Bad Mojo: Taking Perspective on Perspective

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Introduction

One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown belly, slightly domed and divided by arches into stiff sections. The bedding was hardly able to cover it and seemed ready to slide off any moment. His many legs, pitifully thin compared with the size of the rest of him, waved about helplessly as
he looked.75

And similarly begins the story of Bad Mojo (1996), a PC-Mac game which is extremely loosely based upon the ideas within Franz Kafka's short story, The Metamorphasis. In both cases, the protagonist of the story is an unfortunate soul who is unexpectedly changed into a cockroach, and must begin a new journey to navigate once familiar and comfortable surroundings to stay alive. In homage to the general notion of this transformation originally offered by Kafka's 1915 novella ("Die Verwandlung" in German), the Pulse Entertainment computer game creative team named the main character in their story Roger Samms and his cat Franz. Beyond that, the stories diverge significantly in that the characters and storyline within Bad Mojo offer strikingly little to those from the original work. However, the perspective of a cockroach to the objects and people that surround it are somewhat transferrable between storylines, and the insight one might gain from the original story is interesting if not overtly helpful when playing the computer game.

The introduction of Bad Mojo begins with a cut-scene overview of a fictional area of San Francisco, arriving at a seedy bar owned by Eddie Battito. The voice-over, that of Roger, tells a preliminary tale of skipping town with recently-acquired large sum of money to escape the unhappy life he now leads. The voice-over fades as the player joins the introduction cut-scene, continuing within Roger's small apartment above Eddie's bar. The player is introduced briefly to Franz the cat before Eddie pounds on Roger's door, demanding overdue rent money. Roger stuffs some cash into Eddie's hands and rushes him out the door. An afterthought while doing final packing, Roger remembers wanting to take an item that his mother gave to him when he was a baby—a locket with

her picture. When opening the locket this time, however, a mysterious purple mist envelops him. He collapses to the floor, eyes open and contorted. The locket falls out of his hand and lands beside him. His consciousness has now transported from human form into the body of a cockroach; a cockroach that the player manipulates by scurrying around any of a variety of rooms with the ultimate hope of returning back into a human.

The Bad Mojo CD-ROM cover art.

Game mechanics

I played (and re-played, for the purposes of this essay) the 1996 Bad Mojo release, developed by Pulse Entertainment and distributed by Acclaim for the Macintosh which requires a 68040/33 MHz processor or Power Mac. It required an 8-bit color monitor, 8 MB RAM, and a CD-ROM drive with a 300 KB per second transfer rate (double-speed) with a system of 7.1 or higher. What I played it on was a Mac OS 9.2.1 with 256 MB of built-in memory and 1 MB RAM. The monitor was set to 1024x768, 85Hz (a 15" Dell Trinitron CRT). The cut-scene movies and the game itself played in an area much smaller than the monitor resolution, but it did not detract from the game with any real significance. In fact, resolution becomes unnoticeable after the first 10 minutes or so of game play. I used the original clear-plastic keyboard and mouse (black keys) with the delightfully uncomplicated and comforting single-click to begin programs. Bad Mojo settings are equally simple to navigate and remember. I used the up, down, left and right arrow keys to move my roach around each overhead snapshot of room surface that were at times horizontal, and other times vertical and even inverted. The escape key would allow me to "skip" cut-scenes that I did not need to review and get me back to the game play. The spacebar would suspend the action and take me to the menu that includes typical "save," "load" and "quit" opportunities. The "preferences" menu allowed for different directional keys to be assigned, as well as provide options for better performance by turning "on" or "off" your antennae movements, shadows, and lighting effects. Fortunately, my Mac was tough enough to enjoy all rendering features without any slowdowns.

Bad Mojo's game play consists of both navigation-ability and in-game task solving, neither of which is timed, with the only exception being the final task before endgame. Mostly, the player has plenty of time to survey a scene and move along in a purposeful fashion without the fear of unexpected deaths. A player is initially provided with four additional

cockroaches, however, the in-game saves and chances to start from saved positions encourages the exploration of spaces which will likely end in death. Finding ways to die, it turns out, is part of the fun. Did you ever want to know what it is like to charge head-first into a working garbage disposal? Here is your opportunity to do it.

