TABLE OF CONTENTS

EXECUTIVE SUMMARY: A SOCIOTECHNICAL SYNTHESIS

Video games are becoming a larger part of everyday society, and their greater impact requires studing the medium much more closely. Games can no longer get by with advancing purely in graphical clarity, but instead need to examine the human element in games. The technical portion of this thesis puts forth a new model of AI behavior to create more human-like AI in games, allowing for greater impacts of in-game actions. The STS potion examines their social impacts and player dynamics of Massively Multiplayer Online games to gain insight into some of the greater social considerations of game design. Both of these topics work together to add a layer of sophistication to game design by examining the often ignored human element of gaming and games design.

The technical thesis explored a new AI design paradigm to create more realistic game agents by using a psychological model as a design base, Maslow's Hierarchy. Game agents acting more closely to actual humans not only increases the immersion of the gaming experience, but more human-like AI can expand the design territory of gaming to cover realistic consequences of game actions. Maslow's Hierarchy makes an excellent test of the theory due to its widespread acceptance in psychology, simplicity of design, and being easy to adapt to a variety of game genres. A Maslow based AI system is implemented and examined in the context of an XNA game created for this project. The analysis considered the the believability of the AI within the system and the ease of implementing the Maslow Hierarchy within the game logic.

The examination of the AI resulted in some mixed conclusions. Implementing the actual AI proved more difficult than originally planned, which forced the removal of planned features for the game due to time constraints on the project. While the model

itself is easy to adapt to an AI, accommodating all possible needs listed in the Hierarchy required programming many additional game mechanics, turning the relatively simple game into a much more complex product. The Maslow agents did not produce significantly more organic or interesting behavior compared to scripted AI, with the exception of conflict resolution. While there is potential for improved behavior using Maslow's Hierarchy, the benefits of psychology-based AI systems for games are still unclear.

The STS thesis report looked at the social factors of games through intense analysis of player relationships and design decisions within Massively Multiplayer Online games, or MMOs. MMOs involve thousands of players competing and cooperating within a virtual space, making the genre one of the most socially oriented all all gaming. With greater emphasis on personal relationships in games, game designers are faced with the task of being social architects of their game worlds. The importance of designers and their new responsibilities is supported through a combination of psychological and sociological factors behind why people play MMOs and an analysis of several revealing incidents in recent gaming history.

One of the prime concerns of MMO design is “Avatar Capital,” a player's investment into their online persona. Acquiring avatar capital is an end goal for many players, and issues such as World of Warcraft's “welfare epics” show how game mechanics affect a player's capital and their interactions with other players. The massive global market and diverse playerbase of MMOs complicate design choices to prevent offending users or being caught under censorship laws in countries like China. Exploits and glitches also divide the playerbase and require special care on the part of the

designers to understand and resolve issues in a fair manner. These additional pressures require that designers carefully consider the reactions of the player and the game community when iterating and improving on their game, cementing their position as social architects of these virtual spaces.

Video games are no longer the realm of child's play, and are becoming more sophisticated and complex as time goes on. Designers must learn to understanding and appreciate human nature, both inside and out of their games. With new understanding of people and the place of games in society, designers will be able to advance their craft to unexplored territory and truly advance the medium in society.