

# Developing UX Practices at Epic Games

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GDC 'Eu

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## POOR BALANCING!

*You died more than 20 times  
on the same level.  
Contact eTools Studio  
to insult the Level Designer!*

10

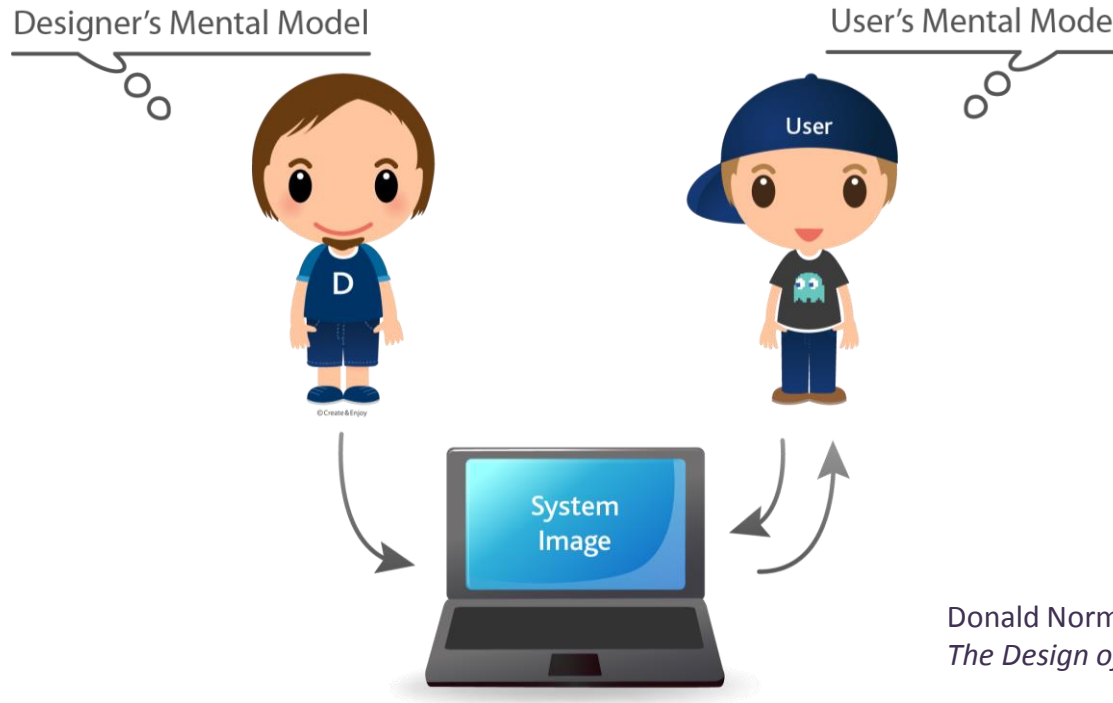


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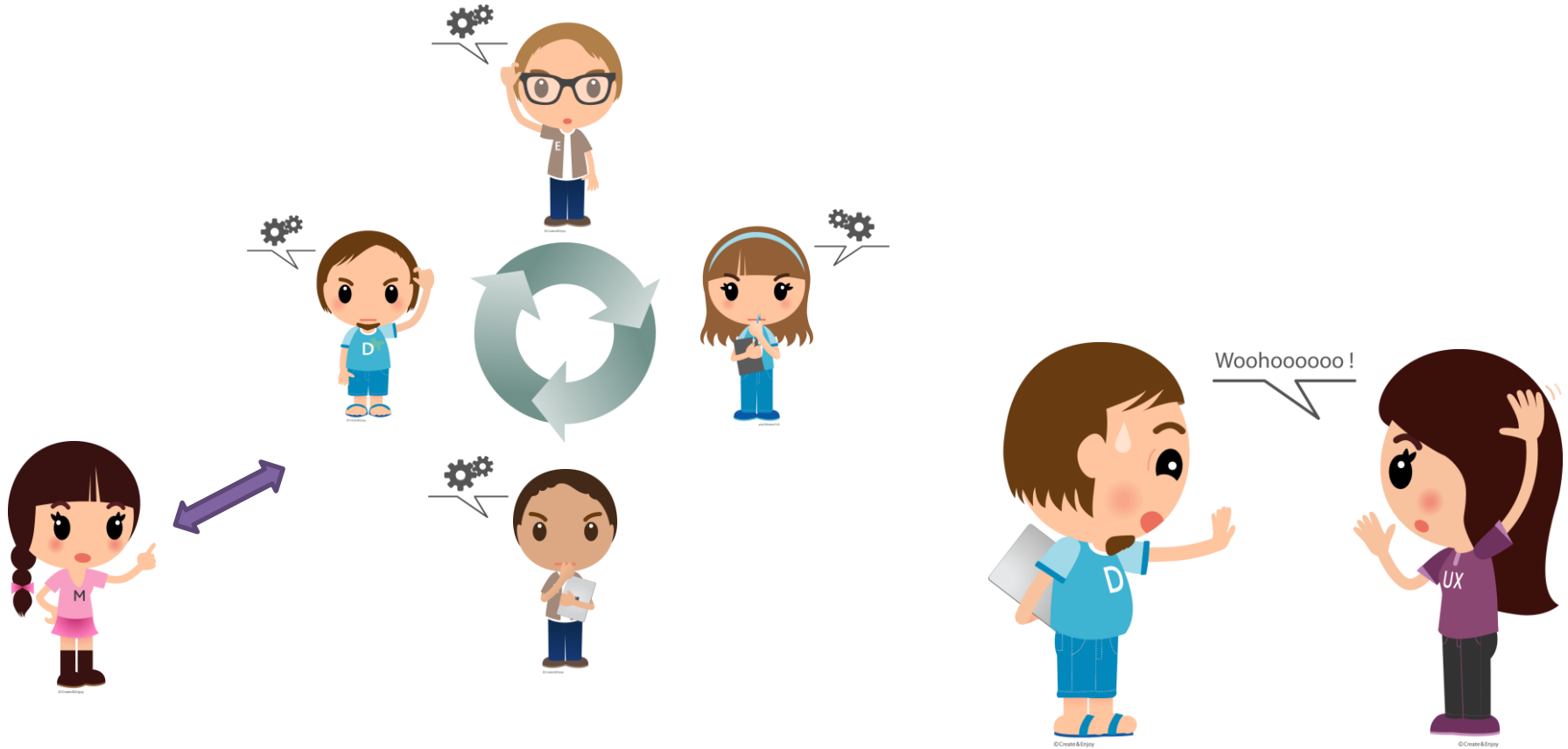
# A definition of User eXperience

