Spatial Presence, Psychophysiology, and Game(play) Emotions

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Keywords
Affect, emotion, cognition, embodiment, experience, reflex, startle, presence, VR

EMOTION-DIRECTEDNESS

This extended abstract proposes a means of classifying the "residual affect" of vertigo, startles, and similar forms of innate, autonomic response easily triggered in and by immersive Virtual Reality (VR). Employing a formal–functionalist approach, I first summarise relevant work on cognition and game emotion, then discuss how acute, involuntary responses to VR stimuli (1) necessarily feed into player experience and (2) correspond with existing categories for game emotion.

Perron (2005; 2013), in line with Tan (1996) and cognitive media theory more broadly (Gregersen, 2014: 422), refers to diegetic and extradiegetic concerns in distinguishing between narrative emotions and those tied to our active, embodied experience of games. Fiction emotions (*F emotions*) are those cued by diegesis. They are vicarious, empathic concerns directed at narrative agents' relations and situations. Consider the death of Aeris in *Final Fantasy VII* (Squaresoft, 1997). Players moved by this narrative kernel can be said to have experienced *F emotions*. Oppositely, players who relished Aeris's slaying may have done so because they were unimpressed with her performance in battle. These players can be said to have responded more with reference to their own (extradiegetic) gameplay concerns than those of the narrative agents. Such are gameplay emotions (*G emotions*), which stem from—and are directed towards—mediated action. *G emotions* pertain primarily to players' exercise of in-game agency and the subsequent response of the game-world. By contrast, artefact emotions (*A emotions*) refer to (meta-)emotions or affective states brought about by the player's recognition of a game artefact's status as human-made. Typical *A emotions* include our responses to artful plot devices, graphical finesse, cunning AI behaviour, or, conversely, glitches and rickety mechanics.

What, then, can be said of affect generated in and by immersive VR experiences? Here the media apparatus strives for immediacy or transparency and, in bootstrapping an often insurmountable impression of spatial presence, is capable of tricking us—if only momentarily—into believing that a simulated threat is real. Crucially, users react to such situations as though it is *themselves* (and not their avatars) who are in *actual* danger.

(One may note, at this juncture, that I refer to the work of Russell and Barrett (e.g. 1999) in differentiating between core affect and prototypical emotional episodes.)

Proceedings of 1st International Joint Conference of DiGRA and FDG

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GEARED TO AROUSE & AFFECT

Certain VR tropes are remarkably dependable in eliciting intense psychophysiological–affective responses. The much-replicated "pit demo", for instance, leverages spatial presence by exposing its users to the perceptually convincing illusion of a sheer drop. Further examples can be seen in VR setups devoted to the clinical study and experimental treatment of phobias and other maladaptive thought patterns. Here I refer to the sensation of vertigo imparted by VR demos simulating heights, to the startle response, and (implicitly and by extension) to motor responses such as the withdrawal reflex also.

VR scenarios that co-opt visuo-vestibular channels or startle us exploit our relative inability to override sub-personal physiological responses. Imagine you are in a VR demo in which you overlook a precipice. You stare down into the void and feel dizzy in spite of the fact that you *know*, consciously and rationally, that you are standing in Oculus's booth at E3. Suddenly, a monster jumps into view and knocks you into the canyon. The beast's unexpected appearance evokes a startle response. As you plunge towards the virtual ground, your viscera lurch further. In all, you remember the experience as having been more tense and taxing than fun. This vignette hints at how physiological arousal can modulate "higher" cognitions: Core affect tied to reflexes and viscera states can *persist*, colouring players' ongoing emotional appraisal of a VR experience.

The key issue is whether or not autonomic affect is subsumable under current categories for game emotion. The VR stimuli described here are acted upon by the embodied player instinctually and as if veridical; understood *at first* as heralding real threat. In this way, VR affect distances itself from *G emotions*, since these typically emerge in relation to action that the player recognises as mediated. A good VR experience will, upon reflection, draw attention to the subtlety of the medium, thus eliciting *A emotions* also. Yet VR-cued reflexes are egocentric and do not (initially, at least) acknowledge diegesis, gameplay, or apparatus. Pre-rationally affective VR events can be seen as inviting the creation of a new sub-category of game emotion. The term "*I emotions*" might sensibly denote the spatial presence effects discussed here. ("*I*" referring jointly to immersion and to the subjective self.) *I emotions* entail the psychophysiology of core affect and self-reflexive emotional episodes brought about involuntarily by VR events misperceived *as actual*. The most intuitable examples of *I emotions* are synchronous with the sensations that accompany falling, flinching, or being startled.

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