

# Fun & Games: On the Process of Game Design

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## ABSTRACT

The game design process is largely driven by practice. While some work has been done in academia targeting the definition of a theoretical foundation for the process of game design, these two communities rarely came together to discuss their perspective theories or processes. As a result, both communities work in isolation. The game industry is often involved in game-specific game design methodologies and academics are concerned with theoretical foundations. The goal of this workshop is to start a dialogue between the two communities and generate general themes and underlying theories. These theories will serve to aid game designers in constructing games, and help tool designers build tools that allow designers to focus on critical issues.

## INTRODUCTION

Many performance arts, such as filmmaking, screenwriting, acting, lighting design, and cinematography, have produced theories to explain and direct creative processes. Game design, still in its (relative) infancy, has not yet produced such theories. The process of game design is still implicit in the minds of game designers. The number of books and papers devoted to this topic can be counted in one hand.

## A GRAND UNIFIED THEORY?

Much as Allen Newell attempted to do with *Unified Theories of Cognition*, the long-term goal of the game design community is to create a synthesis of the existing theories that contribute to game design. The Grand Unified Theory that physics is striving for is not even a reasonable goal at this point, but some level of integration, coordination, and comparison of theories is possible and valuable.

This process will not be simple, nor will it be free of missteps. However, the value far exceeds the cost. The value for researchers is to develop a canon of theories that

can be referenced, operationalized, and extended. The value for educators is to train students using a set of documented theories and techniques. The value for industry is to define an explicit set of design methods that can be used for training, management, and tool creation, as well as for improving the design process itself.

## WORKSHOP PLAN

This workshop is an early stage in the process of bringing together researchers, educators, and practitioners from industry and academia. The workshop will consist of several activities. First, participants will be engaged in interactive sessions where a speaker gives a 10-15 minute introduction to a theory and then engages participants in using the design methods within an interactive exercise. Second, participants will form small, concept-centered working groups to sketch out agreements and conflict. Finally, the working groups will report on their progress to the larger group.

## GOALS, OUTCOMES, AND FUTURE WORK

The goal of the workshop is to create an interactive environment where participants can engage in debates and discussions on game design methods.

One primary outcome will be a record of the theories and debates discussed during the course of the workshop. This information will be available on the workshop website, <http://gamedesign.ist.psu.edu/>. This site will also house ongoing interactions within this community, and anyone interested is welcome to view and join the discussion.

Future work will continue at three levels, the general (or meta-theory) level, the debate (or dialogic) level, and the specific (or theory) level. The theory level will address individual theories, both native and adopted, and their contribution and limitations in game design. The dialogic level will attempt to find and address areas of agreement and disagreement between these theories. The meta-theory level will attempt to find high-level coordination of these theories, to in a sense unify and give perspectives on the lower levels.

## PROGRAM COMMITTEE AND AREAS OF INTEREST

The program committee includes researchers and practitioners. We will briefly outline the program committee members and their areas of interest.

- Magy Seif El-Nasr researches the development graphics and design tools for interactive entertainment. In her designs she borrows from an understanding of game design methods as well as performance arts theories.
- Joshua B. Gross researches and develops visual programming environments for game design and other domains, and also works on computational modeling of behavior.
- Chris Crawford researches and develops interactive narratives. He is also a well-known name in the area of game design, and has written books on the subject of interactivity and game design.
- Andrew S. Gordon focuses on implementing “commonsense” reasoning and planning models.
- Damian Isla develops character AI for video games. He has been involved in developing character AI for *Halo 2*.
- Darla Lindberg is working on applying game theory and design to develop experimental games.
- Keith Miron is one of the main developers for *inXile*.
- Simon Niedenthal researches the value, importance, and implementation of illumination in games.
- Madis Pihlak researches digital design of virtual and real spaces.
- Yusuf Pisan researches intelligent character behavior in games.
- Brian K. Smith researches the relationship between games and learning.
- Bill Tomlinson researches interaction between autonomous agents and humans.
- Robert Zubek researches and develops tools for intelligent character behavior. He is now working as a developer at *Maxis, EA*.
- Joseph A. Zupko researches lighting and sound in game design.