Movement

He was pleased when he finally had his head in front of the doorway, but then saw that it was too narrow, and his body was too broad to get through it without further difficulty.

He pushed himself over to the door, feeling his way clumsily with his antennae - of which he was now beginning to learn the value - in order to see what had been happening there. The whole of his left side seemed like one, painfully stretched scar, and he limped badly on his two rows of legs. One of the legs had been badly injured in the events of that morning - it was nearly a miracle that only one of them had been - and dragged along lifelessly.

It was only when he had reached the door that he realised what it actually was that had drawn him over to it; it was the smell of something to eat.

Once the opening cut scene ends, the player in Bad Mojo steers the cockroach left and right, and moves the cockroach forward and backward at the nexus of a series of drains. One passageway is open that leads to the basement above. The basement is the first of numerous rooms the cockroach will eventually navigate. The adjoining drain areas are one way to navigate between rooms as more passageways open—the result of completing tasks in each room that advance the story. Your cockroach quickly encounters a cut-scene that provides information about navigating the basement, and specifically, how getting sucked into a vacuum and thrown to a new area of basement floor will be necessary. The vacuum sequence foreshadows subsequent navigation that has you crawling across partially exposed electrical conduit. Threats to your cockroach's existence, and thereby Roger himself, are encountered quickly. For example, traversing across a presumed-dead rat may cause you to be gobbled-up, or tossed away by his thick, partitioned tail. You must walk across the dead bodies of deceased brethren within a roach motel, navigating its sticky insides, before burning a charging spider with a cigarette butt. It seems peril is everywhere for your cockroach which has a much harder time staying alive than a cockroach's reputation would indicate.

The story advances with the exploration of new areas that provide the player with additional cut-scenes. There are opportunities to read documents conveniently lying around each of the rooms. You learn incrementally, in painstaking detail, of how Roger's mother passed away. You then learn the name of Roger's real father, who gave him to an orphanage where he endured teasing and mockery. You learn more about Eddie and his bar, the financial difficulties he encountered and his unfortunate luck. You learn about Roger's attempts to garner research money that will rid the world of household pets, primarily cockroaches, and how Roger has unsuccessfully tried to earn respect from his scientific colleagues and funders. By the end of the game, you have been provided a full picture many times over of the full story: Roger's mother and father were happily married when she died in childbirth. His real father is the very same Eddie Battito whose bar he now lives over. Life has been a series of unhappy occurrences for both Roger and Eddie since his mother's death, and the only way to find happiness is to re-discover Roger's relationship with his father. Of course, to do this, you as the player (Roger in cockroach form) must first wake your father from the drug-induced sleep that you have put him in while solving an early puzzle. Waking him will allow him to escape the building that has filled with gas since you turned off the pilot light (while solving yet a different puzzle). Then you must return to the locket to save yourself, that is, return Roger to his human form, and get him out of the bar before it explodes. Who causes the explosion? You did, of course, by lighting a fire in the bathroom when pushing Eddie's cigarette into the paper towel dispenser. This act is encouraged by your mother's memory in cut-scene and will cleanse both Roger and Eddie of the unhappiness of life which was manifested in the bar itself.

The story has four different endings, the happiest of which is when Eddie is awakened by setting off the smoke alarm and returning to the locket. In this ending, both Eddie and Roger reunite outside of the exploding building, resolving previous issues and somewhat creepily retiring together in Belize. The other endings are less happy and dependent on who is saved before the building explodes. [Rather than spoil all additional endings here, I encourage you to seek out and play for them yourself.] The variation on the final cut-scene is the only task that is time-dependent. However, as with all puzzles within the game, plenty of hints are provided about what-to-do-next. Saving both Eddie and Roger is fairly easy to accomplish.

In-game reading and overall pace

“Mother, mother”, said Gregor gently, looking up at her. He had completely forgotten the chief clerk for the moment, but could not help himself snapping in the air with his jaws at the sight of the flow of coffee.

