

# UX Design

MIS3506 \* Lavin \*Spring 2025

# How do we determine how well users interact with digital products?

Imagine you're using a new app for the first time and you want to post a photo...

Simple enough?

But there are no clear labels or an upload button....

You find yourself scrolling and clicking aimlessly.

MISSING:



## A mismatch between user intentions and available actions.

# Gulf of Execution

Trying to figure out how something operates



# How do we determine how well users interact with digital products?

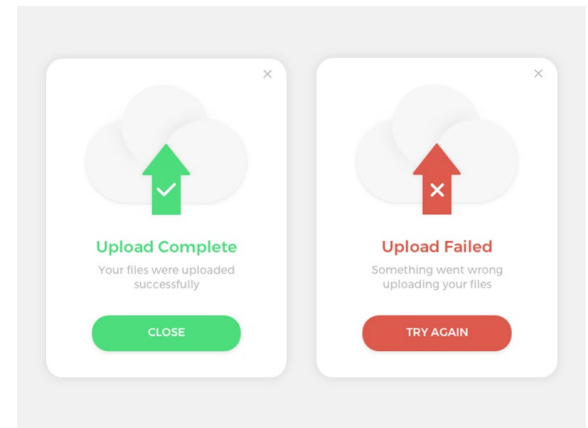
Now, you finally figured out how to upload that photo, you hit Submit.

Nothing happens.

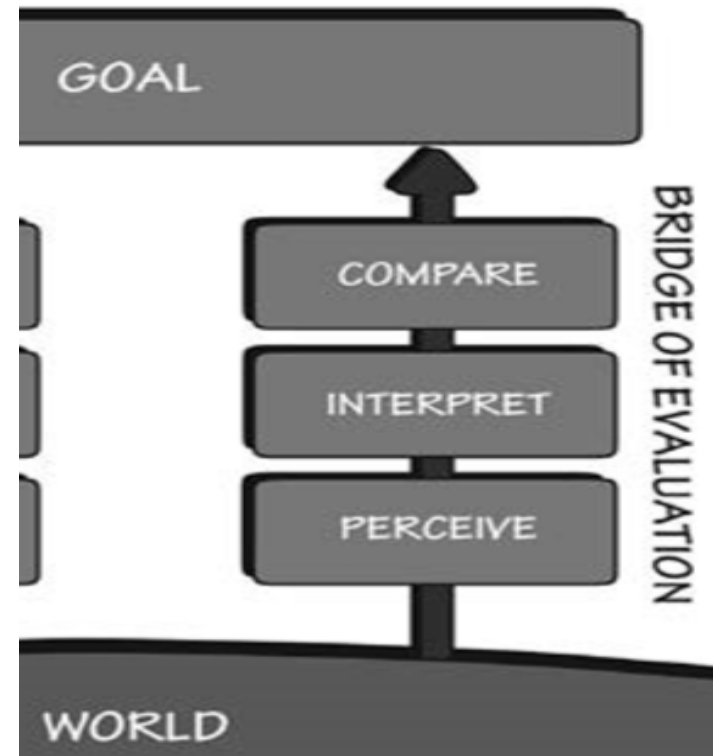
Was there an error? Should you try again?

There is no immediate feedback.

MISSING:

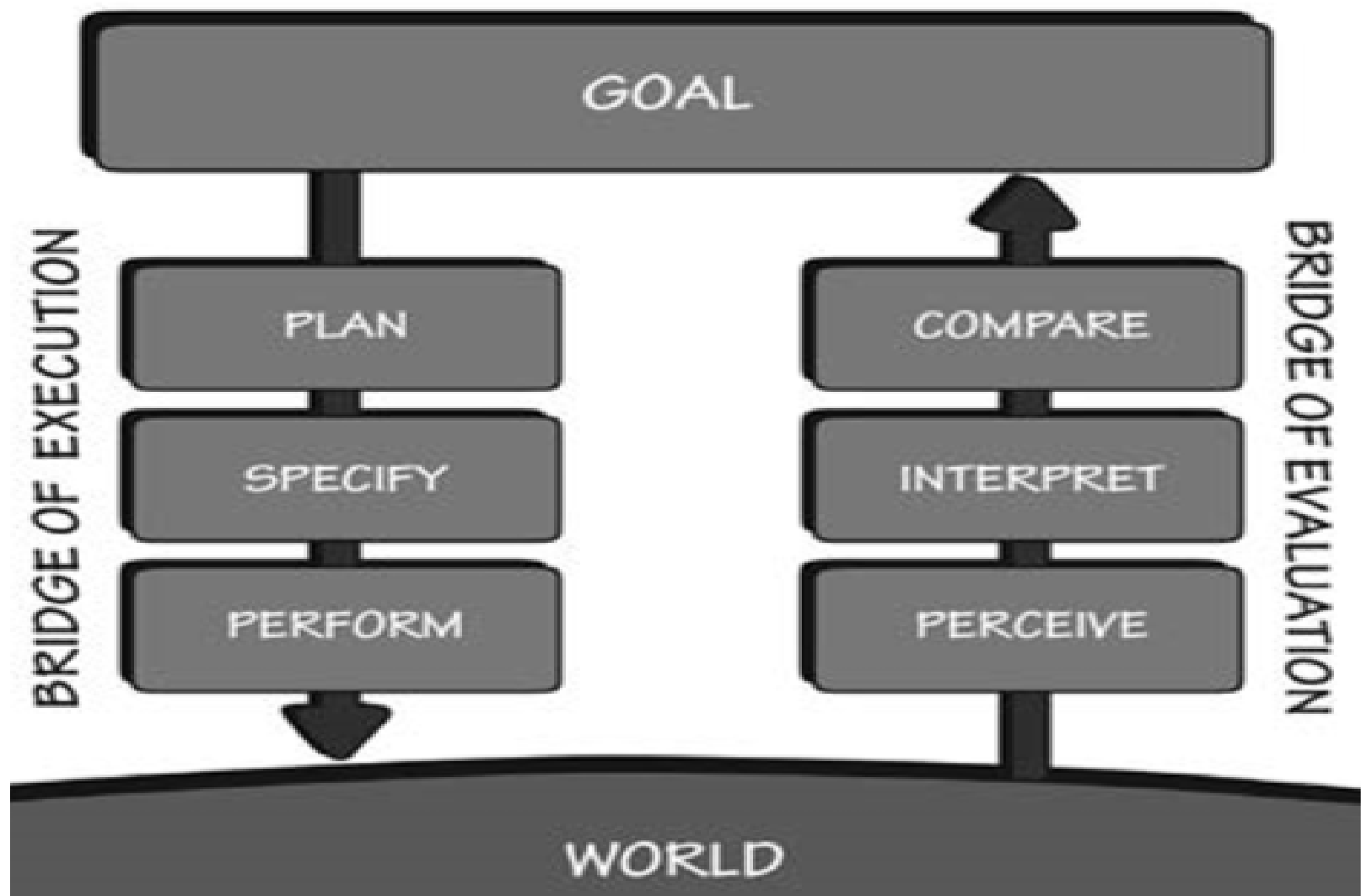


# An uncertainty about whether the goal was achieved.



# Gulf of Evaluation

Trying to figure out what happened



# What are the Gulfs?

Recap:

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)

