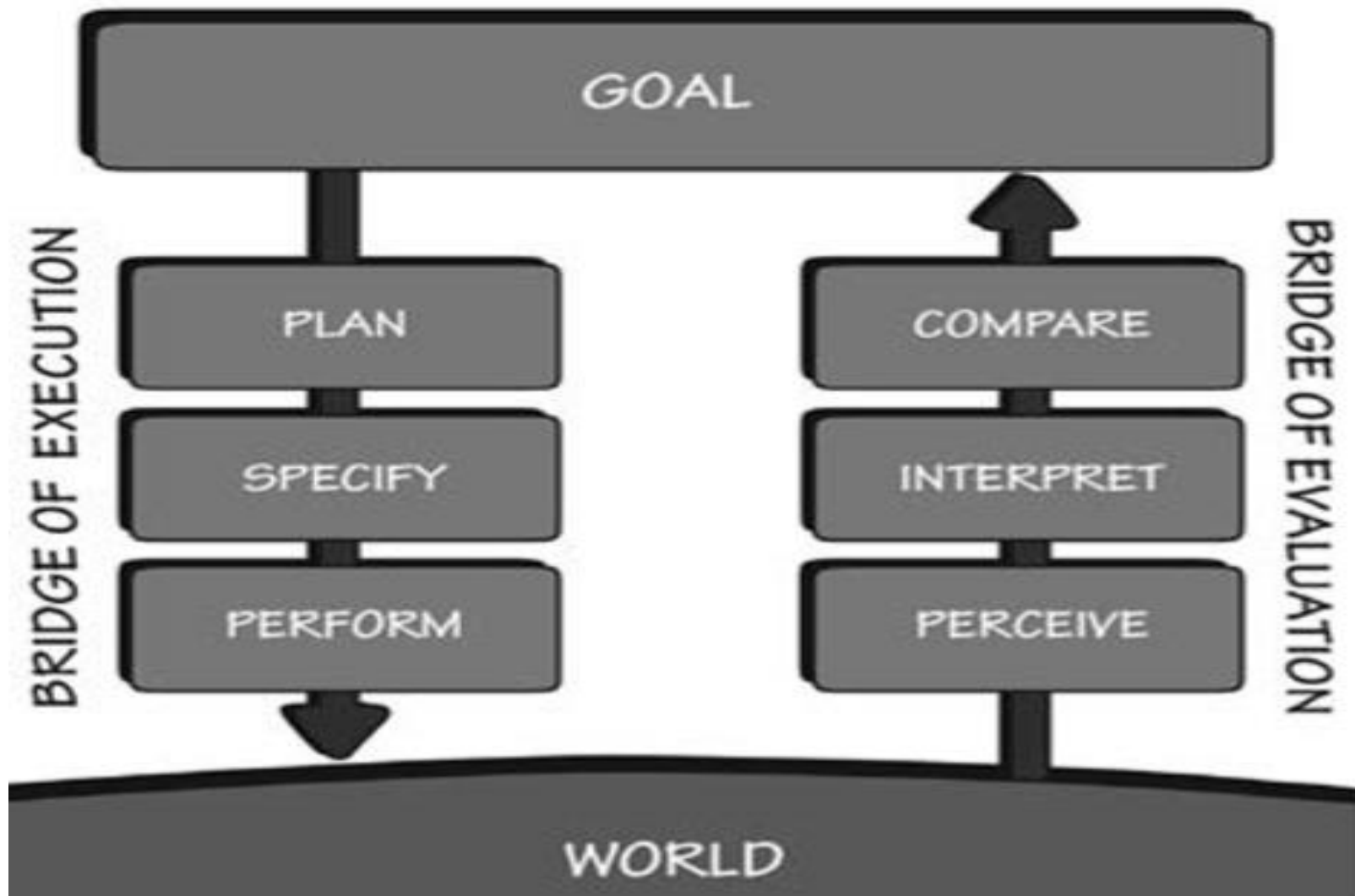


# UX Design

MIS3506 \* Lavin \* Fall 2023



# What are the Gulfs?

The distance between the mental representations (conceptual model) of the user and the physical components and states of the environment.

