# To Err is to Human
# And Ultima Online…

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**I. History**

The *Ultima* series has had a long history, starting back in 1979, when *Akalabeth* (aka, *Ultima 0*) was first created by Richard Garriot, who was then a high school student. The surprising success of the game inspired him to write more, resulting in one of the most well-known role playing game (RPG) series. Garriot formed Origin, which was later bought by Electronic Arts, and designed the games under its name. As the series progressed, the games became more and more complex: in graphics, game play, storyline, and morals. The concept of virtuousness was introduced in *Ultima IV*; here, the players' actions had an effect on how non-player characters (NPCs) responded to them. Garriot describes one such test in an interview with Kyle Ackerman:

> One of my favorites was a blind woman who sold herbs, and after you bought your herbs, the game just asked you, "How much money do you leave in her coffers?" She'd tell you "It'll be 5 gold," and instead of just taking the gold from you, you had the option to leave as much or as little as you wished. [...] Later in the game you would come back to her needing some very special information or help, and she would say, "I'd love to help you, but you are the most dishonest, thieving scumbag I've ever met! So why should I help you?" (Ackerman).

This concept of virtuousness has carried all the way through to *Ultima Online*, where characters earn a good or bad reputation based on their deeds. It's also interesting to note that the character of Lord British, Garriot's game-ego, has existed and persisted through all of the *Ultima* games, tying him to his games in a rather personal fashion. Garriot made the leap to actually playing Lord British, ruler of Britannica, in *Ultima Online*.

Another important person to the creation of *Ultima Online* was Raph Koster, the head designer. Before being recruited for this project, Koster had been one of the main designers/wizards of the LegendMUD, an online text-based multi-user dungeon (MUD); he was responsible for a good deal of the coding behind the game. His experience with LegendMUD was what directly gave him the opportunity to

work on *Ultima*; Garriot knew one of the other lead programmers of the MUD, who recommended that Garriot hire Koster. (Koster, CRPG interview). Koster also participated in many of the chat groups and online discussions, taking suggestions, explaining issues, and defending the game.

## II. Background

The game itself is simply described, at least in concept. The user plays a character in the online world of Britannica, a character that they generate, guide, and develop. The player determines, through their actions and habits, whether their character learns trade skills, works to earn money, practices arcane magic, sneaks around stealing purses, or any combination of these and the various other possibilities. Depending on how the player interacts with other players in the game, they can develop allies, parties, or dire enemies. Successful players earn (or otherwise "acquire") the money to purchase finer equipment, boats, and even property.

The world itself is persistent; or, more accurately, the *worlds -- Ultima Online* servers run a number of parallel worlds (i.e., "shards") in order to accommodate players in different parts of the real world (and to accommodate preferences for player-killing (PKing)). The world continues to exist and change even when a player exits, albeit without the player's character present.

A unique feature of the game's economy, which was later removed, was that it was closed; there was a finite amount of resources, including gold, which would get "recycled" as time went on. Swords would break, and more iron ore would then be available; things would be sold to NPC shopkeepers, and the resources needed to make those items would go back in the "pool" of available resources (available to the game, that is). The system was intended to behave as realistically as possible (Simpson).

For a more player-orientated discussion of the game, see *Ultima Online*'s homepage at www.uo.com.

**III. Mistakes Aplenty**

*Ultima Online* was the first massively multiplayer RPG to come out on the market that was based mainly on a graphical interface: MUDs had been around for years, but they were based around text, even in those that did have some sort of graphical additions (Koster, Timeline). Because of this, *Ultima Online* greatly influenced future massively multiplayer RPGs with its successes, and its failures.

*Ultima Online* began as a contested project: current statistics of the time showed online games to not be as economically practical as single player games. During the beta test, however, 50,000 people signed up to test the game, many more than the predicted 15,000 total *sales* of the game. If nothing else, this certainly didn't bode well for the ability of the hardware to accommodate the players (Ackerman).

Problems with the server load were so bad during the beta test that player caps needed to be put in; only a limited amount of people were allowed to sign on at a time in an effort to reduce the lag experienced (Alcock). Even after the commercial version was released, network latency continued to be a problem; reviews, both professional and amateur, almost unequivocally mention lag as being a common problem, and nicknames such as "Ultima Onlag" arose (Pagliarulo). A class action lawsuit was even leveled against the company, claiming that it was impossible to play the game 24 hours a day, 7 days a week as advertised due to the numerous bugs and server crashes (Brown). Though the judge eventually rejected the lawsuit, saying that each player's experience was based on too many variables for a class action lawsuit to make sense, the incident still testifies to the severity of these problems (Hulsey).

Another major problem was with the in-game closed economy. Simply put, it didn't work. The game was designed to have an economy where items and materials were in constant flux; there were five main item "drains" -- ways to remove items from the world: botched attempts at manufacturing (the raw material is lost), wear and tear on items, "garbage cleanup" (items left for a period of time on the ground would be removed), consumption (i.e., food, potions), and selling items to NPCs. There also were two means for gold to disappear: buying from NPCs, and salary of vendors (NPCs that players could hire to

sell items for them even when they weren't online). Everything, from items to monsters, was defined in terms of raw materials; a sword might be one unit of iron ore; a sheep, two units of meat and one unit of wool. The expected cyclic nature of the economy was supposed to recycle needed resources so that more creatures/resources could be spontaneously created.

