

Virtual Economics and Twenty-First Century Leisure

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Why MMPOGS?

Is it possible that innovations in late-twentieth and early-twenty-first socio-economies have shifted the division between work and leisure? Moreover, might a shift have occurred not just in the time we devote to these activities—expanding and contracting both, ironically expanding work time for those who then have the most resources for newly truncated leisure time and doing the inverse to others—but also in the imaginations we carry into both?[1]

Collectively we imagine how our selves should operate in work and leisure time; what activities are appropriate, what attitudes are relevant, what actions fit in one but not the other and so on. We know how we conceive our selves and are confident we know how others conceive their selves in these realms, and we act on this knowledge constantly reacting to the expected and unexpected events we encounter, adjusting our knowledges and constructing our world as we go (Barnes 2000). In this way we generate a widely dispersed, objective and yet ever changing understanding of the self relevant to times we are working (paid or unpaid) and times we are playing (enjoyably or not). What might we ask of this collective construction in the light of the emergence of virtuality? There is not the space here to justify the assertion that virtuality has developed various social and cultural structures that are connected to but are yet often somewhat different from the social and cultural structures of reality and this claim will be taken as a basis for discussion. In addition, this exploration will itself help to add evidence to whether such a distinction may hold and, if so, what relations might be found (Jordan 1999; Jordan and Taylor 2004).

This paper offers some insight by focusing on one of the most virtual realms of all; massive multiplayer online games (mmpogs). Such games consist of up to thousands of individuals seated at computers that may be anywhere in the world as long as they are connected to the Internet. The really seated individuals then enter virtual worlds, using software on their computers to connect over the Internet to servers that co-ordinate and construct environments, in which they inhabit a graphical representation, or avatar, which they can use for communication and various actions. Such worlds as Everquest (swords and sorcery theme), Toon Town (children and cartoons), World of Warcraft Online (more swords and sorcery), and Star Wars Galaxy (ahem star wars) offer themes which inform the abilities characters gain. In Everquest one might be Fjalia Moonlover, the cute elf ranger, able to join groups, fire arrows, slay mythical beasts and follow quests, while in Star Wars Galaxy one might become Bobbbae Fetter, the bounty hunter, able to join groups, fire lasers, slay mythical star-themed beasts and follow star wars quests.

These worlds, however adventurous and absurd, represent the closest to a social virtual reality that the early-twenty-first century offers. In these worlds thousands wander and hundreds may gather together to work or fight. The characters appear as three-dimensional and move through environments rendered with various degrees of care and skill but all producing the unmistakable illusion that there is another place out-there—a world. The all-too-real sense that there is a ‘there’ there produces a strange situation in relation to play, for the generation of a society in persistent virtual worlds produces all the obligations of a social world within what should be fantasy play-time, ostensibly freed from mundane obligations so that pleasure may be produced.

The economics of these worlds are attractive to corporations as they combine one-off software purchases

as well as monthly subscriptions. When someone decides they wish to become Fjalia Moonlover then they have to first purchase the game, as you purchase any computer game; second, they have to ensure they have computer hardware and an internet connection that will cope with the game; finally, they have to pay a monthly subscription fee. As games develop, some major new pieces of software may emerge and are either given to players or require a new purchase of the software. This combination of regular income with one-off injections makes any mmpog with a strong population a potentially strong income-generator. Against this the corporation running the mmpog must maintain servers and customer support that are not needed or not needed in the same way for nonnetworked games.

Mmpogs may be, for two reasons, a privileged case for analyzing changes produced by the emergence of virtuality in the division of work and leisure. The first, already suggested above, is that they are the most advanced social form of virtual reality widely available. The second is the point just raised that play has been produced with a community as an essential, integral component and that this potentially reintroduces many of the mundane or onerous aspects of commitment to a community that play is designed to release us from, even for a short time.

Within this context of persistent worlds, which generate income flows for the corporations who own and produce the worlds, there have emerged schemes for selling virtual goods for real currency. This paper takes up a case study of the economics of one game and one server in which this occurs to make comments about the relation of work to the pleasures of mmpogs. To conduct this, after having made these preliminary remarks situating the appropriateness of mmpogs for such questions, I will first briefly outline previous work on virtual and real world economics. Second, I will outline a case study of the Prydwen server for European Dark Age of Camelot (DAOC). Finally, I will draw some initial conclusions concerning exploitation and play in virtual worlds.

