

Introduction

Videogames as Transnational Aesthetics

Videogames have become the largest single branch of the recorded media industry on the planet, with annual world sales exceeding \$100 billion in 2016.¹ Yet the importance of videogames far exceeds the metric of sales. They have become one of the key technological drivers of a vast infrastructure of computers, consoles, and smartphones. At the same time, they are structurally tied to new transnational audiences, to new forms of peer production, and to the institutions of the digital commons.² Above all, videogames are humanity's first truly planetary art-form. They tell interactive stories which enthrall billions of human beings, and their most realized works are some of the greatest aesthetic achievements of our time.

As a planetary art-form, videogames also embody some of the deepest economic, political and cultural contradictions of the contemporary era. Prime among these is the seismic clash between transnational capitalism and transnational labor, or more precisely, between the approximately two thousand billionaires who own the majority of the planet's wealth and the 7.6 billion of us who work for a living.³ Given that videogames are produced and sold by some of the largest media corporations on the planet, it is not surprising that many videogame franchises celebrate the world-view of those billionaires, a.k.a. neoliberalism or transnational plutocracy.⁴

What needs to be explained, however, is why some of the most innovative and popular videogame franchises of the early 21st century uphold a set of beliefs and institutional practices diametrically opposed to plutocracy. These beliefs are those of transnational democracy, and these practices are those of the digital commons. What makes these beliefs and practices so powerful is that they are inherently planetary and thus not restricted to any single regional, national or even international culture or polity. Nor are they limited to tiny groups of privileged dissidents or elite code workers. They are produced and sustained by the daily labor of the billions of human beings with regular access to the internet.

This is why the greatest videogames and videogame-related digital media of the post-2008 period are both the purest products of transnational capitalism, as well as the purest embodiments of the transnational resistance to that capitalism.⁵ This text will explore this contradiction in the context of three of the landmark works of the early 21st century. These works are CD Projekt's fantasy role-playing videogame *The Witcher 3: The Wild Hunt* (2015), referred to hereafter as *Witcher 3*; Bethesda Softworks' science fiction role-playing videogame *Fallout 4* (2015); and Ross Scott's machinima series *Freeman's Mind* (2007-2014).⁶

Whereas *Witcher 3* and *Freeman's Mind* are masterpieces of the genres of the fantasy role-playing videogame and the machinima series, respectively, *Fallout 4* is a lesser work of art, due to structural weaknesses in its story and quest design. Nonetheless, *Fallout 4* makes key contributions to the genre of open world science fiction which will be of interest to videogame fans, scholars of interactive media, videogame artists and ordinary citizens. Conversely, whereas *Witcher 3* and *Fallout 4* were produced by commercial videogame studios and achieved blockbuster sales success,⁷ *Freeman's Mind* garnered smaller audiences and only minimal financial returns. This series nonetheless deserves the most careful study due to its extraordinary narrative quality and its audience-centered mode of production, which testifies to the fact that

transnational audiences are beginning to produce media of the highest quality outside of the control of the commercial culture-industry.

Before examining these three works more closely, however, it is necessary to put the emergence of transnational audiences in its proper historical context. As late as 2001, only one-third of the approximately 500 million internet users on the planet were citizens of the fully industrializing nations. By 2008, half of the world's 2 billion internet users were citizens of the industrializing nations, and by 2016, these latter comprised seventy percent of the world's 3.4 billion internet users.⁸

What makes today's transnational audiences so different from all previous audiences is not just their planetary size and their location in the industrializing nations, but the wide variety of digital tools at their disposal. These latter range from social media platforms and open source software to digital services increasingly run on the principles of egalitarian sharing rather than monopoly rent-seeking, e.g. Google's Android, Valve's Steam, and CD Projekt's GOG.com.

