

## **A Marxian Analysis of World of Warcraft: Virtual Gaming Economies Reproducing Capitalistic Structures**

For \$522.95, Game Outfitter sells 8 miniature mage knights figurines. These mages can be used to play staged fights or for display on your shelf. For \$1,800, a seller on the eBay market is auctioning off a World of Warcraft virtual mage warrior. This mage can *only* be used in an online game setting and has no physical presence whatsoever.

A new economy is emerging: the economy of virtual game worlds. The gaming points of virtual worlds are traded against millions of dollars in earth currency and some trading is higher than real world currencies, such as the Japanese yen (Castranova 2). However virtual this world may seem, I argue that its structures are grounded in reality and are not completely new forms of labor relations. Virtual gaming economies embody and reproduce real patterns of capitalist structures of labor, including alienated labor, commodity fetishism and a modern concept of labor theory of value.

Marx's theory of alienation shows how the production of points alienates the consumer from the labor and the workers from the consumer. Marx's concept of commodity fetishism demonstrates how wealth in the virtual economy is being driven by an out-of-game fetishization, which contributes to the reification of in-game points. Success within the game is fetishized, which leads to the points being reified. Scholars like Antonio Negri, Michael Hardt and Yochai Benkler have written about virtual economies as ushering in new labor relations and disappearance of economic

inequality. However, premature examinations of digital economies can be misleading because the analysis ignores alienation of labor and commodity fetishism, which continue and reproduce modern strands of capitalism. Postone's reinterpretation of Marx's labor theory of value as a measure of wealth explains why virtual economies are subject to the same abstract structural domination of capitalism that is seen in material economies because value still has the same function. Before I proceed, I will briefly frame the context of virtual economies.

Virtual worlds are computer generated cyber spaces that mediate interaction of massive amounts of people. There are different types of virtual worlds, but the primary two are platforms and games. Platforms are not goal driven and the purpose is for a participant's avatar to interact with the virtual world in any which way they chose to—much like real life. Then there are “massively multiplayer online role-playing games” (MMORPGs), which are goal driven and where the purpose is to conquer the game by reaching a certain level. Both type of worlds contain their own virtual currency and economies, where commodities can range from points, virtual real estate to magical objects, to clothing.

For MMORPGs, a player can level up in several ways. One of them, which is critical to understanding how the virtual economy is changing, is through transactions that involve an exchange of monetary capital. Players can either level up on their own talent and time, or a player can pay for the leveling up work to be done by someone else.<sup>1</sup>

It is only recently that transactions with monetary capital has developed into a

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<sup>1</sup> The former usually means the player levels up through mastering a level by their own skill, getting help from a friends or doing this with a group. The latter means that the player purchases points or an account that is already leveled up.

massive economy of more than one billion dollars (Castronova 13). In the simple stage of gaming transactions, players purchased points directly from other players who sold their points (this could be mediated through eBay). This is still a popular method for selling and buying points. But there is another form of purchasing and selling points, which is a boss/owner hiring large groups of experienced gamers from developing countries to produce points, and the owner of the company sells the points on the market. What started out as a bartering/simple-market exchanges, has now transformed into a complex virtual and global labor market.

In what follows, I will refer specifically to the virtual economy of World of Warcraft (WoW). Owned by Blizzard, a US based company, WoW's 7.5 million players are distributed<sup>2</sup> throughout the world.<sup>3</sup> Players can play together from any geographic location with a high-speed Internet connection, electricity, and a fast computer.<sup>4</sup> Thus, this game is virtual in that players never have to meet physically to play together. Writers such as John Seely Brown proclaim the amazing skills and cooperation of WoW gamers around the world (2006). This insightful perspective only takes into account gamers who play for pleasure and ignores the complexity of participants in WoW's virtual landscape.

A Marxian analysis of WoW departs from the obvious and popular perspective of players-to-players. A Marxian approach acknowledges multiple relationships,

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<sup>2</sup> As of September 2006, WoW is estimated to have 7.5 million players on earth accumulating points through quests and raids. The game is set in a fantasy universe, World of Warcraft Universe, with a Medieval European theme of kingdoms, dungeons, dragons, and warlords. Players pay a monthly fee of \$14.99-\$12.99 for unlimited game time.

