

Skyrim, J.P. Gee, and Introductory Economics

Introduction

The Elder Scrolls V: Skyrim is a fairly new experience for me. My typical video game adventure is much less, well, adventurous and much more linear and level-based (read: *Halo*). Perhaps the best way to describe *Skyrim* is to say that it's like medieval times (or at least the romanticized version of medieval times with knights and damsels in distress that we read about in the 21st century) but in an alternate universe with magic spells and mystical creatures. The player starts the game as a prisoner of war condemned to be executed by his captors. Right at the moment of execution, however, a dragon swoops in and unknowingly, unintentionally spares the player from his/her imminent death. The first hour of gameplay involves learning the basics of the game while traveling in fields, dungeons, and caves while on the run from this terrible dragon.

In regards to gameplay, *Skyrim* is a role-playing game, which means that the player must collect items, navigate large game maps, and choose his/her own dialogue (Note: these are common elements in most role-playing games, but a game does not have to satisfy all of them to qualify as such). (Chaplin, 2006) As I hinted at, I usually play only basic first-person shooters, along with the occasional sports game. Therefore, I was certainly a little clumsy at the role-playing elements of *Skyrim*; in particular, I picked up every item that was lying on the ground without a moment's thought and had trouble brandishing my sword in a timely manner. However, even in the hour that I played, I improved mightily at balancing my weapons with my magic and learned a good deal about the economic choices a role-playing gamer must make throughout the course of *Skyrim*. Indeed, through its dexterous application of James Paul Gee's

“fruitful principles of learning” in games, *Skyrim* manages to teach its players, however crudely, a small lesson in basic economics.

Gee’s Principles of Learning and Skyrim

James Gee is a cognitive scientist by profession and a gamer in his free time, though he sees room for games in the modern educational environment. He states that video games may not have a place in the classroom, per se, but educators should take note of the principles that good game designers use to teach players the ways of their games. (Gee, 2004) In this section of the essay, I will highlight some of Gee’s principles that are utilized quite well in *Skyrim*, while offering a few criticisms as well.

One Gee principle that features prominently in *Skyrim* is that of **co-design**. Good learning does not occur unless the learner feels like an active agent rather than a passive recipient, according to Gee. He continues on to say that video game players “make things happen” in good games. In regards to *Skyrim*, this is certainly true. Towards the end of my playing experience, I encountered a female hunter in a wooded area. She paid me no heed, and I, had I so chosen, could have gone on my merry way without the two of us interacting in any significant manner. For whatever reason, however, I felt compelled to engage her in combat, and after some fighting, I killed her with my axe. In doing so, I literally changed the outcome of the game in a significant way. Lying beside the hunter’s corpse (which I could search for valuable items) was her dog, which had accompanied her on the hunting mission. I don’t know if it was crying or whining for food or what, but it just *seemed* sad to me. When you kill someone, they die, and there are material consequences. It sounds silly and obvious, but as a *Halo* player (you kill aliens and then they die and then they disappear) it was a lesson I had to learn in the virtual world. On the other

hand, the unforgiving and practical side of me learned that I could kill somebody who offered minimal resistance and take some of their valuable belongings. In *Halo*, there are aliens impeding the player's progress, and they must be killed for the mission to be completed. As a new *Skyrim* player, I had to learn that its game world operated under different rules: pacifism and negotiation is a possible strategy, so too is brutality, etc. I learned these lessons through being an *active* participant in the game and seeing the various effects of my consequences.

Another principle that *Skyrim* handles well is that of giving the player adequate **information**. In the previous paragraph, I discussed learning through acting and assessing the consequences of those actions, but in this paragraph I am referring more so to explicit information the game gives the player to help him or her complete it. Like most good games, *Skyrim* has a pretty organic tutorial; the player must run from the aforementioned dragon that inadvertently saved his or her life, and various instructions pop up ("Press 'Y' to jump) on the screen during this sequence. Gee refers to this as information "just in time." One aspect of this that the game handles particularly well is a mechanic that comes into play when the player is trying to sneak around. Roughly a half hour into the game, the player encounters a bear in a cave. An eye icon appears on the screen, along with the word "detected" when the player is in sight of the bear. When the player is not in the bear's viewpoint, the eye icon compresses into a flat line and the word "hidden" appears. After this incident, the words no longer appear on the screen; this allows the player to learn what the eye symbols mean without having to display the slightly unwieldy words every time sneakiness is required. Information "on demand," on the other hand, is information that the player can access at any time. The game also performs well on this metric, as there is a game map and a breakdown of all the player's items that can be accessed by simply

hitting the start button. In this way, the game strikes a nice balance between teaching new players the ways of the game while not holding the hands of experienced players (the game is part of the Elder Scrolls series) too much.

