

Theorizing Process in Digital Games

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Abstract

A Ph.D. candidate can not defense his research without applying rigorous scientific theories and methods. Furthermore, by applying theories and methods a researcher can position himself and the research in the scientific community.

An interim on-going struggle has to be resolved, however. Probably, many Ph.D. students writing their dissertation about digital games are wondering how to fill the theory gap research by applying theories and methods from other disciplines due to the lack of well established theories of digital games. Yet, one may ask: am I doing research for the discipline of information systems, marketing, digital games or something else?

I intent to solve this problem by briefly presenting some perspectives from information systems science about the good components of theory, theorizing process, a method and apply them to the discipline of digital games.

Key words: digital games, theory, theorizing, consumer behavior

Introduction

It has been claimed that there is no theory developed and that the methods used are inadequate for digital games to be a proper independent discipline (Aarseth 2003). The purpose of this essay is briefly present some of the underlying issues of theory and methods that make research studies of digital games business interesting and valid. I closely refer to my own research area, the business of digital games and consumer behavior. I do it according to the rules and methods applied in the discipline of information systems science. My objective is to take a pragmatic perspective on digital games studies rather than discussing the philosophical foundations of science.

Academic research on consumer behavior has been extensively conducted from different perspectives such as marketing (Blackwell et al. 2006; Foxall 2005; Keller et al. 2006), economics (Darby et al. 1973; Nelson 1970; Shapiro et al. 1999; Stigler 1961; Varian et al. 2004), social psychology (Ajzen 2005) and information systems (Saeed et al. 2003; Venkatesh et al. 2003). Similarly, digital games research has been conducted for over 30 years in many different scientific disciplines and perspectives such as health, information technology and social sciences (Bragge et al. 2007). In spite of thousands research studies made about digital games there are only a few that focus on theorizing consumer the business of digital games.

This exploration of theorizing digital games and consumer behavior is both necessary and timely. Digital games are a good example of information technology (IT) which have had an impact to people's every day lives (ESA 2007; Farrand et al. 2006; Kallio et al. 2007; Raessens et al. 2005; Rutter et al. 2006). Secondly, digital games are especially good example of products that involve many different aspects of consumer behavior such as technology adoption (Davis 1989), innovation diffusion (Rogers 1983), social norms (Bearden et al. 1982), feelings (Holbrook et al. 1982) and other motivational factors (Gagné et al. 2005). Thirdly, digital games production have grown to be significant business (Crandall et al. 2006; Siwek 2007). Actually, digital gaming is not just an industry of games but it has already different extensions like movies, toys, comics etc.

(Rust et al. 2004). Fourthly, despite the increasing offer and demand for digital games, to our best knowledge, there is little research that has focused on the business aspects of these goods (Bragge et al. 2007). Fifthly, digital game business is rich in the ways of revenue models and capturing consumer attention. In the research of digital games it is also relevant to understand user perceptions towards technologies and user consumption values (Sheng et al. 2007).

Theorizing Process

According to Kerlinger (1973) the purpose of science is theory. However, all disciplines struggle with controversies in them (La Tour 1987). The purpose of the theory is to provide explanations, predictions and being testable (Gregor 2006). In Weick's (1995) words: *"a good theory explains, predicts and delight's"*.

Sutton and Staw (1995) define theories as *"connections among phenomena, a story about why acts, events, structure, and thoughts occur."*. Similarly, Kerlinger (1973) defines a good theory as *"a set of interrelated constructs (variables) definitions, and propositions that presents a systematic view on phenomena by specifying relations among variables, with the purpose of explaining natural phenomena."*. According to Eisenhardt (1989) theories related to case studies a good theorizing work includes *"careful construction of construct definitions and evidence produces the sharply defined, measurable constructs which are necessary for strong theory."*

Bacharach (1989) depicts that the primary goal of theory is to answer questions such as "How?", "When?" and "Why?" rather than using language of description by asking "What?". A good research study and theorizing process reveals issues that are interesting to the scientific community (Murray 1971). A good theory is well structured, explained and it argues. It is believable. It refers to an important phenomenon in ways that probably are not common to others. It has a pragmatic perspective but it is not too simple or obvious or too profound to be too complex. The findings should not be too absurd neither irrelevant. Most importantly, the research is relevant and its implications are

implementable and stimulate critical thinking (Benbasat et al. 1999). A theory that can not be generalized in any ways is useless (Lee et al. 2003).