**Gulf of Execution** is the difference between the intentions of the users and what the system allows them to do or how well the system supports those actions (Norman)

**Gulf of Evaluation** is the degree to which the system/artifact provide representations that can be directly perceived and interpreted in terms of the expectations and intentions of the user (Norman)

# Gulf of Execution

Trying to figure out how something operates





# Gulf of Evaluation

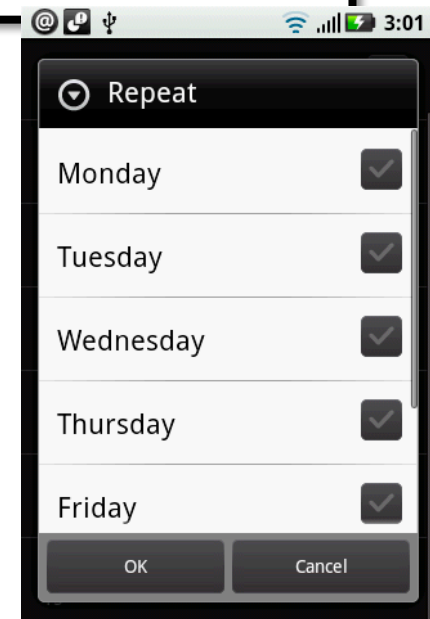
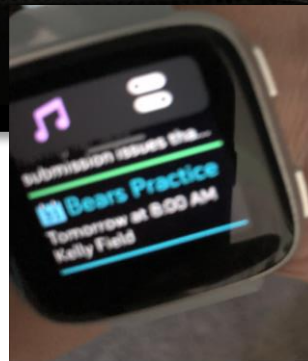
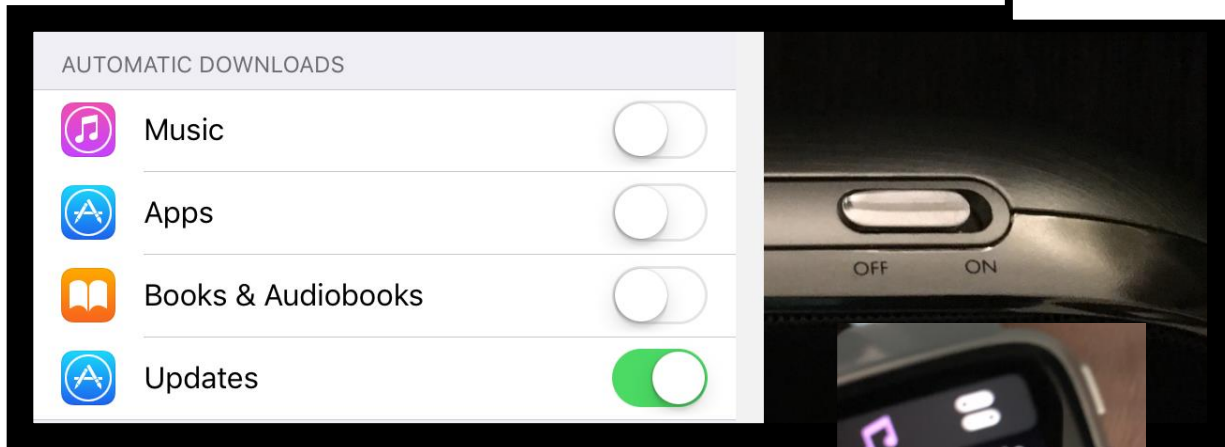
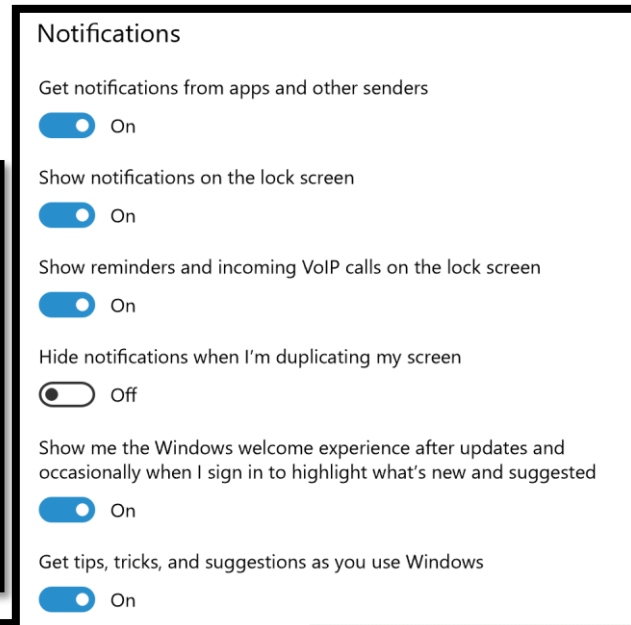
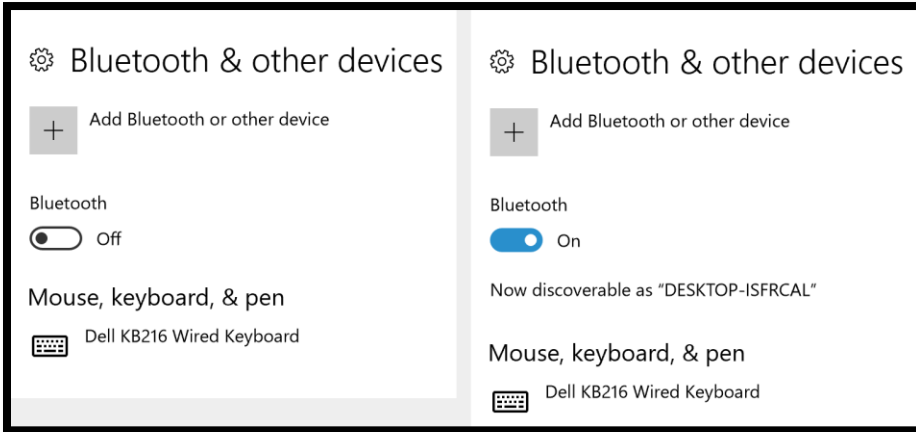
Trying to figure out what happened