Players had different ideas, however. One of the favorite anecdotes of the Origin team is that of one character who hoarded 10,000 identical shirts in his house. Besides creating stagnation, which prevents recycling of resources, situations like this also create different sorts of resource problems; namely, it takes a decent amount of CPU power needed to keep track of so many items. The bigger problem to players, however, was the lack of recycling: resources tied up in hoarded loot were resources that couldn't be used to spawn monsters and more treasure. For a time, the world was barren, with very few monsters and raw resources available in the world (Simpson).

Even without the problem of a closed economy, however, there were still massive problems with realism. NPC shopkeepers were to buy items at a price inversely proportional to their stock; in other words, a shopkeeper who had just bought 100 shirts would probably not offer much, if anything, for more shirts. Players, in an attempt to make large sums of money, would overproduce items, and shopkeepers wouldn't buy the surplus. This had the affect of angering players, who felt that skills they had trained in were being made useless. Another major problem was the AI that forced shopkeepers to make a profit; i.e., not buy more goods than they had money. Players were trying to sell manufactured goods to shopkeepers in greater values than what they bought from them. This, coupled with the aforementioned problem, meant that in order to sell goods, a player had to find an NPC that not only hadn't already been oversupplied with that good, but also still had money. Again, this elicited complaints from many players (Simpson).

Finally, there was the problem of PKing. The problem wasn't necessarily with its existence -- designers felt it was a necessary part of the game. The trends that caused issues were older characters beating up on newer ones, and players who joined solely to try to make life miserable for everybody else.

The notoriety system originally in the game allowed rampant PKing with little consequences, if done right (Knight). Game designers took notice of this problem and tried to change it; as said by Koster (DesignerD) in the first of the Ultima Online House of Commons meetings, "We feel that PKing is rampant and badly needs to be restrained. Our intent with the new reputation system is to channel those who wish to engage in pk towards guilds and other forms of 'legal' warfare where they do not prey on innocents" (UOHoC, 4/17/98). Yet even with a new system, there were still immature and PK-oriented players who continued to attack unwilling players (see Bartle for an in-depth discussion of player types), and this still tended to drive away players (Knight).

## IV. Putting the Pieces Back Together

*Ultima Online* wasn't all bad, of course; Koster notes that even players who complain most vocally are still playing the game (Koster, post). The sheer number of players attests to its popularity: within 1997, the number of subscriber accounts broke 100,000, shattering the current records for online games (Koster, timeline). There are also the other massively multiplayer RPGs: *Ultima Online* was the first to be released, and in many ways, other companies were watching it, waiting to see how well the idea played out. As Koster says in his CRPG Tavern interview, he didn't expect clones to be a problem due to the large amount of resources it took to make an online RPG; *Ultima Online's* success showed other companies that such an endeavor was profitable, paving the way for other games such as *EverQuest* to be developed and released.

The best to come from *Ultima Online* was its problems, however: success might have prompted other companies to make online RPGs, but the mistakes showed them how to make them well. Even *Ultima Online* was able to learn from its mistakes; in later updates and expansions many of the problems plaguing the first release were fixed. Let's look at some of the solutions and implications of the solutions of some of the issues.

The latency and lack of network resources issues were probably the easiest to prevent for other companies. *Ultima Online* hadn't been expected to attract so many players; other companies now knew better and were able to have enough servers ready before launching their games. *Ultima Online* was forced to add servers after the game had already launched.

The economy problems were a bit more interesting. Adding more resources to the world only temporarily relieved the problem, as hoarding still continued. Finally, the closed economy system was forced to be abandoned in favor of a system where resources were being added to the system at a constant rate, and resources taken out of the system via drains were destroyed. This did not solve the problem of hoards taking up significant server resources, however, and it is clear that better ways to manage an economy need to be found, in order to conserve real-world resources (Simpson).

The player-killing problem was one that ultimately defeated the designers; they were unable to fix their original world. When the original notoriety system of flagging criminals failed, a new reputation and karma system was established. This too failed, and the final solution was to run two parallel worlds, one that allowed PKing, and one that did not, except under strict circumstances (Knight). This problem still presents itself as a challenge to game designers: How do you create a world that balances PKing with the desire of players to keep their characters alive?


**V. Conclusion**


*Ultima Online* was a valuable game in helping to establish the MMORPG genre, and through both its virtues and mistakes. It was an immediate success, despite its problems, and still continues to have a large number of subscribers. It was the first game that allowed players to role-play online with large numbers of people in a graphical setting. Most importantly, however, are *Ultima Online's* contributions in exploring the mechanics of exactly *how* to run a MMORPG; many companies, Origin included, learned

valuable lessons about keeping the players happy, keeping costs down, and making their games fun to play.

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