

CS4455: Game Feel Intro

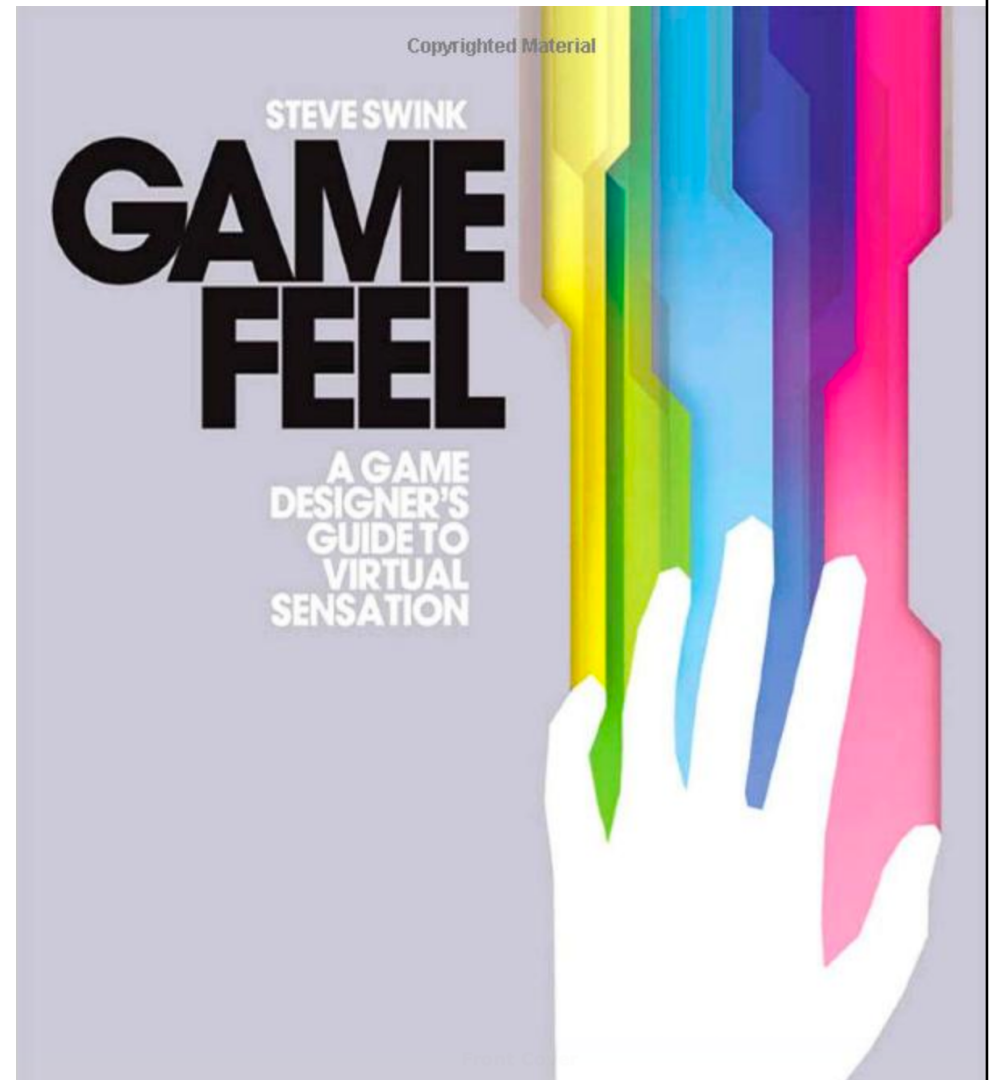


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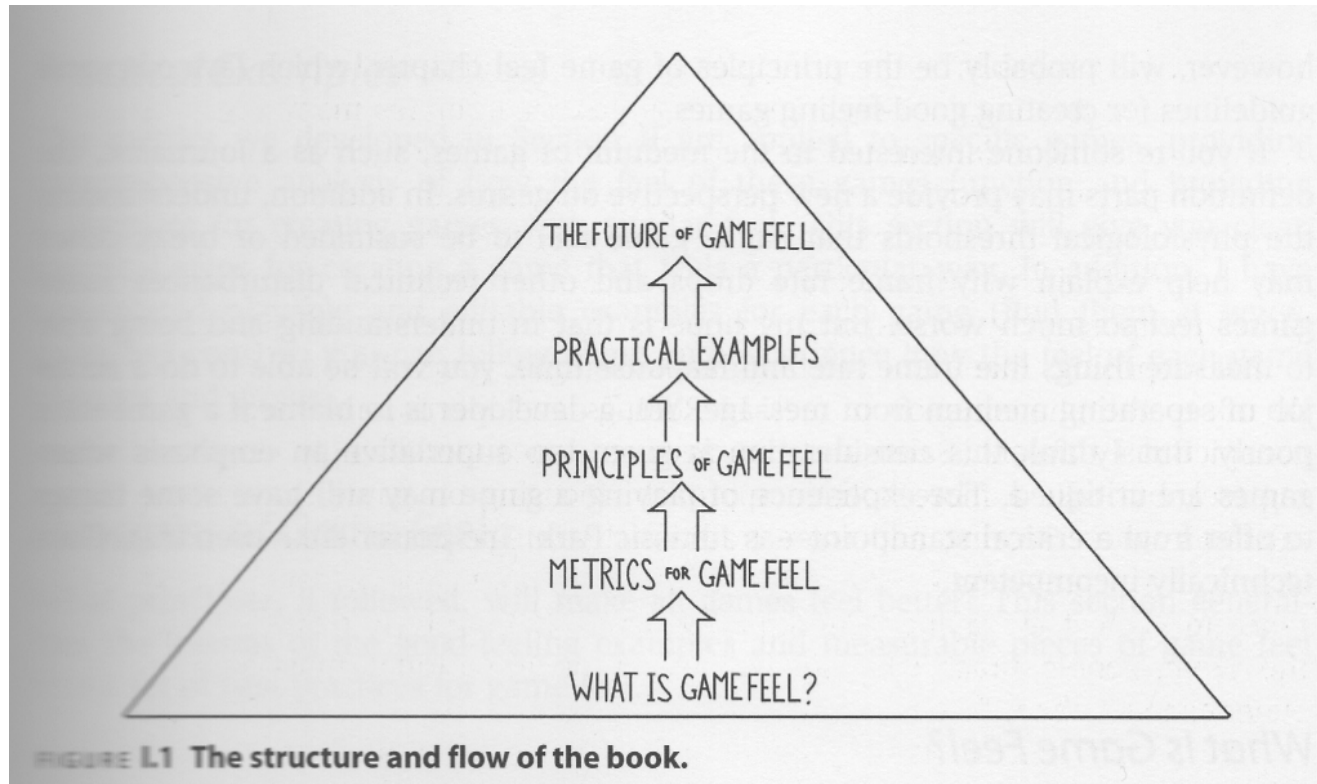
Text: Game Feel