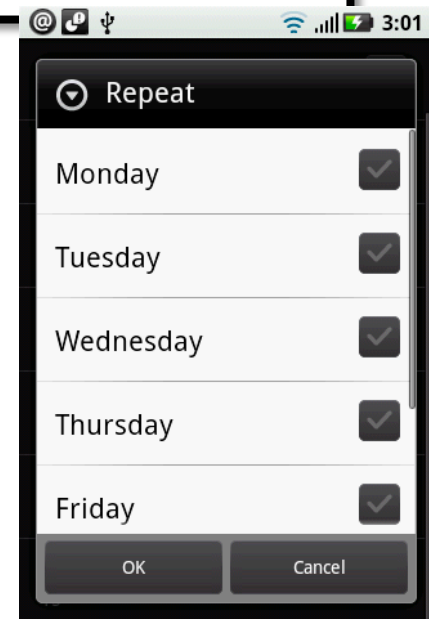
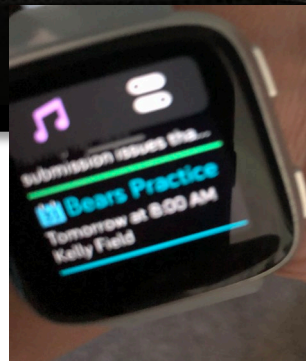
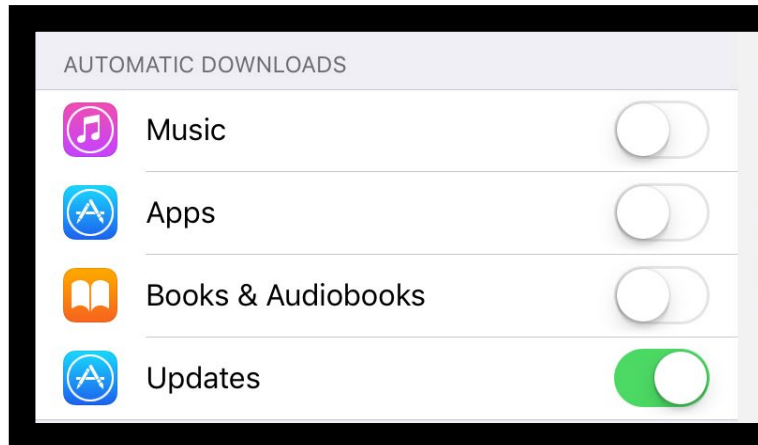
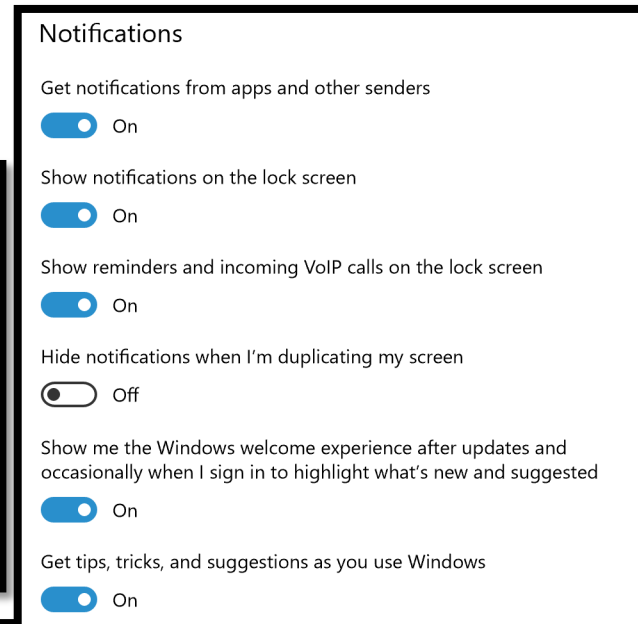
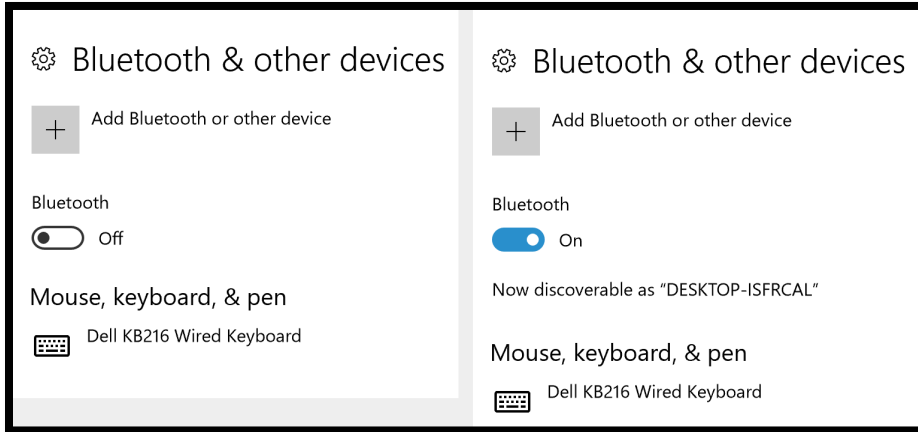