An additional principle that *Skyrim* does subtly but rather well is a concept that Gee describes as a “**sandbox.**” The basic idea of a sandbox, the way Gee defines it, is that it provides a basic facsimile of a more dangerous environment so players have a place to safely hone their skills without being rushed to do so (note: Gee’s sandbox principle is not to be confused with so-called “sandbox games” in which the player is free to roam around the game universe in a non-linear fashion). This exists in *Skyrim* in the form of a small room that the player hides out in after escaping from the dragon. The player is free to grab weapons and collect items without fear of taking damage, as there are no enemies in this room. Furthermore, the controls can be slightly clunky when it comes to balancing items and brandishing weapons and what not, so this sandbox is a good place in which to practice that as well.

Overall, the game designers did a fine job of teaching its players the ways of the game. I have a few minor quibbles—it would be nice to get some better instruction on how to use magic, for one—but the information the players receive is more than adequate given the wide range of expertise among the game’s players.

Economics and Skyrim

It struck me while playing *Skyrim*—as I mentioned, I typically play much less mentally stimulating games—that the game is a reasonably solid lesson in fundamental economics. As an economics major, I’m always looking for broader applications of the subject in the real world,

and I found a few in *Skyrim*. Perhaps the microeconomic lessons in the game are not overt--and maybe not even intended by its designers—but the game utilizes Gee's principles well enough so that any careful player will emerge with an acute sense of scarcity, trade-offs, and the importance of optimizing choices.

To those unfamiliar with economics in an educational sense, I'll try to give a brief crash course. Scarcity is referred to as “the fundamental problem” of economics (Pindyck, 2009). The world has a finite amount of resources, and any agent (for our purposes, a *Skyrim* player) must make the right choices to optimize these finite resources. These choices are referred to as trade-offs in economic circles; when one chooses an option, he or she forfeits the opportunity to choose any of the alternatives. If apples cost \$2 and oranges cost \$4 and an agent chooses to buy one orange, he forfeits the right to buy 2 apples with that same money. Therefore, the agent must like oranges twice as much as apples for that to be a rational decision. (Frakt, 2011) Rarely, if ever, are the decisions we make in life as simple and as mathematical as that, but it's a streamlined model of the thought processes we all go through every day when making choices. Quality games such as *Skyrim* force their players to make similarly difficult choices.

The concept of trade-offs is easily viewed through the lens of *Skyrim*. As I mentioned, the basic idea of trade-offs is that when one makes a decision, he/she sacrifices the ability to choose an alternative. In particular, choosing one's character class at the beginning of the game represents this notion. I chose to be a Khajiit, which is a cat-like species that specializes in agility and stealth. In doing so, I lost the ability to be an Argonian (expert lock pickers), a Dunmer (very strong and destructive), or a Breton (good magicians). There are also character classes that are overall very well-rounded. When choosing, a player must think about his or her own set of skills.

Had I been playing the game for leisure and not as a project, I likely would have chosen a strong, slow character, as this is more in line with my skills. I'm typically not very patient or strategic as a gamer, and thus the Khajiit's skills were of little use to me. A slyer player who prefers to sneak around enemies rather than kill them would be well served in choosing a Khajiit. Now, choosing one's player occurs at the beginning of the game, so naturally one hasn't really learned too much from the game at this point. Therefore, a decision like this one requires some previous experience and learning. In my case, I usually fare better as strong, unsubtle players.

Another case in which trade-offs are very important is in choosing what items to carry. Items in the game can be broadly separated into two different categories: loot and weapons. Loot may include gold, fruit, keys, or any other number of things. Each of these items is assigned a weight and each item has some kind of purpose. Apples are rather light and give the player a small boost of health. The player has a weight limit of 300 units (an explicit unit is not given so I will refer to them as pounds from here on out), so one can't just pick up every item on the ground. Contrary to choosing a character, this element of the game can be learned by feedback from the game. When a player adds over 300 pounds, he or she suddenly becomes unable to move and must dump a few items. Here again arises the concept of trade-offs: apples are lightweight and somewhat useful, but they do little more than help out in a pinch, so they're hardly essential; gold is valuable in marketplaces, but it's also heavy; cabbage is virtually useless. There are choices and sacrifices to be made. Perhaps a player decides to be subsistent rather than try to sell gold and buy useful items with money, or vice versa. These are things the player can learn through the system of the game. In a way, this facet of the game is a sandbox unto itself. During my hour of play, I picked up far too many items, received instant feedback in

