

# *The Psychology of Everyday Actions*

*The Design Of Everyday Things by Don  
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# The Gulfs of Execution and Evaluation

## Execution

- ◇ How do I do this?
- ◇ What can I do?

## Evaluation

- ◇ What happened?
- ◇ Is this what I wanted?



# 7 Stages of Action

1. Form the goal
2. Plan the action
3. Specify action sequence
4. Perform the action sequence
5. Perceive the state of the world
6. Interpret the perception
7. Compare the outcome with the goal

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Goal

Execution

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Goal

Execution

Evaluation



# Root Cause Analysis

- ◆ Asking ‘Why?’ until the ultimate, fundamental cause of the activity is reached

# Procedural vs Declarative Memory

## Procedural

- ◆ Memory that can be factual information, but usually are recalled by preformed activities

## Declarative

- ◆ Memory form factual information
- ◆ Either know or unknown



# Procedural vs Declarative Memory

Four Corners is the only geographical point in the US where four states all touch. What are the four states?

Procedural

Declarative

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# Procedural vs Declarative Memory

As you walk into your dorm room, is the light on the left or right side?

Procedural

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# Procedural vs Declarative Memory

As you walk into your dorm room, is the light on the left or right side?

Procedural      Declarative



# Subconscious and Conscious Systems of Cognition

## Subconscious

- ◇ Fast
- ◇ Automatic
- ◇ Based off past experiences
- ◇ Biased to regularity and structure

## Conscious

- ◇ Slow
- ◇ Controlled
- ◇ Compares, rationalizes, and finds explanations for different decisions

Both are subject to errors, misconceptions, and failures

# Three Levels of Processing

- ◇ Reflective
  - ◇ Occurs after the event
  - ◇ Evaluates the circumstances, actions, and outcomes
  - ◇ Leads to the anticipation of future events
- ◇ Behavioral
  - ◇ Learned skills triggered by situations
  - ◇ Example: Moving your hands
- ◇ Visceral
  - ◇ Making quick judgements about the environment:
    - ◇ Good or bad, safe or dangerous
  - ◇ Example Fear of heights
  - ◇ Appearances, sounds, sight, touch, smell, all drive the visceral response



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Conscious

Subconscious



# 7 Stages of Action and Levels



How do we develop our conceptual models  
with respect to the action and processing  
levels?



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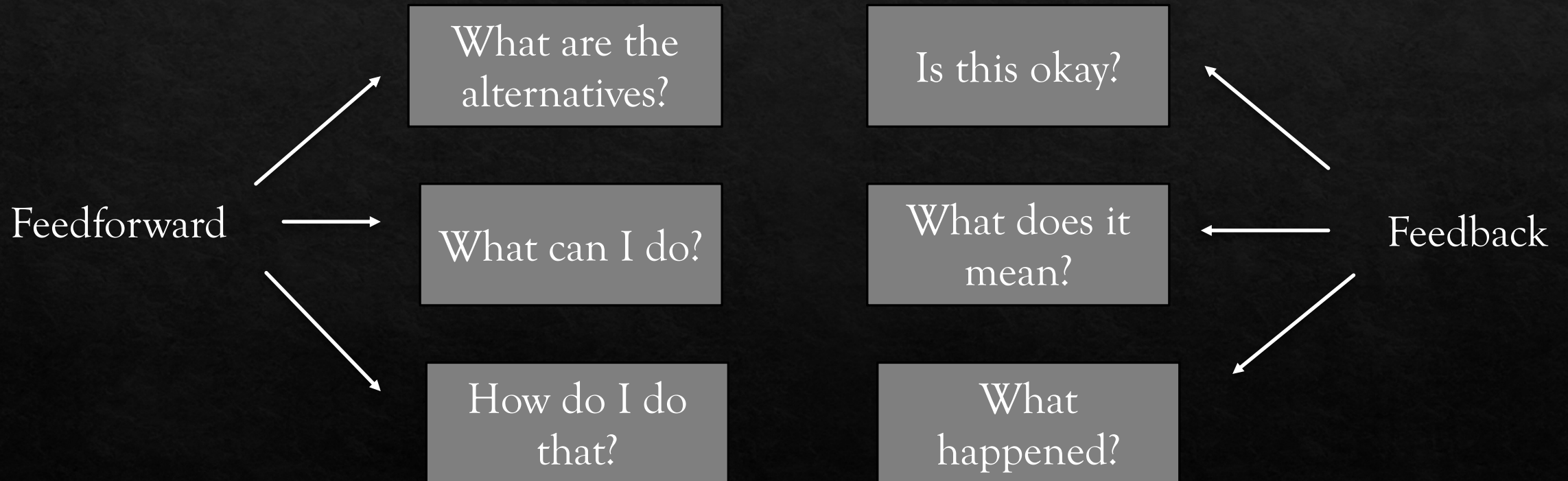
By being storytellers and finding relationships between two  
actions

But sometimes our stories are not entirely true



# Feedforward and Feedback

What do I want to accomplish?



# Seven Fundamental Principles of Design

- ◇ Discoverability
- ◇ Feedback
- ◇ Conceptual Model
- ◇ Affordances
- ◇ Signifiers
- ◇ Mappings
- ◇ Constraints