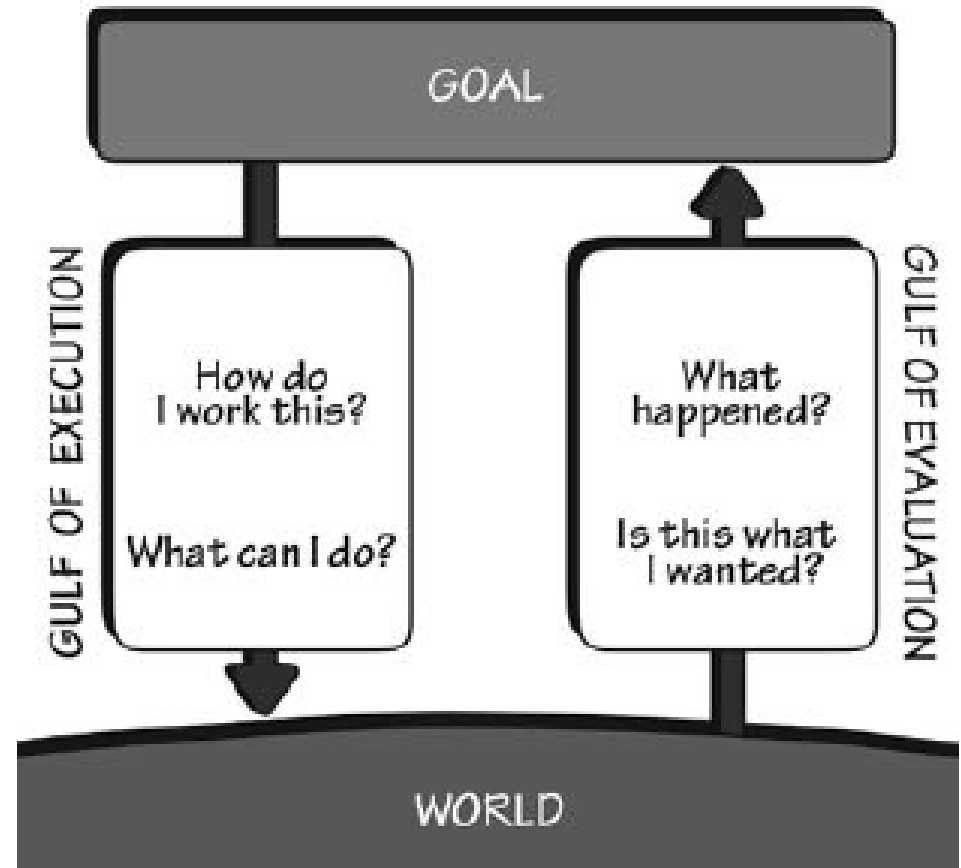
Signifiers  
Constraints  
Conceptual Model

Feedback  
Conceptual Model

Designer's Role: Be the bridge between the Gulfs  
\*Visual & Functional Similarities with Familiar Design\*



