How Games Give Players "The Feels" (book excerpt)

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> *The following is an excerpt from Chapter 3 of Gaming SEL: Games as Transformational to Social and Emotional Learning, by Matthew Farber, EdD and appears here courtesy of publisher Peter Lang.*

There is a kind of magic in watching children play *Candy Land*. A classic board game set on a winding path through the Peppermint Forest, the goal is to be the first player to reach King Kandy's Castle. The instructions are straightforward: Flip a card and move your token to the next space that matches that card's color.

During play, children learn the basics of turn-taking, self-regulation, impulsivity control, and goal-setting. The lack of written text and ease of rules means that parental supervision is often unnecessary. Some young players construct stories set in the game's toothsome world.

Although youngsters may revel in the colorful gameboard, *Candy Land* can be tedious for older kids and parents. Moving along a track by matching colors can be maddingly monotonous. Further, *Candy Land* lacks a leveled increase of challenge—it is as easy to play at the Lagoon of Lord Licorice as it is at Princess Frostine's Ice Palace.

Most games challenge players continually. Strategy games like *Chess* become more difficult as players move pieces. *Super Mario Bros.* adds more enemies through game levels. *A Theory of Fun for Game Design* author Raph

Koster was one of the first to identify how level design in games happens to align with the zone of proximal development (Koster, 2005/2014). The zone of proximal development describes where learning is "matched in some manner to the child's developmental level" (Vygotsky, 1978, p. 85). Koster (2005/2014) also wrote that fun ceases for players—and learners—once mastery is attained.

As it happened, *Candy Land* was not designed to bore parents or irritate dentists. Prototyped on butcher block paper in 1949, retired teacher Eleanor Abbott made *Candy Land* while recovering from polio. Back then, polio was an incurable and highly infectious disease that threatened paralysis to anyone who caught it. Abbott saw *Candy Land* as a way to engender freedom to children who were restricted from playing outside (Joy, 2019; Kawash, 2010). Early editions of the game featured an illustration on the box "of a boy with lines on his legs that suggest the leg braces common to victims of the disease" (Kawash, 2010, p. 191).

In the late 1940s, there were few games made expressly for children. Thus, board games became a safe-at-home activity, away from swimming pools and ice cream parlors—public areas where polio was feared to spread (Kawash, 2010). With Abbott's game, children could now play together *without* adults. After she sold the game to Milton Bradley, millions of parents purchased copies for their children. Decades later, the game remains a household staple.

As I write this, history has repeated itself. In early 2020, the COVID-19 pandemic spread. Once again, children and grown-ups were locked indoors. But, while being physically distant, there was no need to be socially distant. To encourage people to play games online or at home while also staying safe, in the spring of 2020, the World Health Organization partnered with more than 40 game publishers to launch the #PlayApartTogether campaign.

We play games together to connect and to feel more human. Before the pandemic, playing games was already a social experience. More than half (55%) of frequent game players reported that games helped them to connect with friends and other people ("Essential Facts," 2018). At the onset of the pandemic, sales skyrocketed: consumers in the United States spent

nearly $11 billion on video games in the first quarter of 2020—a new record ("Record First Quarter," 2020). *The New York Times* quickly dubbed Nintendo's social life simulator *Animal Crossing: New Horizons*, released on March 20, 2020, "the game for the coronavirus moment" (Khan, 2020, para. 1). Sales of jigsaw puzzles and board games—including the perennial classic *Candy Land*—also surged (Miller, 2020).

This chapter moves from King Kandy's Castle to Sleeping Beauty's Castle, where magic is real and imagination is limitless. As it turns out, there are many parallels between emotional experiences in good games and the mental transport afforded when we visit places like Disneyland. But first, let's explore exactly how games evoke "the feels."

AFFORDANCES AND EMOTIONS

Affordances are invitations to interact with physical or digital objects (Norman, 1988, 2013). A handle on a mug affords grasping. Chairs are shaped to invite sitting. Smartphone screens afford tapping, pinching, and swiping.

Our brains form mental models of how we expect objects to behave when we interact with affordances. For instance, as I type on my keyboard, I anticipate that text will appear on my laptop's screen. Expectations are reinforced by feedback: the sound of clicking keys, the appearance of letters and words.

Norman's (1988, 2013) definitions of affordances built on Gibson's (1977, 1979), who more generally considered how objects relate to perception. To Norman, affordances were specific to physical objects embedded with characteristics where users perceive function. For instance, when encountering a light switch, people toggle up or down. Toggling results in feedback that confirms (or denies) the user's mental model (lights go on or off).

Our mental models of affordances can sometimes be false. Norman (2013) shared an example of oven thermometers. Our mental model may assume that temperature in ovens are constant, when, in reality, heating elements

go on and off, restarting when a threshold temperature is met (Norman, 2013).