the form of my player being rendered virtually immobile, and adjusted by dropping a few items. After that incident, I became more shrewd and analytical about what items I picked up. *Will this item help my cause enough to be worth its weight? How many apples restore as much health as one potion, and what are their respective weights? Is it unwieldy to use numerous apples during an intense battle?* Subconsciously or otherwise, every *Skyrim* player does this kind of analysis, and the feedback the game gives the player early on in helps to instill the player with an intuitive sense of what items are and aren't valuable to the cause.

The process of choosing valuable weapons works very similarly to choosing the other types of items in the game, but there are some key differences that merit a separate discussion. In fact, choosing items is quite similar to choosing a character. Swords are quick but weak. Axes are strong but slow. The type of player one wishes to be helps determine the optimal weaponry. One interesting feature of the game is that a player can equip a different weapon in each hand. I don't have any statistics on the matter, but I would assume that the majority of people equip a strong, slow weapon in one hand and a weaker, faster weapon in the other. Players can discover what works best for them as the game progresses; in the early goings, the battles are pretty easy. In this sense, the first few hours serve as a sandbox where the player can experiment with different weapon types and see what will work the best as the game becomes more challenging. Again, this all pertains to economics in a subtle but definitive way, as the best players find the optimal way to allocate scarce resources. By contrast, games like *Halo* just feed the player essentially infinite ammo to kill aliens with. Another interesting wrinkle of arming oneself is that all the weapons have weight as well, so a careful player must be shrewd with how many items to carry. It may be risky to carry only the two weapons that one equips most commonly, but by

carrying multiple weapons, one cannot carry as many apples or gold pieces. All the key elements of microeconomics are there: scarcity, optimizing choices, trade-offs. Perhaps they do so unknowingly, but the best *Skyrim* players play the game the same way expert economists go through life (albeit with a bit more violence). The game teaches its players the importance of economical thinking by providing feedback and a (relatively) safe space for players to experiment with different combinations of weapons, items, and gameplay strategies.

Broader Applications

It's hard to tell if the economics lessons that can be learned in *Skyrim* might have important, practical applications in the classroom. On one hand, the lessons are so subtle that pretty much all players—excluding economics majors, of course—probably don't notice the parallels that exist between the video game and introductory microeconomics. On the other hand, the game certainly instills an intuitive sense of trade-offs and scarcity in the player, whether or not he or she is able to explicitly define it. Indeed, video game design company Valve has seen the links between video games and economics; they've gone so far as to hire an economist to study the barter markets that players enter into when trading in-game commodities (Goldstein, 2012). Does this mean that video games may have some use as an educational tool in the field of economics? It's tough to say. I can only guess, but at the moment it seems like it would be quite difficult to find a balance between making the economics lessons found in games like *Skyrim* more explicit and yet at the same time avoiding that all too common slide into the land of chocolate covered broccoli that we've discussed in class. That doesn't mean it's not possible.

Conclusion

What drove me to write about economics and *Skyrim* stemmed from my experience playing the game. I *played* the game like an economist. *What items provide me with the most utility at the lowest weight? Would I rather be well-rounded as a character or specialize in a particular skill, such as stealth? Do I want to attack people with strength or with speed, or maybe even a mix of both?* My transformation into this type of thinking occurred as the game progressed and I learned lessons from experimenting with different strategies. I didn't realize until I started working on this essay just how important the **sandbox** principle is to the game. The **information** the game provides, both on demand and just in time, is helpful and so too is the feeling of **co-design**, but if I were to pin down what one element is the most enlightening, it's the idea that the player can try out all sorts of different combinations and approaches while the game is still fairly easy. In this way, *Skyrim's* players can learn valuable lessons about the best ways for them to play the game. And maybe, just maybe, they can learn some basic microeconomics too.

Bibliography

Chaplin, H. (2006, October 21). Role-Playing Games, Offering a New Reality. *National Public Radio*.

Frakt, A. (2011, February 18). Simply Put: Marginal Cost/Benefit. *The Incidental Economist*.

Gee, J. (2004). *Situated Language and Learning*. London: Routledge.

Goldstein, J. (2012, June 25). Video Game Company Hires Economist To Study Virtual Worlds. *National Public Radio*.

Pindyck, R. (2009). *Microeconomics*. Prentice Hall.