Signifiers  
Constraints  
Conceptual Model

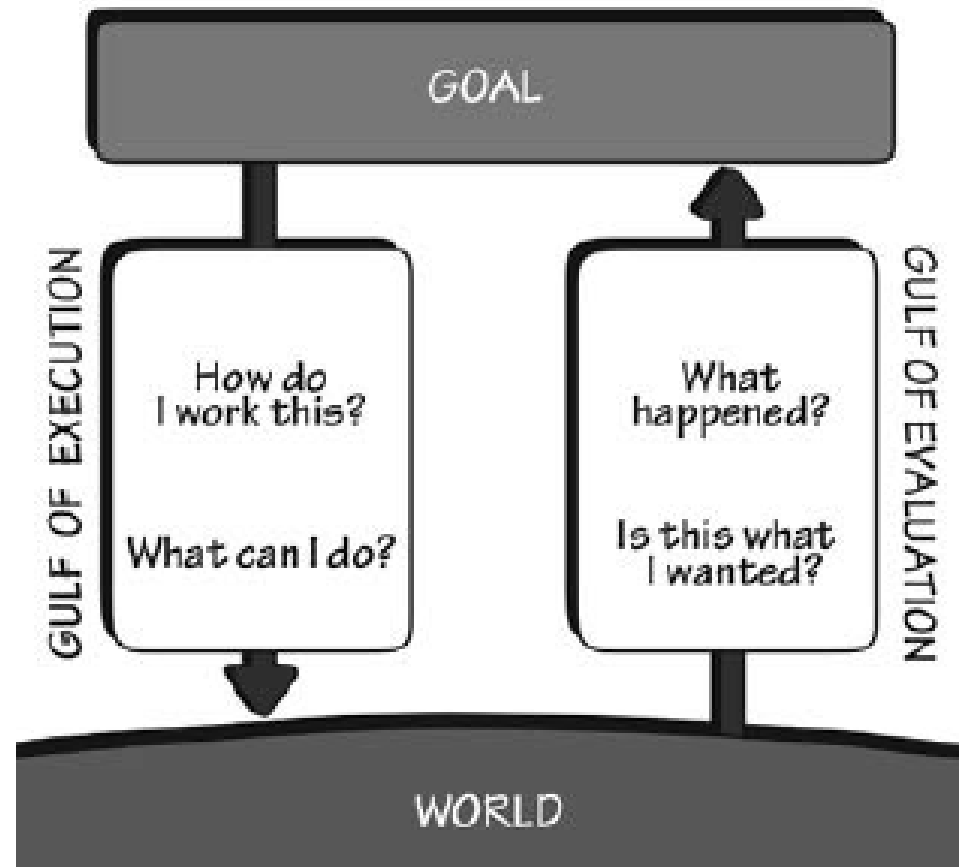
Feedback  
Conceptual Model

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

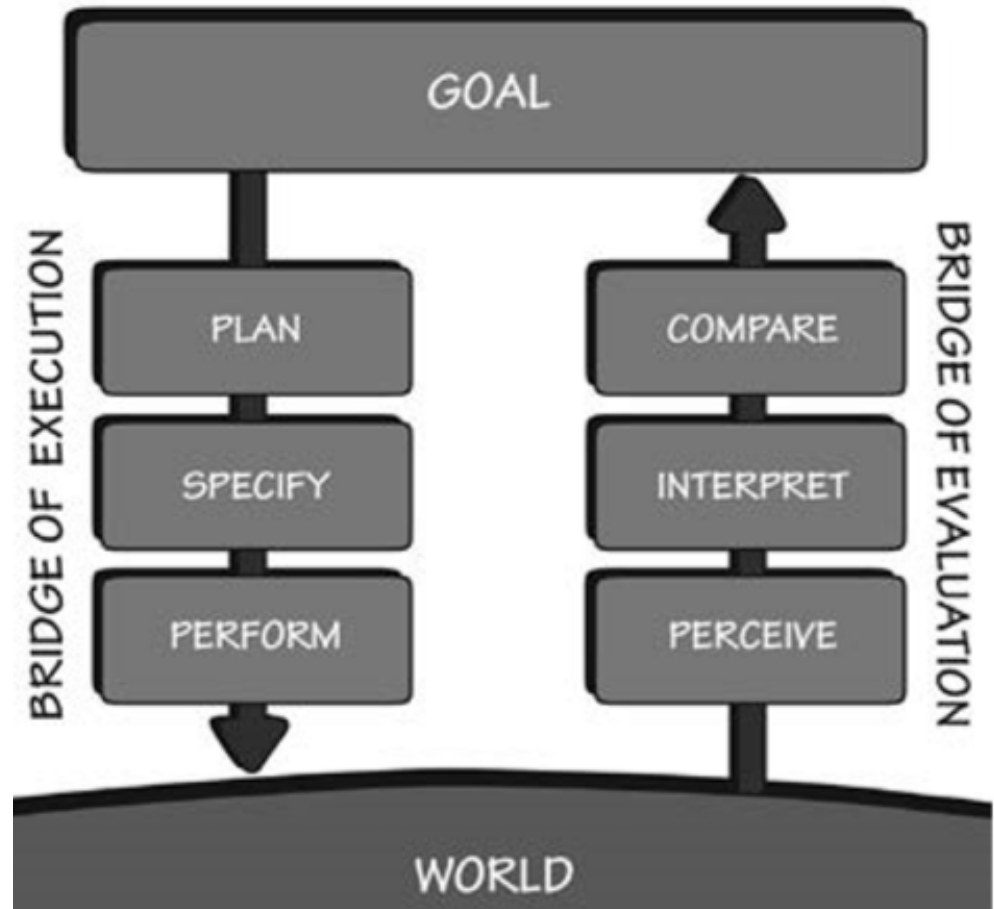