What it is like for the targeted **user** to **interact** with the software, including how engaging the **experience** is, relative to the **design intentions**.



Donald Norman,  
*The Design of Everyday Things* (1988)

# UX misconception #1: UX stands outside of the design loop



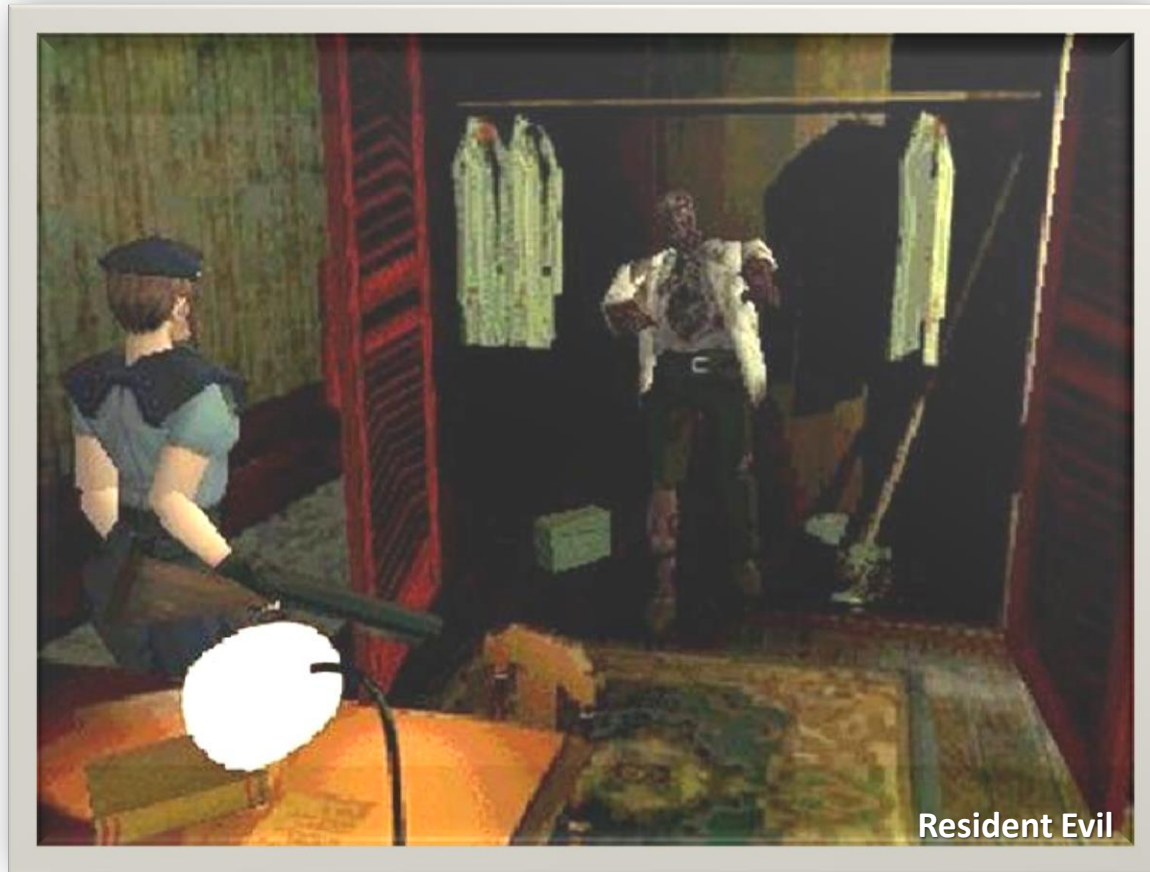
What is UX?

