

Affective Ludology: Reflecting on Fun, Measurement, and User Experience in Interactive Entertainment

Presentation Abstract:

Digital games provide the most engaging interactive experiences. The research in interactive entertainment, especially in gameplay experience is stimulated mainly from the research communities of science and technology (e.g., human-computer interaction, physiological and entertainment computing) and social science (e.g., media psychology, psychophysiology, and communication sciences). This talk is located at the intersection of these research areas, bringing together emerging methodological and scientific approaches from these multi-faceted communities. In this talk I will discuss and explain work in the field of affective ludology, which is focuses on game analysis and player-centered design. Three important results from my Ph.D. research are presented: (1) the establishment of an objective/subjective correlation methodology founded on psychophysiological methods, (2) the creation of a formal theoretical framework in which one can conduct user experience (UX) research related to games, and (3) the combined results of cognitive and emotional investigations for describing, defining, and classifying the interactive relationship between players and games.

You will be able to take away three methodologies for measuring user experience in games from this talk. First, the objective assessment of physiological user responses together with automated event-logging techniques, so called game metrics, will show how to collect essential player- and game-related variables for a comprehensive understanding of their interaction. Second, using psychometric questionnaires will allow a reliable assessment of players' subjective emotion and cognition during gameplay. Third, the combination of the two approaches allows cross-correlations and inferences to be made about gameplay experience with focus on human-machine interaction.

We will briefly discuss the many possibilities that open from this research. For example, the inclusion of more complex and detailed gameplay metrics data together with psychophysiological metrics will enable a comprehensive analysis of player behavior, attention, and motivation.

Mini Bio:

Lennart Nacke is a Ph.D. candidate in Digital Game Development at Blekinge Institute of Technology, Sweden, where he has recently finished writing his doctoral thesis titled "Affective Ludology: Scientific Measurement of User Experience in Interactive Entertainment." He has chaired and organized several expert panels on psychophysiological player measurement and game UX at academic conferences (e.g., DiGRA, Future Play) and industry venues (e.g., GDC Canada, Quo Vadis Berlin). As much as an avid gamer, he is a passionate scientist, whose research interests are psychophysiological player testing with EEG (i.e., brainwaves) and EMG (i.e., facial muscle contractions) as well as quantification of gameplay experience in player-game interaction, technology driven innovation (e.g., playability metrics, physiological computing) and innovative interaction design with digital entertainment technologies.