*avoid the gulfs!*



# Seven stages of action





# 7 Stages – Deleting an Email

Think through the steps you take to delete an email.

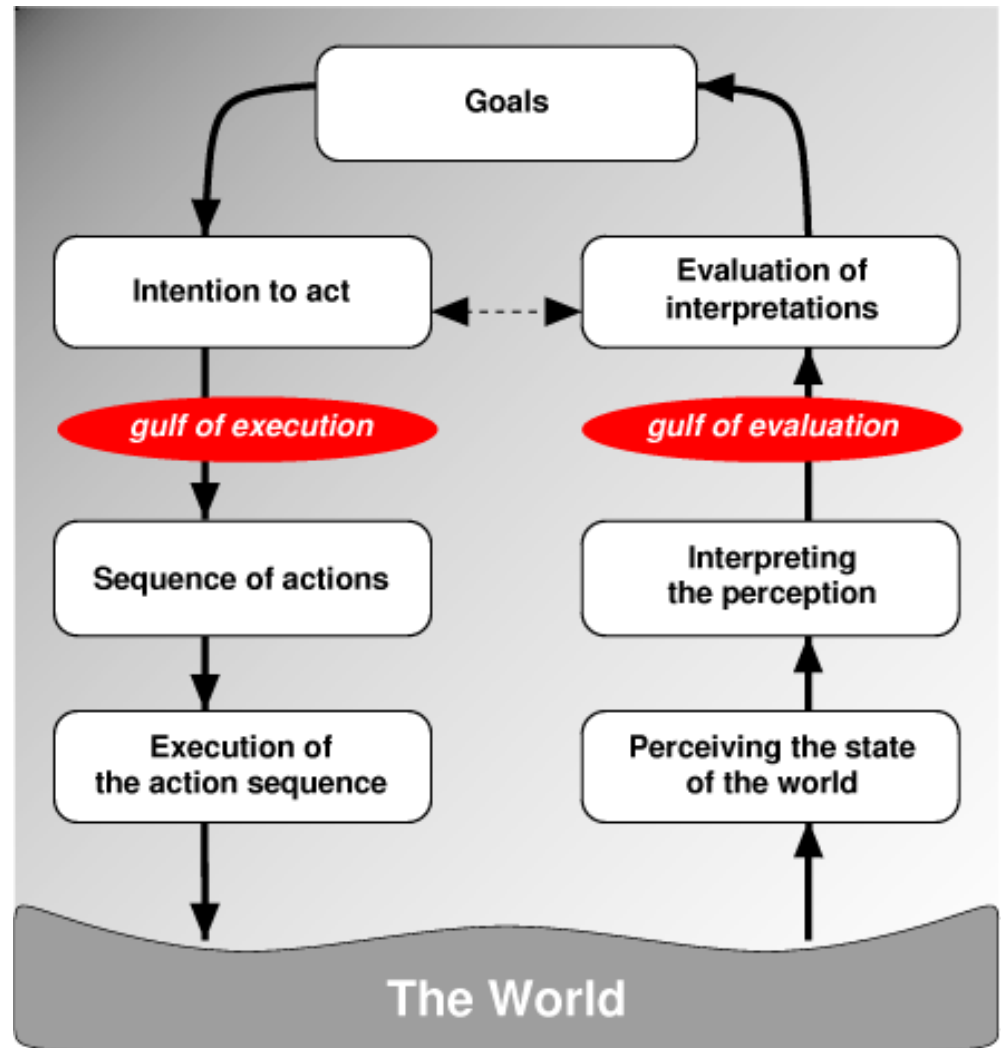
*Now – let's think through it with the lens of Norman –*