Indeed, the success or failure of videogames is increasingly determined not by corporate advertising campaigns or by oligopoly media pipelines, but by transnational audiences with exponentially increasing amounts of computing power at their disposal. This exponential increase can be subdivided into three smaller trends, namely the exponential rate of improvement in storage, in microprocessor power, and in internet connectivity in terms of cost per unit of data -- trends more popularly known as Kryder's Law, Moore's Law, and Nielsen's Law.⁹

Over time, the operation of these three laws has decreased the monopoly power of transnational media corporations and governments over the production and distribution of information, and increased the power of digital artists and transnational audiences.¹⁰ Whereas a cinema fan might watch a two-hour film two or three times, videogame players routinely spend eight to ten hours on a single play-through of a top-tier videogame, while dedicated fans can spend hundreds of hours exploring open digital worlds.¹¹

The rapid growth of these transnational audiences also help to explain why the greatest videogames of our time have been, without a single exception, stinging critics of plutocracy. The the greatest third-person shooter ever made, Remedy's *Max Payne* (2001), told the story of an ordinary New York City police detective battling a malevolent transnational corporation. Square Enix' *Final Fantasy 12* (2006), the greatest fantasy role-playing videogame prior to the release of *Witcher 3*, delivered a scathing critique of imperialism and neocolonial warfare. The single best fantasy-adventure videogame ever made, Sony Santa Monica's *God of War 3* (2010), infused the Greek-themed mythological epic with the subversive energies of the late 20th century neo-slave narrative. The two finest visual novel videogames of all time, Spike Chunsoft's *Dangan Ronpa* (2010) and *Super Dangan Ronpa 2* (2012), were scintillating denunciations of the plutocratic demolition of public education and the toxic identity-politics of transnational consumerism.

The planetary scale and burgeoning networks of today's transnational audiences present unique challenges to the critical interpretation of videogames and its associated digital media. Book reviewers are rarely required to understand the mechanics of mid-18th century book editing and publishing in the manner of Robert Darnton's *The Business of Enlightenment*,¹² while the vast majority of music critics need not familiarize themselves with the history of acoustic compression algorithms explored by Jonathan Sterne's "The MP3 as Cultural Artifact".¹³ Yet even the most cursory analysis of a work of interactive media requires an in-depth understanding of the institutions of the digital commons, the structure and role of fan communities, and the

audience reception of the specific genre of interactive media in question.

We will suggest three interpretive concepts to help meet these challenges. These concepts are game-play, game balance, and replayability. The first, game-play, refers to the set of player inputs necessary to complete the game. At its simplest, this means the precise number, sequence and timing of button-presses, hand-motions, tablet swipes, mouse clicks, or other player actions. Just as alphabets and pictograms can generate an infinite variety of linguistic meaning in human languages, so too can the simplest sets of player inputs generate an inexhaustible variety of interactive experiences.

At its most complex, game-play encompasses the sum total of all actions which players can perform inside the videogame. This includes the interfaces which allow players to control their avatar or multiple avatars, the strategies players employ to master the challenges presented by the specific rules of the game, and player customization of in-game abilities, conditions and attributes. It also encompasses the interfaces which allow players to record their in-game actions, to save their in-game progress, to create and share player-created media (social avatars, screenshots, sound tracks, video clips and the like), and to interact with other fans in online and offline settings.

The second interpretive concept is game balance. The main metric of game balance is the subjective capacity of players to learn as they progress through the game. The central imperative of game balance is to maintain the equilibrium between the challenge of progression, and the rewards players earn for overcoming successive challenges. Creating and sustaining this equilibrium has always been one of the single most challenging tasks facing game designers, for the simple reason that videogame audiences are enormously diverse in terms of their individual playing styles, skills, and learning capacities. If the challenges are too difficult or increase in difficulty too quickly, the interactive experience breaks, i.e. players will feel frustrated and will not be motivated to improve their skills. If the challenges are too easy, players will feel boredom. Studios meet this dual challenge by means of extensive iteration and cross-disciplinary testing.¹⁴

The third interpretive concept, replayability, refers to the enduring appeal of the videogame to its audience over time. Replayability is based on the tension between the ability of players to learn and the ability of the game to teach. One of the most common forms of replayability is to replay a game on a higher difficulty setting, giving players a renewed challenge and allowing them to hone their game-play skills and refine their strategies. Other common forms include multiplayer gaming, as fans replay their favorite games in online and offline communities. While there are limited parallels between replayability and the ways in which fans of commercial franchises create fan art, or the ways fans create informal institutions around commercial sports industries, the interactive nature of videogames means that replayability is a core feature of the medium.

While game-play, game balance and replayability are all significant innovations in their own right, their true power is revealed only by their collective integration. The most successful videogames combine all three categories into a compelling whole, while the least successful do not. Achieving this integration is an extraordinarily difficult task, and has spurred the rise of the occupational specialization of the videogame designer.¹⁵

Videogame designers exercise some of the functions of a film director, e.g. overall responsibility for staffing and personnel, scriptwriting, editing, and post-production. They also administer many of the key functions of the franchise, e.g. continuous engagement with fan

communities, quality assurance and testing, and coordination between the globe-spanning networks of skilled workers.