- Steve Swink
- Focused on how to create experiences that feel good to play



Game Feel

- <http://game-feel.com>



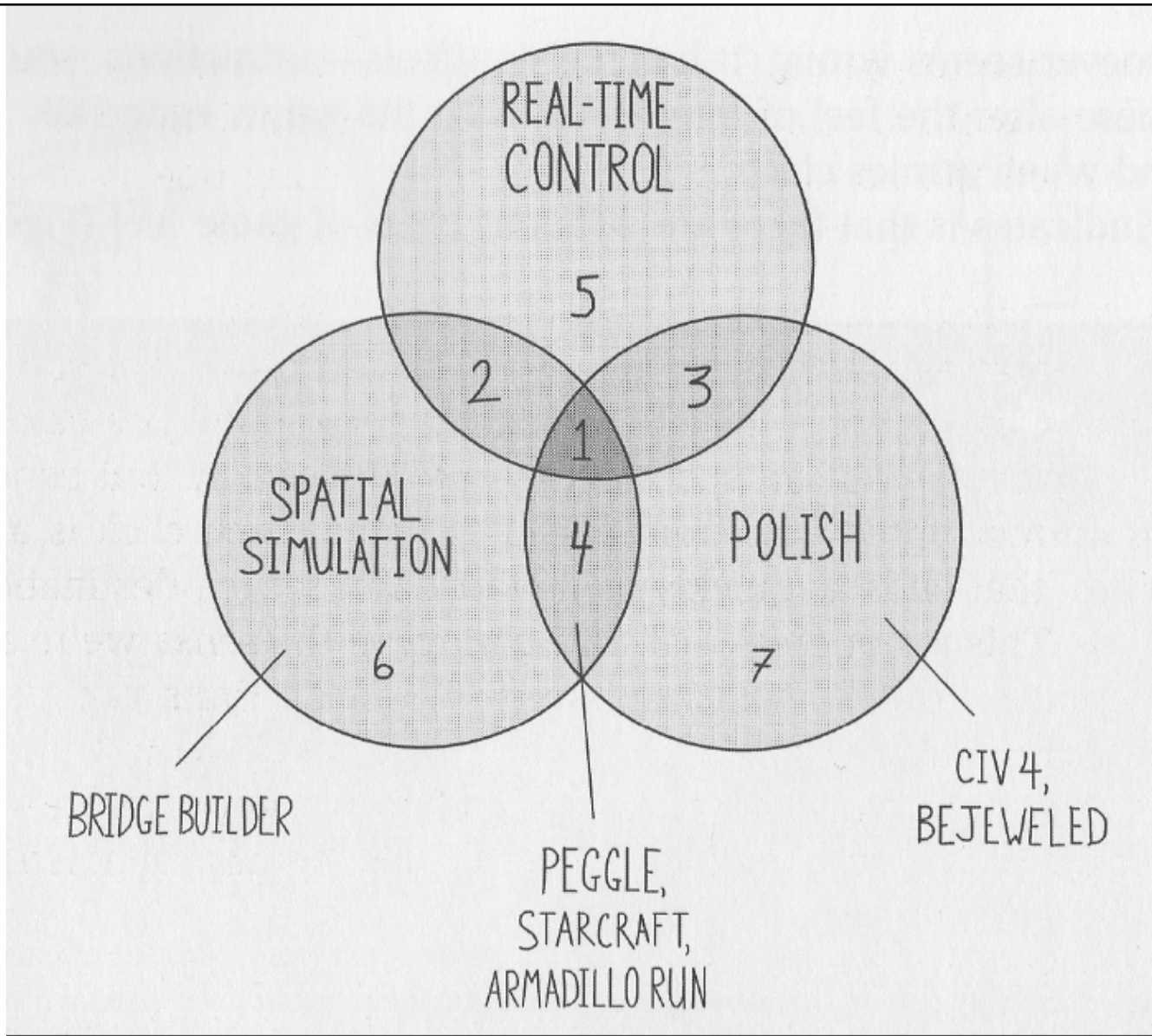
What is Game Feel?

