I once heard someone at the digital games lab say: “I am playing video games for science.” I thought it was a somewhat clever and quite funny statement, but I had difficulty accepting the relationship between video games and science. However, I now understand that possibly there was a deeper truth to what those words conveyed and that perhaps we can in fact play games for the sake of science. Although it may sound like it, I am not trying to make up a clever excuse to buy a new game console or justify hundreds of hours spent in pursuit of virtual quests and shooting aliens from outer space. I am referring to the importance of being aware of the real-world manifestations of the technologies that we study at our lab.

As a researcher in an area of Computer Science that includes video games, I consider it my professional duty to be familiar with the latest game releases and with older games that for one reason or another have become widely successful or have a loyal following. Of course this pursuit could easily span several thousand titles if we go beyond what has been written for Xbox 360, PS3, or Nintendo Wii. We could reach all the way back to the days of the Atari and if we are lucky be able to play Space Invaders or Combat on the same hardware for which they were originally written. Of course we can still play such games on an emulator or on one of the newly released compilations. In any case, other than being a nostalgic trip down memory lane for some or perhaps a fascinating project on video game archeology for others there is a lot that can, in my opinion, be gained from playing older games.

Being more practical perhaps we should limit our choices to the realm of recent console and PC games. When selecting what games to play I would also suggest that our selection should focus on those seminal games that achieved something truly special or that in some manner helped shape the field of modern video games. I would consider game titles that: enabled specific consoles or franchises to become a commercial success, had revolutionary graphics, invented a genre or game-play metaphor, used sound or animation in a way that had never been done before, etc. Titles such as Super Mario Brothers, Max Payne, Grand Theft Auto, Sonic the Hedgehog, StarCraft and many others may come to mind.

Now, I am not saying that I we should all become gamers because of science or that playing video games constitutes a scientific pursuit. What I propose is that playing video games can be an important tool toward becoming a well-rounded scientist when one’s field of choice encompasses digital games. What a simpler and more interesting method to master what makes RPGs, FPSs, MMORPGs, and Platformers their own genre and how they differ from each other. I am sure that I can read in a book what an FPS is but I could argue that playing
Playing Video Games for Science?

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Halo or Unreal for a couple of hours would provide a much more entertaining and compelling learning experience. Of course, there is nothing wrong with learning from traditional methods but I posit that learning by experiencing in this case could be dramatically more effective. What better way to learn how something works than to directly manipulate a typical example created by masters of the craft?

I propose playing video games as an activity that can complement our scientific pursuits. Playing games can clarify concepts, give us ideas, and enable us to experience how some ideas go from the lab to the real world. Finally, because I think of a hopefully not too distant future when I walk into a classroom full of students waiting for their professor to teach them the fundamentals of video game design. In this future, I want to be able to describe how a given video game design principle works and why it works, not only because I read about it in a book, but also because I have experienced it on a real-world example that came in the form of an actual video game.