Where videogame designers diverge from other media professionals, however, is their professional mandate to maximize the category of replayability. While the programming of serial media such as commercial radio and television are purely a means to sell advertisements, which encourages studios to prioritize short-term audience ratings above all else, there are no such constraints on videogames, where the time spent by players does not necessarily correlate with their financial investment in the videogame.

One of the challenges facing videogame designers is that the larger and more complex videogames have become, the greater the weight of systemic categories on the category of replayability. Simply, the totality of the player's interactive experiences and choices is greater than the sum of each visual detail, sound cue, character ability, item usage, or dialogue choice. This totality generates a semi-autonomous life of its own, or what players subjectively perceive as their immersion in the videogame.

To the extent videogames function as platforms for the player's experiences, achievements, successes and failures, they operate more like contemporary operating systems or social media platforms than as individual software programs. Just as operating systems and platforms allow users to access an exponentially increasing array of digital materials and tools, so too do contemporary videogames enable players to access exponentially increasing amounts of in-game items and external game modifications.

At a certain point, the sheer size and complexity of the in-game choices available to players propels videogames away from their status as commercial products or information commodities and towards a non-commercial zone of digital participation: the market of informatic scarcity accedes to the commons of informatic abundance.¹⁶ It is no accident that the enabling role of open source software and non-commercial distribution vis-a-vis social media platforms mirrors the enabling role of non-commercial digital media production by modders and fan communities vis-a-vis videogames.

This is why videogames, to paraphrase Theodor Adorno, are among the most significant seismographs of historical experience in the age of transnational capitalism. We will argue that the popular appeal of videogames is best understood as a variant of the political concept of public credibility, that is to say, the mass legitimacy (or illegitimacy) of a given political order, a specific cultural practice, or an individual economic institution. Videogames with low credibility have limited mass appeal due to their tendency to generate player frustration (excessive challenges which result in insufficient rewards) or player boredom (insufficient challenges which result in meaningless rewards) for the audience. Conversely, videogames with high credibility are appealing because they reward new and unskilled players for exploring the game, while providing more experienced players with challenges and rewards appropriate to their increased skill level.

From the standpoint of game designers, credibility is where playability (the player's willingness to perform any given in-game action) converges with replayability (the player's desire to repeat those actions and improve their skills over time). Creating and maintaining this credibility is quite possibly one of the most difficult aesthetic challenges ever faced by human beings for three reasons.

The first reason is that transnational audiences are not a unified, homogenous mass. They

are subdivided by myriad languages, nationalities, ethnicities, occupations, income levels and technological platforms. Since videogames are a fundamentally interactive rather than passive media, game-worlds must establish their narrative credibility (a combination of their initial playability and their replayability over time) across an extraordinarily broad spectrum of players and cultures. This means contemporary videogames must tell stories which transcend the barriers of race, gender, class, national identity, linguistic heritage, occupation, age, and technological access which divide transnational audiences.

The second reason is that today's transnational audiences have significant and increasing power over several key aspects of interactive media. This includes power over the circuits of media reception (audiences can digitally mobilize to make or break even the biggest franchises), power over distribution (audiences actively select digital media from proliferating online platforms rather than from a few oligopoly media pipelines, reducing the power of advertising), and power over production (fan-created media can dramatically expand the narrative scope and density of game-worlds). Whereas 20th century national audiences primarily consumed their own media culture or imports of US film, television and popular music, today's transnational audiences routinely download media content as diverse as China's Hong Kong action films, India's Bollywood films, Japanese animation and Polish videogames.¹⁷

Thirdly, the demographic majority of today's transnational audiences are citizens of the industrializing nations. This audience is increasingly demanding videogames which acknowledge the searing historical experiences of empire, anti-colonial national revolutions, and postcolonial nation-state formation from the perspective of the colonized rather than the colonizers.

The most successful videogames of the early 21st century have resolved these three challenges in three ways. First, they created playable and non-playable characters which critique the market-based identity-politics of transnational capitalism. Second, they have invented modes of game-play which turn the energies of the digital commons against plutocracy. Third, they have created open worlds constructed from a planetary array of stories, by borrowing copiously from digital media all over the world, as well as from the mass media and literatures of the industrializing nations.

