UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Workshop on the Cognitive Science of Games and Gameplay

Permalink

https://escholarship.org/uc/item/38q6r5xv

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 28(28)

ISSN

1069-7977

Authors

Holopainen, Jussi
Ijsselsteijn, Wijnand A.
Lindley, Craig A.
et al.

Publication Date

2006

Peer reviewed

Workshop on the Cognitive Science of Games and Gameplay

Craig A. Lindley (craig.lindley@hgo.se), Charlotte Sennersten (charlotte.sennersten@hgo.se)
Game Design, Cognition and Artificial Intelligence Research Group
Gotland University College and Blekinge Technical College, Cramergatan 3, SE-621 86, Sweden

Jussi Holopainen (jussi.holopainen@nokia.com)
Nokia Research Centre, Finland

Wijnand A. IJsselsteijn (W.A.IJsselsteijn@tm.tue.nl)
Human-Technology Interaction Group, Department of Technology Management, Technical University of Eindhoven,
Nederlands

Simon Niedenthal (Simon.Niedenthal@k3.mah.se)
School of Arts and Communication, Malmö University, Beijerskajen 8, 205 06 Malmö, Sweden

Niklas Ravaja (ravaja@hse.fi)
Center for Knowledge and Innovation Research, Helsinki School of Economics, Tammasaarenkatu 3, FIN-00180 Helsinki,
Finland

Keywords: games; gameplay; ludology.

Abstract

Cognitive science has always had a strong relationship with games and game play. Simple cognition tests frequently have the form of games, and games like chess have provided traditional models of intense cognitive challenges. Ongoing advances in computer game technology have supported the creation of commercial games presenting a wide variety of cognitive challenges embedded within rich, engaging audiovisual worlds. The growth of computer games as an entertainment technology and medium is having a major cultural and social impact, with game players frequently spending large portions of their discretional time deeply immersed in game play.

Despite the emergence of computer games as a major cultural and economic force, the scientific study of complex games is in its very early stages. Methodologies and theoretical paradigms are still being established, and the world waits for substantial results before game systems can be more fully deployed across broad application areas. Games are fundamentally learning systems and this is of particular interest, both from the perspective of the cognitive changes in players arising from entertainment gameplay (and their attendant social implications) and from the perspective of how games might function in more specific pedagogical and therapeutic contexts.

Theories and methods from cognitive science appear to be among the most promising for studying the structure, dynamics, affects and effects of games and game play. Moreover, computer games provide rich, multi-modal, controllable environments for conducting cognitive experiments having potentially higher ecological validity than the rarefied experiments of traditional cognitive psychology.

This workshop aims to bring together cognitive scientists interested in game phenomena, cognitive scientists interested in using games as a research tool, game researchers interested in cognitive approaches to the study of games, and game researchers interested in games for the study of cognition. The aim of this workshop is to consolidate and focus these interests in a new field of the Cognitive Science of Games and Game Play. Topics of interest include but are not limited to:

- cognition-based theoretical frameworks for the study of games and gameplay
- games as a methodological tool for cognition research
- emotion and aesthetics of games and game engagement
- cognitive neurophysiology of games and play
- cognitive foundations of game design principles
- cognitive and perceptual substructure of game interaction
- effects of game play upon player cognitive processes
- schemata involved in game play
- player modelling and motivational factors
- computational modelling of players, play processes, tactics, strategies and learning
- game interaction as a basis of cognitive modelling
- perceptual loading, attention and cognitive capacity management in game play
- empirical study of games; methods, results and interpretations
- social cognition and multiplayer games
- the cognitive substructure of fun