Real and Virtual Economics

It is not my intention to outline in full real and virtual economics and their interaction. Such a topic in-total is clearly beyond current concerns. Instead the specific set of economics under the microscope here are the exchange of virtual items created within persistent game worlds for real currency and what this might reveal about play and work in mmpogs. A brief explanation of the mechanics of this is in order.

In nearly all persistent worlds various virtual commodities are produced. First, most worlds have a currency. In the world I studied, the Prydwen server for European Dark Age of Camelot, this currency is expressed as copper, silver, gold, platinum, and mithril, with the key currencies being gold and platinum which have the relationship of 1,000 gold equalling 1 platinum. Gold is obtained from killing monsters, who drop the currency to be looted when they die, or from selling other virtual items. There is a second source of funds in the items that are created within the game. These may be things like an Arcanium Cudgel of Obvious Truth or the Axe of Mindless Rage, [2] and such items are either dropped from monsters, made by player-crafters or gained as a reward from a quest. Finally, in most games players must kill monsters or do quests to gain experience. As experience grows a player's character gains levels and new powers. Usually there is a cap with DAOC finishing levelling at 50, though there are then other ladders to climb. In summary, there are three sources of value in most mmpogs: currency, items and character experience. All these sources of value can be sold for real world currency, most often via the medium of Ebay but also from websites, irc-contacts or online fora from which professional and semiprofessional companies offer services.

One point is that this activity is often, though not always, illegal. The company that owns the game most often asserts ownership of all items produced within the game. That means that in return for paying subscription and one-off fees, players effectively rent all things within the persistent world from the owning company. Even items or currency created or produced by the player is considered, by the company, to be the company's property. Most company's also make it illegal to put their virtual property up for sale due to the perceived deleterious effect on the game. They try to prevent players paying with real currency to gain items, experience or in-game currency that other players have to play to gain because this undermines the game design. Some companies take action to prevent exchanges of real currency for virtual. For example in March 2005 Blizzard, who run European World of Warcraft, claimed to have unilaterally banned over 800 accounts, stripping players of access to their characters because they claimed to have evidence players had been involved in selling in-game currency. In contrast in early-2005, Sony announced it would open an auction house that allowed players to sell virtual goods for real currency on some designated servers for Everquest II. They also planned to take a percentage from each transaction (Sony 2005). Though experimented with in some smaller mmpogs, Sony's move represents the first large-scale mmpog to legitimize the trade of virtual for real currency. It received a mixed reaction, being vehemently attacked by Mark Jacobs, the CEO of Mythic Entertainment

who run the game *Dark Age of Camelot* analyzed in this paper. Jacobs stated:

We remain committed to keeping our games as games and not as opportunities to encourage behavior that runs counter to their spirit of creativity and entertainment. We have no plans to participate in this type of service. We will gladly "leave money on the table" to ensure that whether or not you like our games, that they remain as that, games and not an entertainment version of day-trading. (Game Daily 2005)

Jacobs articulates a clean divide between leisure and work, arguing the game stops being a game once you import into it possibilities for real earnings. As indicated by Jacobs' attitude, in my case study trading real currency for virtual commodities was formally illegal but had never to my knowledge been acted against. The paradox here is that if the generation of values that are sold were a pleasurable part of the game, why would anyone pay real currency to avoid having to play that part of the game? We shall return to these points later. Here it is simply useful to note this legal position as part of the context.

Edward Castranova produced the pioneering study of such virtual goods economies. Exploring the mmpog *Everquest* some of his headline conclusions were that the normal hourly wage to be made selling virtual items was, in 1999, \$3.42 USA per hour and that the GNP per capita of his virtual world was equivalent to Russia's (Castranova 2001). An example of Castranova's (2001) work is the following:

A wage of \$3.42 is insufficient to sustain Earth existence for many people. Many users spend upwards of 80 hours per week in *Norrath*, hours of time input that are not unheard of in Earth professions. In 80 hours, at the average wage, the typical user generates *Norrathian* cash and goods worth \$273.60. In a month, that would be over \$1,000, in a year over \$12,000. The poverty line for a single person in the United States is \$8,794. Economically speaking, there is little reason to question, on feasibility grounds at least, that those who claim to be living and working in *Norrath*, and not Earth, may actually be doing just that. (P. 36)

Castranova (2001) also calculated the exchange rate between *Everquest* platinum and the US dollar; 1 platinum piece being worth .01072 USD in September 2001, as well as other macro-economic indicators (pp. 31-2). His overall conclusions pointed toward the growth of virtual goods economies, possibly fast and large growth.

