

CS 696 Mobile Phone Application Development
Fall Semester, 2009
Doc 17 Design 1
Nov 17, 2009

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References

The Design of Everyday Things, Norman, Basic Books, 2002

Declarative Knowledge

fact & rules

Procedural Knowledge

how to

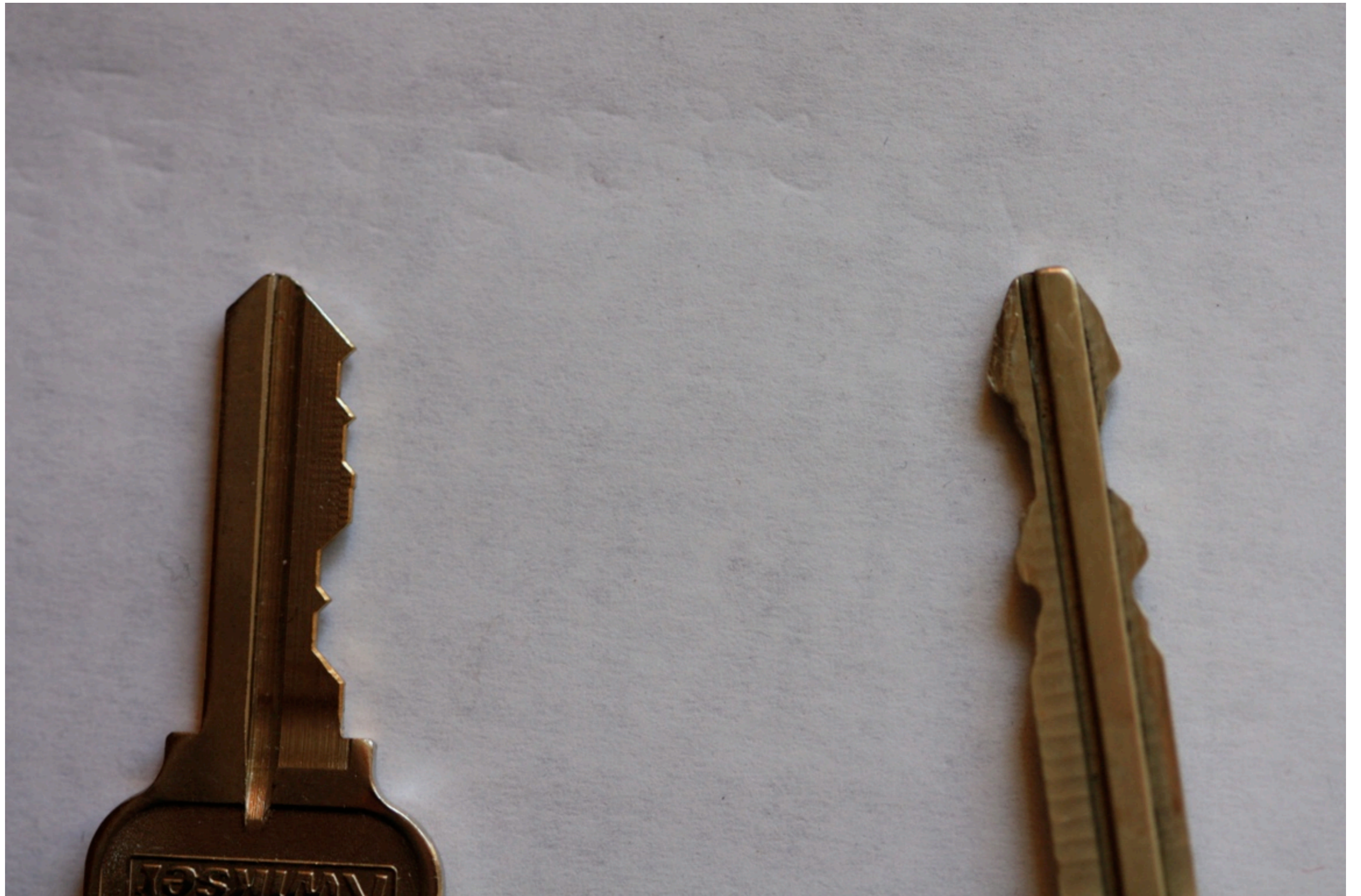
Spring 2010 Schedule

		Select Term	Resources
54 classes found for Spring 2010 main campus			<input checked="" type="radio"/> All <input type="radio"/> Open
CS 100 Sec 1 FUNDAMENTL IDEAS COMP SCI	3 units	Sched# 20789	open seats: 76/76
Lecture 2:00pm-3:15pm TTH P-145	W. ROOT		
CS 107 Sec 1 INTRO COMPUTER PROGRAM	3 units	Sched# 20790	open seats: 40/40
Lecture 2:00pm-3:15pm MW EBA-251	I. BAJIC		
Footnotes: 40			
CS 107 Sec 2 INTRO COMPUTER PROGRAM	3 units	Sched# 20791	open seats: 80/80
Lecture 12:30pm-1:45pm TTH AL-105	I. BAJIC		
Footnotes: 40			
CS 108 Sec 1 INTERMED COMPUTER PROG	3 units	Sched# 20792	open seats: 80/80
Lecture 4:00pm-5:15pm MW GMCS-214	I. BAJIC		
Footnotes: 40			
