Introduction

Computer game design houses can usually be categorized into two types: the ones who follow the existing ideas and the ones consistently creating games that set new benchmarks or even creating new genres along the way. The company Bullfrog belongs to the second category. In the late 1980s, Bullfrog released a game called Populous that signified the beginning of a new genre that had tremendous impact on the computer industry still in its infancy. The genre was later referred to as God games.

The basic concept of God games is simple - the gamers can decide the fate of the followers by changing terrains and cast magic that may cause catastrophe. The ultimate goal is usually to make followers thrive and to defeat followers of the other gods (the competitors). Bullfrog subsequently released many God games with different variations such as Powermonger, Magic Carpet, and Dungeon Keeper.

Peter Molyneux, the founder of Bullfrog, was the person responsible for the creation of Populous. He created many award winning games during his years at Bullfrog and Dungeon Keeper was his last game designed before he left Bullfrog.

Dungeon Keeper was a game that challenged the traditional idea that players are heroes in games. Electronic Arts, after acquiring Bullfrog, published the game in 1997. It was a good example of God game as well as a perfect example of the conflicting goals between game designers wanting to produce a 'perfect' game and business people who need to look after their shareholders' interests.

This paper attempts to discuss the roles of Peter Molyneux and Bullfrog in shaping the God game genre using Populous and Dungeon Keeper as examples.
A Historical Narrative of God Games

Peter Molyneux got involved in the game design business literally by accident. He founded a company in the early 1980s that programmed business-management software. But one day the company mistakenly received some free Amiga computers from Commodore. He was so inspired by the graphic capabilities of the machines that he started a new company called Bullfrog to take advantage of what was arguably the best graphics system available at the time.

After a few false starts, he designed the now legendary game Populous. It was a God-playing game where gamers played the role of gods and influence their followers and the environment. A commonly quoted incident why Peter Molyneux is so interested in the God-playing genre begins with an ant hill. He poked and destroyed parts of an ant hill when he was a child. The ants struggled to rebuild the nest as it was being destroyed, which fascinated the young Molyneux. Finally he gave in and offered sugar cube to make peace and was enthralled to see how the sugar cube could influence the behavior of ants.

The feeling of powerfulness over tiny creatures and the fascinating unpredictability of what the ants would do was the experience he would carry over and put on his first game Populous. The gamers would share similar experience by playing the role of Gods in the game.

Molyneux once said, "I have always found this an interesting mechanic, the idea that you influence the game as opposed to controlling the game; also the idea that the game can continue without you is a concept that still fascinates me".1

The game went on to be one of the best-selling games ever, over 4 million copies were sold in total. The game was also ahead of its time by offering multiplayer mode that could be played across different platforms by using modem connections. In other words, a gamer with PC could play with another player with Amiga!

1 "The Worlds of Peter Molyneux" by Alexander Antoniades, Wirednews.com
Bullfrog later released many games based on similar ideas. It eventually became a multi-million dollar company winning all kinds of awards in the computer game industry. In 1997, British Prime Minister Tony Blair even cited "Bullfrog electronic games" as one of the products that shows England is a world-class innovator.

Ironically, Bullfrog released a 3D racing game called 'Hi Octane', soon after Electronic Arts, having been the publisher of Bullfrog games for a long time, acquired the company in 1995. The game was released because Electronic Arts wanted to publish a Bullfrog game as soon as possible. The decision to release 'Hi Octane' became the biggest blunder made by Peter Molyneux. The rushed and mediocre game tarnished the design house's reputation and they needed something to restore their image.

Another God game, Dungeon Keeper, was already in the pipeline a few months before EA acquired Bullfrog. It was a critical time for Molyneux, Bullfrog and Dungeon Keeper.

Dungeon Keeper was one of the most anticipated game to be released in the mid 1990s because of the reputations of Molyneux and Bullfrog. The idea of Dungeon Keeper is simple yet intriguing. What would happen if the gamers were to play the role of the dungeon masters against the heroes? Gamers are used to the idea of being heroes that go on quests and beating the evil masters as their ultimate goal. It is refreshing to play the role of the evil dungeon master. However, as players would soon find out, it is not easy to be the dungeon masters since they have to, with finite resources, compete against other masters, while keeping their minions happy and defending against the brave heroes.