The flight of the chief clerk seemed, unfortunately, to put Gregor’s father into a panic as well. Until then he had been relatively self controlled, but now, instead of running after the chief clerk himself, or at least not impeding Gregor as he ran after him, Gregor’s father seized the chief clerk’s stick in his right hand (the chief clerk had left it behind on a chair, along with his hat and overcoat), picked up a large newspaper from the table with his left, and used them to drive Gregor back into his room, stamping his foot at him as
he went.

As mentioned earlier, there exist a number of cut-scenes provided throughout progression of the game that give the play a narrative feel, and also direct the action in a linear way. There are rarely times when the player does not have a goal in mind. The player is most often provided direction from clues contained within the most recent cut-scenes. The cut-scenes may occur when goals of the story have been met, in which there are several, roughly one-per-room. Therefore advancing to a new room is often accompanied by a new cut-scene. The cut-scenes that provide game-based goals are normally provided by the voice of Roger’s mother (presumably through a locket-induced memory) spoken in obscure rhyme. The other helpful cut-scenes are triggered by advancing to physical locations in the game marked by the “Bad Mojo eyeball” logo. The logo’s placements are carefully drawn into the background reducing distraction when navigating the area. Crawling directly over such a mark brings a nearby pest to you who telepathically relates to you how to “solve” a puzzle in the game. The pests take the form of silverfish, fire ants, termites, mice, and other normally unseemly creatures that also make the dirty building their home. For example, approaching a moth perched on a bulletin board in the den triggers the cut scene of climbing on the back of a butterfly who will then fly you to a desk on the other side of the room. Walking on the floor, in this case, was prohibited by a number of dangerous liquids and broken glass, not to mention a lurking Franz who is always ready to capture you.

The characters in the opening scene, just as in all intermittent cut-scenes supplied throughout the game, are provided as a means to give the backstory. They are delightfully (and purposefully) over-acted as though borrowed directly from a B-movie—something akin to those parodied in Mystery Science Theater 3000.

Favorite moments

Nothing would stop Gregor's father as he drove him back, making hissing noises at him like a wild man. Gregor had never had any practice in moving backwards and was only able to go very slowly. If Gregor had only been allowed to turn round he would have been back in his room straight away, but he was afraid that if he took the time to do that his father would become impatient, and there was the threat of a lethal blow to his back or head from the stick in his father's hand any moment. Eventually, though, Gregor realised that he had no choice as he saw, to his disgust, that he was quite incapable of going backwards in a straight line; so he began, as quickly as possible and with frequent anxious glances at his father, to turn
himself round.

One of my favorite activities within the game is the trip to the taproom of Eddie's Bar. Here you get the opportunity to practice your mixology skills by inspecting and reading various recipes for tasty beverages. Obviously, this task is something beyond the realm of what normal bugs are capable of achieving. Perhaps oddly, it does not seem out of place here. The game consists of mostly realistic renderings of surfaces, real-video intermixed with few images of "cartoony" situations, and disgusting imagery. This sense of realism is intertwined across most scenes, along with the requirements of size and capability of "realistic" tasks—such as the "pushing" of cigarette butts into position rather than "taking" or "grabbing." At the point in the game where you are tasked with making alcohol-based concoctions, your roach is feeling somewhat empowered by doing things above-and-beyond what a normal bug might do. Mixing drinks, and remembering which amounts should go into making the penultimate Bad Mojo beverage, seems strangely within the realm of possibilities for your alter ego. The actual recipe seems less-than-appetizing, but for the protagonist, it is just what is needed to solve the puzzling situation within this particular room.

One of the more unique adventures begins in the kitchen area, where you begin by navigating your cockroach across a slippery refrigerator to a tile floor. Heading up the mop stick handle will get you to the kitchen counter. The counter is filled with a vast array of half-prepared food items, including vegetables and raw meats. Part of the gross-out factor of Bad Mojo is the idea of how much of what we leave out may be crawled upon by various insects, and indeed, the kitchen is one of those places. Here, we are forced to experience just how much of what we prepare might be crossed and re-crossed by undesirable bugs. The animated

cockroach is quite good during these parts, climbing up-and-over matte backgrounds that lend a realistic touch to the navigation.