- What does it mean for a game character to feel
 - Floaty? Heavy? Loose? Twitchy?
- Three parts
 - Real-Time Control
 - Simulated Space
 - Polish

What is Game Feel?

- A definition

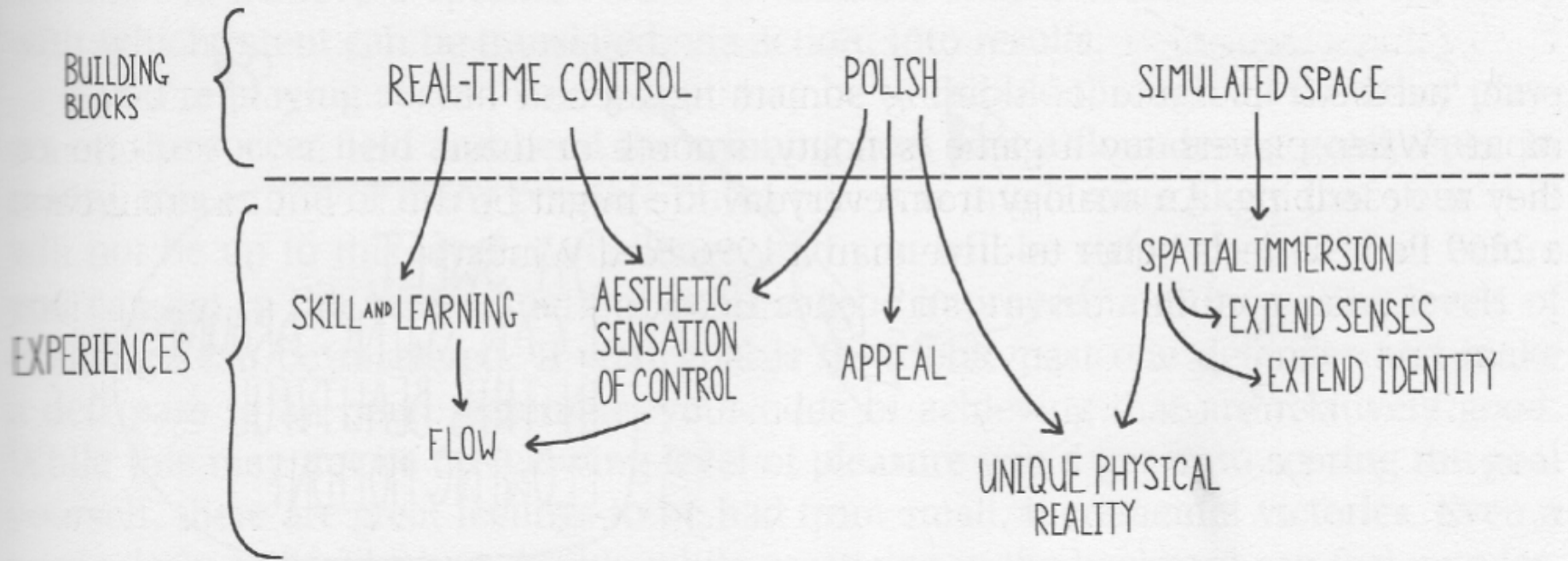
“Real time control of virtual objects in a simulated space, with interactions emphasized by polish.”



(activity)

Experiences of Game Feel

- Aesthetic Sensation of Control
- Pleasure of Learning, Practicing, Mastering
- Extension of the senses
- Extension of identity
- Interaction w/ unique phys reality