The development of Dungeon Keeper was anything but smooth. There was conflict between the newly acquired Bullfrog and its parent company Electronic Arts as Molyneux was a perfectionist who did not want to release any game that he felt not ready (even more so after the terrible experience of 'Hi Octane'). On the other hand, Electronic Arts had its own agenda as it had to control budget and to meet the deadlines of releasing
the games. Furthermore, the builder of virtual worlds found himself unable to adapt to
the new managerial role he has undertaken in Electronic Arts.

After long periods of repeated delays, Molyneux decided the game needed a serious
redesign six weeks before it was scheduled to ship. Electronic Arts could not tolerate any
longer, and it wanted to abandon the Dungeon Keeper project. Electronic Arts and
Molyneux finally reached a compromise. He would provide funding for the rest of the
development of the game and the whole design team would move to his house to
complete the game. In addition, Molynuex would relinquish control of Bullfrog.

Dungeon Keeper was finally published in 1997, nearly two years after its original
scheduled release. The people involved in the game design, artwork and music totaled
more than 80 people, which is more than 10 times the size of the original Populous
design team. Dungeon Keeper as it was released was put together almost entirely in the
last few months. Although the game already looked like the released version long before
the release date, Molyneux decided that the game played like Command and Conquer and
it was rewritten entirely. He did not want to compromise game play and the game
interface.

"By the time two years had gone past, it looked virtually as it did when it was released, but it
played like Command & Conquer in a dungeon. And so we started again," says Molyneux. □

Although Dungeon Keeper was a hit, selling close to a million copies, the conflicts
between Molynuex and Electronic Arts still remained. Finally in 1998, he left the
company he had started less than 10 years earlier.

Even though the experience between Molyneux and Electronic Arts had not always been
positive, he does not hold it against the company. In particular, he thinks Electronic Arts
is a company that is dedicated to publishing excellent products. In an interview regarding
his latest game 'Black and White' (designed by Lionhead, which he founded after leaving

2 "The World of Peter Molyneux" by Alexander Antoniades, Wirednews.com
Bullfrog) he had the following to say about his attitude towards developing games and what he thinks of Electronic Arts.

"No game I have worked on has ever been finished by my standards, not even Populous, but there comes a time when you have to say "that's it". You have worked all the hours god sends and are totally exhausted and you think the game is good - not perfect - but good. So you press the button which begins the final process. Of course, by the time the game is manufactured you regret this but it still has to be done. Developing games is always a fine balance between everyone but you wanting the game out as soon as possible and you being happy with the final product. I think EA was very patient with the two and half year development time of Dungeon Keeper."

"Me being part of the large organization that EA is didn't work for me personally but that is not to say that I don't respect EA's dedication to publishing excellent products. So when it came to a decision of who would publish Lionhead's first game, EA was the obvious choice. In a way I have the best of both worlds- I get to work with all the people at EA that I have known and respected over the last decade but I also have full independence to develop the first game the way I want to."

The game received much acclaims from the gaming community when it was released. However, like many high-anticipated products especially after long delays, some gamers were not satisfied. The most common complaint was the sluggish multiplayer mode and the fact it didn't support the Internet. Some gamers wanted more features and better interface design. Dungeon Keeper 2 took these into considerations in designing the game, but that's another story.

**Technology and Game Design**

Peter Molyneux has always been a strong believer in pushing the computers to their limits. Sometimes he even delayed the release of games so the average computer specs could match his games system requirements. From isometric view to 3D graphics, he always took advantage of the latest technology available in order to make the world more believable. For example, Populous was released with VGA support and Dungeon Keeper utilized 3D acceleration card. He has also been a strong believer of networked gaming -
Populous was one of the few games to allow network gaming by modem in the late 1980s.

Screenshots of Dungeon Keeper (left) and Populous (right) shows the differences in graphics technology.