You move along the top of the counter toward the sink, which has some precariously perched silverware over the drain. A trip into the garbage disposal is probably worth satisfying your curiosity, even though it costs you the life of your cockroach. It is a satisfying because, after all, you are still a cockroach, and if you ever wanted to make a cockroach go straight into a set of whirling blades, this is too good of an opportunity to pass up. However, a gratifying suicide is not the point of this particular test. Instead, a cut-scene available nearby implies that it is the silverware that you need to tumble into the disposal. Creating a locked disposal will disrupt the building's power, and eventually lead you to the ultimate goal for this area.

Trying to tip the knife-and-fork with your own roach's weight does not do the trick, so more exploration is required. Eventually moving further along the countertop takes you to a greasy stove where some sort of chili concoction is bubbling away. Navigating this space leads you to the front of an oven, where grease has spilled in long impassable trails, effectively trapping a smaller roach. An additional cut scene recommends that you help your roach brethren with a rescue. Here the "solution" is less than satisfying, as trial-and-error will eventually let you build a bridge across a narrow grease spot with your body. Your body-as-bridge allows the smaller roach a path for escape. However, instead of crawling to freedom, he continues to piggy-back on you. Here is the a-ha moment, where the additional weight of your rescued friend allows you to topple the silverware into the garbage disposal.

The puzzle itself is one that offers neither an intuitive nor clever solution. What makes it a favorite is the interaction with another roach, and the idea of turning your roach into a "hero" of-sorts in the story. Until this point in the adventure, your character is largely an outsider, observing the human-centered narrative with the primary objective to stay alive. Normal interactions with familiar objects, such as your cat, render danger and anxiety into your roach-life. Being a cockroach is inherently difficult to relate to simply because our perspective as a person makes the story of a roach difficult to identify with. For example, your cat turns into your enemy, an immediate source of danger, which may distance a player from getting into the action (especially one who likes cats). However, in this "save a fellow roach" adventure in which your roach becomes a hero, the narrative truly cements you into a likeable character. It is a fireman-like rescue, albeit for a roach smaller and more helpless

than yourself. Your character is rewarded for the bravery and selflessness it takes in making the rescue, and you are then duly compensated by receiving help in toppling the silverware, eventually advancing the story. Good karma indeed, as valor is rewarded even in the realm of cockroaches!

The roach: A new perspective?

For some reason, the tall, empty room where he was forced to remain made him feel uneasy as he lay there flat on the floor, even though he had been living in it for five years. Hardly aware of what he was doing other than a slight feeling of shame, he hurried under the couch. It pressed down on his back a little, and he was no longer able to lift his head, but he nonetheless felt immediately at ease and his only regret was that his body was too broad to get it all underneath.

In thinking about the perspective of a cockroach, nearly all visual scenes are from an overhead (top-down) perspective of a square of real estate in which you maneuver your roach from a god-like view, more similar to the situation in Sid Meier's Civilization III (Briggs & Johnson, 2001) than an over-the-shoulder view more commonly associated with third-person perspective like American McGee's Alice (McGee, 2000).

Screenshot of games played in 3rd person perspective, American McGee's Alice (McGee, 2000)

The creators of Bad Mojo allow some first-person perspectives during game play to offer the unique perspective of a bug, and how a bug sees its environment. The first-person perspectives are through a few cut-scenes where your roach communicates through some sort of unknown extra-sensory perception in thought-bubbles to other insects. A favorite moment, however, is the rare over-the-shoulder perspective that is offered from the high-points in any given room, where you as the roach can survey the entire area. Another memorable cut-scene from this perspective was mentioned earlier, your roach rides the back of a butterfly across the "Den of Madness," allowing you safe passage across the room above the outreached paws of your cat. Riding the butterfly is a bit dizzying, but a nice visual experience that feels as much like a roller coaster ride as the technology could possibly simulate.

This high-point perspective within rooms is offered by the creators, presumably, as a way to map the entire environment for a few fleeting moments, before you are relegated back to the tile-like visual progression of scurrying across large areas. What the perspective also offers, however, is a moment of relating to your roach. You, seeing what the

roach sees, can take in the vastness of a public bathroom or a disheveled den as if you were standing on the edge of the Grand Canyon. You can marvel at the vastness of the landscape, its emptiness, and the contours of its terrain. A brief glimpse of the world as seen through the eyes of a roach, is worth the reflection upon perspective. It may give the player more of a sense of identity than at any other point during the game.