# 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

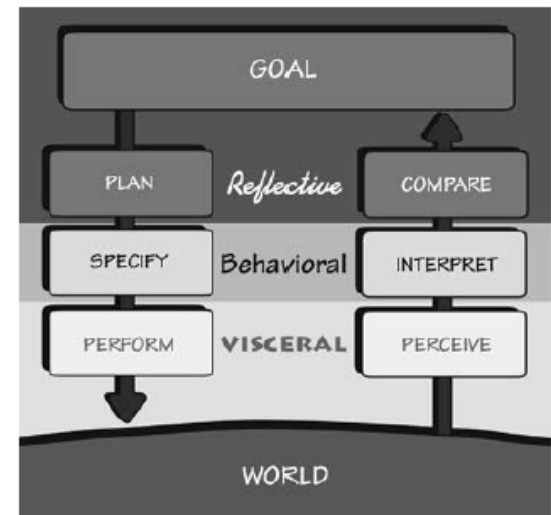
# Why is this so hard?

## 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



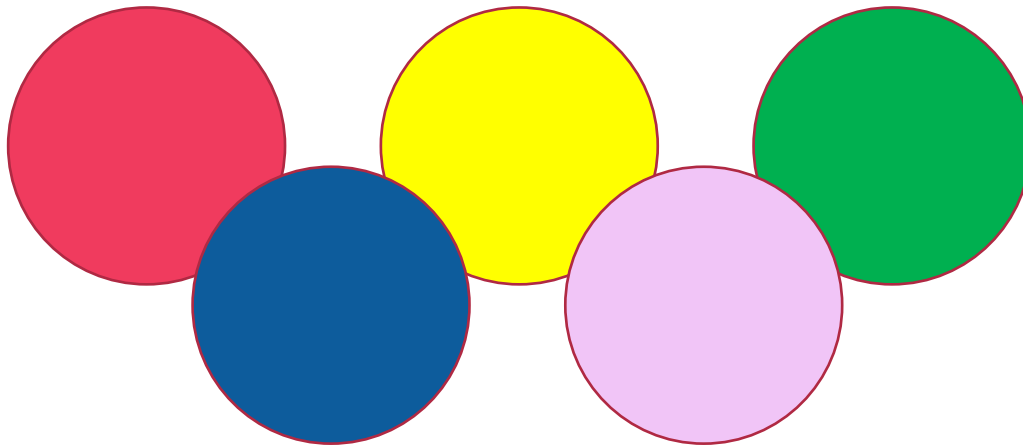
BEHAVIORAL



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

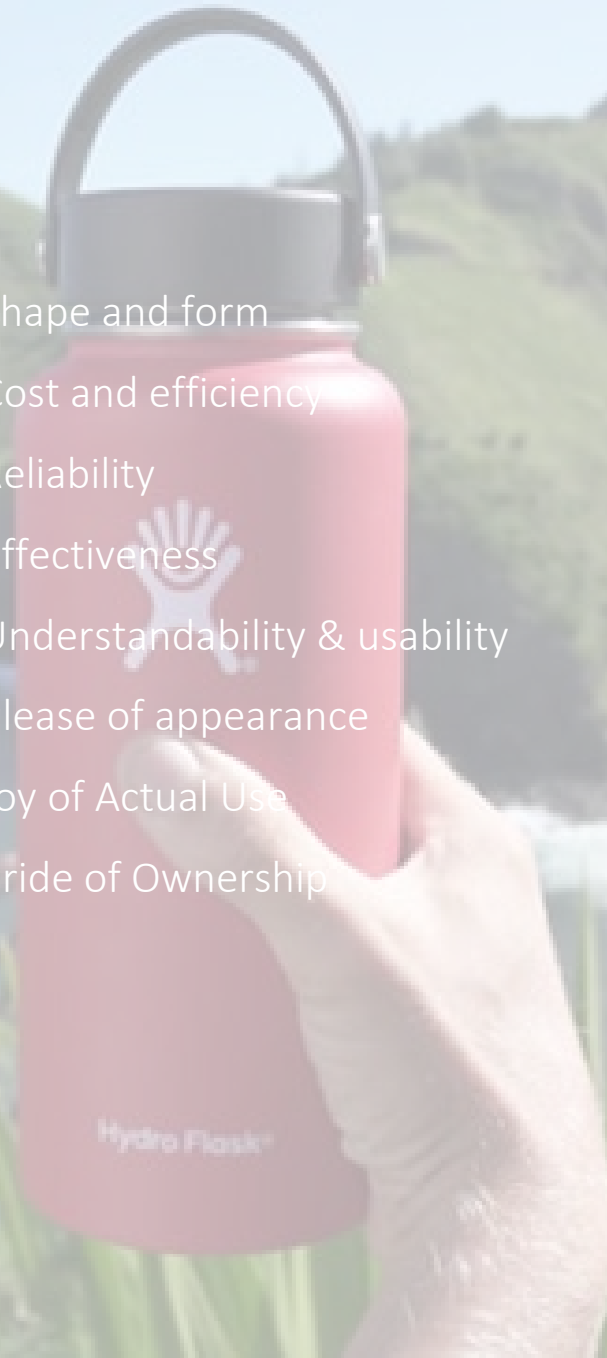
Effectiveness

Understandability & usability

Pleasure of appearance

Joy of Actual Use

Pride of Ownership

