AIE Lafayette
UX in Game Visuals (And Non-Visuals)

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What is UX?

UX (User Experience) is an industry term that refers to the way the player interacts with the game. This discussion will focus on player perception and player intention.

Player Perception

- Players should have awareness of anything not deliberately hidden
- Losing track of yourself on screen is probably not what you want

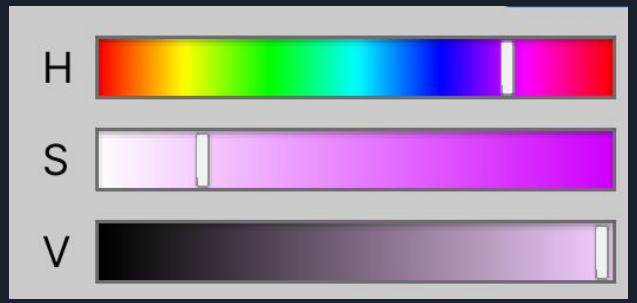
Player Intention

- Input should reflect player intention
- Players shouldn’t need to spend time thinking about buttons

Utilizing Contrast

Contrast is a useful tool for distinguishing different game elements.

Hue, Saturation, and Value are all useful ways of showing contrast. Harshening highlights, shadows, and outlines or flattening colors can draw attention towards or away from objects.

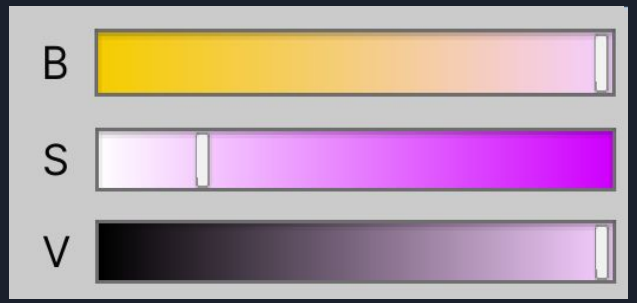


The Witch & The 66 Mushrooms (2020)

Utilizing Contrast

Accessibility should always be a concern.

Deuteranopia (red-green colorblindness) is the most common form of colorblindness. With this in mind, show contrast using blue levels (cool versus warm) more than other colors. Notice that Mario and Luigi utilize much more than just red and green.



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Utilizing Contrast

While Castlevania II has a more natural and moody color palette, distinguishing between important and unimportant elements can become difficult.

Castlevania (1986)

Castlevania II: Simon's Quest (1987)

Utilizing Contrast

Using different forms of contrast, it becomes very easy to distinguish between foreground and background elements. Walkable surfaces, walls, and open spaces are easy to discern.

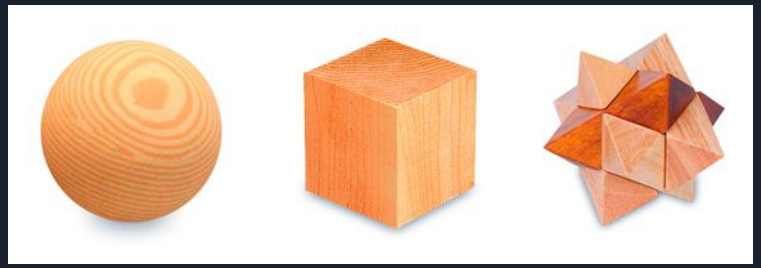
Owlboy (2016)

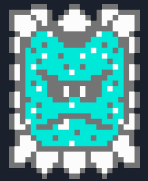
Signaling Hazards

Shape language can be used to convey implicit meaning to objects.

- Rounded shapes (circle) indicate softness
- Blocky shapes (square) indicate stability
- Spiky shapes (triangle) indicate danger

Use these shapes to indicate the properties of surfaces in both environment and characters.





Super Mario Bros. 3 (1988)

Super Mario 64 (1996)

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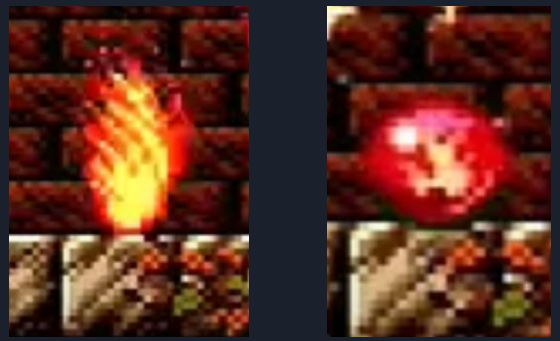
Signaling Hazards

Wario Land: Super Mario Land 3 (1994)

Shape language makes it easy to see the difference which parts of an enemy are safe to touch (for the player) versus parts that will hurt. Topping off platforms with squared surfaces tells the player that those platforms are stable.