<sup>3</sup> Gamers who play for pleasure are all overwhelmingly located in Northern America, Western and Northern Europe, and Australia

<sup>4</sup> For detailed system requirements for Apple and PC Computers:  
<http://worldofwarcraft.com/info/faq/technology.html>

different types of actions, and different purposes for playing the game. First, a Marxian analysis sees multiple relationships between game players and non-players that are stratified and rooted in power, access, and political economy. There is also a sharp distinction that this approach makes room for, that is the actions in the virtual economy that are mediated inside the game (in-game) and outside of the game (out-of-game). The in-game and out-of-game market relations are two inseparable, yet different modes of operation, in which I will define in the next section. Additionally, a Marxian approach makes room for gamers who play for pleasure in-game, and gamers who play in-game for wages as a function of survival (to purchase shelter, food and basic living necessities). I will refer to the former group as *gamers* (those who play for pleasure) and latter groups as *goldfarmers* (those who play for the sole purpose of selling their points.)<sup>5</sup> Within the group of gamers who play for pleasure lies a large number of players who buy WoW points with advanced powers, tools and points.<sup>6</sup> Goldfarmers are real people who work to obtain virtual gold points to sell to gamers. Essentially, in WoW, players purchase the points of other players with real currency. However, underlying this process is a stratified production system.

The economy of WoW is stratified, much like a complex capitalistic economy, where participants have different roles. Gamers play for pleasure, while goldfarmers play to supply the means of expedited levels through selling their labor. The nature of the transactions and supply of gold-points for purchase is a global and

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<sup>5</sup> In WoW, gold is translated to points. JinGe's research has documented the work of game laborers who work to obtain virtual gold, they are called goldfarmers. This word is now a ubiquitous word for game laborers in any virtual game.

<sup>6</sup> The production of points are taken to an out-of-game market, like eBay and the actual transaction of buying the heroes also takes place out-of-game, where the player has to set up a credit card to purchase the points, that she/he will upon ownership transfer to WOW.

economically stratified process. The economy of virtual gaming is not just an extension of a specific industry of our entertainment industry, nor does it produce new relations of labor as Hardt and Negri claim, but the stretch of WoW's economy reproduces the inequitable exploitive relations of a material capitalistic economy. This is the key factor that is ignored in scholars who claim virtual economies have new relations in production. They do not take into account that there are players who game as a form of labor, to supply the demand of points.

Goldfarmers work in out-of-game factories by playing in-game to sell their points. They are located in low-wage countries, such as, China, and are almost always male. Ge Jin, a global gaming researcher who has documented goldfarmers in China, estimates that there are tens of thousands of goldfarm gaming workshops in China, employing up to half a million of workers. The goldfarmers are employed to produce WOW points to be sold on the world market, but it is not the individual goldfarmer who sells his product directly to the market. He sells his labor power to the owner of the goldfarm. These gold farmers are organized in large work groups of 80 players and employed by a single owner, who decides the pay scale and supplies the resources for producing the points. Jin sees this organized labor of selling virtual points as gaming sweatshops, where the labor takes place in low-income countries and usually exploitative conditions. The gaming sweatshops produce (points) that are sold on global market for gamers from North America, Western Europe and Australia (Jin).

The labor of goldfarmers is alienated labor. Marx's theory of alienation says that a worker is separated from human nature because she/he has less control and

options over the nature of the work because the worker is working for someone else (70-75, 260-61). It is the monotony and repetitiveness of the worker's skill that alienates her/him from the job and it is also the controlled environment of industrial work that takes the worker's freedom away. In WoW, goldfarmers in China are engaged in post-industrial technology work, where they labor repetitively, killing for points (Jin Ge). Although it can be argued that these goldfarmers have a passion for gaming and thus enjoy the goldfarming work, Marx's theory of alienation shows that despite any preexisting passion upon entering the work, it is in the repetitiveness of the work that kills off the human connection to her/his human nature/species being, and renders the work as external to the worker's life (70). It is in the repetitive killing for points that *estranges* the worker from the *thing*, but this is also a process of *self-estrangement*, and from the simultaneous process results in *estranged labor* (75). Marx emphasizes that the work we do, makes up who we are. Therefore if our work is repetitive, controlled and monotonous, then we will embody the very aspects of our work – which further alienates us from our human nature and ultimately from each other (77).