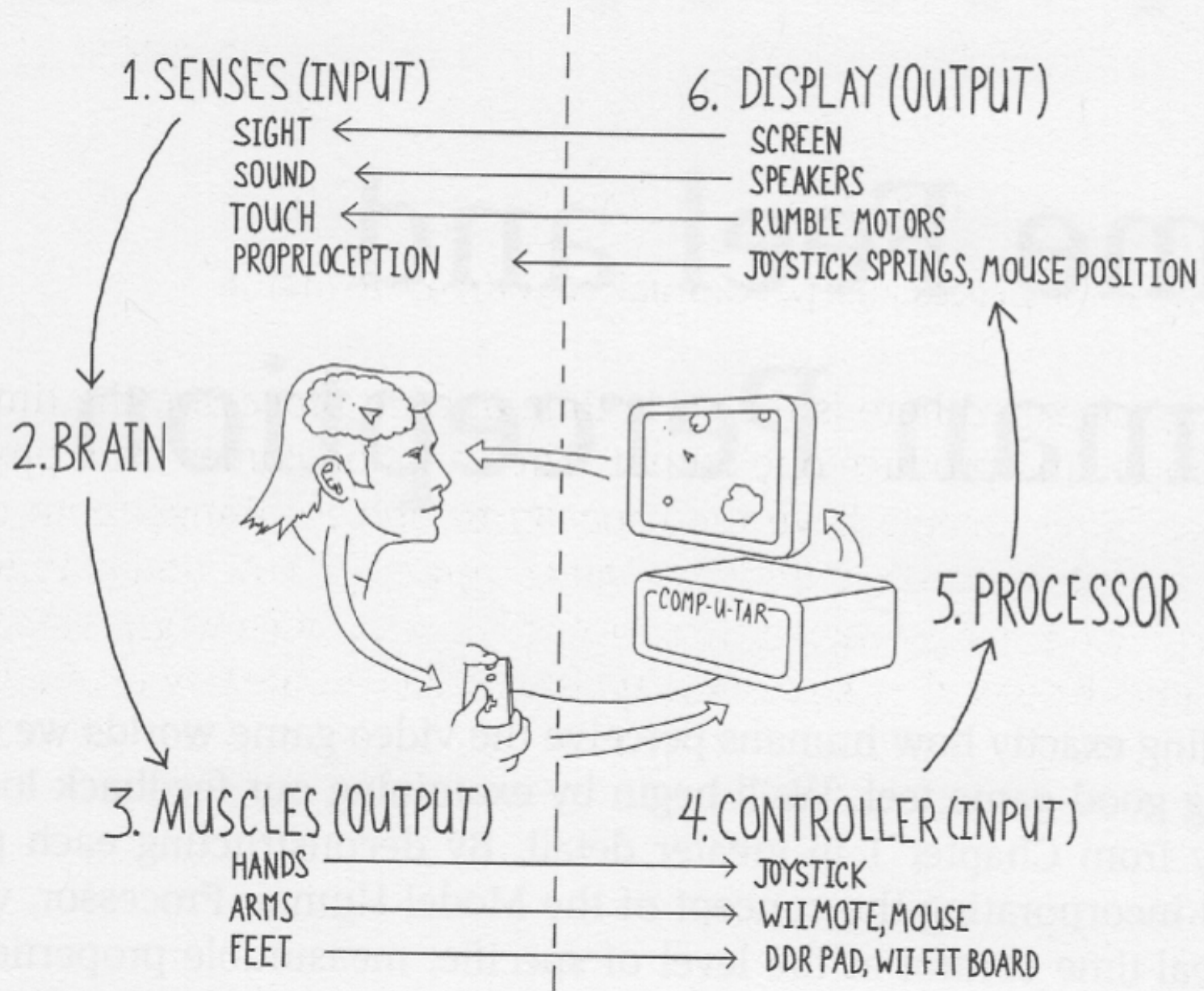


Human Perception and Interactivity

- Ch2 is essentially asking
 - Can we be more precise about what real-time control means from a people and computer side?