This did not occur overnight, of course, but required a lengthy process of artistic experimentation and community feedback. For example, Hideo Kojima's *Metal Gear* series began in 1987 as a straightforward pastiche of the James Bond thrillers and the Japanese mecha (giant robot) genre. However, its two most successful iterations in the early 21st century -- *Metal Gear Solid 3: Subsistence* (2004) and *Metal Gear Solid 4: Guns of the Patriots* (2008) -- drew on the materials of the postcolonial Vietnam war memoir (Bao Ninh's *The Sorrow of War* (1990)) and the postcolonial urban action thrillers of the industrializing nations (in particular, Timur Bekmambetov's *Nightwatch* (2004), Joon-ho Bong's *The Host* (2006) and Jode Padhila's *Elite Squad* (2007)) to create the transnational stealth espionage thriller.

Similarly, Sony Santa Monica's *God of War* franchise began as a straightforward Greek mythology epic, but reached its narrative peak by borrowing heavily from the transnational neo-slave novel (e.g. Toni Morrison's *Beloved* (1987) and Évelyne Trouillot's *The Infamous Rosalie* (2004)). The result was *God of War: Ghost of Sparta* (2010) and *God of War 3* (2010), earth-shattering spectacles of transnational slave insurrections.

Two other striking case studies of the power of transnational audiences include Square's role-playing fantasy *Final Fantasy 12* (2006) and Spike Chunsoft's *Danganronpa* (2010) and

Danganronpa 2 (2012). *Final Fantasy 12* transformed J.R.R. Tolkien's *Lord of the Rings* trilogy, the Anglo-American pulp fantasy genre, and the neocolonial geopolitics of East Asia and Southeast Asia during the Cold War into an epic tale of anti-colonial insurrection against an energy-hungry empire, while the two *Danganronpa* games reappropriated the Japanese high school role-playing videogame typified by Atlus' *Persona* role-playing videogame series, the serial media of travel and food tourism exemplified by Anthony Bourdain's *No Reservations* (2005-2012), and the postcolonial historical novel incarnated in Amitav Ghosh' *Sea of Poppies* (2008) to create the first great anti-neoliberal interactive visual novel.

For all of the immense achievements of these artists and studios, they could never break free of the fundamental constraints of the commercial culture-industry, namely the corporate ownership of hardware and software platforms. The signal importance of *Witcher 3*, *Fallout 4* and *Freeman's Mind* is that they narrate the historical moment that videogame culture began to break free of these constraints, namely the conjuncture of 2013-2014 -- the first two from within the heart of the commercial culture-industry, and the third from a position at its margins.

All three works of art testify to the fact that transnational audiences are no longer passive recipients of media. They have become active digital citizens and cultural producers in their own right. In a world-system where two thousand billionaires relentlessly seek to transform play into digital labor, the 7.6 billion of us who work for a living just as relentlessly struggle to transform digital labor into play, and our greatest videogames are the anticipatory walk-throughs of transnational class struggles to come. Players of the world, unite -- we have worlds upon worlds to win!

1. Videogame sales data is from February 2017, Newzoo: <https://newzoo.com/insights/rankings/top-100-countries-by-game-revenues/>. This is significantly larger than Variety's estimate of world box office revenues for cinema (\$38 billion in 2016) or IFPI's estimate of world recorded music revenues (\$15 billion in 2014). Variety: <http://variety.com/2017/film/box-office/2016-global-box-office-1201968877/>. IFPI: <http://ifpi.org/news/IFPI-GLOBAL-MUSIC-REPORT-2016>. To keep these figures in perspective, ZenithOptimedia estimated the largest media market of them all, namely advertising expenditure, reached \$537 billion in 2014. <http://www.reuters.com/article/2014/04/06/advertising-media-idUSL5N0MW2JH20140406>.

2. Benkler, Yochai. (2003). "The Political Economy of Commons." Upgrade 4:3 (6-9). Web: <http://www.benkler.org/Upgrade-Novatica%20Commons.pdf>. Accessed October 31, 2010. Also see: Yochai Benkler. *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven: Yale University Press, 2006.