*avoid the gulfs!*





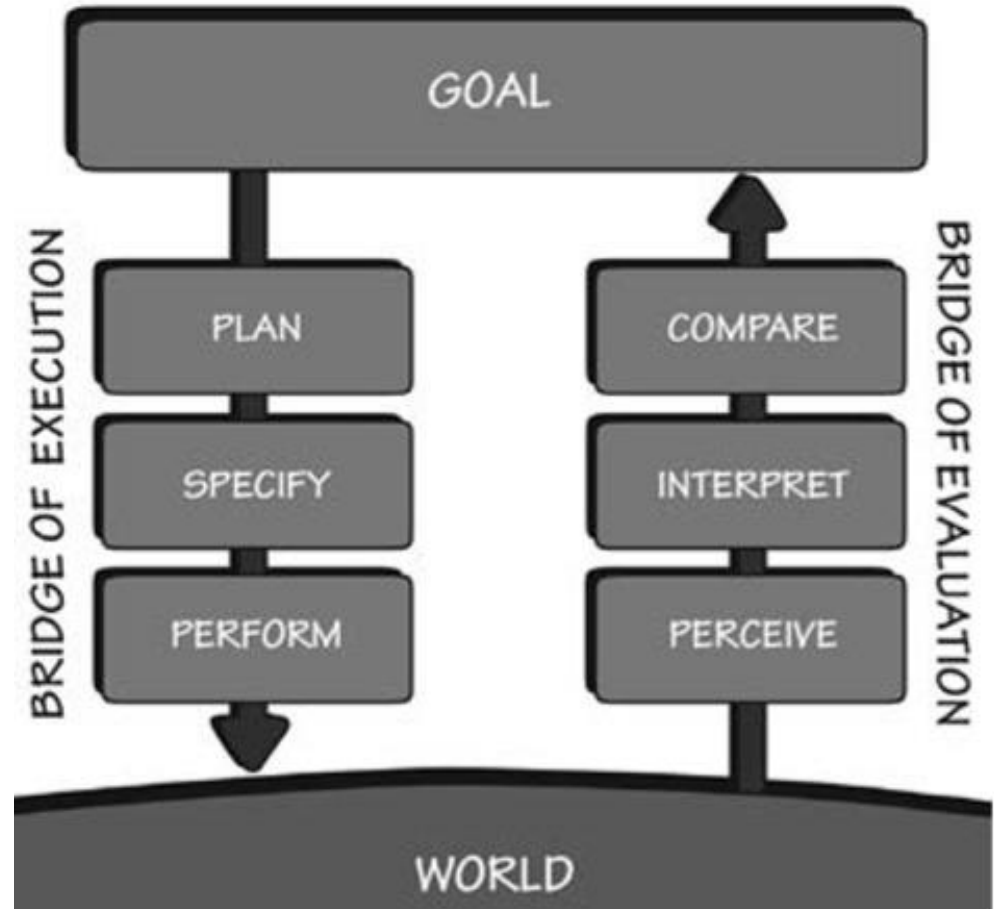


# 7 Stages – Deleting an Email

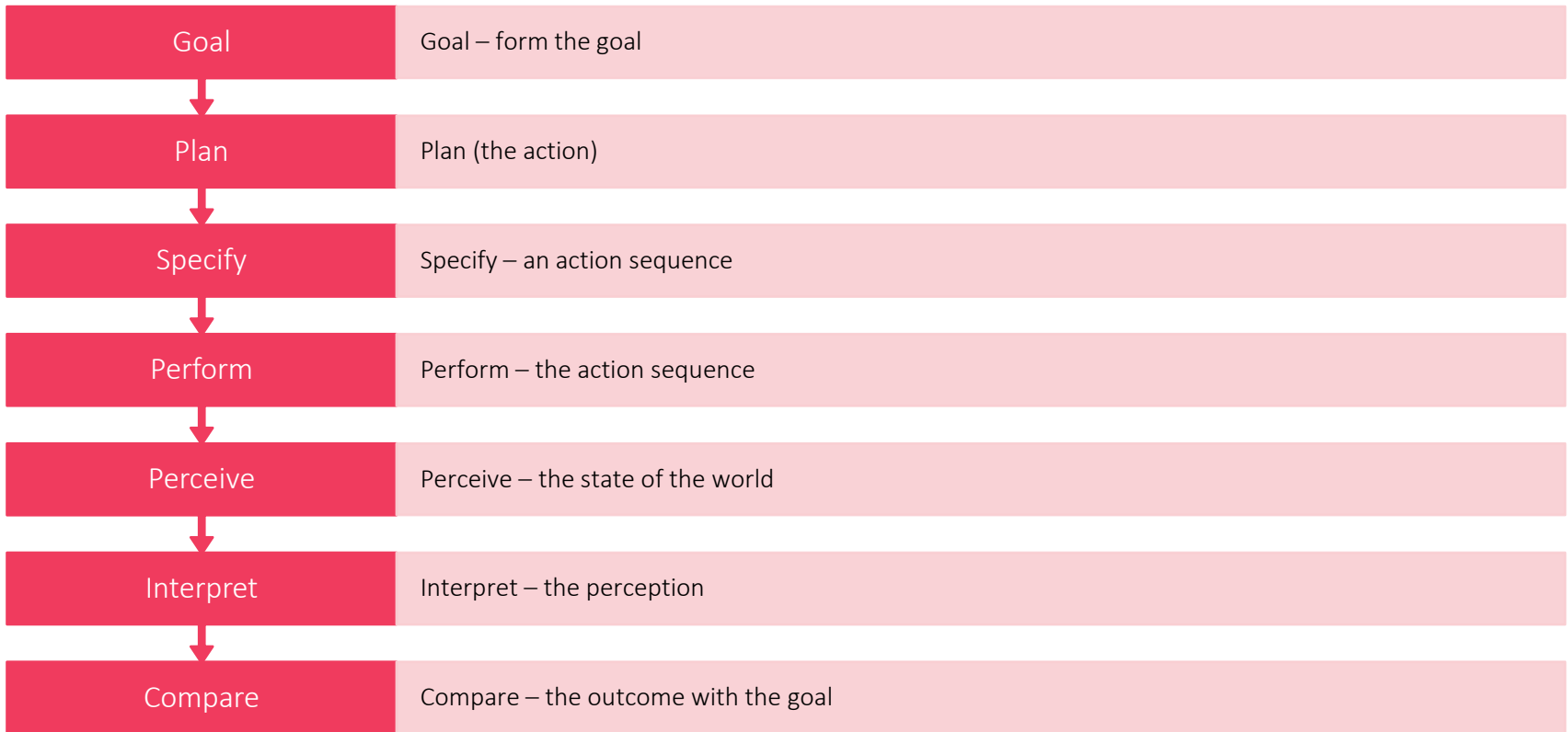
Think through the steps you take to delete an email.