In a less academic vein, Julien Dibbell (1999), who previously wrote one of the seminal accounts of online life in his account of *cyberape*, published a blog of his year long adventure buying and selling virtual goods in *Ultima Online*. Reading through his year long adventure offers as visceral a way as possible of exploring the life of the virtual goods seller. Similarly to Castranova, Dibbell suggests such a profession is possible. He reported a post-tax profit of £3,917 for one month, suggesting a comfortable income of around £46,000 a year might be possible (Dibbell 2004).

In the next section I will present data from a similar case study to Castranova's, which I do not believe contradicts his, or Dibbell's, work in any substantial way. However, Castranova's aim was to establish the validity of such enquiries. The aim of this case study will be to add a few more empirical bricks in a wall originally constructed by Castranova and, perhaps more significantly, to suggest a theorization of exploitation and play based on such economic behavior.

Mid-Pryd

Dark Age of Camelot is a swords and sorcery themed mmpog which emerged in the USA but was licensed to a French Company (Goa, owned by Wannadoo) which produced French, German, Italian and Spanish language versions and ran servers in all those languages, as well as European based English-language servers. There were two English language servers named *Excalibur* and *Prydwen*, which opened in February 2003. I investigated sales of virtual goods on *Prydwen*, where I was also conducting a sustained ethnographic investigation as well as having a lot of fun. Data was taken from www.ebay.com and www.ebay.co.uk concerning sales of virtual goods in August 2004, November 2004 and February 2005. I conducted two surveys in February, one that predated the release of a major competitor game, *World of Warcraft*, and one that postdated that release. These two later surveys were conducted 17 days apart.

In August there appeared to be one company called *Xroadgames* offering a full range of services (also selling in other games) with some small scale competitors offering limited services. By November a second company, *FavGames*, was directly competing with *Xroadgames* over the full range of services. By late February 2005 both companies had stopped selling services for *DAOC Prydwen*. This reflected the release of *World of Warcraft* which

negatively affected player numbers on European DAOC in early 2005. Xroadgames and Favgames both closed their Ebay stores and Xroadgames closed its website, offering only the claim that it was being redeveloped. Favgames continued its website though no longer offering services for Prydwen, but for some DAOC USA servers and for other games such as World of Warcraft, Lineage 2 and Everquest 2.

I recorded data for both companies in regard to exchange rates between DAOC gold and real world currencies. In addition, I conducted one case study for Xroadgames in July 2004 of their total selling via ebay. I shall report first on exchange rates and possible wages. I will then explore the case study of Xroadgames.

Both Favgames and Xroadgames offered for sale on Ebay various amounts of Prydwen gold. These appeared on Ebay as fixed offerings to be accessed via the 'buy now'[3] option for such amounts as 2, 5, 10, 20, 30, 50 platinum with each amount offering a small discount for buying larger lots. Xroadgames also records a one-off purchase, most likely privately arranged between buyer and Xroadgames, for 90 platinum. The exchange rates are calculated by averaging out these different offerings.

Exchange Rates (one real currency buys x Prydwen gold)

<i>US Dollar</i>			
	Average	Xroadgames	Favgames
Aug-04	135.30	N/A	N/A
Nov-04	185.45	197.20	173.69
Feb-05 (pre-wow)	281.71	295.00	273.73
Feb-05 (post-wow)	324.09	358.15	296.84

<i>GBPound</i>			
	Average	Xroadgames	Favgames
Aug-04	247.46	N/A	N/A
Nov-04	348.97	369.67	328.28
Feb-05 (pre-wow)	530.72	555.76	515.70
Feb-05 (post-wow)	613.96	678.49	562.34

<i>Euro</i>			
	Average	Xroadgames	Favgames
Aug-04	165.78	N/A	N/A
Nov-04	244.04	258.51	229.56
Feb-05 (pre-wow)	365.36	382.60	355.01
Feb-05 (post-wow)	423.19	467.67	387.61

The collapse of the Prydwen gold standard is clearly evident in these figures. Whereas in August 2004 one US dollar bought 135.30 Prydwen gold, just before the release of WoW it had doubled in value, buying 281.71 gold. In the pre-WoW period the effect of Favgames entry into the market seems clear. Favgames continually undercut Xroadgames in a maneuver that drove the value of Prydwen gold down, until WoW delivered the coup de grace and both companies left the business of buying and selling Prydwen gold.