3. Forbes Billionaire List 2018. <http://www.forbes.com/billionaires/>.

4. The most useful critiques of neoliberalism as an economic system have been delivered by Ha-Joon Chang and Joseph Stiglitz. Ha-Joon Chang. *Bad Samaritans: the Myth of Free Trade and the Secret History of Capitalism*. New York: Bloomsbury Press, 2008. Joseph Stiglitz. *Freefall: America, Free Markets and the Sinking of the World Economy*. New York: W.W. Norton & Co., 2010. For useful overviews of the political economy of information under neoliberalism, see: Dan Schiller. *Digital Capitalism: Networking the Global Market System*. Cambridge: MIT Press, 1999. Also see: Nick Dyer-Witford. *Cyber-Marx: Cycles and Circuits of Struggle in High-tech Capitalism*. Chicago: University of Illinois, 1999.

5. This contradiction had its prehistory in the mainstream videogame franchises of the 1980s, 1990s and early 2000s. Since these franchises were aimed primarily at First World markets rather than today's transnational audiences, they either celebrated the US economic, political and cultural hegemony of that era, or else dissented from such. Dyer-Witford and de Peuter provide this lucid account of this earlier generation of videogames: "Virtual games are exemplary media of [US] Empire. They crystallize in a paradigmatic way its constitution and its conflicts. Just as the eighteenth-century novel was a textual apparatus generating the bourgeois personality required by mercantile colonialism (but also capable of criticizing it), and just as twentieth-century cinema and television were integral to industrial consumerism (yet screened some of its darkest depictions), so virtual games are media constitutive of twenty-first-century global hypercapitalism and, perhaps, also of lines of exodus from it...

...The game industry has pioneered methods of accumulation based on intellectual property rights, cognitive exploitation, cultural hybridization, transcontinentally subcontracted dirty work, and world-marketed commodities. Game making blurs the lines between work and play, production and consumption, voluntary activity and precarious exploitation, in a way that typifies the boundless exercise of biopower. At the same time, games themselves are an expensive consumer commodity that the global poor can access only illicitly, demonstrating the massive inequalities of this regime." Nick Dyer-Witford and Greig de Peuter. *Games of Empire: Global Capitalism and Video Games*. Minneapolis, MN: University of Minneapolis Press, 2009. Introduction, xxix.

6. Machinima are works of digital video or cinema created by using videogame rendering software.

7. Between 2015 and 2017, *Witcher 3* sold somewhere between 12 to 14 million copies and *Fallout 4* approximately 14 million copies across a variety of platforms. Jordan Sirani. “The Witcher Series Sales Pass 25 Million.” <http://www.ign.com/articles/2017/03/30/the-witcher-series-sales-pass-25-million>. Luke Villapaz. “Fallout 4' Sales Record Breaking: 12 Million Copies Worth \$750 Million Sold At Launch.” *International Business Times*. November 13, 2015. <http://www.ibtimes.com/fallout-4-sales-record-breaking-12-million-copies-worth-750-million-sold-launch-2183997>.

8. Internet World Statistics. <http://www.internetworldstats.com/>.

9. Kryder's Law states that the capacity of electronic storage doubles every 12 months, Moore's Law states that the capacity of data processing increases every 18 months, and Nielsen's Law states that the capacity of transporting data via the internet doubles every 21 months. The flip side of these exponential increases is a decrease in costs, i.e. the cost of storing data halves every 12 months, the cost of processing halves every 18 months, and the cost of transporting data halves every twenty-one months. While all three laws have been more or less accurate from 1971 until the early 2000s, there is strong evidence to suggest that all three rates have slowed down over the past decade. The reason is that all technological improvements generally follow an “S” pattern – slower short-term growth, rapid medium-term growth, and shorter long-term growth – rather than trending permanently upward (e.g. the average speed of trains, automobiles and airplanes does not increase to infinity). Data preservation specialist David Rosenthal provides this useful insight into the increasing physical and economic constraints facing continued exponential growth in data storage: <http://blog.dshr.org/2014/05/talk-at-seagate.html>.