Overview of recent research: Perspective and game play

"We have to try and get rid of it", said Gregor's sister, now speaking only to her father, as her mother was too occupied with coughing to listen, "it'll be the death of both of you, I can see it coming. We can't all work as hard as we have to and then come home to be tortured like this, we can't endure it. I can't endure it any more." And she broke out so heavily in tears that they flowed down the face of her mother, and she wiped them away with mechanical hand movements.

She happened to be holding the long broom in her hand, so she tried to tickle Gregor with it from the doorway. When she had no success with that she tried to make a nuisance of herself and poked at him a little, and only when she found she could shove him across the floor with no resistance at all did she start to pay attention. She soon realised what had really happened, opened her eyes wide, whistled to herself, but did not waste time to yank open the bedroom doors and shout loudly into the darkness of the bedrooms: "Come and 'ave a look at this, it's dead, just lying there, stone dead!"

So, what does this viewing perspective offer the player in terms of character identity, narrative, and engagement within the game itself? Reviewing the results of some recent research may offer some insight (Scoresby and Shelton 2010). In this research, player viewing perspective is first parsed into three categories. First-person perspective is the player's vision and actions are as the main character in the game. Third-person perspective is when the player views and controls the main character in the game much like a puppet. The third category is "without" viewing perspective, meaning the player sees nothing but text. University students were recruited, both experienced and novice gameplayers, to play games from the three categories of viewing perspective. Some of the games they played were of the commercial off-the-shelf variety, while others were educational in nature. Students were videotaped and interviewed after their experiences of playing each of these perspectives to probe for feelings of presence, flow, and in the case of the educational games, their learning. The outcomes of the research were interesting in that the viewing perspective was thought to have significant influence

on presence, flow, and learning. However, the qualitative analysis of this research suggests that four emergent categories (content, emotion, motivation, engagement) had more influence than perspective. Bad Mojo was not one of the games used in the research, so within a discussion of research findings, a comparison to the game play of Bad Mojo reveals both consistencies and inconsistencies for points of presence, flow and perspective.

The research was couched using the following definitions: immersion—the extent to which the computer system delivers a surrounding environment; and presence—the feelings or sense of "being there." The findings were based upon an immersive level provided by desktop computers. Categorized data showed that for both inexperienced and avid gamers, personal preference was highly influential in the progression towards presence and flow. The graphical games had a higher rate of interaction, which required higher levels of focus and use of cognitive faculties. By in large, the graphical games engaged more players than the text-based games.

Summary of First- and Third-Person perspectives as it relates to player presence and flow (Scoresby and Shelton, 2010).

	Content to Emotion	Emotion to Motivation	Motivation to Engagement
Third-Person Perspective	Dependent on experience and personal preference Character possible distracter for progression	Genre/ content important	Personal Preference Possible gender difference Ownership of character and activity, could or could not relate to character
First-Person Perspective	More dependent on personal preference Genre/Content/ Actions possible distracter for progression	Genre/ content important	Personal preference Possible gender difference

The analysis of presence included the sense of "being there," responses to events that occurred in the computer environment, and the learner's memory or knowledge of objects in the virtual environment. Touching the keyboard or mouse was not a significant influence in adding to or detracting from the feeling of presence. However, learning how to control

the game did serve as a common distracter. When a significant amount of thought went into using the controls, the players could not focus on the game and they could not progress toward presence. When the controls of the game and the action of the character were not fluid, it was similarly easier for the player to become distracted. Bad Mojo excels in this particular area, due to the ease and fluidity of its navigational control for most areas. There is no coordination necessary for dual hand-control (no running-while-shooting actions) and no worries about what keys to press for a complicated action. Maneuvering the cockroach itself feels very realistic, in that its awkward rectangular body does not fit well into all spaces. Turning in tight places to escape sticky substances is equally unyielding. The movement of the roach up-and-over surfaces is graphically similar to Kafka's descriptions of strangeness that our protagonist encounters in The Metamorphosis, and is perhaps one of the key sources of enjoyment when playing Bad Mojo.