Of course, pushing the hardware to the limit was not the only concern he had. He had admitted in an interview that Miyamoto has had huge influence on him in terms of game design. He considers the following four points are what makes an enjoyable game that could be played over and over again:

- The ability to change and create something within the game
- The feeling that you are exploring new areas and discovering new things
- Humor, games don't need to be serious
- Unexpected "Easter eggs"

Ironically, these points may backfire as was demonstrated in Dungeon Keeper. The ability to pick up any creature that belongs to the player and place them anywhere in the Dungeon was admitted by Molyneux to be a major flaw. It seemed innocuous and was something that was put in the game as a joke. However, this renders the need for a more well-planned and efficiently designed dungeon not very important, as it doesn't matter if you don't set up creatures to guard crucial areas or make certain areas easily accessible because whenever there's an intruder, you can immediately move your entire army to one point.
In retrospect, Peter Molyneux thought Dungeon Keeper was not as polished as he would like to have done.

"Dungeon Keeper taught me to think even harder about design issues before starting the process of implementation. It also taught me how not to design an interface -- the complicated interface meant that Dungeon Keeper was a missed opportunity."

"It had lots of things wrong with it. Too many icons. Too many game mechanics that were just wrong. It ended up being too dependent upon little bits that were supposed to be there as jokes. In the end I didn't feel as proud about it as I had hoped. It was good, but it had that one mechanic where you could pick up monsters anywhere. It would have taken ten minutes to change and the game would have been a million times better."

The key to making nonlinear, possibly open-ended, gaming experience is to think like players. Developers have to approach their work as if they were writing complex novel instead of simple narrative. They have to explore and anticipate every move players might take. SimCity creator Will Wright likens this process to be "designing the possibility space". Important factors have to be considered such as how big should the game be, how much freedom should the players have and how the game will end. Developers spend as much time playing the games as they do designing them.

Molyneux loves to play games and to immerse himself in creating rich worlds, which partly explains the long developing period of his games. He once said, “The thing that sets me apart from everyone else is probably the insane level of detail that I love to put into my games. Whether this is a good thing in terms of the development time scale remains to be seen!”

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4 “The World of Peter Molyneux" by Alexander Antoniades, Wirednews.com
5 “Legends of Game Design: Peter Molyneux" by Ron Dulin, Gamespot.com
6 “Millennium Gaming, 20 Gaming Visionary Usher in The Next Millennium of Gaming” by Geoff Keighley Gamespot.com
Influence of God Games in Gaming Industry

Peter Molyneux might not be familiar to the new generation of gamers grew up in the age full of Doom and Quake-clones, but he was and still is considered one of the few masters of game design. Some even go as far as saying that Peter Molyneux is to PC games what Miyamoto is to the console games.

Molyneux thinks the term God game is too restrictive. "The term does tend to limit people's imaginations," he says. In his opinion, God games are not just about being a God in the traditional sense, it's about being a creator of towns, plumbing and sometimes of people. Many games can be considered as God games under this broad definition, such as SimCity and Civilization. The sheer number of games that borrowed ideas from these early God games shows their tremendous influence on the gaming industry.

One important distinction between the games like SimCity and Populous is that the former has no ending whilst the latter has beginning, middle and end. This reflects different design philosophies between Molyneux and other God game designers. Civilization creator Meier offered, "We focus on making the story interesting, as opposed to the goal. The journey is the reward. We want you to have fun throughout the process as opposed to only at the end feeling satisfaction." In contrast, Molyneux opined, "To be honest, it is rather unsatisfactory to have a game with no end."

In any case, the idea that the characters in games do not have to be directly controlled opened up great possibilities in game design. Some genres might be ephemeral, but God games will always be popular as long as people are intrigued by how much influence they can have, albeit in a virtual world.

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7 Essay "Playing God" by David Kushner. April 2000 Feedmag.com
Conclusion
The God games have come a long way since the release of Populous. Although the basic premise of God games have not changed, the release of different types of games has shown the genre is capable of fostering great varieties of games. The richness of the worlds has increased with the advancement of computer hardware. From isometric to full 3D environment, technology has helped in creating a more believable world. There might be some conflicts of interests between the game designers and the publishers. However, ultimately it is the creativity and the imagination of game designers that has shaped the God-playing games in the end. Peter Molyneux's perseverance and passion for designing games have shown that imagination is the only limit to computer games.