Body Centred Interaction: Meaningful Design and Aesthetic Distance

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Abstract

If we accept that video games are a form of art (Costikyan, 1994), then it is proposed that the concept of "aesthetic distance" should also apply to them; this is a literary term, defined by *Encyclopedia Britannica* as "the frame of reference that an artist creates by the use of technical devices in and around the work of art to differentiate it psychologically from reality" (2010). In other words, the aesthetic distance is the degree of separation required in order for a player to be able to be able to appreciate and critically evaluate a game as art.

This discussion explores this notion of aesthetic distance as it applies to video games, particularly in the context of innovations in controller technology, and the increasing trend toward interfaces which increasingly engage our bodily proprioceptive systems (our sense of the different parts of our body in relation to one another). This is a paradigm defined by Slater & Usoh (1994) as "Body Centred Interaction." That is, interaction techniques that match bodily proprioceptive and sensory data; in other words, the action you perform is the action you expect to see on the screen. Body Centred Interaction therefore includes gestural and kinesthetic control mechanisms, such as the Nintendo Wii, PlayStation Move, and Xbox Kinect, which have become increasingly notable for their commercial interest. Though the concept of gestural interfaces is not at all new (earlier examples include the *Nintendo Power Glove (Date)*, the *Sega Activator (Date)*, and so on), these previous examples were notably commercial failures. However, due to improvements in sensor technology being able to more accurately reflect a player's real-life bodily input within a game, novel interfaces of all types are becoming more prevalent.

This discussion draws upon not only interaction design and psychology, but also cognitive science, aesthetic theory, and moral philosophy. Subsequently, this discussion seeks to encourage consideration of the implications this may have upon game design, both in considering ethical issues, and in terms of positive, new possibilities.

In framing this discussion, it is useful to begin with the oft-cited example of *Manhunt 2*, about which four United States Senators wrote a letter to the Entertainment Software Rating Board (ESRB) to suggest it reconsider its ratings system. Notably, their concerns specifically addressed the fact that the game was available for the Nintendo Wii. The senators claimed that the "system permits children to act out each of the many graphic torture scenes and murders in Manhunt 2 rather than simply manipulating a game pad" (Tapper, 2007). Regardless of the fact that this statement misrepresents the target audience of the game, it is seemingly the kinesthetic mimicry of the motion-sensing Wii Remote controller that raises questions here: that is, the way in which the violent actions occurring onscreen must be physically *acted out* by the player, using the Wii Remote. In other words, the game provides a close mapping between the player's real-world action, and the in-game action.

Additionally, *Manhunt 2* was the first game for ten years to be rejected for classification by the British Board of Film Classification (responsible for regulating films and video games in the UK) ("BBFC Rejects Video Game Manhunt 2", 2007)). The statement claimed that the game "constantly encourages visceral killing with exceptionally little alleviation or distancing." The use of the word distancing is interesting here, as it is reminiscent of the notion of aesthetic distance; the separation between the work of art (in this case, the game) and the player. Also, the US Senators' statement about Manhunt 2 involving "acting out" rather than "simply manipulating a game pad" is interesting, as this makes assertions about the degree of mapping between the controller and the game, and seemingly,

the effect this has on "distancing". Therefore, it is useful here to define the relationship between the player and the controller in light of these statements.

Philosophers, psychologists, scientists, and interaction designers increasingly assert that our bodily perceptions are the "ultimate foundation of our knowledge about ourselves and the world." (Slater & Usoh, 1994) As noted by Klemmer (2006), "direct physical interaction with the world is a key constituting factor of cognitive development during childhood." Clark (2008) states that "human sensing, learning, thought, and feeling are all structured and informed by our body-based interactions with the world around us." (p. xxvi) In short, human experience is shaped by our very physicality and our presence in the world; we recognize the world through our ability to physically act within it.