Work in a capitalistic economy appears to be as satisfying our basic needs, but the repetitiveness of the work, he argues, is not to satisfy our basic needs, but is part of a endless circle of growth for more capital. Aneesh's theory of the phenomenon of skill saturation highlights the decisive role of repetitive skills in a post-industrial information technology world. He defines skill saturation as “absolute predicatability of procedure and outcome, resulting from exhaustive ordering of various components of skills, and the elimination of all irregular spaces of work”

(363). This type of labor means that every action of labor can be monitored and surveillanced (379). His theory crystallizes the type of labor in a post-industrial digital world as unrestrained saturation of skills. In WoW, the goldfarmer's in-game "killing for points" labor is clearly repetitive labor of a specific skill, clicking the mouse to kill "a monster" for points. Labor in WoW means that every mouse-click, point obtained, and movement is quantifiable. It is complete saturation of the player's gaming skills that alienates him from his labor, because he is not producing points for his own pleasure (345). The work of goldfarming is alienating because the repetitive work is not for the laborer's consumption, but for the purchaser's fulfillment. Regardless if a goldfarmer played for his own fulfillment prior to becoming a goldfarmer, the act of goldfarming as an action of repetitive skill reaps profits for the goldfarm owner and in process alienates the goldfarmer from his own labor and the product of his labor.

The fact that gamers are willing to purchase points for entertainment is an given that there is nothing tangible or fungible outside of the system of WoW. Other intangible entertainment commodities such as music and movies, or MP3 or MPEG files, function on various platforms in various spaces.<sup>7</sup> The commodity of points in WoW functions solely within WOW. I argue that in complex MMORGS, such as WoW, game points are a commodity that is fetishized by players. To be clear, it is not a fetishization of points, it is a fetishization for status and respect that drives the reification of points.

Marx outlines how a commodity embodies social relation as a embodiment in

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<sup>7</sup>For example, mp3's can be players on computers, mp3 players (i-pods), CD players, cars, phones and stereo systems.

mysterious and intangible process, called fetishism (319-328). He brings the origins of fetishism back to the labor that was put into producing the commodity. However, it is the item's origins that are completely disconnected from the character the commodity takes on in the market. He says the only way to judge the commodity is by assigning a value to it, but herein lies the dual nature of commodities, in the use value as constituted by the utilizations and labor power is collapsed into the exchange value that the commodity takes on.

In WoW, the use value of points is to level up. But this takes time - a lot of time. Therefore, when placed on the market, the use value of points is not just as points in itself to be purchased, but time is the value.<sup>8</sup> With the added value of time, the use value of points is collapsed into the exchange value, which gives it the value that it has on the market, such as eBay. What happens to the value of the points once placed on the market is a mysterious process. Gamers compete for the points and drive up the value through their demand, but they are not aware or do not need to be aware of the labor process that takes place in low wage countries for the sale of the purchased points. This contributes to another level of alienation, In the previous section the theory of alienation showed how the goldfarmer is alienated from his product (points), from himself and from others. Commodity fetishism of WoW points extends the alienation to the consuming gamer, who is alienated from the commodity (gaming points) that s/he purchases. The nature of the transaction facilitates this alienation, where the buyer does not purchase the points from the goldfarmer directly, but through a mediated market (eBay). The exchange value of

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<sup>8</sup>Translating time into value is a concept that has been studied among economists. (Castronova 46).



gaming points is mystified in process because the purchaser does not have to be conscious of the commodity's labor history. The value is abstracted from the labor process in China and the market value assigned to the gold-points further reifies the fetishism for the it. As described by Marx, this type of fetish only exists within complex capital systems. Similarly, a fetishism for game gold-points only comes to existence in a complex virtual gaming economy.

Marx also saw that commodities in a capitalistic society constituted by labor (308-317). He describes the dual character of labor in capitalism: concrete labor, which is a transhistorical process in all societies, and abstract labor, which is an interdependent form of the social mediation of commodities. Abstract labor is embedded into commodities, which constitutes the relations in labor production and distribution. The relations of labor in a complex virtual economy produce commodities. Goldfarming is an abstracted form of labor. Goldfarmers labor to produce points, which is the commodity that distribution and production is mediated through. Marx's labor theory of value saw commodities as constituting the objectified form of abstract labor and therein lies labor as the source of wealth. Marx saw wealth created by human labor as a transhistorical process, and only in capitalism is the abstracted labor the ultimate mediation of wealth. Moishe Postone reinterprets abstract labor as having a "unique social function: it mediates a new form of social interdependence"(59). Therefore the unique function of labor in capitalism is that one labors not to consume one's products, but one labors to consume the commodities of another person's labor. Labor is mediated through the structures of commodities. This interdependence that Postone identifies, is the process that

drives capital economies. It is also a dual process because abstract labor is the ultimate force that shapes concrete labor – as in material production. This cycle of interdependence is the structure of virtual economies and shows that it an economy based on material production.

