

Avatar-Kinaesthetics as Characterisation Statements in *Horizon: Zero Dawn*

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The kinaesthetic aspect of digital games has been approached in various ways: Karhulahti (2013) explores kinaesthetic gaming challenges as dependent on nontrivial psychomotor effort; Calleja (2011) studies kinaesthetic involvement in relation to the agency of the player; Newman (2002) argues that the pleasures of video game play are primarily kinaesthetic; and, from a more design-centric approach, Swink (2009) examines the role of kinesthesia in relation to *game feel*.

At the same time, there is an apparent trend towards studying video game characters in relation to their counterparts in more traditional storytelling media: Lankoski (2011) outlines a theory of how to make sense of *player characters* in digital games, based on the narrative theory of Rimmon-Kenan (2003), and Vella (2015) suggests revisions of Margolin's (1986) characterisation statements to understand the character aspect of the *playable figure*. All the while, numerous scholars have been busy arguing that we must be careful when examining games using theories and methods developed for a different medium (e.g. Aarseth, 2001; Lammes, 2007).

This study will attempt to combine inquiries into playable figures [1] with examination of the kinaesthetic experience linked to the avatar in question. As a specific case, this study will explore the *avatar-kinaesthetics* of *Horizon: Zero Dawn* (Guerrilla Games, 2017) (henceforth *HZD*), facilitated in part by the haptic feedback [2] of the PlayStation 4 DualShock controller.

Digital games have used haptic feedback since the mid-1970s (Wolf, 2008, p. 39), and the technology is continuously refined and utilized in new ways. *HZD* is a PlayStation 4 exclusive, which means that we can assume that the haptic feedback has been designed with this particular controller in mind. The fact that the game offers feedback on various

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actions across multiple modalities thus allows for in-depth analysis of the avatar-kinaesthetics in different situations.

Avatar-kinaesthetics is here meant to refer to the combined phenomenon of the haptic feedback of the controller and the audiovisual representation of the movement and actions of the avatar; feedback based on *player performance* [3]. An example of the simplest form is the haptic feedback generated by jumping with Aloy in *HZD*. While this type of kinaesthetic feedback is obviously designed to somehow “immerse” the player further in the game, we argue that it also functions as a characterisation statement, as the kinaesthetic feedback, combined with the audiovisual representation of the executed game, can serve the function of communicating information about the character-dimension of the playable figure, in this particular case a distinct sense of Aloy’s weight. This is notable when the kinaesthetic feedback is compared to that presented in the very early parts of the game, in which the player controls Aloy as a child. Similarly, the feedback triggered when commanding Aloy to (fully) draw her bow leaves the player with the sensation that Aloy is a skilled hunter, but it also strengthens the link between avatar and character, making Aloy seem more of an immediate *prosthetic extension* (Klevjer, 2007).

In the field of game studies, certain researchers have focused on the avatar in relation to the feeling of embodiment. Such studies include, for example, Klevjer’s (2007) work on the avatar as a prosthetic extension of the player. This understanding of the avatar becomes central to this investigation when linked to the view of kinaesthetics in cognitive science, where kinaesthetics is considered to be a more specific form of proprioception and defined as a perceptual awareness of bodily *movement* (Gapenne, 2011) and its composite dynamic qualities in their spatial, temporal, and force aspects (Sheets-Johnstone, 2010). Kinaesthetic changes are understood to happen on both the mechanical and the visual level, offering two complementary sources of kinaesthetic information (Lishman & Lee, 1973), both of which are accounted for in our interpretation of avatar-kinaesthetics in *HZD* through the analysis and discussion of haptic and audiovisual feedback.

Furthermore, in the case of *HZD*, as well as in most other third-person games, the player is not just responsible for controlling the movement of the avatar, but is also in charge of the *avatorial camera* (Klevjer, 2007) or *optical mechanism* (Karhulahti, 2013), adding yet another dimension to their kinaesthetic engagement with the avatar. Within the broader field of human-computer interaction, the integration of multimodal perceptual cues (such as visual, aural, and haptic) has already been identified as contributing to the sense of *presence* in virtual environments (Biocca et al., 2001, p. 260). Consequently, we argue that the multiple forms of feedback in relation to the player’s kinaesthetic engagement in *HZD* contribute not only to a stronger prosthetic relationship with the avatar, but also to a better understanding of the character dimension of the playable figure.

Thus, the central argument of this study is that the avatar-kinaesthetics in these examples can be understood both in relation to the player’s immediate control- and feel of the avatar, but also in relation to the character dimension of this playable figure. As such, it becomes meaningful to study exactly how avatar-kinaesthetics function in contributing to the character-dimension of the playable figure. To do so, we will build on Margolin’s (1986) theory of *characterisation statements*, which approaches action as a basis for characterisation. The theory has been revised by Vella (2015) in the context of digital

games, and, building on both versions of characterisation statement-theory, this framework will help us situate avatar-kinaesthetics as a means for characterising avatars in digital games.

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ENDNOTES

1. We follow Vella's (2015) terminology where the *playable figure* consists of respectively *avatar*, a component under the player's direct control in the "game-as-system", and *character*, a representation of an individual within the "game-as-heterocosm".
2. *Haptic* is here used to refer to "dynamic aspects of touch" (Carter & Fourney, 2005, p. 85); with regards to the PlayStation 4 controller, haptic feedback is understood as the vibration triggered by certain in-game actions or states.
3. This means that certain types of haptic feedback are excluded, e.g. vibrations indicating world-events in cutscenes, where the player has no control of the avatar.