The research results indicated that first-person perspective allowed the player to "become" the character. In first-person perspective, the player is holding a gun or walking through the scenery. In third-person perspective, the players are following the character and watching what is happening from a distance. By playing third-person perspective games, the player is already removed to some degree from the character, but feelings of presence were still reachable. In playing Bad Mojo, the unique third-person perspective of top down, tile-background does not precisely fit either of the categories explored in the research. There is little in the way of feelings where you "become" the cockroach in the manner traditional first-person shooter games would indicate, which certainly hindered feelings of presence.

The research also indicated that in third-person perspectives, some players progressed through the four categories (content, to emotion, to motivation, to engagement) toward presence despite finding the character-player provided some visual occlusion to the virtual environment. This visual occlusion became somewhat of a distraction. In the case of Bad Mojo, the cockroach was relatively small compared to the overall tiled "view" of the player, though likely consistent with the field of view of a cockroach—yet much smaller for the player than many games such as American McGee's Alice. In addition, very little important information was "under" (or "behind") the player. Rather, the narrative had less to do with environmental cues and more to do with navigation, pushing objects, and positioning of the roach. Visual occlusion by the

roach did not serve as a distraction, so this research finding may not be applicable to all third-person perspective environments.

Progression toward flow

Then, out of consideration for Gregor's feelings, as she knew that he would not eat in front of her, she hurried out again and even turned the key in the lock so that Gregor would know he could make things as comfortable for himself as he liked. Gregor's little legs whirred, at last he could eat. What's more, his injuries must already have completely healed as he found no difficulty in moving. This amazed him, as more than a month earlier he had cut his finger slightly with a knife, he thought of how his finger had still hurt the day before yesterday. "Am I less sensitive than I used to be, then?", he thought, and was already sucking greedily at the cheese which had immediately, almost compellingly, attracted him much more than the other foods on
the newspaper.

The research also had some interesting findings with regard to flow. Even if a player does not have feelings of presence, it does not mean that player cannot or will not reach a state of flow. Consistent with observations by Csikszentmihalyi (1988a), when someone is in a state of flow she often experiences a loss of sense of time, loss of self-awareness and the environment, and a heightened ability. When a player is distracted enough, he or she will not reach a state of flow. Beyond not progressing through the categories (content, to emotion, to motivation, to engagement), some distractions may include activity in the external environment that make noise, a process of learning the controls of the game, or a progressive puzzle that proves to be too challenging. During game play, research indicated that some players reached a state of flow where they experienced a loss of awareness, loss of time and above-average ability. Like presence, players had to progress through the four categories to reach a state of flow. When playing Bad Mojo, I experienced some feelings of flow after playing an hour or so of the game, and in the latter stages of the game. The game was still thoroughly enjoyable before that time, but game play probably required more self-awareness in those stages. In other words, the game did not simply rely on action-and-reaction with comfortable movements and solutions. Rather, earlier stages required intense listening and exploration, often with consistent checking for new dangers. These types of actions could be considered flow "distracters" within game play. Even while these distracters were enjoyable, they likely were not conducive to progression toward feelings of flow.

The findings of the research indicated that perspective did not play a large role in reaching a state of flow, however, some factors were found to be influential. If the player has already moved through the four categories, reaching a state of flow was possible (but not guaranteed) due to distracters within the gaming and external environment. A large part of reaching flow is focus and what garners the lion's share of attention (Csikszentmihalyi, 1988b, 1997). If a player's focus is somehow taken away from playing the game, the state of flow is disrupted. A player's focus may be disrupted by distractions in the external environment, an overly challenging game, or "shocks" during game play. Shocks include things that happen in the game that are out of place, such as when a graphic does not appear as expected or when a player dislikes something within the graphic elements (McMahan, 2003). In the case of Bad Mojo, there could have been many opportunities for "shocks" during game play, the most likely entering cut-scenes that move the narrative forward. During my play, I found the scenes both necessary and enjoyable, but also disruptive to flow. Portions of the game where I moved the roach from tile to tile, exploring new surfaces and searching for interactive objects, provided me with the most opportunity for
flow-like experiences.