The labor of goldfarmers is the material production. Their labor is abstracted into commodities of gold-points. The fetishism of gold-points drives the reification of the points. A gamer works a job not to consumer their own products, but to consume the products of someone else. This is the cycle of productive consumption, where Marx outlines three-fold process by which one produces in order to consume (228-231). The gamers use a part of their income to attain in-game prestige by purchasing a goldfarmer’s labor power in the form of gold-points. Consumption of points “creates the motive for production” of points (229). The points that are produced are to be a consumed “in a specific manner,” they are to be used virtually in-game and are not fungible. Therefore, production for gold-points feeds and shapes the “manner of consumption” (230). And in a reiterative loop, the gamer’s desire for quick in-game points shapes the material production of gold-points. Gamer as consumer and goldfarm owner as producer, induce each other’s inclination to continue consuming and producing. It is precisely “consumption [that] reproduces the need” (229). Exemplifying a critical feature of commodities in capitalism, the gold-points as a commodity mediate the entire social relations of production, distribution and consumption.

The value assigned to the gold-points is the social mediation of wealth, where the points mediate the relationships between gamers from to goldfarming laborers.

This process though is not apparent to the gamers who purchase the gold-points, which is the characteristic of relations in a capitalistic society. The process of exchange and distribution relies on an abstract labor, which is constituted by alienated labor. As pointed in the previous section of alienated labor, the gamers are alienated from the commodity they purchase and the goldfarmers are alienated from the labor that goes into the commodities they produce.

Marx saw that abstract labor is alienated labor. He critiqued capitalism from the standpoint of alienated labor. Postone offers a critique of labor within capitalism. Labor for Marx is problematic because it is alienating, which is the source of capitalism's structural contradiction in class/production and labor relations. Wherein Marx sees labor as constituting of wealth, Postone extends it to value as a measure of wealth. This critical refinement of labor's role opens up the doors to look at value as a form of wealth that is tied directly to human labor.

Ultimately, as long as value is a measure of wealth, the commodities in a virtual economy will reproduce the same relations of labor as within capitalism. Power and domination in a virtual economy is not solely about people controlling game laborers, it is about the abstract structural domination that determines end goals of capitalism and the way it looks" in its material form (Postone 59). As Postone points out, this cycle is self-generating because abstract labor is a new set form of social interdependence. For Postone, surplus is not just about the laborers overproducing for owners to reinvest, surplus is the *sina qua non* measurement of wealth, not value (Marx 248, Postone 64). When we peg the model to the goldfarming industry, we can think of value of the gold not only as valuable for its worth in the gaming

economy, but as an actual measure of wealth that structurally dictates the actual set up of even producing gold in the first place. Ultimately, global goldfarming is not just about the Chinese goldfarmers being dominated by the factory owner, its about this abstract notion of value that we have in a capitalistic society that determines what is valuable, which is equated with wealth (Postone, 71). Therefore, in this schema, to be able to purchase gold points from Chinese goldfarmers is a measure of wealth for the purchaser and it shows the extent of capitalism's domination in that anything can be commodified.

So the alienation is structural, in that every individual is alienated not only from the products they consume and produce, but an individual is alienated in the endless climb to reach the end goal of wealth, yet the end goal is one without a finish line, an ever moving mirage. For a virtual gaming economy, the structural domination of capitalism is revealed in the changing value of intangible gold, which was originally meant for in-game points, and gaming as function of leisure and entertainment, has now climbed its way out to have value in out-of-game contexts. Even intangible in-game entertainment points could not evade the domination of capitalism

Virtual economies are subject to the same abstract structural domination of capitalism that is seen in material economies because value still have the same function. This explains why virtual economies reproduce the very forms of alienation, commodity fetishism and structural contradictions that are seen in material capitalism. Scholars like Negri and Hardt claim that the labor in a digital economy is immaterial, therefore it produces entirely new labor relations within capitalism, a trend towards “postmodernisation of the global economy” (1992: 103,