PLAYER

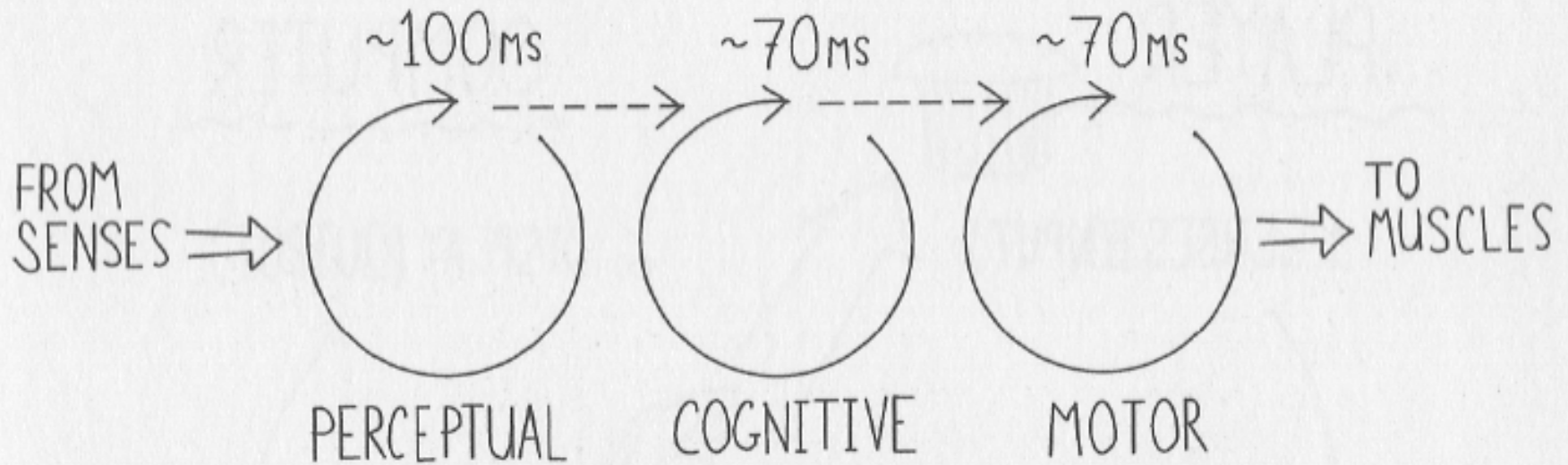
COMPUTER



Understanding People

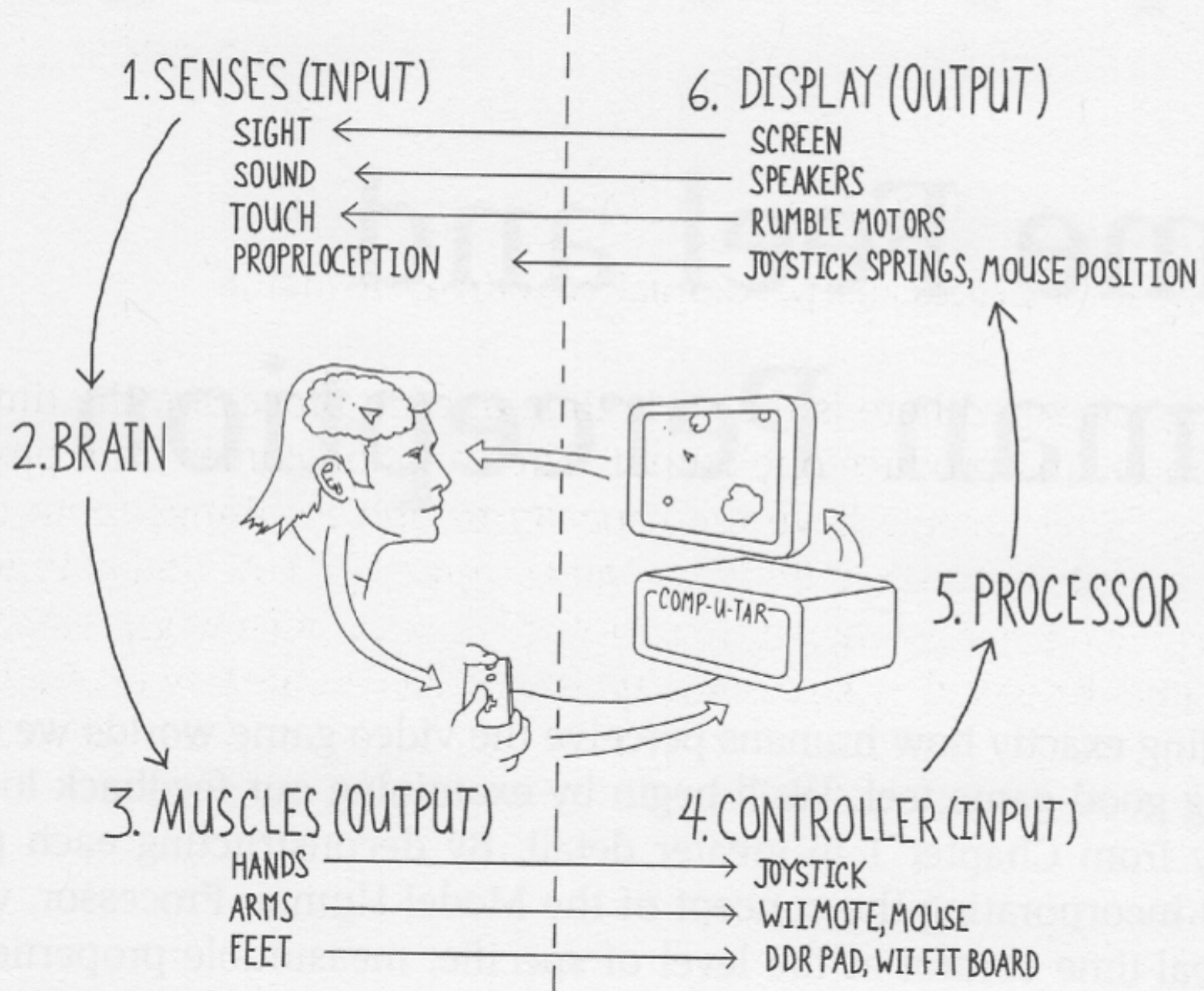
- 3 parts, from HCI
 - Model-Human Processor: how people perceive and react to the world
 - Correction Cycle: what this means in practice for building reactive systems
 - Fitts' Law: a remarkably resilient model that combines target size & distance to predict how long it takes to touch something