Some objects do not indicate an interaction's consequence: Does one push or pull a door handle, or toggle a switch up or down? If a lavatory door has a protruding handle that affords pulling, how do we know if it is occupied? Without a clear indication, the only way to find out is through hypothesis and experimenta-tion. Experimenting with affordances of objects in games may be fun, but not with real-world objects like bathroom door handles! Likely, there are no treasure chests of coins to be found in public lavatories. Therefore, *signifiers* may be needed on or near objects to guide use (Norman, 1988, 2013). In bathrooms, signifiers may also be color-coded; when locked by an occupant from the inside, a red "Occupied" sign may appear on the front of the door.

Hartson (2003) described four types of affordances as being dependent on what each accomplishes. First are physical affordances, like door handles and switches that invite pushing or pulling or toggling. Next are cognitive affordances, signs that indicate use, such as push or pull signs. Cognitive affordances are what Norman refers to as signifiers (1988, 2013). Sensory affordances are the third type, affordances that relate to perception. Font is an example, as it can be perceived as readable or legible or too small or poorly contrasted with backgrounds (Hodent, 2017). Finally, are functional affordances, when objects are used differently than how they were designed or intended (Hartson, 2003).

Objects can be designed to afford play. Sicart (2014) wrote, "Masks and disguises, merry-go-rounds, and computer controllers all point to the idea that play is possible in that context" (p. 7). Playgrounds are designed with playful affordances like slides, ropes, and swings. Holding dice affords rolling and throwing. Sometimes we can find play in everyday objects, like cups, rubber bands, and string.

Video games are often designed to provide signals and feedback to players. But sometimes affordances purposefully mislead players (Norman, 2013). This is more of an exception than rule. An example is the video game, *That Dragon, Cancer*, an empathy game about a young child with terminal cancer. In one vignette, the child is in a hospital room crying uncontrollably.

In the room, players see a juice box and a stuffed animal. Interacting with these affordances fails; the child keeps crying. As a result, players feel a sense of hopelessness and despair (Tanz, 2016).

"A false affordance is when people understand a feature in a certain way intuitively, but it is not how it is used," Celia Hodent (2017) explained. Hodent is a cognitive psychology PhD and game user experience (UX) expert. "We want players to understand the affordance correctly because most of the time, we place the challenge elsewhere. But, depending on the game, it can make sense to create false affordances and mislead players by design."

Typically, there is an alignment of the functional affordances of objects in games. However, players can experience things differently than intended (Hartson, 2003; Upton, 2018). "A game may play around with people's perception," Hodent continued. "Or, in horror games, designers may want people to think something is dangerous when it's not so they can later scare them"

Regarding interacting with functional affordances, educational video games have a checkered history. Sometimes derided as chocolate-covered broccoli, in these games, learning is sugar-coated. In a chocolate-covered broccoli math game, players may be required to solve fraction problems before they can cast spells or shoot aliens. Comparatively, in a well-designed fraction game, gameplay may involve slicing blocks into smaller units. In this hypothetical "balanced design" game, player actions are aligned with learning goals—players learn about fractions by making fractions (Groff et al., 2015, p. 5).

"GAME FEEL"

Many video games embed discovery, novelty, and surprise in design to elicit emotions from players (Hodent, 2017). Lootboxes—prize crates that contain secrets—are an example. In video games, opening a lootbox is not like clicking a folder icon to retrieve a Word document file. Playful, these interactions are often pleasant, fun, and satisfying (Hodent, 2017).

Let's look at the lootbox in the massively popular game *Fortnite*. Instead

of crates or treasure chests, players encounter llama piñatas. Yes, llama piñatas. Animated and interactive, their eyes move, gazing at the player's avatar. When the player hits the llama piñatas, there is a colorful reaction, replete with sounds and fanfare.

Celia Hodent helped design *Fortnite* when she worked as director of UX at Epic Games, the game's publisher. "You hit the llama and open it up just like a piñata, which is an interaction," she explained.

> "That emotional interaction is 'game feel.' It is not just the affordance. You see a chest, there is an affordance, and you understand that it opens if you click it. In *Fortnite*, the interaction is more—it's fun and emotional. The llama provides a narrative."

Game feel is the emotion players have when interacting with elements in a game's system, which can deepen the emotional connections players have to the overall experience (Hodent, 2017). There are three core components, or "3 Cs," to *game feel*: control, character, and camera (Hodent, 2017). First, let's discuss control in games. Control is important because it affects how players feel when moving through game environments (Hodent, 2017). In a first-person shooter game-like *Call of Duty*, players become intimately involved with how sensitive thumbsticks are when aiming weapons at enemies. Because of this, players need to sense that they are in control of characters. What happens when players release their finger while an avatar is running? Does that character come to a full stop? When that character jumps, what is the inertia in the animation? Is there leeway for players who make mistakes by consistently jumping too high or running too far? "Some players might overshoot or stop short, which doesn't feel good," Hodent said. "In the AAA industry [big-budget game publishing], there is a lot of work to nail those controls."

The next C is character, which includes avatars that players control, as well as the non-playable, computer-controlled characters (Hodent, 2017). If a character is supposed to be fast, it should look wiry or bouncy, like Sonic the Hedgehog. If a game has a monster, it should look scary, or at least dangerous (Hodent, 2017). *Nightmare: Malaria* is an example of a game with a social message about the need for mosquito netting for malaria prevention. The mosquito in the game is giant and terrifying, signaling

danger to players. *Sea of Solitude* is another game where character design affords attributes to players. Filled with metaphors, a scary sea monster represents the protagonist's overbearing mother.