10. Today's most successful videogame studios are not the ones which most ruthlessly exploit their employees or fleece their customers, but the ones which give their workers the most creative freedom and give customers access to the tools of the digital common. While Valve Software's egalitarian internal division of labor, exemplified in its legendary handbook for new employees, is the most famous example of this trend, similar tendencies are at work elsewhere in the industry, e.g. Sony's Naughty Dog and Santa Monica Studio, the creators of the world-class *Uncharted* and *God of War* franchises, respectively, are organized as flat hierarchies and cooperative production networks. See: Valve Employee Handbook. www.valvesoftware.com/company/Valve_Handbook_LowRes.pdf. Benson Russell. “Designing Combat Encounters in *Uncharted 2*, Part 2.” *Gamasutra*. July 1, 2010. http://www.gamasutra.com/view/feature/134317/designing_combat_encounters_in_.php?print=1.

11. This extensive time investment is antithetical to most 20th century business models of mass media. These latter are based on oligopoly control over the circuits of production and distribution (e.g. the ad-sponsored live sports broadcast, ad campaigns for blockbuster films which are shown only in specific theaters, and the seasonal cycle of fresh television programming designed to garner maximum advertising revenues). By contrast, videogame fans are increasingly able to download the interactive experience of their choice at a time and on a device of their own choosing.

12. Robert Darnton. *The Business of Enlightenment: A Publishing History of the Encyclopédie, 1775–1800*. Cambridge: Harvard University Press, 1979.

13. Jonathan Sterne (2006). “The MP3 As Cultural Artifact.” *New Media & Society* 8:5 (825-842). <http://sternetworks.org/mp3.pdf>.

14. Przemyslaw Wojcik describes the strategies employed by the quality assurance team at CD Projekt Red in order to maintain game balance as follows: “A good QA [quality assurance] team has to consist of different types of people. We have to have casuals and hardcores on board. If we have people that beat every game, get every achievement in it – then we have only one point of view. If you find a part of any game to be always absurdly difficult, be sure that it was tested only by hardcores. Dividing the team is important not only when it comes to setting the bar for game difficulty, but also other factors. In our current projects we allow only half of the team to read the whole story of the game, while the rest doesn’t know it at all; this second group can then give us feedback about the comprehension and presentation of the story. In *The Witcher 2* we gathered a team with people who had read Sapkowski’s novels and people who knew squat about Geralt. We’re creating a game, after all, for people who are unaware that these novels even exist. I say that if every tester who has beaten the game a hundred times (in terms of gameplay hours) says it’s easy, it means that everything is just as it should be.

When we are talking about balance in the game it’s not all about mechanics, but also about presentation. We analyze the game’s length and what happens in particular playthroughs. We can show the designers that a particular quest has too little or too much combat, dialog or cutscenes. There are a lot of things to check when analyzing the game, so we try to divide tasks so nobody gets bored doing the same thing over and over. We set two weeks as the maximum time a person works on one aspect: gameplay, performance etc. and then we let them switch tasks. It’s great when a person can rest from one part of the game and when he or she returns after some time to this fragment of the game they can approach an old job with new perspective and give valuable feedback.” CD Projekt Red Blog. <http://cdpred.com/divide-and-test-balance-your-qa-balance-the-game/#more-1506>. Accessed March 20, 2013.

15. “Every [videogame] designer I met seemed to come from a different background: physics, computer science, media studies, film studies, graphic arts, writing, or journalism just to name a few. More designers were 'self taught' than artists or engineers. Though they seemed to come from every disciplinary background imaginable, the common theme was: designers are gamers more than any other discipline within game development. Designers frequently had skills that seemed to transcend disciplinary boundaries. Designers must possess analytic skills, which allows them to deconstruct games, examine their core elements and mechanics, and determine the underlying rules and structure of a game.” Casey O'Donnell. *The Work/Play of the Interactive New Economy: Video Game Development in the United States and India*. Dissertation Thesis, Science and Technology Studies. Troy, NY: Rensselaer Polytechnic University, 2008. http://digitool.rpi.edu:1801/webclient/DeliveryManager?application=DIGITOOL-3&owner=resourcediscovery&custom_att_2=simple_viewer&pid=11525. Accessed May 21, 2011.

16. One of the most interesting features of videogames is their capacity to create in-game economic systems as tools of interactive story-telling. In many videogames of the 1970s and 1980s, this took the form of the “high score” which measured the player's in-game proficiency. More complex versions of this dynamic include the items and loot acquisition system of role-playing videogames, and the various online trophies and achievements awarded for specific player actions inside a videogame.

17. Social Science Research Council. (2010). *Media Piracy in Emerging Economies*. Joe Karaganis, Editor. Web: <http://piracy.ssrc.org>. Accessed April 15, 2011.