Model-Human Processor



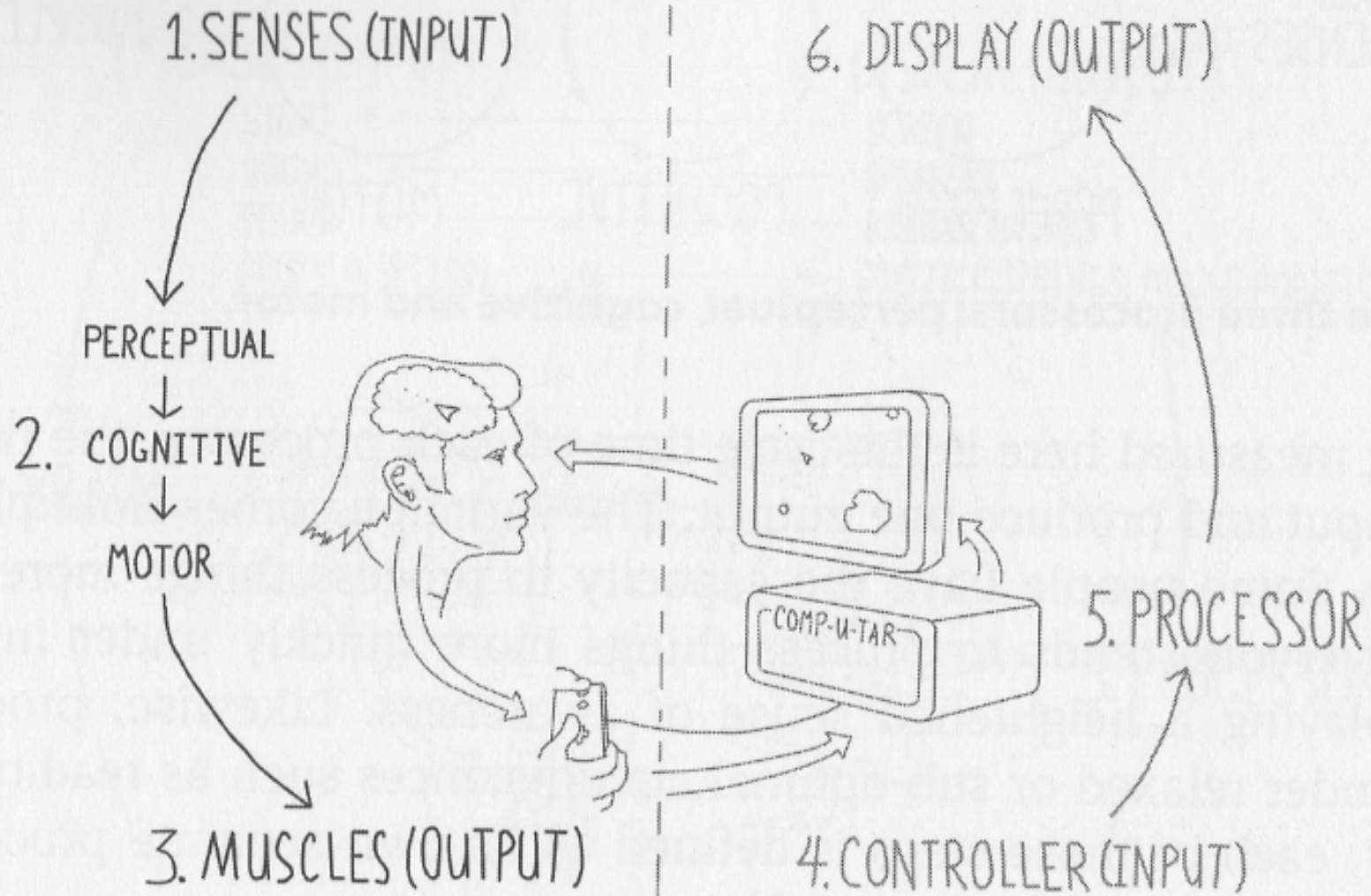
PLAYER

COMPUTER



PLAYER

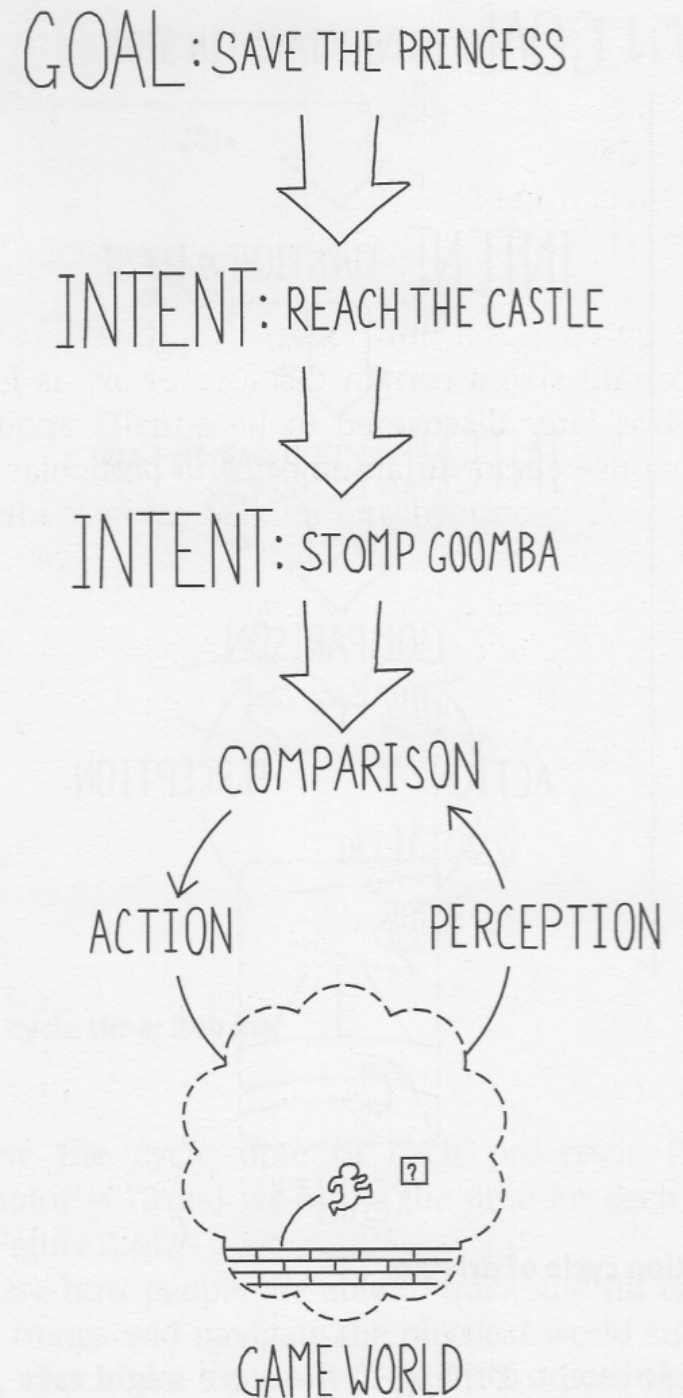
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Correction Cycle

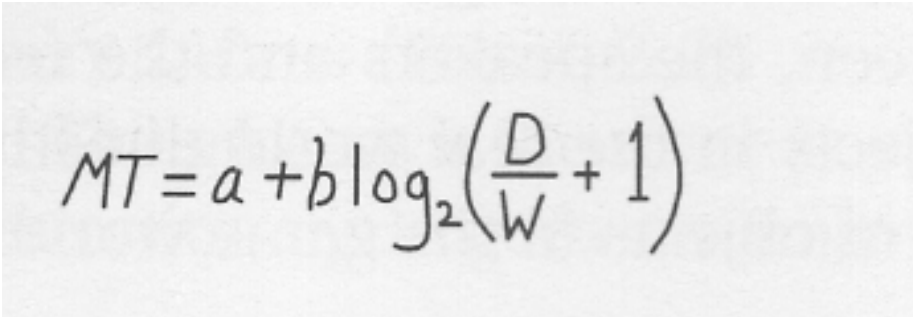
- Perceive
- Pe-plan
- Execute
- Repeat!