Chalmers (1999) describes some important starting points for a good research design. Firstly, observations about the reality are important but many times they are wrongly interpreted. Secondly, research method should fit to the research purposes and objectives. Thirdly, the objectivity of a researcher is necessary. However, researcher is almost always involved in a way or another to the research composition and thus, there is certain “personal” perspective to it. In other sense, objectivity means that the research should be possible to be repeated by any other researcher. The research design should be clear and repeatable. Fourthly, empiria means for practioners different things than to a scientist. Practioners are guided by practical experience and observations and not by science and theory. In contrast, scientists are guided by evidence obtained in a systematic and controlled scientific research. However, Sutton and Staw (1995) state that only data, variables, diagrams and hypotheses are not theory.

The findings of a research study are socially constructed statements because they create a coherent story that is linked with the research community in this research theme and which is difficult to criticize (DiMaggio 1995; La Tour 1987).

Theorizing Digital Game Studies

The discipline of information systems could be defined as a social system which have embedded in it information technology (Land 1992). The “system” is an artifact used to study the relationship between the man and a machine (La Tour 1987). Digital games and information systems science are strongly interrelated. Firstly, digital games are information systems. Secondly, in both disciplines the interaction between the system and the user is the source and motive for the research. Thirdly, both areas are highly multidisciplinary. Fourthly, they apply extensively theories from other disciplines. Fifthly, they contain social systems which lead to controversy in them.

However, at this point, I would like to state that the way systems are described differ from each other. Digital games studies are strongly based on narrative stories and design (Raessens et al. 2005). Information systems research is based more in systems benefits and impact by using information technology to the organization (IT) (Davis 1989).

For example, two good examples of IS research applying well known theories in a rather rigorous scientific manner in the context of digital games are studies made by Hsu and Lu (2004) and Hsu and Lu (2005). These studies apply TAM (Technology Acceptance Model) to digital games contexts. However, these studies do not intent to neither develop digital games as a discipline nor new theory for IS or for digital games.

Several IS researchers such as Mingers (2001) and Robey (1996) have stated that a pluralistic methodologies are good ways to study IS in different contexts (see Table 1). They give a richer perspective on the results than using a single method. This kind of use of methodologies fit exceptionally well for digital games research, too.

Type of Design	Method mix	Illustration
Sequential	Methods are employed in sequence with results from one feeding into the later one.	Do a statistically analyzed questionnaire and then follow up with some in-depth interviews to better understand the results. Or, undertake ethnographic research and content analysis to design a questionnaire.
Parallel	Methods are carried out in parallel with results feeding into each other.	Observation and recording of computer usage together with interviewing and cognitive mapping of users.
Dominant (Imperialist)	One method or methodology as the main approach with contribution(s) from the other(s)	An intensive study using ethnography or participant observation with some statistical data analysis in the appreciation phase.

Multimethodology	A combination of methods, embodying different paradigms, developed specifically for the task.	Interviews, data analysis, and questionnaires, combined with root definitions and conceptual models, strategic choice commitment package.
Multilevel	Research conducted simultaneously at different levels of an organization and using different methods.	Survey of call-center operators and interviews/cognitive mapping with supervisors and managers.

Table 1. Different Types of Multimethod Research Designs. Adapted from (Mingers 2001)

Summary and Conclusions

DiMaggio (1995) depicts that *“Firstly, a good theory is so difficult to produce routinely, in part, because goodness is multidimensional: the best theory often combines approaches to theorizing, and the act of combination requires compromise between competing an mutually incompatible values. Secondly, theory construction is a cooperative venture between author and readers: Theory reception rides on much more than scientific potential; in the short run, we tend to reduce theories to slogans; and in the long run, brilliant expositors can turn muddled theories into canonical masterpieces.”*

Studies on information systems and digital games suffer from the lack of “own” theories. However, richness of perspectives can be used as an advantage to create innovative research by using multitude of research methods and theories.

In my own dissertation, my purpose is to go through a theorizing process which result will not be to create a grand new theory but to find new insights to the existing theories and to test improved ideas in new contexts (Weick 1995). In the best case, I may probably contribute to the science by creating interesting new theoretical propositions (Murray 1971).

I summarize this brief essay by concluding that digital games are highly multidiscipline research area. The theories and methods that fit to the study digital games arise from the scientists themselves when they apply well established theories and methods to the innovative research of digital games.

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