*Now – let's think through it with the lens of Norman –*

# Seven stages of action

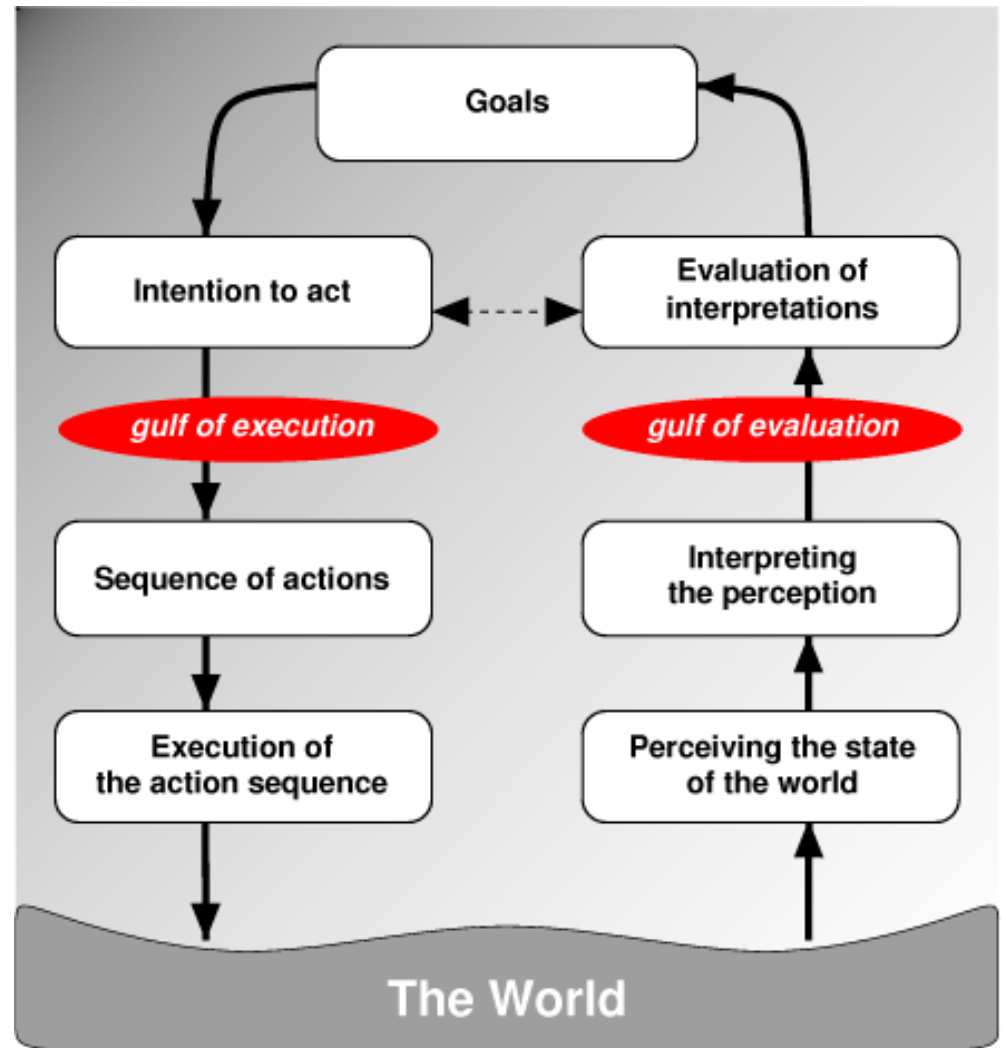


# 7 Stages - Deleting an Email



Putting it  
together

*avoid the  
gulfs!*



# Advice to the Designer

1. Provide Visibility of System Status
2. Meet the Conceptual Model of the User
3. Consistency in presentation of operations and results through signifiers
4. Provide good Mapping
5. Provide full and continuous feedback

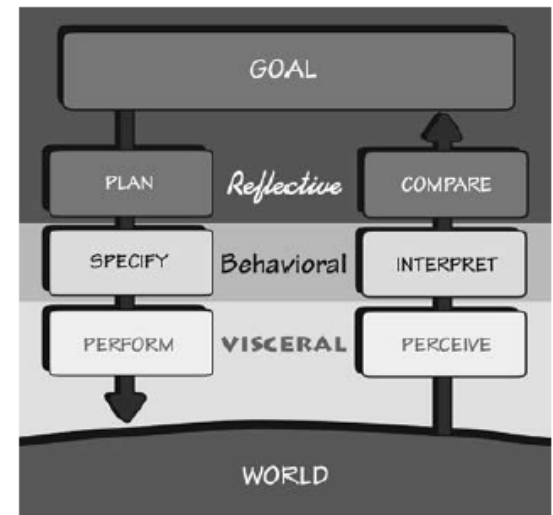
# Why is this so hard?