2005: 109). Ojai Benkler's recent book, The Wealth of Networks, goes as far to claim that new forms of capital will solve class inequality (2, 468). However, beyond a cursory examination of this misleadingly impalpable digital economy, lies a very tangible economy grounded in material relations of labor. These labor relations are not new, they are a continuation of stratified class labor relations of modern capitalism. For Hardt and Negri's statement to come true, that virtual labor as immaterial labor gives rise to new relations of labor, requires for a fundamental change in the way value is objectified. As long as value is a measure of wealth in society, any new market mediation of commodities, whether is be in third party mediators like eBay or self contained economies like WoW, the same relations of labor will be reproduced. They make the same mistake that Postone identifies as the failure of Socialism to transform society.

The discourse of virtual economies confers the similar hopes for Socialism to create new labor relations. Postone argues that the elimination of the market in Socialism as a function to transform the distribution of commodities didn't change the structures of production (71). In Socialism, value was still the measure of wealth, therefore value was still inextricably tied to labor, which explains the unsuccessful reordering of labor relations. This same argument can be applied to virtual economies. As long as value is still the measure of wealth in society, it will be inextricably tied to labor. Therefore, relations of labor in a virtual economy will mirror what we have seen so far, which is the constant tensions of production. Any utopian visions for virtual mediation transforming social structure should take into account that a change in platforms does not always mean a change in structures.

The structural contradictions of production still exist because the fundamental framework has not changed.

I believe that we are witnessing a new transition in capitalism, a transition to a virtual economy that transforms the *medium* in which capital is exchanged, labor is sold, production is organized, and value is created. But a *new medium* does not *mean new forms* of capital or labor relations. The new medium of virtual markets still reproduces the structures of labor and production of material capitalism. The emergence of these basic structures were first identified and observed by Karl Marx. Although many Marxian theorists have expanded, appropriated and reapplied his theories in a more nuanced way that better explains modern economies, his underlying theories are still useful and fundamental to understanding the nature of labor relations in capitalistic society. A Marxian perspective and Postonian reinterpretation of his labor theory of value allows us to see the complex and global aspects of virtual economies. Postone's reorientation of value reveals that "the systematic constraints imposed by capital's global dynamic" holds true not only for industrial capitalism, but also for post-industrial digital economies (Postone 72).<sup>9</sup> As long as value is a measure of wealth, complex virtual economies reproduce parallel conditions of labor power of material capitalist economies.

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<sup>9</sup> This new economy is commonly referred to as the information technology economy.

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## **NOT USING THIS STUFF BELOW – DELETED SECTIONS**

### **MOTES**

#### **Surplus value section**

The entire process that feeds commodity fetishism and alienation of labor from the products is further developed by Marx's theory of Surplus Value - which highlights that in the end, this cycle is driven by the drive for growth, and growth is possible through surplus. Surplus is created through labor, and the capitalist appropriates the surplus.

Postone

The computer and the game drives the productivity of the goldfarmer. We can analyze the goldfarmer in terms of objectified labor and living labor. According to his definition of objectified labor, it is possible for a goldfarmer to sell his labor to the owner to work for an agreed amount of hours. The price of this type of labor is determined by what it will take to keep the laborer alive in terms of purchasing food and shelter and etc subsistence. If we look at the goldfarmer as selling his living labor to the owner, the owner can squeeze out more points from the goldfarmer to create a surplus after paying out the goldfarmer. The surplus of points is an ever changing # - where the goal is to produce more and more points to be sold on the market to make a profit. The surplus gives the net income for the Leader to REINVEST in technology that will further be used to speed up the worker's productivity. The developments in technology, such as faster computers, faster bandwidth, and faster connection drive up the productivity of the



goldfarmer to mine for points. So surplus value is derived from the labor power of goldfarmers. Surplus value can increase with increased squeezing of labor power. Increased squeezing can be done through reinvesting net income into faster technology to facilitate the squeezing, monitoring and surveillancing of goldfarmers. Surplus value in WOW goldfarming works because the leader does not necessarily have to pay the goldfarmer more wages as his productivity increases because of the existence a surplus in labor - there are always more experienced gamers in China to hire as a goldfarmer and because is a WOW's global market, the surplus in labor exists in other semi-periphery nations like Indonesia, who can drive down the wage as they can compete more than China because they can pay their goldfarmers an even lower wage than China's (cite ).