Usability

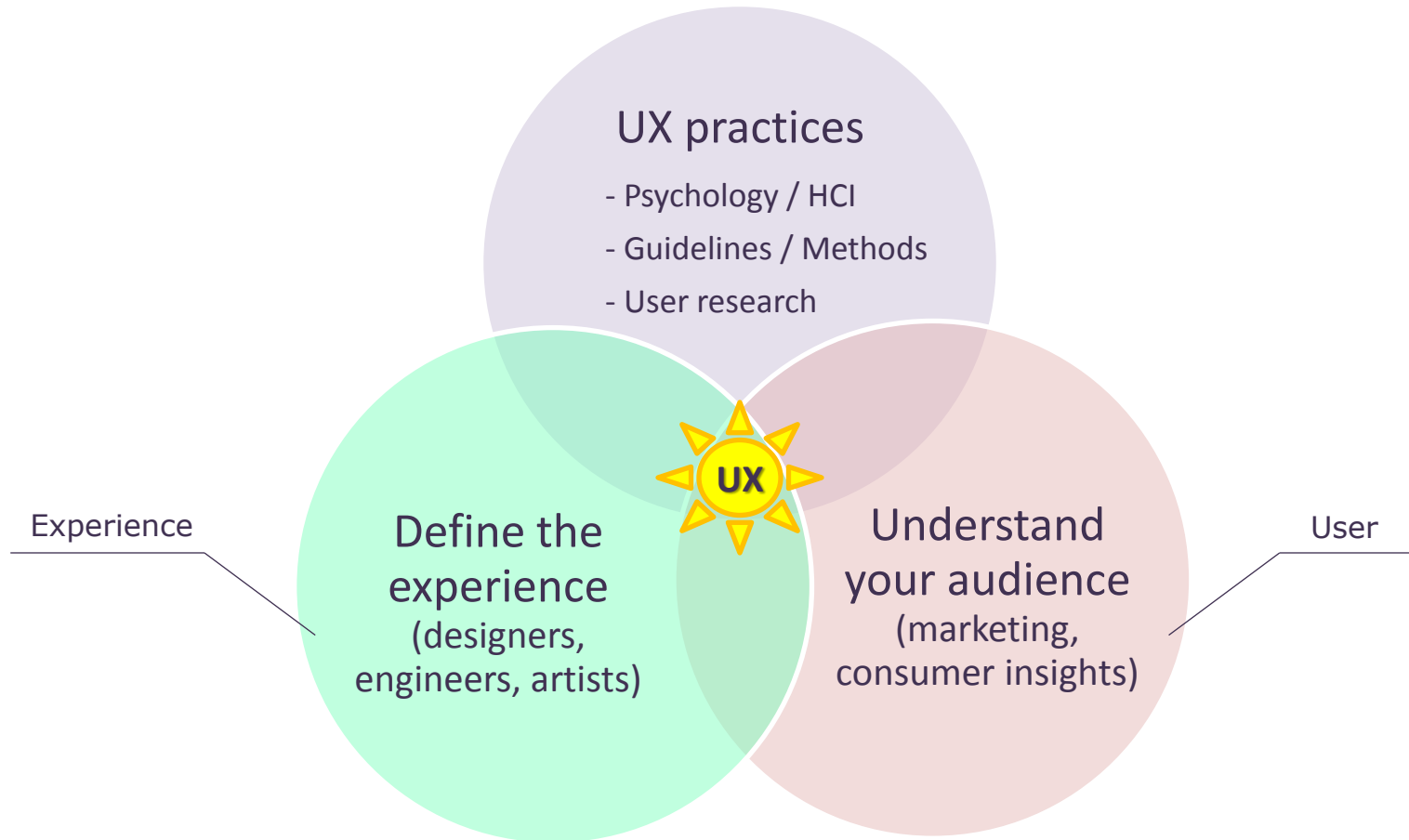
Gameflow

Conclusion

## UX misconception #2: UX is only gonna make the game easier



# A definition of UX



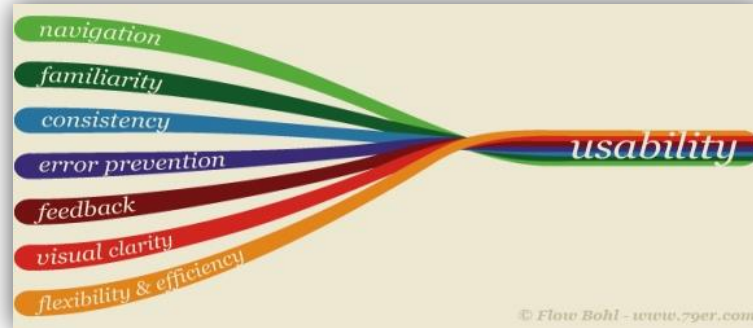
# Good UX = Usability + Flow



# A definition of Usability

Making software usable means paying attention to **human limits** in perception, attention, and memory (Isbister & Schaffer, 2008).