Design decisions are made when considering how control and character intersect to evoke game feel (Hodent, 2017). The controls in *Sea of Solitude* can feel stiff and constrained, likely symbolizing emotional obstacles the main character can't quite overcome. "A lot of platformers have what we call *coyote time*, where you can run beyond the platform but still be able to press to jump," Hodent said. "You have some space to make mistakes midair after overrunning." ("Coyote time" refers to *Road Runner* cartoon nemesis Wile E. Coyote, who often overran ledges of cliffs and mesas.)

Camera is the third C, describing players' emotions relating to visual perspectives (Hodent, 2017). "In a strategy game, you usually have a top-down camera with a larger view so that you can think about strategy," Hodent explained. "If you want to make a scary game, you might have a first-person camera to restrict field-of-view. All of that is going to have an impact on the way the player feels playing a game."

Chess and *Civilization* have a top-down camera. Many other games utilize a third-person or over-the-shoulder view, where players see their avatars throughout the experience. *Tomb Raider* and *Assassin's Creed* games are examples. By default, the building block game *Minecraft* uses a first-person perspective. *Fortnite* is usually played with a third-person camera. In addition to its shooter gameplay, part of the game's aesthetic appeal is the ability to change avatar costumes, or skins. Skins have a lot to do with player autonomy, which is part of self-determination theory (Ryan & Deci, 2018). "It is meaningful at the player's level to feel autonomy, but also meaningful at the relatedness level because other people see you being cool," Hodent remarked. "It's like fashion. It speaks to what you care about, your ingroup, who you are rooting for in football. Teenagers care a lot about being part of a group, and *Fortnite* offers a space to do that." In *Fortnite*, children "learn to negotiate conflict, become independent, and explore what kind of person they want to be" (Squire & Gaydos, 2018, para. 5).

Dancing is a big part of *Fortnite*'s ecosystem. Hence, dance moves are

in third-person camera, enabling players to see their character floss or breakdance. "If a game has a first-person camera, it would not be as meaningful to have different skins and dance moves," Hodent continued. "All of these elements need to interact with each other."

Games like *Fortnite*, *Overwatch*, and *Minecraft* have "emotes," brief animations—including dance moves, hi-fives, and hand waves—to convey character emotion. In *Super Mario Odyssey*, Mario emotes by spinning and backflipping midair when he jumps (Hodent, 2017). *Animal Crossing: New Horizons* embeds emotes as part of gameplay. As players proceed, they unlock "reactions." Reactions include joy, delight, and surprise, which can be selected when encountering villagers.

Emotes and reactions create bonds between players and games. But when games are in the first-person camera, it can present challenges to game feel. To ameliorate this, some games switch perspective. In *Overwatch*, when an emote plays, "the camera transitions to a third-person view, so you can see yourself being cool," Hodent said. "In *Overwatch*, as well as *Fortnite*, not only can you see yourself being cool, but others see you being cool."

The perspective of the camera is, of course, a primary convention of cinema. In the medium of film, seeing characters on screen creates an invisible line, or "demarcation" (Murray, 2017, p. 147), bordering viewers from the experience. The first video game with a player-controlled camera was *Super Mario 64*. Designer Shigeru Miyamoto proposed that Lakitu, the character who rides a floating cloud, is following Mario, filming him the entire time. In other words, the camera would not be some random point in space; instead, it would mimic an actual camera. "Miyamoto's main point was that the camera was like another character," game designer Scott Rogers told me. Rogers also wrote about the 3 Cs in his book *Level Up: The Guide to Great Video Game Design* (2014). "The conceit was, 'The player won't see Lakitu the entire time, but he is filming you.' To me, that's a wonderful analogy because that is what a cinematic camera does." (I told my son this when he played a re-release of *Super Mario 64*. "When Lakitu appears on screen holding a camera, who is filming him?" he asked.)

Players may be less likely to perspective-take when in the first-person view

as their game and real life identities blur (Darvasi, 2016)—what Gee (2007) calls the *hybrid identity* between player and avatar. To what extent does camera affect our ability to perspective-take? Aïete et al. (2016) designed a task where participants had to decide whether they thought an avatar was holding an object with the right or left hand. "We looked at whether participants could take a third-person perspective and whether they could control their egocentric bias," study co-author Grégoire Borst explained. Borst is a developmental psychology and cognitive neuroscience professor at Paris Descartes University. "We created a specific behavioral paradigm to ask people to go from a front-facing to back-facing avatar. We observed the cognitive costs from going from one to the other."

Findings suggest that player perspective matters. From childhood to adulthood, the ability to perspective-take was, in part, found to be related to the ability to control egocentric biases (Aïete et al., 2016). "We tend to respond from a first-person perspective, but sometimes we need to take a third-person perspective," Borst said. "In other words, you need to control your own biases to understand someone else's emotions."

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