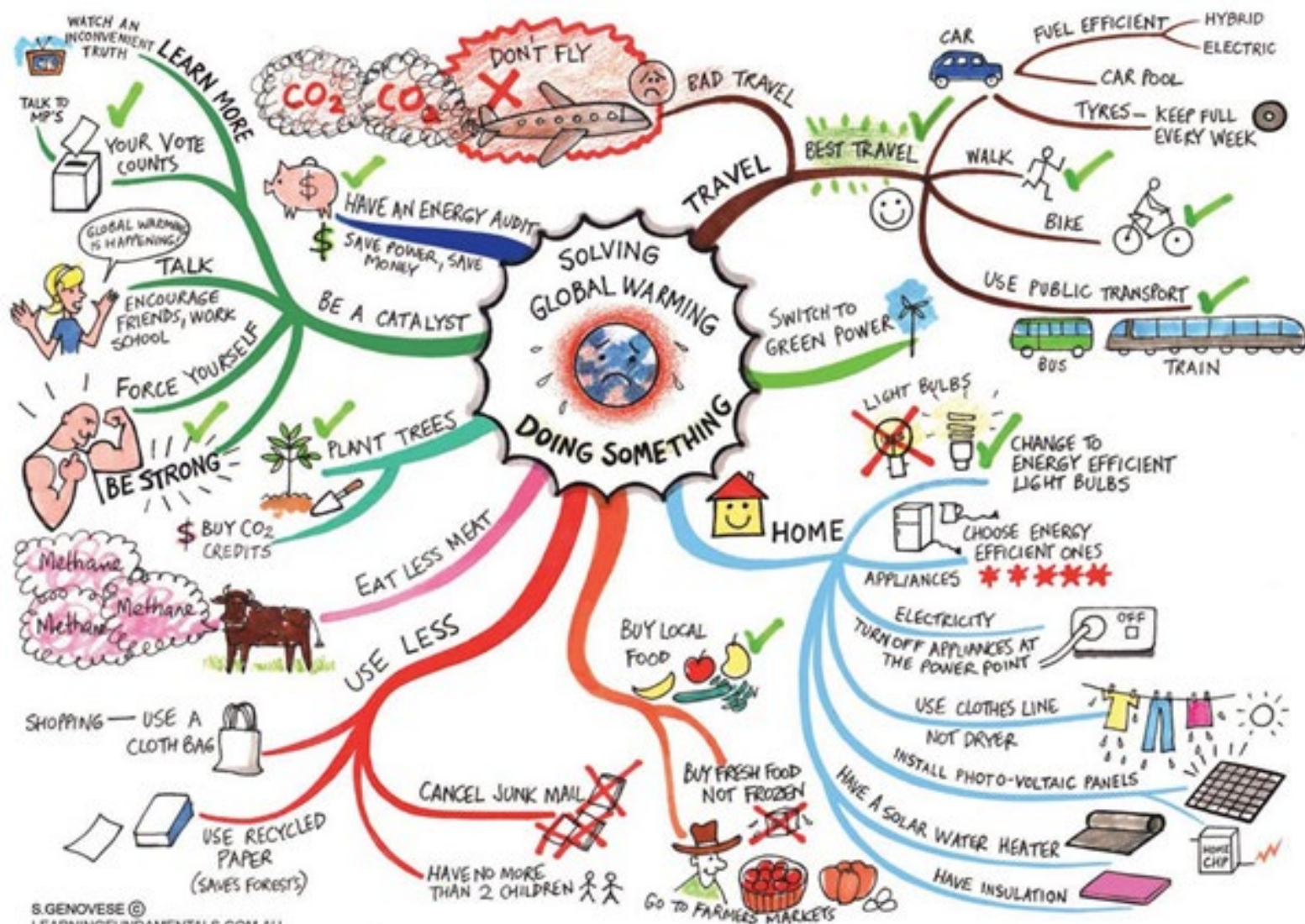


# Three Levels of Processing

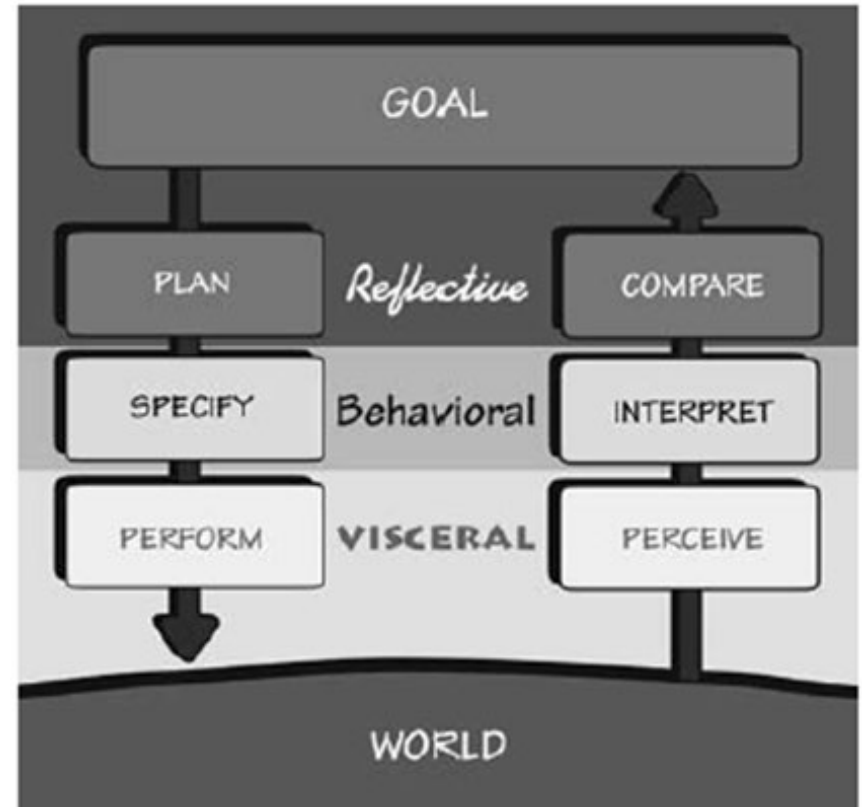
- ☐ Conscious cognition
- ☐ Deep understanding
- ☐ Reasoning and conscious decision making
- ☐ Evaluation of the circumstances, assessing blame or responsibility
- ☐ Highest levels of emotions



REFLECTIVE



# Levels of Processing & Stages of Action Cycle



Putting it  
to  
practice





# TUportal Exercise...

Think back to the ICA where you redesigned the layout of the TUportal.

Armed with the knowledge you just gained about the Gulfs of Execution & Evaluation make a list detailing the tasks in the TUportal that have long gulfs and the ones that have short gulfs.

Why? For the long gulfs, make some suggestions of design changes to bridge the process. For short gulfs, what is the designer doing right?

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?

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)