CS 108 Sec 2 INTERMED COMPUTER PROG	3 units	Sched# 20793	open seats: 40/40
Lecture 2:00pm-3:15pm TTH GMCS-327	I. BAJIC		
Footnotes: 40			
CS 237 Sec 1 MACHINE ORG&ASSEMBLY LANG	3 units	Sched# 20794	open seats: 60/60
Lecture 12:30pm-1:45pm TTH HH-221	L. RIGGINS		
CS 299 Sec 1 SPECIAL STUDY	1 units	Sched# *****	open seats: 20/20
SUPV ARR L. BECK			
Footnotes: X			
CS 299 Sec 2 SPECIAL STUDY	2 units	Sched# *****	open seats: 20/20
SUPV ARR L. BECK			
Footnotes: X			
CS 299 Sec 3 SPECIAL STUDY	3 units	Sched# *****	open seats: 20/20
SUPV ARR L. BECK			
Footnotes: X			
CS 301 Sec 1 COMPUTERS AND SOCIETY	3 units	Sched# 20795	open seats: 120/120
Online K. STEWART			
Footnotes: 03, 04, DE, P			

Car Ignition switch



Keys



Keyless Ignition

"Push-button keyless start couldn't be simpler"



Improved Version



Psychopathology of Things

Affordance

Conceptual Model

Make Things Visible

Mapping

Feedback

Affordance



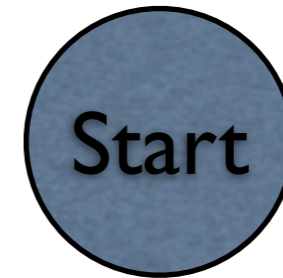
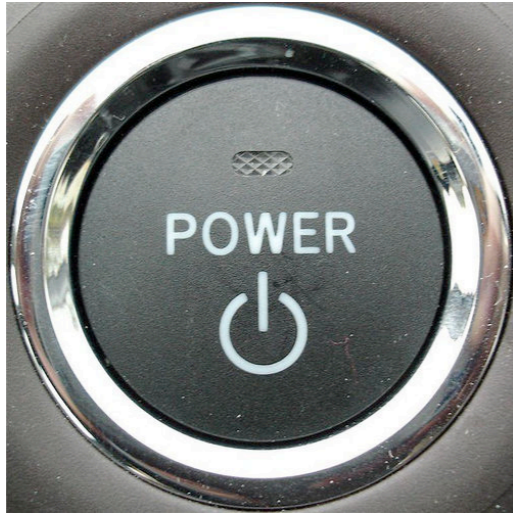
Affordance



