

This paper analyzes first-person shooter interfaces from an information seeking behaviour framework. Information seeking behaviour proposes that individuals pose information queries to bridge gaps in their knowledge. These cognitive gaps occur in daily life and normally involve processes outside the standard model of information retrieval (like searching a library catalogue). Individuals attempt to gather information to overcome these cognitive gaps using a variety of approaches from using the Internet to reading a book to consulting with a friend. This cognitive gap model is similar to challenges in video games. Players encounter challenges that requires a series of decisions to complete. To overcome these challenges or cognitive gaps, players must gather information and create a strategy to solve the challenge. The information presented in a video game assists players to overcome cognitive gaps and complete challenges. As the first-person shooter genre develops, the type of information presented in the interface has changed. This paper conducts a historical analysis of FPS interfaces and documents their development as information sources. This paper finds that FPS interfaces have provided players with increasing amounts of information to help them overcome challenges and bridge cognitive gaps. In modern FPS games like Battlefield 3 and Call of Duty: Modern Warfare 3, information is provided during moments of failure and provides rich encounters to help players bridge their cognitive gaps.

Jesper Juul defines video games as the intersection between rules and fiction. “Rules are definitive descriptions of what can and cannot be done in a game, and they provide challenges that the player must gradually learn to overcome. Fiction is ambiguous - the game can project more or less coherent fictional worlds that the player then may imagine” (Juul, 2005, p. 197). Based on Juul’s definition, we can understand video games as a series of challenges. The rules of

the game and the fictional world creates challenges for the player. The basic paradox of video games (and all games) is the rules themselves are “generally definite, unambiguous, and easy to use... [but] the enjoyment of a game depends on these easy-to-use rules presenting challenges that cannot be easily overcome” (Juul, 2005, p. 5). Playing a game is a process of skill development to overcome these challenges. Players encounter challenges that requires a series of decisions to complete. To overcome these challenges, players must gather information and create a strategy to solve the challenge. However, this is not a straightforward process and results in multiple in-game failures for players.

Information seeking behaviour theorizes the way people search for information and use information. Information behaviour describes “how people need, seek, manage, give and use information in different contexts” (Savolainen, 2010, p. 1781) and analyzes how people make sense of their worlds (Dervin, 2003, p. 223). Dervin’s sense making metaphor describes humans as moving through time and space until reaching a “cognitive gap”. Individuals must find new information to address this cognitive gap before they can move forward, or make sense of the situation. (Dervin, 1992, p. 67-70). An individual actively searches for meaning through a constructive information-seeking process to increase his/her knowledge on a topic or problem (Kuhlthau, 1991, p. 361). Information seeking behaviour provides a framework to understand interface design in first-person shooter and first-person perspective video games since the 1970s.

This paper concludes that failure provides a unique instance for players to learn from their mistakes and bridge cognitive gaps in their strategy. This also resonates with Juul’s study on failure and player responsibility. Juul’s study confirms that players enjoy feeling responsible for failing in a game. Failure pushes the player into reconsidering strategy, and failure therefore adds

content to the game by introducing problem solving into the game experience. The challenge for developers is creating a game with the right level of failure. Failure, Juul argues, is a core component of video games, closely intertwined with the learning component of game play (Juul, 2009). FPS developers Infinity Ward and DICE have capitalized on failure as an opportunity for learning with their variations on the “kill-cam”, where the game provides information on how a player’s mistakes lead to their death. This paper proposes that failure provides a key instance for feedback to the player. Games (other than first-person shooters) can use failure as a teachable moment and incorporate failure as an information seeking behaviour instance. Failure helps players bridge cognitive gaps.

Keywords: interface, information seeking behaviour, first-person shooters

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