## Human thought

- Subconscious: fast, automatic, daily skilled behavior
- Conscious: slow, controlled, limited, infrequent

## Processing

- Reflective - thinking
- Behavioral - actions
- Visceral- 'lizard brain'



# Three Levels of Processing



REFLECTIVE



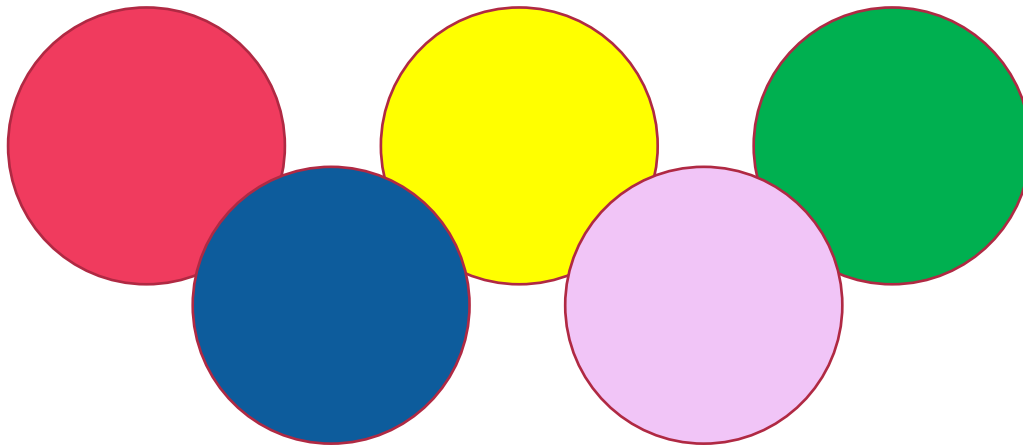
BEHAVIORAL



VISCERAL

# Three Levels of Processing

- ❑ Most basic level of processing
- ❑ Quick judgements about the environment
- ❑ Respond quickly and subconsciously – without awareness or control



VISCERAL



# Three Levels of Processing

- ❑ Home of learned skills and triggered by situations that match appropriate patterns
- ❑ Every action is associated with an expectation