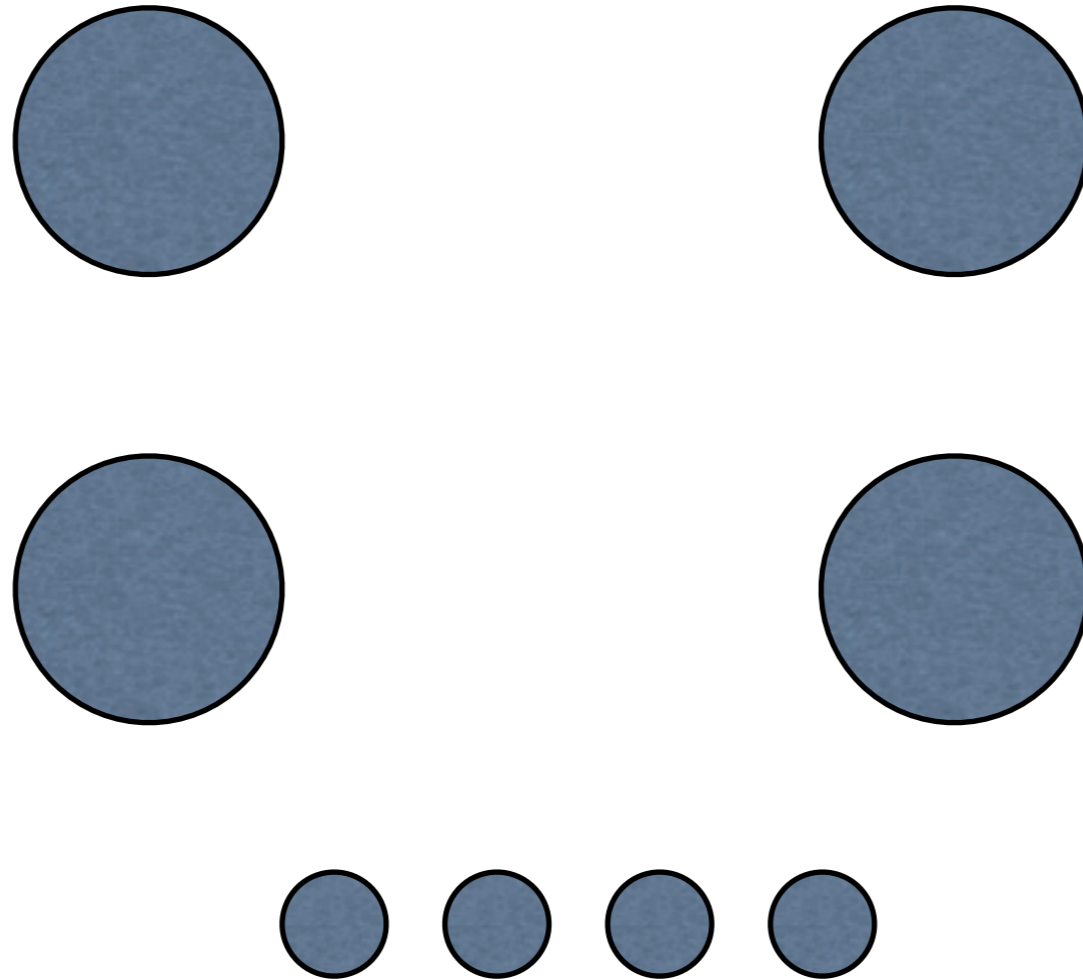
Conceptual Model



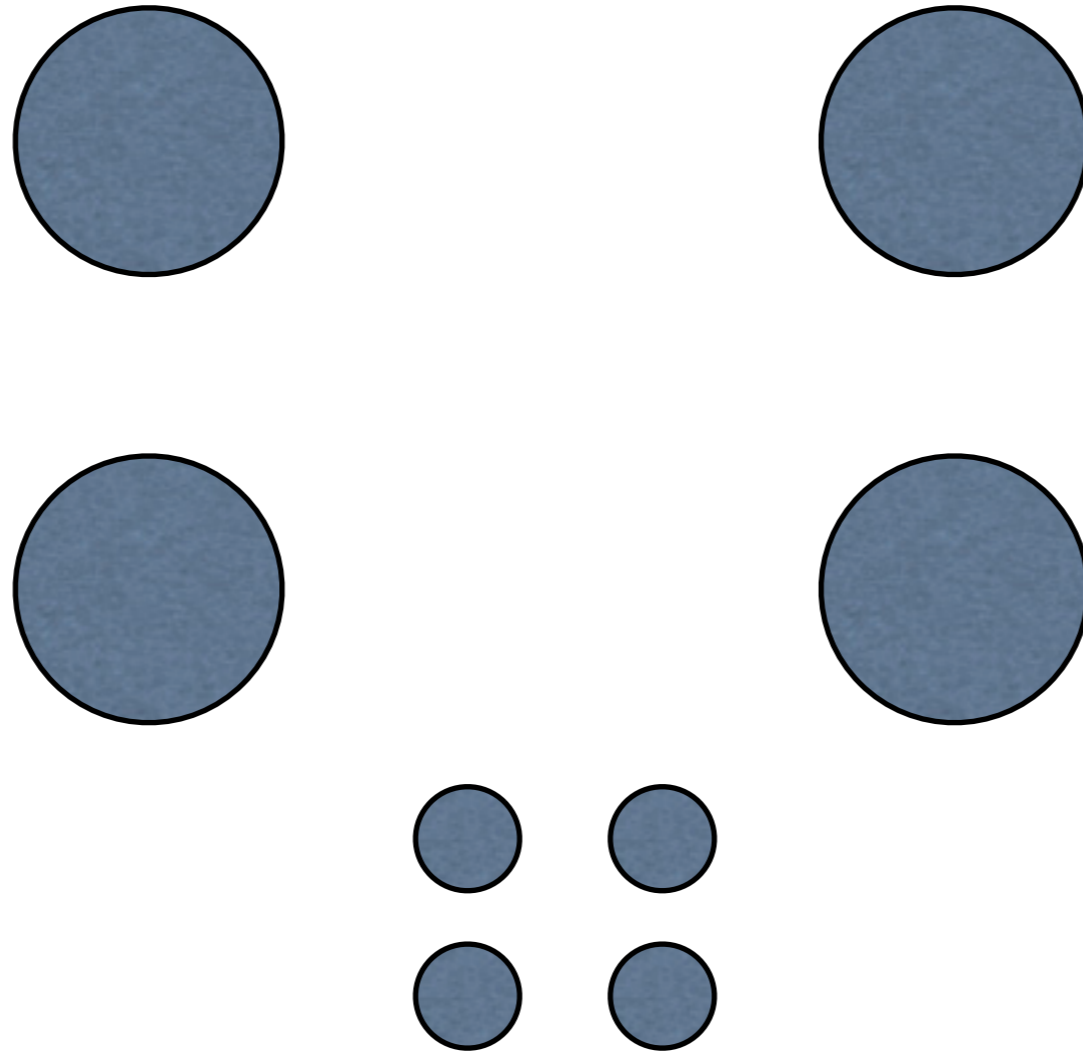
Make things Visible



Mapping



Mapping



Feedback

0.1 seconds