The research findings indicated that perspective does influence presence, flow, and learning, but perhaps not as much as previously reported. Vora et al. (2002) noted that players felt more immersed while playing first-person perspective games, and this led to feelings of presence. Because of the heavy influence of companion computer graphics, the mental strain experienced by their study subjects was decreased and subjects reported frequent feelings of "being present." In the Scoresby and Shelton research, the highly interactive levels of first-person perspective also influenced presence and flow. Players who became involved with the game and were not distracted by the controls or external factors had an easier time feeling like they were a part of the game, losing awareness of their external environment. As stated earlier, I felt playing Bad Mojo was simple and straight-forward in terms of navigation, and the designers of the game took care as to not provide many distracting elements within game play. The nature of the adventure game itself required some awareness and attention to detail, but in the later stages, it was easier to lose awareness of the environment outside of the game.

With third-person perspective, the Scoresby and Shelton research indicated that some players had problems feeling presence because they could not relate to the player-character they were controlling in the

game. However, some players felt presence in third-person perspective by feeling that they were inseparable companions with the character despite not acting as the character. In Bad Mojo this feeling increased as the game progressed, and was particularly evident in the "rescue" mission. In some cases, players in the research mentioned that they could not see where player-character was looking and therefore could not progress as they wanted in the game environment. The players then became frustrated, limiting their progress toward states of presence and flow. Others felt they had a broader view of the environment and were not distracted by feelings that something or someone was "behind" them, similar to results reported by Taylor (2002). The tile-like view of a static environment in Bad Mojo meant that moving your roach to the edge of the environment would trigger the change to a "new" overhead view. In some ways this was a unique third-person perspective that mirrored neither the broad view of a gods-eye look, nor the over-the-shoulder view one experiences in a game like American McGee's Alice. Some might have considered this tile "loading" as a disconnect or "shock" that would distract from presence and flow. In another sense, it could be considered the most convenient compromise between third-person perspectives which helped to enhance flow-like experiences within
game play.

Perspective wrap

So, recent research has indicated that enjoying the content, having an emotional connection with the game, being motivated to succeed by completing challenges, and becoming engaged with the game through interaction gave players a better chance to achieve feelings of presence and to reach a state of flow. Reflecting on the research results from a typical third-person perspective in the case of Bad Mojo, minimal feelings of both flow and presence were achieved. First, in passing through a stage of content to emotion, my personal preferences tended to lean toward having a more detached view of my character. There were few distracters that existed within the game, a nod toward effective programming by the designers. In getting emotionally involved, the genre of "adventure" game is very appealing, as I find the pacing and strategy of this type of game more appealing than other styles, such as traditional arcade or shooting games. The content of Bad Mojo was especially interesting, in both the presentation of B-movie styles as well as taking on the guise and movements of a miniature protagonist. The narrative was interesting, just as in any "successful" adventure game, and for these elements and more, I found the game to be quite motivating. In moving from

motivation to engagement within the game, I can see how gender differences may have ultimately affected how players may reach feelings of presence or flow. This game, in particular, has a large ick-factor in ways that go beyond computer simulated blood-and-guts games. The backgrounds and activities are realistic in appearance, which makes players either cringe in titillation or disgust. To me, it was simply delightful.

The research suggests that a game's perspective can influence progress towards feelings of presence and flow, depending on the players' personal preferences. When game designers are sensitive to the cognitive requirements placed on the players by not distracting players with complex character controls and by giving opportunities for players to reflect and think about what they are doing, reaching flow or feeling presence can be more easily achieved. This is certainly the case for Bad Mojo, which did its best to not create distractions with complex controls while providing plenty of opportunities to relax, enjoy the scenery, and think about what their roach should do next. Despite this, there exists numerous issues in effectively or consistently reaching states of presence or flow from playing Bad Mojo, whether it is the content, genre or personal style preference. But perhaps equally important is that reaching those states did not seem crucial to my ultimate pleasure of playing. This game has stuck in my mind as one of the all-time greats, and I could not care less about whether I felt like, "I was there," or how often I lost track of time. With that in mind, are educational game researchers wasting their time in studying aspects of flow and presence when designing effective games for learning? Perhaps, but it is more likely that game research should account for other factors beyond flow and presence when considering what makes for a good game.