In a complex virtual game like WOW, the process and salience of creating surplus value as the source of growth becomes clear. In a non-complex game, the exchange of commodity mirrors the pre-capitalist economies as identified by Marx, where it is one-to-one transactions and net-income is not used in a systematic way to produce more commodities. Because points can be mass produced through intense skill saturation of the same activity over and over again by goldfarmers, owners can establish systematic and consistence supply of points. The points have exchange value on the market and this value is mysterious in that there is not a direct need for human subsistence of this commodity of gaming points, and the labor process behind the points is unclear to the purchaser. We are seeing a transformation of virtual games from more simple economies to complex global economies that reproduce the labor structures as found in material earth economies.

This transformation as notes by economists such as castronova - he writes about the implications it poses for economies, law, and policies to deal with the issues that

arise from complex virtual economies. In his book, *Synthetic worlds: theorien business ofoooo* blah blah. Castronova's call for attention to this new economy reemphasizes Marx's analysis of capitalism in that this new economy is the foundation in which structures of society emerge: laws, institutions, and governance. Therefore, we are witnessing the beginning of a call to analyze how virtual production calls for a reexamination of social structures, perhaps even readjusting or inventing new structures to deal with this type of production.

In this paper, I have analyzed the virtual economy of MMORPG - WOW, but the emergence of massive virtual economies that will host not only games, but everyday human interaction like talking, buying, loving, meeting, fighting, killing will question economies and social scientist to radically examine the impact of this kind of economy, this seems very similar to capitalism now = but will make us realize that our current laws and institutions do not address and cannot handle many of the questions raised this type of economy. The virtual economy is already at multibillions blah blah (cite ). For example, how will exploitation of goldfarmers be monitored when it appears to be invisible (unable to track IP address, location of gaming sweatshop?) When everything is mediated online, how do laws address disputes? How does monetary exchange be determined? How do you handle monies in virtual worlds as monies in earth world? Thus, the entire virtual economy of WoW can be seen as a world system, a system of interlocking players operating within a single market system (Wallerstein 102). Wallerstein's tri-model world economy of capitalism consists of countries classified as Core, Semi-Periphery, or Periphery (86). There are different indicators used for classifying countries into one of these modes, but a perfunctory definitions sees the Core as free and wealthy countries that extract surplus value by exploiting the labor, resources and materials of semi-periphery and periphery countries. The periphery are

the poorest countries and the semi-periphery are countries are one that can either become a Core or a Periphery. The distribution of gamers and goldfarmers in WOW mirror this tri-modal framework. Gamers who play for pleasure are from core countries, United States, Australia and Western Europe. (cite - ). Players who play for wages—the goldfarmers— are from semi-periphery countries, China (site ). The elite in the semi-periphery have access to the capital to set up the goldfarming company, organize the market exchanges of points, and hire goldfarmers to play for a low-wage, so that the points they produce can be sold at a profit to players in core countries. The profit is reinvested into the company to hire more players, buy more computers, purchase more caffeine or drugs to squeeze out more labor power from the players (cite ).

The economic transactions to sell the goldfarmer's products (point) take place on a market that transcends nations, governing systems and languages. The economy of WOW operates on a system of exchanging of virtual goods—points. This global gaming economy mirrors transnational companies and businesses of the material world, where growth is the ultimate target, and semi-periphery and periphery nations provide the low-wage labor to extract the surplus value for growth. Except in WOW, the economy looks more like a bi-modal system, because the periphery countries do not have the technology infrastructure to support this type of massive organized production of labor gaming.<sup>10</sup>

A world systems approach gives the macro view of market exchange in WOW's virtual economy. Gamers from core nations can level up by buying these points because of the relative affordability of points based on the exchange rate that are sold from semi-

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<sup>10</sup> explain the technical infrastructure needed and that GAMERS can still be from periphery countries as long as they have the technology

periphery nations <sup>11</sup>. These exchanges reproduce a market where the goldfarmer is alienated from his work, and this ultimately leads to an alienation from his life.

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<sup>11</sup> go to world systems theory link to show how exchange rates further reproduce inequities