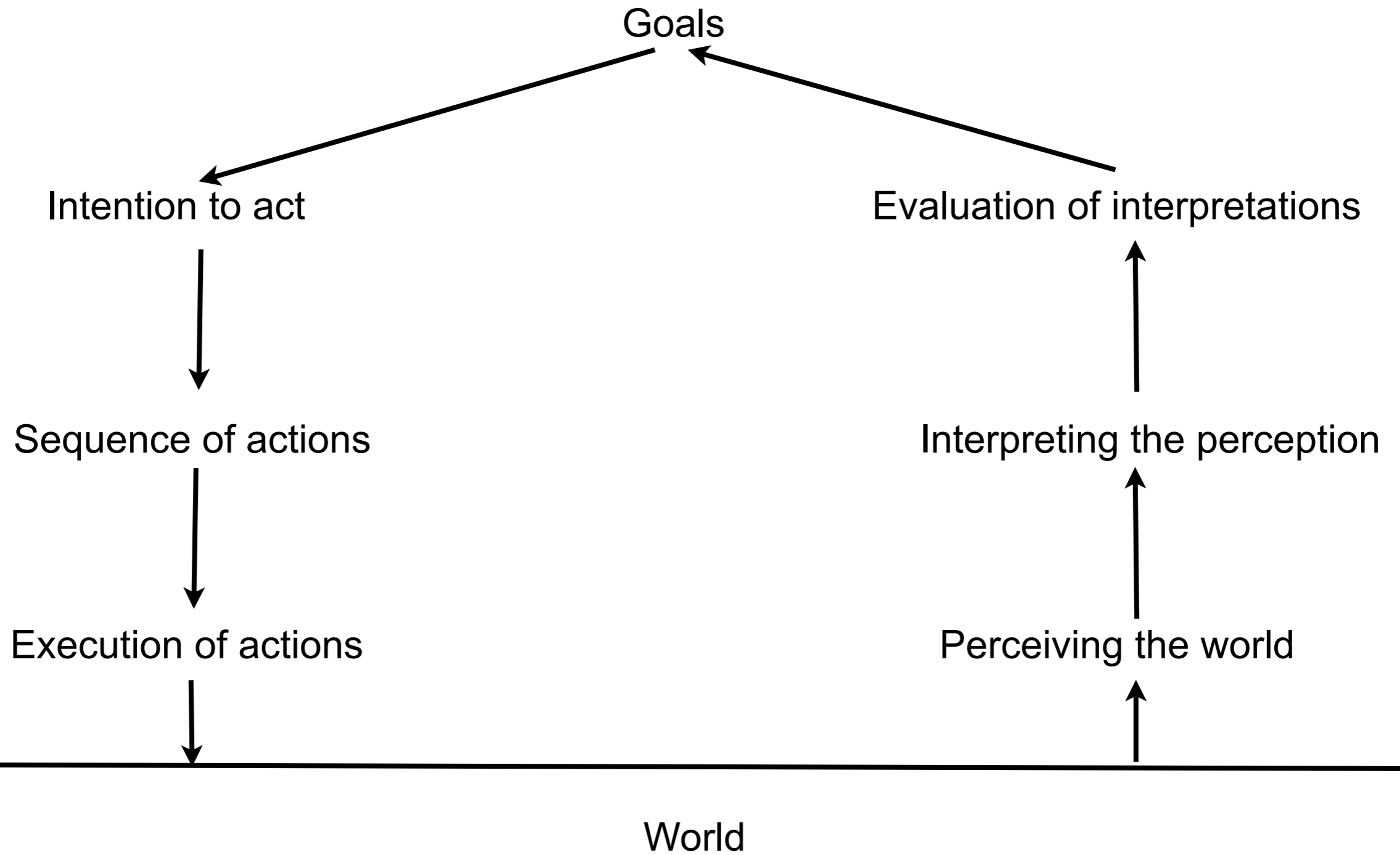
0.1 to 1 seconds

More than one second

Psychology of Everyday Things

oops I make a mistake

Seven Stages of Action



How Easily Can One

Determine the Function of the device