Similarly, interaction with video games via a control mechanism is always also inherently physical; the video game controller is a player's crucial link to the game world, mediating the interaction between the player and the game. These controllers may take the form of gamepads, joysticks, keyboards, computer mice, steering wheels, plastic instruments, dance mats, and so on. Interfaces which are kinesthetic or gestural (those which allow for movement or gestures respectively, such as the Nintendo Wii, Microsoft's Kinect, and Sony's PlayStation Move), mimetic interfaces (those which closely resemble their real-life counterparts in appearance and/or their use, such as the Rock Band or Guitar Hero series), or indeed, the classic controller (the traditional joystick-and-buttons gamepad) are all, nonetheless, notable for the physicality of the interaction they offer.

Even with a classic controller, then, there is still a sense of spatial compliance; moving an avatar left, for example, also generally involves pressing the thumb stick or directional pad to the left. Thus, the space of play, including the body, has always been implicated in the game experience to some degree. Indeed, all games depend upon the primacy of the everyday world, regardless of the type of control mechanism, depend upon the primacy of the everyday world; Indeed, it can be argued that video games take advantage of a player's knowledge of *sensorimotor dependencies* to varying extents; that is "our (implicit, nonconscious) knowledge or expectations concerning the many complex ways perceptual stimulations will morph and alter as we move our eyes, heads, and bodies." Gregersen & Grodal (2009) assert that the extent to which an embodied sense of agency, ownership, and personal efficacy is fostered is very much a question of overall design including interface design, and note how games may be designed to selectively target and activate the auditory, visual, and proprioceptive systems. The nature of this primacy and the extent to which a player's bodily proprioceptive systems are required for a game determines the degree of phenomenological embodiment, or "being able to act through one's technologically enhanced body." (Biocca, 1997)

Traditional, abstract video games tend to require a low level of a player's sense of proprioception; for example, *Tetris*, whilst requiring spatial reasoning, does not take advantage of the body's proprioceptive systems, whereas a fully immersive virtual reality system engages propriocepion and other sensorimotor dependencies to a much fuller degree. Indeed, the difference between *Tetris* and a first person shooter such as *Halo*, even when played on the same platform (for example, the PC), is the player's awareness of the sensorimotor dependencies required to play the game; the player's sense of proprioception. The sense of direction for an avatar in the game world equates to the player's own bodily sense of direction; the player uses their real world knowledge to know how to navigate the game world, due to the sense of spatial compliance. There is, then, a sense of increased sensorimotor verisimilitude, and this extends a player's sense of phenomenological embodiment. Indeed, Slater & Usoh (1994) term interaction techniques that match bodily proprioceptive and sensory data as "Body Centred Interaction", and, referring to virtual reality, empirically show that a user's sense of *being there* within a virtual environment is maximized in such settings. It can be argued that matching such data also proprioceptively extends a player's sense of embodiment, being able to act through their technologically enhanced body.

One can think of all video games, then, to exist along a spectrum spanning from abstract controls, to full-on "simulation", depending on the level of engagement of our sensorimotor dependencies and thus, phenomenological embodiment.

Regarding the 'abstract' end of the spectrum, Poole (2000) theorizes that the 'distant mapping' of the classic controller enforces a sense of alienation from the game world, which he terms as "cybernetic dissonance. Such a notion is again reminiscent of aesthetic distance; that is, the way in which a degree of separation is required for a player to be able to appreciate a work, in this case, a game, as 'art'. In the same way that moving up the abstraction-simulation spectrum extends phenomenological embodiment, it is also posited that aesthetic distance is narrowed.

Indeed, aesthetic distance is a term coined by Edward Bullough, who wrote:

> *Distance ...is obtained by separating the object and its appeal from one's own self, by putting it out of gear with practical needs and ends. Thereby the 'contemplation' of the object becomes alone possible. But it does not mean that the relation between the self and the object is broken to the extent of becoming 'impersonal.'* (Bullough, 1912)