Noting perspective within the Bad Mojo puzzles made it unique, much in the way all games that have the player "miniaturized" might do. For example, Army Men: Air Attack (1999) has you play as the toy helicopter for the little plastic green army men that many of us enjoyed as children. Your objective in that game is to assist the green army men against the faction of tan plastic army men by securing various areas common around suburban neighborhood homes. The environments navigated by your helicopter are the familiar scenes occupied by the little plastic toys themselves: an outdoor sandbox, a picnic in the backyard, and a kitchen floor and a family room. However, everything from this perspective seems to be giant-sized. Saving the picnic from invading ants seems a giant task for a toy helicopter; only using a grappling hook to take the sugary sweets from the picnic blanket saves your plastic comrades. A

similar notion of giant-sized perspectives can be experienced in other games too, such as the legendary Katamari Damacy (Takahashi, 2004). This game provides a similar change in the size-of-the-world as the player, in third-person perspective, rolls an adhesive ball around the environment that picks up everything in its path. As the levels progress, the player and ball become larger as the surrounding environments shrink. What begins as an exercise in picking up fruit five times larger than the player eventually becomes activity of rolling-up entire buildings as the giant ball becomes increasingly enormous.

Other games that play with ideas of perspective include the Metroid series (1986). This game attempts to take advantage of both first-and third-person perspectives within the same game: become a robot-like ball that the player sees over-the-shoulder to roll into tight spaces and fit inside small cracks. The ball-form also offers a different set of weapons and tactics in battle than in human-like form, which is viewed through traditional first-person shooter perspective. Changing between these perspectives is disruptive to presence and flow, in my experience, but was intriguing. Switching form also changes your abilities, as well as how you view the surrounding environment. Similarly, Paper Mario (2000) is part of the successful Mario Nintendo-based series that is mostly played in typical arcade perspective. You move the Mario character in horizontal progression in which backgrounds would move behind the character to indicate navigation. Paper Mario offers a unique twist on navigation, offering a move that would make Mario paper-thin and able to slip into cracks that would normally be un-available to a 2D character. Adding a pseudo third dimension to the typical navigation thereby added a twist on perspective that was previously absent from typical arcade fare. Newer games, not yet fully developed, also take a turn on multi-dimensional puzzling. Fez (Fish, DeGroot, & Bedard, 2010) has been popular among design and game festivals. Miegakure (Bosch, 2009) takes its lead from one of the most popular reads on multi-dimensionality: Flatland (Abbott, 1884).

Conclusion

Out of consideration for his parents, Gregor wanted to avoid being seen at the window during the day, the few square meters of the floor did not give him much room to crawl about, it was hard to just lie quietly through the night, his food soon stopped giving him any pleasure at all, and so, to entertain himself, he got into the habit of crawling up and down the walls and ceiling. He was especially fond of hanging from the ceiling; it was quite different from lying on the floor; he could

breathe more freely; his body had a light swing to it; and up there, relaxed and almost happy, it might happen that he would surprise even himself by letting go of the ceiling and landing on the floor with a crash. But now, of course, he had far better control of his body than before and, even with a fall as great as that, caused himself no damage.

Forward as north, then under the table, and forward as south. Traversing underneath surfaces, across horizontal surfaces, and underneath vertical surfaces, all the while never changing direction. The implications of perspective seem worth consideration from the game designer's standpoint of what it means to be entertained, to feel enveloped by a virtual environment, and to be cognitively engrossed within an activity. In fact, the world from the perspective of a cockroach reveals special consideration as to how we relate to the environment around us, as well as tests the limits of how easily we empathize with our game-playing alter egos. We dislike what we see in the mirrors and what is underfoot every day. Interaction with the environment feels constraining and awkward. What might normally be unappetizing or frightening becomes commonplace and necessary for our existence. Heroism takes on new forms. Death is a way of life. It turns out that the multiple perspectives of a cockroach are as complex as they are entertaining.

Endnotes

75 Excerpts are from the Project Gutenberg EBook of The Metamorphosis, by Franz Kafka Translated by David Wyllie. Release Date: August 16, 2005 [EBook #5200]

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