Tell what actions are possible

Tell if System in in the desired state

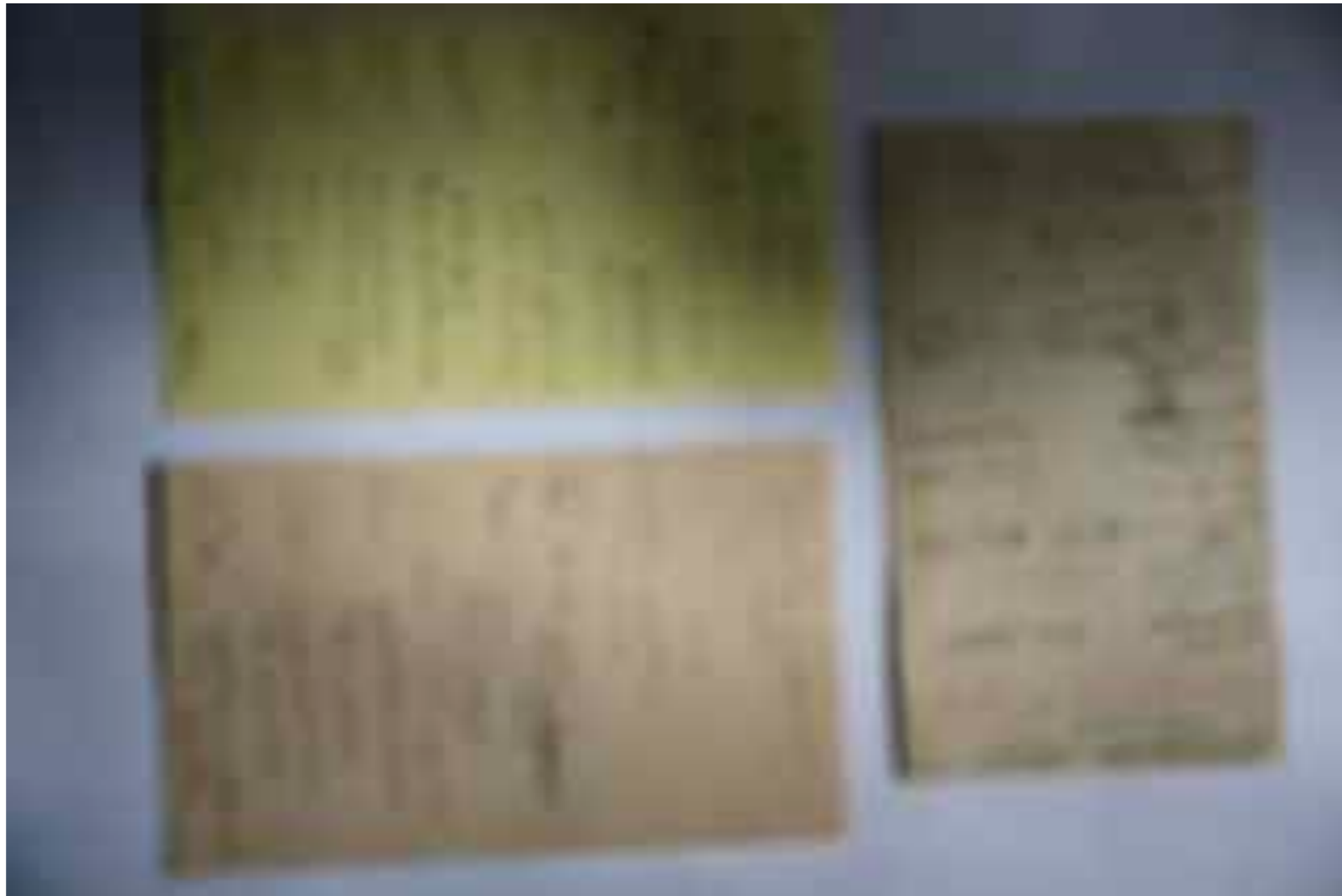
Determine mapping from
intention to physical movement

