The Activity of Play

Martin Pichlmair

IT University Copenhagen
Rued Langgaards Vej 7
2300 København S
mpic@itu.dk

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INTRODUCTION

This paper presents Activity Theory as a framework for understanding the action of playing games with the intention of building a foundation for the creation of new game design tools and methods. Activity Theory, an epistemological framework rooted in Soviet psychology of the first half of the 20th century, has a long history and was only recently applied to HCI (Nardi 1996) and games (P. Barr et al. 2007), where Barr succeeded in situating play in the Activity Theory framework. Based on his work to establish a framework for analysing systems of values in games, this paper maps different levels of interaction with games to concepts of Activity Theory in order to be able to design gameplay on those levels more effectively. The authors think that Activity Theory can provide a foundation for a new theoretical framework for game design.

THE ACTIVITY OF PLAY

Activity Theory is based on three core principles on how humans interact with the world. The first of these principles is the unity of consciousness and activity. The mind, according to Activity Theory, emerges as "a special component of human interaction with the environment" (Kaptelinin 1996). While the primary conclusion of this is that the mind can only be understood in terms of its activities, this aspect goes beyond the scope of this project. The phenomenon described here is closely related to what is called "doing for the sake of knowing" in design theory and pragmatism (Gedenryd 1998, but also Dewey 1929 and Tolman and Piekkola 1989). Cognitive psychologists refer to a related phenomenon as "embodied cognition" (Kirsh and Maglio, 1992).

The second principle of Activity Theory, object-orientedness, stands for the fact that objects in the environment are perceived as a combination of objective features and culturally determined ones (Kaptelini 1996). For games, this means that the sum of all perceived features of a game object defines its role in the game. A pot that can be smashed to reveal a treasure retains its culturally implied role of being a vessel, while being objectified in its new role as a gold dispenser.

The third principle of Activity Theory is the hierarchical nature of human activity. Kaptelinin (1996), based on pioneering Activity Theory researcher A. Leont'ev (1978), describes a human's actions as situated in a hierarchical system of three layers, according to their dominant motivation: activities satisfy needs, actions are directed towards goals and operations are determined by actual conditions of activity. This hierarchy can be mapped to levels of interaction (compare also Sicart 2015, Cook 2012) as outlined by table 1. This table forms the starting point for further inquiry. The next step in this research is to map play actions adequately complete and detailed to these three levels based on concrete games.

Activity Level	Exercised by players to satisfy a motivation extrinsic to the game.	Session, Daily Runs, Achievements, Challenges, League matches
Action Level	Main sequential actions that have to be performed to progress in the game or to achieve other conscious goals.	Matches, Boss fights, Levels, Stages
Operational Level	Routinizable player actions that are structured by the conditions of the game.	Jumping, Accelerating, Selecting, Throwing, Shooting

Table 1: Mapping of hierarchy of human actions to gameplay

FUTURE OUTLOOK

The goal of this research is to develop a starting point for a framework for describing gameplay activities and game feel on several levels. This refined view of game feel is then used to develop new tools and methods for game design. If game design is understood as the act of shaping the experience on the three presented levels, an exact mapping between game mechanics and the levels is the next concrete step. Understanding the relation between game mechanics, game loops and game feel is another necessary step. Creating mechanisms, processes and tools that allow control over game feel (Swink 2009) on all presented levels is the final step of this research endeavour.

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