The notion of aesthetic distance is also akin to German playwright Brecht's "alienation effect"; that is, techniques used in his "epic theatre" in order to 'alienate' the play, reminding the spectators that they were experiencing a representation, rather than reality. This arose from his criticism of Aristotelian theatre, which he saw as keeping the audience immersed without giving them a chance to take a step back and critically think about what is happening on stage. According to Brecht, the audience are, in traditional 'dramatic theatre', encouraged to "enter into the emotions expressed by the actors, and are temporarily taken in by the dramatic illusion", and "lulled into acceptance of what they see presented on the stage." In contrast to this, Brecht forced them to think about what they were watching, thus forcing the audience to be "conscious observers". Blackman (1998) describes similar critiques made by interactive artists, in which the user's expectations were deliberately played around with by introducing into the electronic art works 'bugs' and 'malfunctions', in order to 'disturb' the choice offered to the user; these attempt to 'force the user to reflect upon their own preconceived expectations and desires within virtual space.

Of course, such a viewpoint also assumes that art has an effect upon morality; Sheppard states that "Brecht was concerned with the effects of his plays on the audience." (1987) With regards to moral philosophy and ethics, we may define 'moral' within the framework of normative ethics; that is, a consideration for the rules, or norms, for our moral behavior, and the way we assess what is right and wrong, in everyday life (Stewart, 2009).

In Brecht's viewpoint, the aesthetic distance purposefully employed in his epic theatre forces an audience to "think about what they see so that they leave the theatre roused to take action and change the world"; therefore, rather than relying on an inherently virtuous audience, Brecht wants an audience to reflect morally as a result of the aesthetic distance. The concern Brecht shows for the effect of theatre upon the audience is a utilitarian viewpoint, concerned with the consequences of an action; this is similar to the concern the US Senators show regarding *Manhunt 2*, that "you're basically teaching a child the behavioural sequencing of killing." In the same way that Brecht alienates his audience, the US Senators appear to suggest that the cybernetic dissonance afforded by "simply manipulating a game pad" enforces a sense of aesthetic distance.

From this viewpoint, considering that an extended sense of phenomenological embodiment narrows aesthetic distance within video games seems a pessimistic outlook. Sheppard states that "the claim is often made that the moral value of art lies in its ability to give us imaginative insight into other people" (1987) so we may ask then, whether meaningful game design, to teach "moral value" is not possible with gestural and kinesthetic control mechanisms.

However, it is suggested that instead, a virtue ethics framework is useful in regarding video games. Virtue ethics is a moral philosophy assuming that what is ethical is defined not only by what "conventional morality requires," but

also by "what a virtuous person," or in this case, a virtuous *player*, would do. This perhaps echoes Aristotle's virtues as related to "what the man of practical wisdom would determine." Thus, Sicart asserts that: "the virtue ethics approach is essentially player-centered. It defines players as virtuous beings who make game play choices informed by their practical wisdom, guided by the presence (or absence) of a number of player-specific virtues." Therefore, virtuous players are able to cognitively distance themselves from a game experience, in order to step back and critically reflect upon their actions. Indeed, Salen & Zimmerman (2004) assert that the way in which games create meaning for players is via a mechanism of "double-consciousness", a "multilayered experience" that is "something separate from, but connected to the real world". In this sense, the player is a virtuous one, fully aware of their game character (where appropriate) as an artificial construct.

Certainly, Bogost (2009), in discussing *Manhunt 2* in a column entitled *'Gestures as Meaning'*, also claims, "the game's coupling of gestures to violent acts makes them more, not less repugnant by implicating the player in their commitment". He asserts that "in *Manhunt 2*, we are meant to feel the power of Daniel Lamb's psychopathy alongside our own disgust at it. It is a game that helps us see how thin the line can be between madness and reason by making us perform abuse." Of course, such an assertion relies upon the notion of a virtuous player. Whilst an increased sense of phenomenological embodiment may strengthen the rhetoric of a game seeking to highlight the reprehensible nature of violent action, it simultaneously creates a dangerous sense of close identification for those who would seek to misuse such an experience.

This narrowing aesthetic distance gives rise to interesting ethical issues, but also, opens up many opportunities for meaningful design. As posited by Sheppard, "enriching our aesthetic experience goes together with developing our powers of imagination and understanding… If we develop our ability to respond to art, we shall develop our potential as human beings." (1987)