BEHAVIORAL

Effective  
design  
satisfies

Shape and form

Cost and efficiency

Reliability

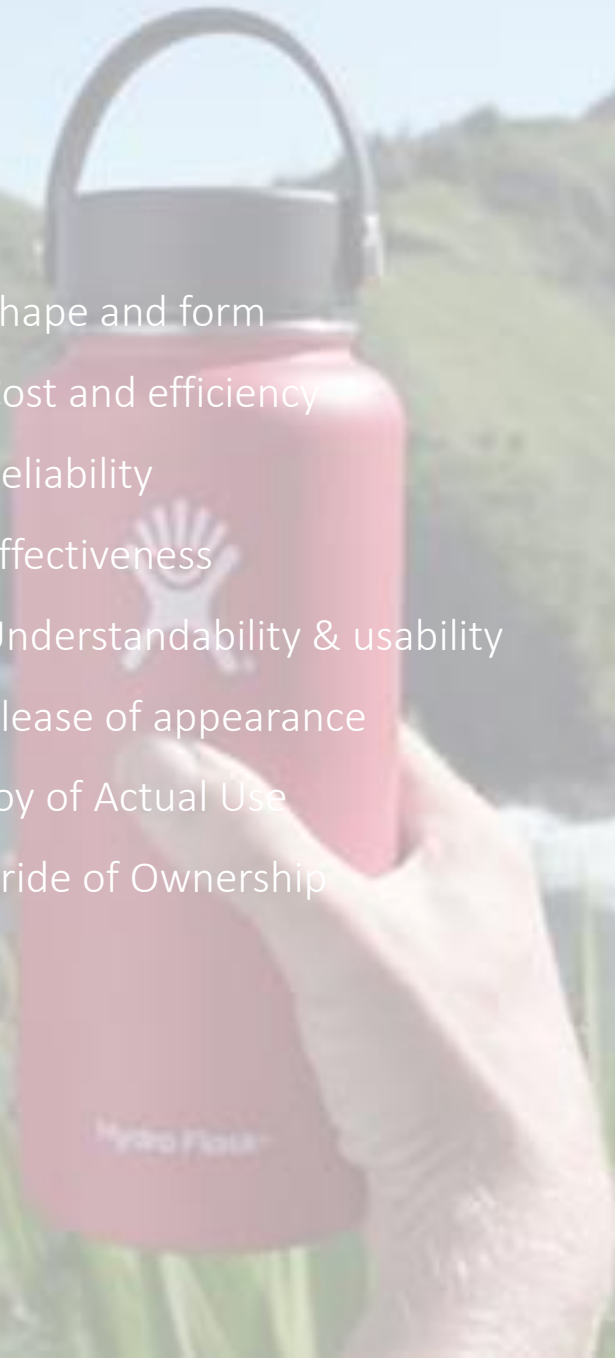
Effectiveness

Understandability & usability

Pleasure of appearance

Joy of Actual Use

Pride of Ownership

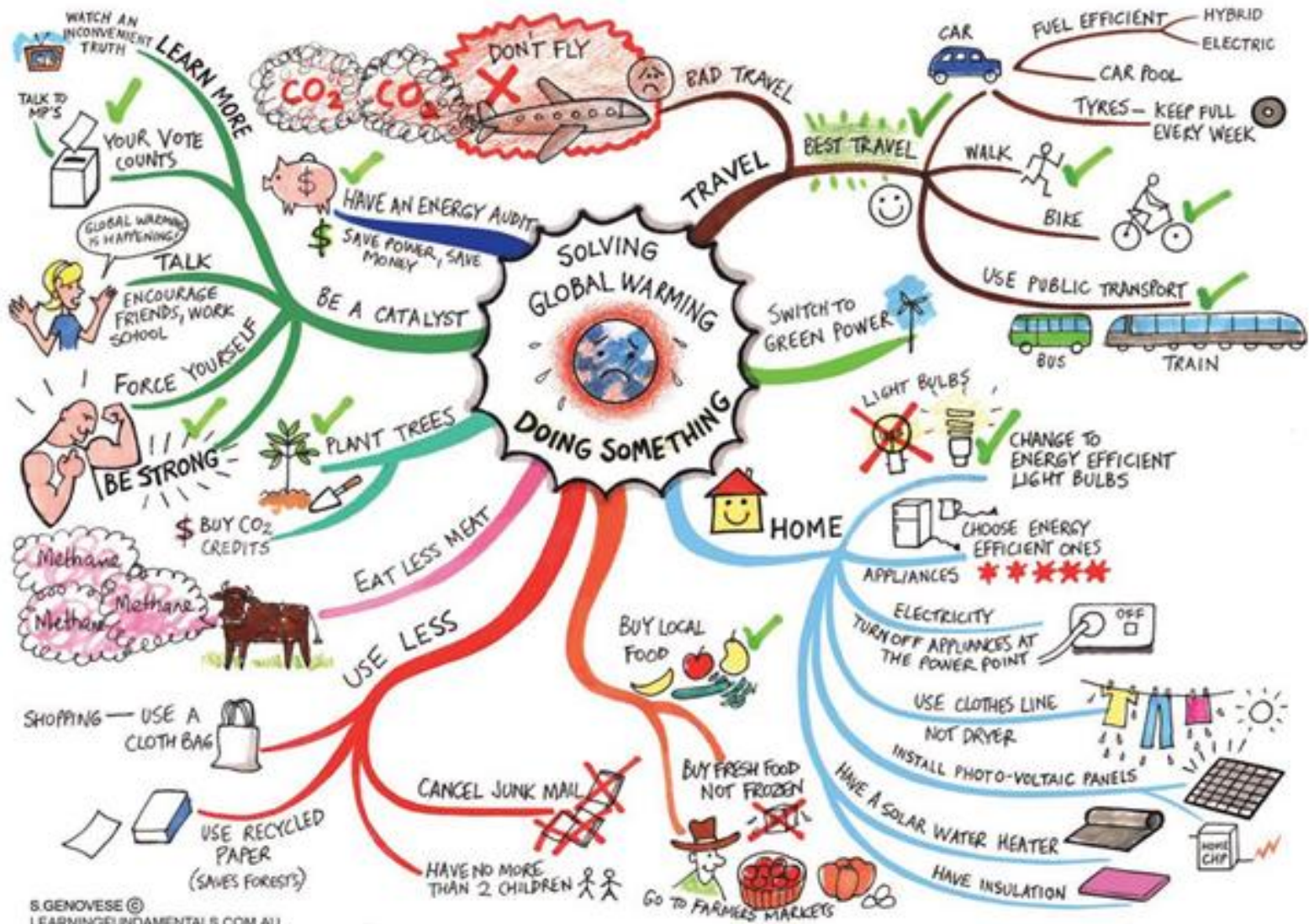


# Three Levels of Processing

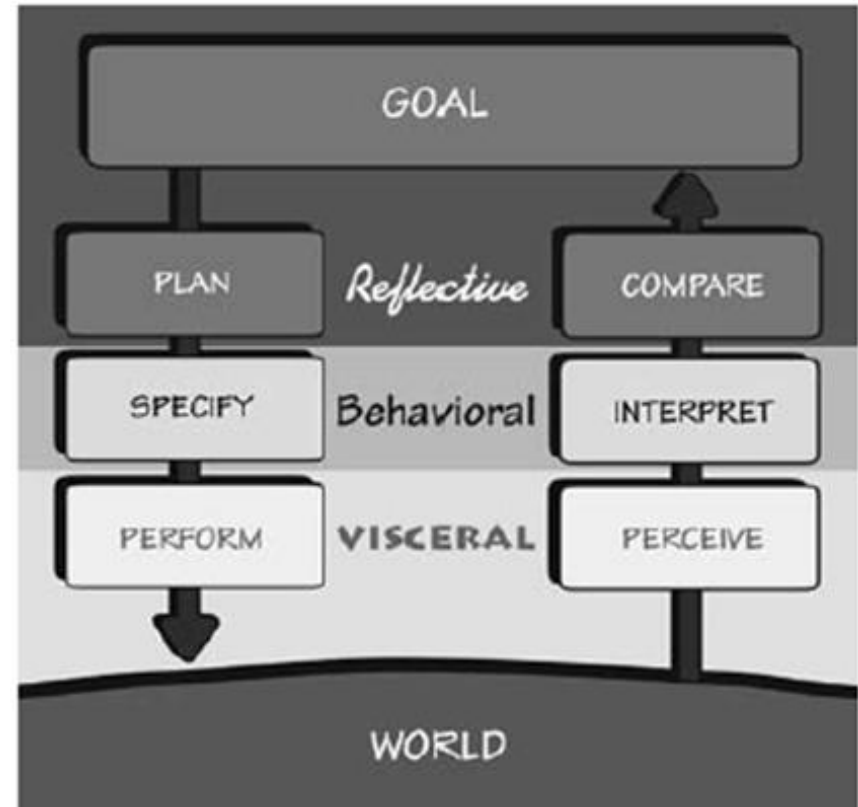
- Conscious cognition
- Deep understanding
- Reasoning and conscious decision making
- Evaluation of the circumstances, assessing blame or responsibility
- Highest levels of emotions



REFLECTIVE



# Levels of Processing & Stages of Action Cycle



# Putting it to practice



MIS3506

ICA – Outlook Migration & User Experience

Temple University recently migrated from Gmail to Microsoft365. This migration has caused joy for some users and angst for others. The question is – what is the source of the angst? Is it the User Experience of Microsoft? Is it that users don't like change and a break from the familiar? Is that Gmail was just so intuitive that we don't think any other option will be suitable?

Reflect for a moment on the migration from one system to another. Consider Temple's reasoning for the migration for a different perspective: <https://its.temple.edu/gmail-outlook-365-migration>

Step 1:

1. Identify the overall affordance of Gmail & Outlook.
2. Without using the interfaces, think through the steps needed to achieve your goals with your mail delivery application. List them out.
3. Now, walk through the steps in Outlook – what feels comfortable or uncomfortable?
4. Open Gmail if you still have it and repeat the steps in the app OR think through the process as you remember it. What makes the experience so different?

Step 2:

1. Think about where you find the most discontent with the Outlook app, make a few notes.