CS 4455



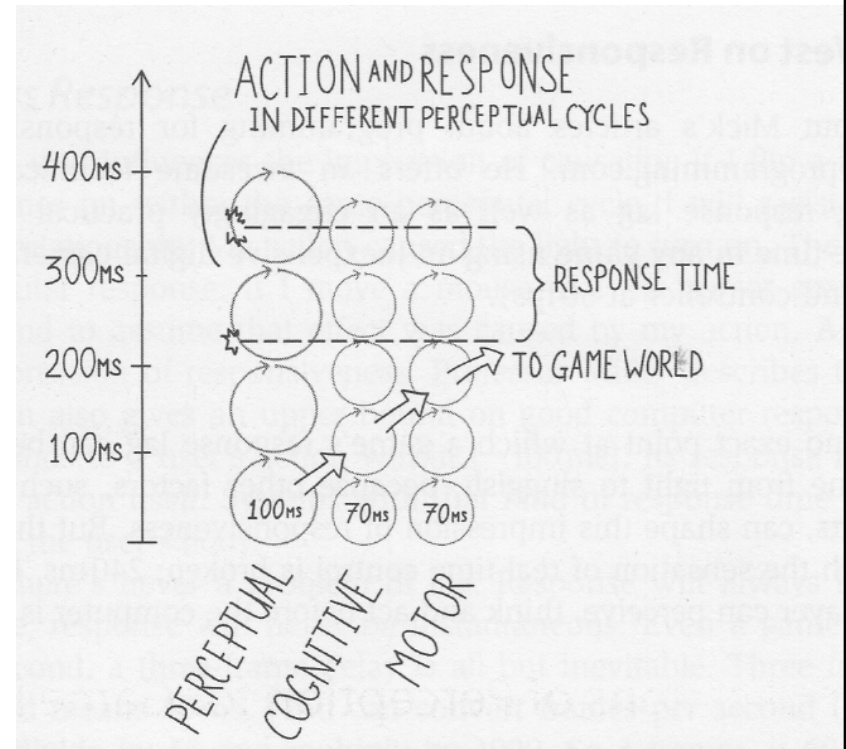
Fitts' Law

- Predict how fast you can move to select a target
 - Ballistic motion w/ correction cycle
- Physical motion; mouse; touch screen; etc.


$$MT = a + b \log_2 \left(\frac{D}{W} + 1 \right)$$

Meanwhile, on the Computer Side ...