Determine the mapping from the system
state to interpretation

Perform the action

Tell what state the system is in

Memory for arbitrary things



Memory for meaningful relationships

My Freshman humanities course

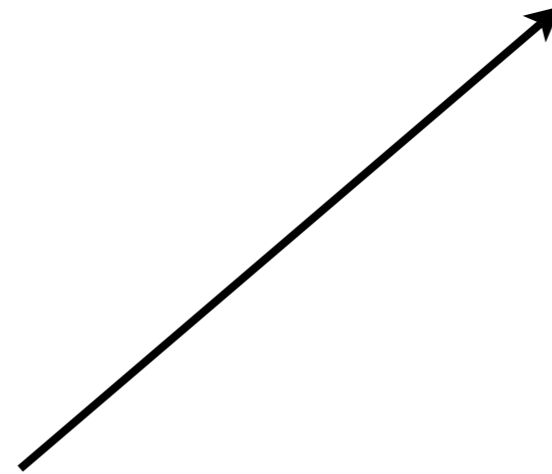
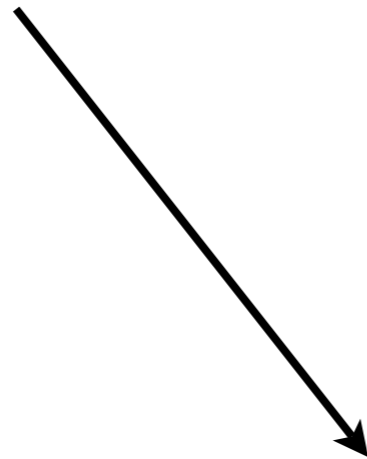
Memory through explanation

Xerox repair people

Three Conceptual Models

Designer's Model

User's Model



How the system appears to operate

Information in the World



3.1 Which Is the U. S. One Cent Coin—The Penny? Fewer than half of the American college students who were given this set of drawings and asked to select

Power of Constraints

How does someone remember a 50,000 line story

Types of Constraints

Physical constraints

Semantic constraints

Cultural constraints

Logical constraints

Forcing Functions

Make sure it is done right

Reminding



Over Reminding

Constraints and Forcing Functions



The lost Soviet Space probe

A technician uploaded the wrong instruction

Evolutionary Design



Why designers go Astray

Aesthetics

Why designers go Astray

Designers are not typical users

Why designers go Astray

Clients may not be the users

Why designers go Astray

Creeping Featurism

Microsoft Word

User Centered Design

7 Principles

Use knowledge in the world & knowledge in the head

Simplify structure of tasks

Make things visible

Get mappings right

Use constraints

Design for error

When all else fails, standardize