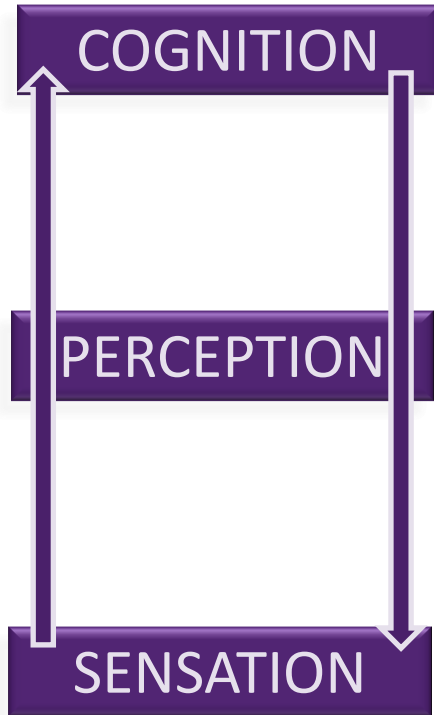
Usability guidelines come from human **psychology** and our understanding of the **brain**.





# Brain limitations: Perception

Information is **organized** through a 3-level process (example of vision):



**Knowledge:** access to semantics

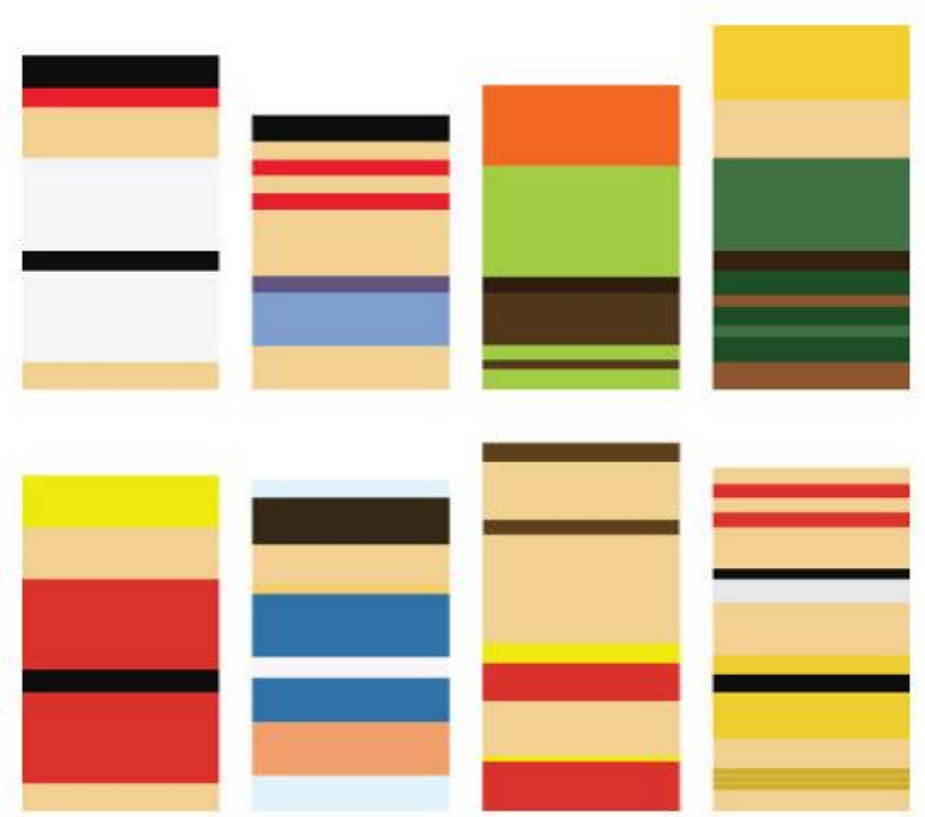


**Organization** of the visual field: the brain likes meaningful patterns (shape)



**Physics:** orientation, spatial frequency, brightness ...

# Brain limitations: Perception

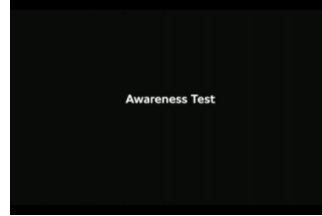


→ Top-down process in perception ... the geek version

*Street Fighter II* characters as minimized by artist Ashley Browning

# Brain limitations: Attention

Game! Watch carefully the following video:

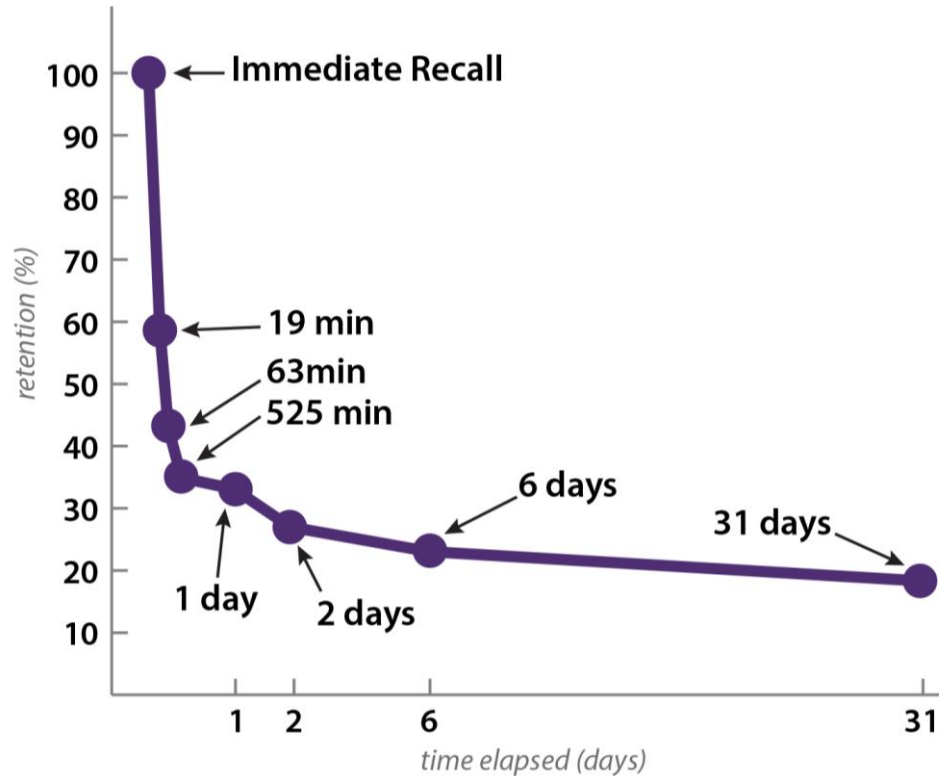


The brain is not good at multitasking.



# Brain limitations: Memory

The forgetting curve (Ebbinghaus, 1885):



# Usability heuristics

- ☐ Signs & Feedback (visibility of system status)
- ☐ Clarity
- ☐ Form Follows Function
- ☐ Consistency
- ☐ Minimum workload (physical & cognitive)
- ☐ Error prevention / recovery
- ☐ Flexibility

Ref:

Jakob Nielson (1994) - Norman Nielsen Group ([nngroup.com](http://nngroup.com))

Laitinen (2008)

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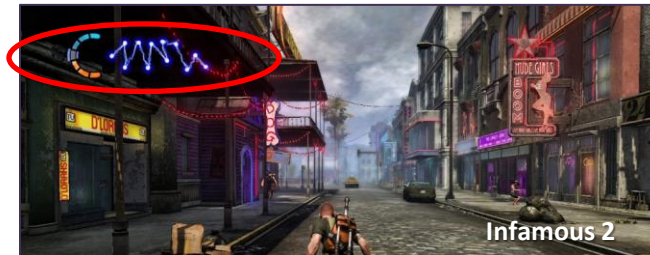
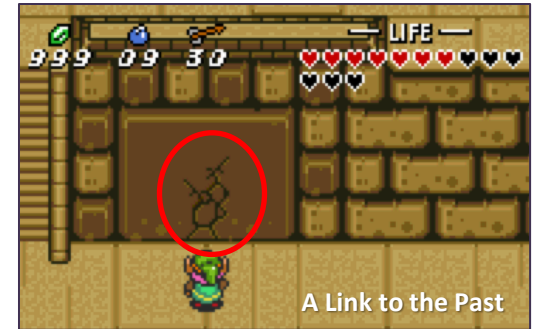
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# Signs

- Draw player's attention to particular elements.
- **Inviting signs** (encourage the player to do something)
- **Informative signs** (inform about a state)



# Feedback



- Every action from the player must have a feedback.
- Helps the player to understand and learn the game mechanics.