Castlevania: Rondo of Blood (1993)

Player Favoritism

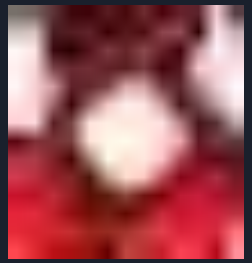
Don’t be afraid to show favoritism to the player. Outside of competitive multiplayer, your goal doesn’t need to be fairness. For example, you can design your colliders with bias towards the player. The player’s attacks can be lenient while the enemy’s attacks require precision. Enemies can then be made faster or more damaging to maintain the target challenge.

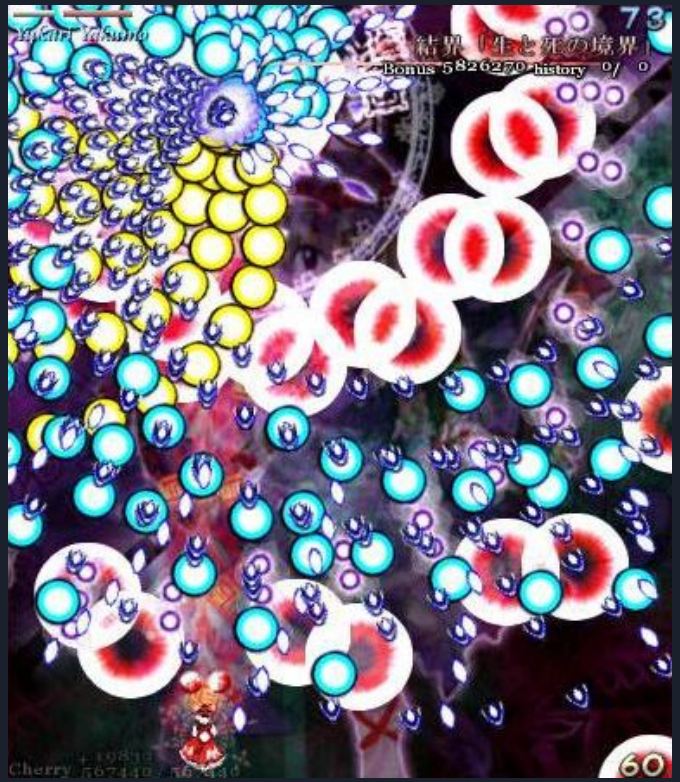
Shovel Knight (2014)

Player Favoritism

Consider notoriously difficult bullet hell series *Touhou*.

Though the game is regarded as incredibly challenging, the player's collider is approximately a mere 5 pixels across.





Perfect Cherry Blossom (2003)

Player Favoritism

When the player takes damage, you don’t want them to assume unfairness. Colliders that seem favor enemies lead to frustration, even if they are technically accurate.

Monster Hunter 3 Ultimate (2011)

- If players are frequently blaming the game, adjustments may be needed.
- Conversely, if players perceive that colliders are fair (even if they’re not), they are more likely to shoulder blame for their own mistakes, which encourages them to improve.

Simplifying Controls

Where ever possible, simplify your controls, sometimes even if it means simplifying your game.

Consider a game with an inventory system. You want the player to have limited carrying space, with the ability to drop an item so that they can have room to carry a different item.

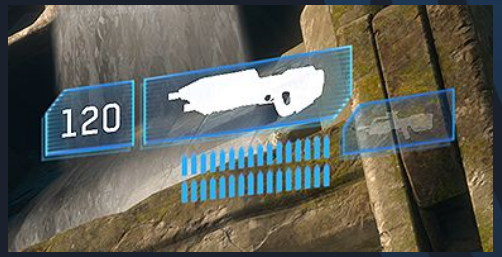
How many buttons are needed?

You *could* program one button to drop an item and another button to get an item, but if the only purpose of dropping items is to replace them, both functions could easily be bound the same button.

Simplifying Controls

Traditional first person shooters allowed the player to collect a wide variety of weapons. Buttons allowed the player to switch to the next and previous weapons, and each weapon was often bound to a specific button as well.

Later games limited the player's weapon capacity to only two at a time, often a main weapon and a sidearm, but this allowed all weapon switching to be bound to a single button! You can even hold that same button to replace a weapon.



Halo 2: Anniversary (2014)

Unreal Tournament 2004 (2004)

Summary

- Use saturation, value, and blue levels to show contrast between types of objects and direct the player's attention.
- Signal the properties of objects using circles, squares, and triangles. Circles are soft, squares are stable, and triangles are dangerous.
- Outside of competitive multiplayer, secretly show favoritism to the player by making the hitboxes unfair for enemies. Balance the difficulty around unbalanced hitboxes to let the player easily understand their mistakes.
- Simplify your controls. If an input isn't important to the game, you probably don't need it.

Questions?