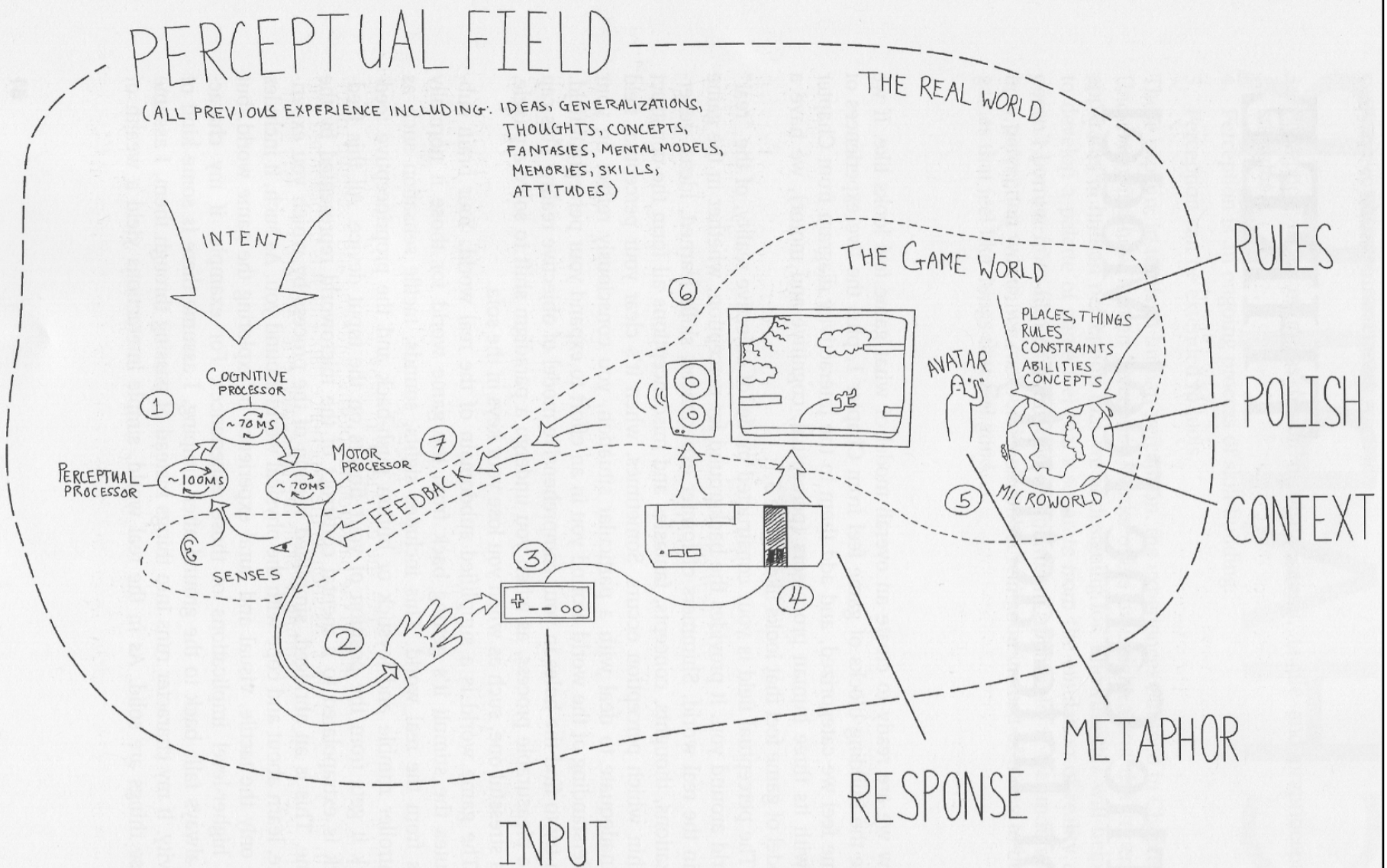
- Must respond to human input before next perceptual cycle
 - $< 100\text{ms}$
- Smooth motion requires 10fps anyway, so need to run that fast
 - 30 or more better



Implications

1. Perception requires action
2. Perception is skill
3. Perception includes previous life experience
4. Perception is a whole-body experience
5. Tools become extensions of our bodies

A Model of Interaction



P2: Same game structure, two different feels

- Simple side-view, orthographic “platformer”
 - Avatar can jump between a few platforms
- Simple avatar
 - circle + rectangle
 - coordinated movement
- Two different feels
 - Heavy, metallic, machine
 - Quick, nimble, elf