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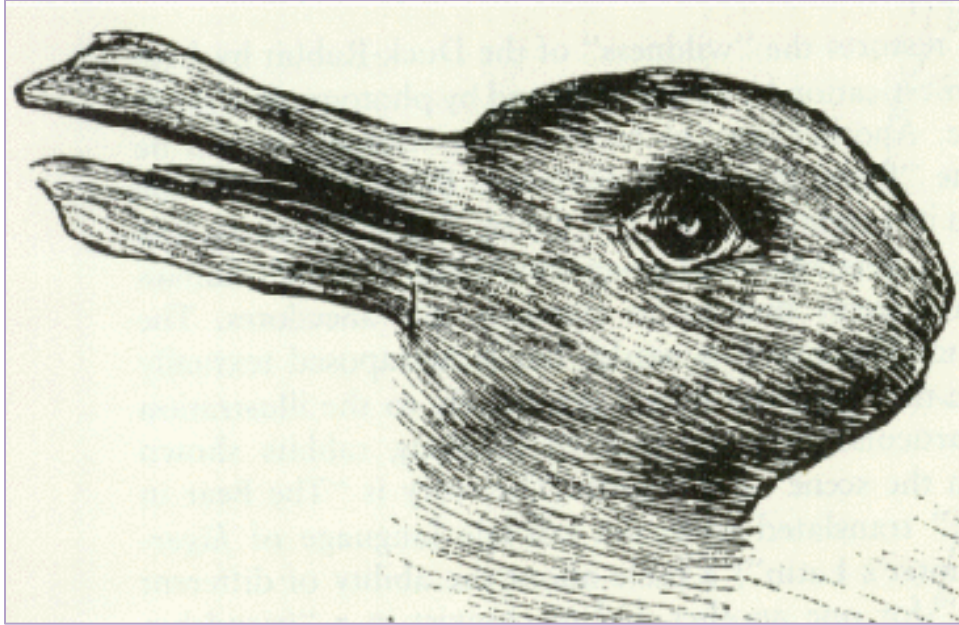
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# Clarity

- All information conveyed must be **perceived** as intended and text must be legible.



Gestalt principles: Multi-stability

# Clarity



Fortnite WIP



# Usability heuristics

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# Form Follows Function

- The **form** of an object gives information about its **function**:
  - Similar forms should have a similar functionality.
  - Different forms should have different functionalities.
  - **Affordance** is the goal.



# Usability heuristics

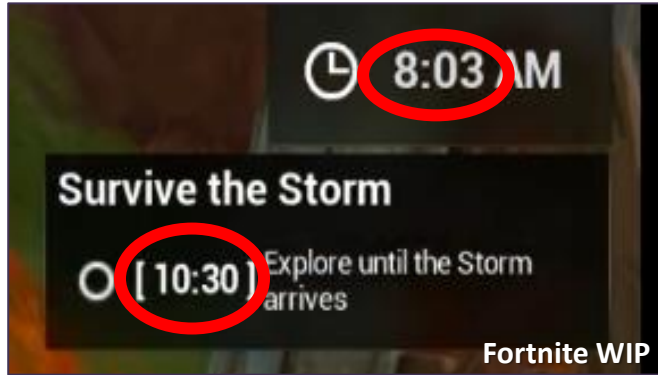
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# FFF & Consistency



- Similar forms convey different functionalities.  
→ Confusing and the player needs to pay more attention.



- Clock replaced by a widget to avoid confusion with objective timers.

# FFF & Consistency

- Decoration assets that look like gameplay assets = **misleading form**.





# Usability heuristics

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# Minimum workload



Fortnite WIP

What is UX?

Usability

Gameflow

Conclusion

# Usability heuristics

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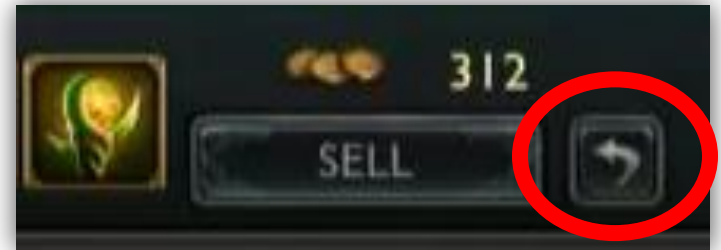
Laitinen (2008)

# Error prevention / Recovery

- Mario Galaxy - collision zone of enemies is smaller than their 3D model.



- League of Legends – Undo button



# Usability heuristics

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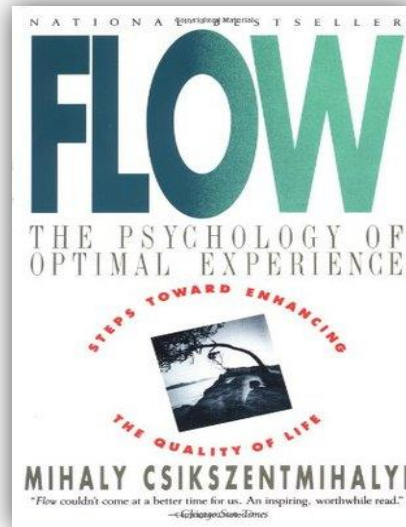
# Good UX = Usability + *GameFlow*