2. For each note, think about a way that you could improve the features and functionality to improve the overall experience. Can you classify these as slips or mistakes?
3. Finally, sketch out what you think the improvements should look like.

Consider: The Outlook app has been widely used and Microsoft is a leader in technology. How can you ensure that the changes you propose won't alienate the traditional user base? Or should you disregard their needs? If you understand the need or decision for the change, does it make it more appealing?



# Reflections

Outlook Migration –

1. How much effort did you have to put in to interpret the state of the app? Were your expectations met?
2. How long did it take you to figure out what to do with the app? To accomplish your goals?

# Breakout

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Each group will pick a computer powered device (e.g., Alexa, Fitbit, Kindle, VR glasses, smart badges, smart remotes, smart appliances)

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Apply Norman's seven stages model to answer: 1. At which stage does the device fail? 2. Which design principles are deficient and why?

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One person reports back to the class



Select an activity from your regular life that struggles with a large gulf of execution or gulf of evaluation, especially due to a weakness of the interface involved in the activity. First, describe what makes that gulf wide. What are the failures of the current interface to bridge the gulf?

Then, select a similar activity from your regular life that does a better job bridging its gulf of execution or gulf of evaluation. Briefly describe that activity and what gives it a narrower gulf, then describe what lessons could be borrowed from the second activity to resolve the wide gulf in the first activity.

# I am only human (after all)