# Definition of Flow

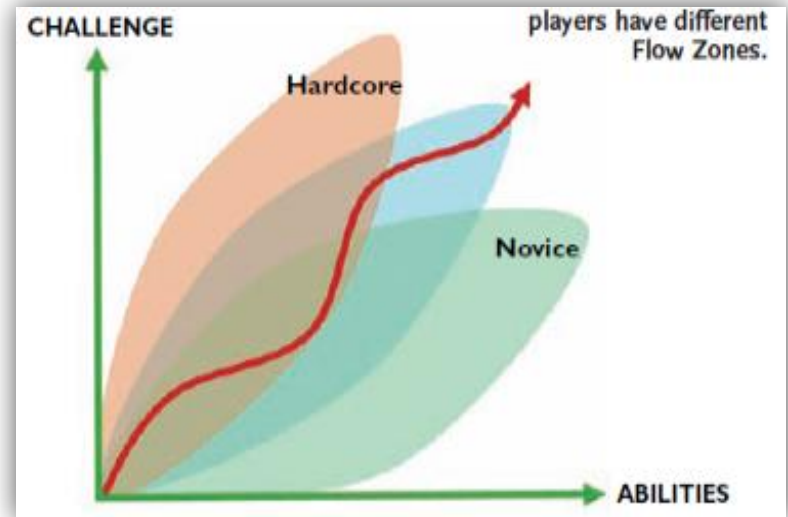
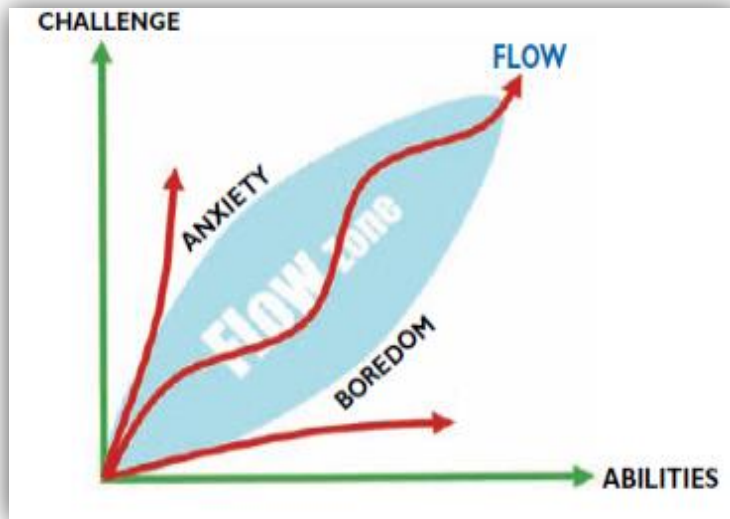
Flow = **optimal experience** whereby “a person’s body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile” (Csikszentmihalyi, 1990).





# Definition of GameFlow

“Descriptions of the Flow experience are identical to what players experience when **immersed in games**, losing track of time and external pressure.” (Chen, 2007)



# GameFlow heuristics

☒ Perceived Pacing

☐ Motivation

☐ Emotion

Ref:

Bernhaupt (2010) - Chen (2007) - Ryan & Deci (2000) - Sweetser & Wyeth (2005) – Swink (2009)

# Perceived Pacing

- **Challenge** - Never too easy nor too hard
- **Pressure** - Never too relaxing nor too intense for too long
- **Learning curve** - distributed learning by doing (through LD)

Example of a shooting range gym level in *Fortnite*:



# GameFlow heuristics

- ☒ Perceived Pacing
- ☐ Motivation
- ☐ Emotion

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# Motivation

- Extrinsic: clear **goals** and **rewards** (short-medium-long term)
- Intrinsic: **Competence, Autonomy, Relatedness** (CAR)
  - Control, skills, progression felt
  - Meaningful choices and self-expression
  - Social interaction: coop and competition / NPCs?



# GameFlow heuristics

- ☒ Perceived Pacing
- ☒ Motivation
- ☐ Emotion

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# Emotions

- **Game Feel** - how do the controls, cameras, and characters feel?
- **Implicit motivation** - drives and instincts (survival & reproduction)
- **Avoid flow breakers** - unfair deaths, losing hard-won possessions, etc.
- Meet or exceed **expectations** / Offer **surprises**



# GameFlow heuristics

- ✓ Perceived Pacing
- ✓ Motivation
- ✓ Emotion

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# UX heuristics

For every little bit that you implement in the game, even if placeholder, ask yourself:

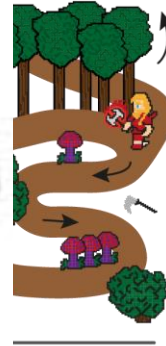
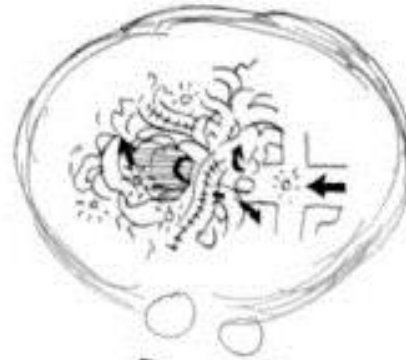
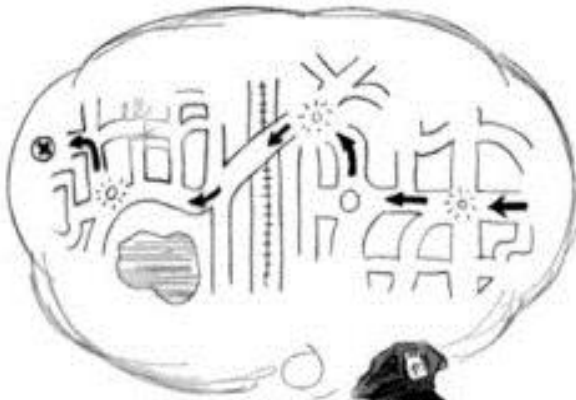
- Does it follow the **usability guidelines**?
- Does it make sense for the **gameflow** and the overall **experience** you want to offer?



# Curse of knowledge



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?

©Create&Imag

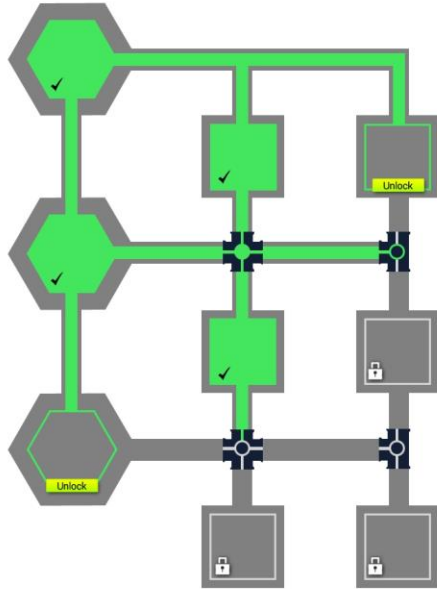
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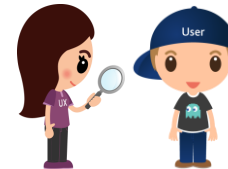
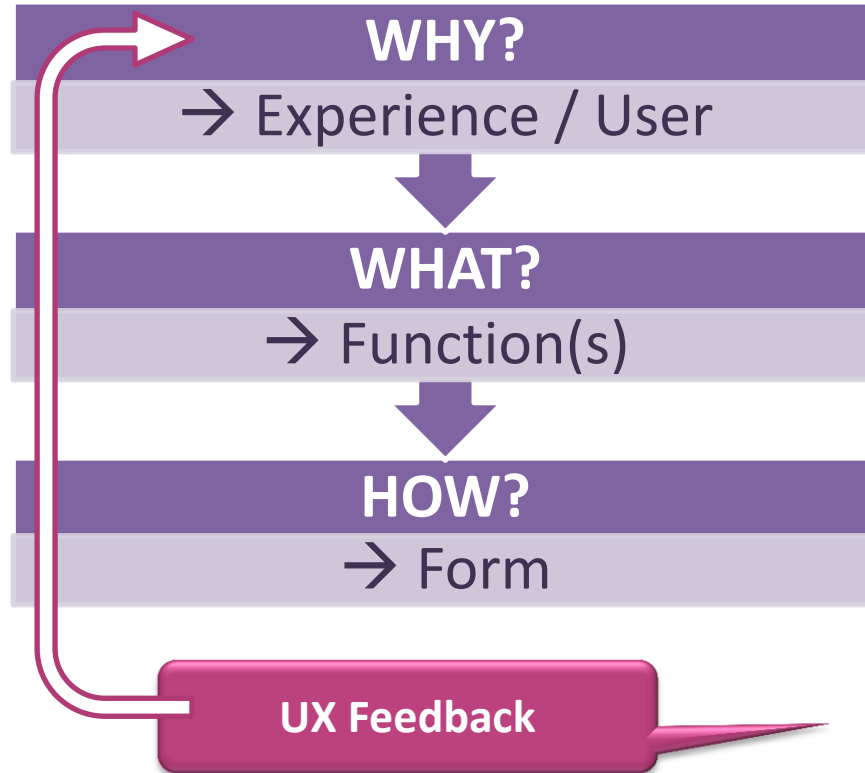
Conclusion

# Curse of knowledge: the skill tree example





**Awesome  
feature!**  
(or fixing pb)



What is UX?

Usability

Gameflow

Conclusion

## UX misconception #3: You cannot afford UX

Don't ask yourself if you can afford thinking about UX ...

... Ask yourself **if you can afford not to.**



# User eXperience =

## Usability

- ☐ Signs & Feedback
- ☐ Clarity
- ☐ Form Follows Function
- ☐ Consistency
- ☐ Minimum Workload
- ☐ Error Prevention / Recovery
- ☐ Flexibility

## GameFlow

- ☐ Perceived Pacing  
(challenge, pressure, learning curve, ...)
- ☐ Motivation  
(competence, autonomy, relatedness)
- ☐ Emotion  
(game feel, implicit motivation, ...)



THANKS!



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