A calculation can be developed from these figures to analyze potential wages. I will outline this theoretical income and then check it against the real income for Prydwen for Xroadgames in July 2004. For the purposes of the in-principle analysis it will be useful to take only August 2004 and February 2005 (pre-WoW) into account; similarly, I will restrict currencies to the US Dollar and will forego separating Xroadgames from Favgames as no additional point will be made by continuing to do so.

An abstract definition of an hourly wage for supplying Prydwen gold is generated based on a number of

assumptions. First, I propose it is possible to generate two platinum per hour of uninterrupted game time. This figure is arguable however it represents a reasonable estimate based on discussions with players. Discussion of what type of work this represents will follow in the next section. Second, it will be assumed that all platinum that are produced will be sold. That is, it will be assumed that someone working 8 hours per day producing 16 platinum per day is able to sell all they produce. This assumption will be controlled for when discussing the real income of Xroadgames immediately after this section.

Wage for Selling Gold: in-principle

<i>US Dollar</i>			
	Amount Sold (plat)	Wage per Hour	Weekly Wage**
Aug-04			
	2	19.99	799.60
	10	14.00	559.92
	30	13.27	530.67
	Average	15.11	604.41
	Average gross annual income*		29,011.46
Feb-05 (pre-wow)			
	5	7.34	293.74
	10	6.41	256.21
	30	7.72	308.96
	Average	7.28	291.34
	Average gross annual income*		13,984.49

*Assumes 48 working weeks.
 **Assumes 40 hours work per week.

The official 2004 Federal poverty line for a single under-65 person in the USA was \$9,827. (USDHH, 2004) This means that until the competition between Favgames and Xroadgames there was, at least, an in-principle possibility that working 40 hours per week generating Prydwen platinums could fund a liveable income for a single person. Neither figure approaches the \$46,000 pa figure Dibbell generated as a possibility, but there are other factors at play here such as the size of the market. My figures, however, make unrealistic assumptions concerning the ability to sell all gold that can be produced and make no allowance for variations in work effort, server stability, Internet stability and many other factors. To control for this and examine a realistic view, a case study of Xroadgames at its most favorable time (just before August 2004) was undertaken.

We need to now take into account income from other factors than gold. Xroadgames in the month of July 2004, in relation to the Prydwen server of Euro DAOC, sold all three virtual game commodities; gold, experience and items. Experience was in the form of levelling, which means you could hire Xroadgames to take over a character of your own and level that character up or you could buy a level 50 character that had been created by Xroadgames. Items were mainly respec stones, which allow a character to change the skills that they have learned, and some rare items. For Prydwen, there were 50 sales of all three commodities, which constituted 56% of Xroadgames total Ebay business for that month.

The figures for July 2004 offer the possibility of an annual gross income of approximately \$70,000 for only 56% of Xroadgames' business. We should note this was possibly the optimum time for Xroadgames on Prydwen with a lack of competitors and a reasonably healthy server population, also being July this is a peak month on Prydwen for player numbers as it is school holidays for many nations but before the most common periods for holiday trips away from computer access. To truly understand these returns for Xroadgames however we need to inject further

real world factors. There are two ways of understanding this business: first, could a company conduct this business themselves?; second, what profit can be made from subcontracting and buying services from other players and then selling virtual goods on? To generate some figures here, I will focus solely on generating gold and levelling characters from 1-50, because it is possible to make reasonable assumptions about the most efficient time in which to conduct these activities. As already stated, we can assume gold can be generated at the rate of two platinum per hour. From experience of power-levelling, that is utilizing the most ruthlessly efficient levelling means, we can assume 36 working hours to raise a character from 1-50. [4]

Sales: July 2004 Xroad Games

<i>US Dollar</i>			
	Number	Amount Virtual	Amount US Dollar
Gold	38	480,500 gold	3,391.68
Experience	11	Ten lvl50, 45 sundry other levels	2,453.00
Items	4	N/A	139.97
Total*	50		5,984.65

*Some sales were for multiple commodities.

Time: July 2004 Xroadgames

<i>Prydwen Platinum</i>			
	Number/Amount	Time needed*	
		Hours	8 Hour Days
Gold	480	240	30
Experience	10 x 1-50 levels	360	45
Total		600	75

*Two plat = 1 hour, 1-50 = 36 hours

There were only 22 working days in July 2004. The seemingly large income of \$5,984 per month is accordingly impossible for one person, who would have to have worked 19 hours per day for every day in the month. If three people shared the work, taking 25 days each and thus working the odd weekend or night, then they would each receive just under \$2,000 gross per month. This produces a low but potentially viable annual income.

The second possibility, which is not mutually exclusive to the first, is that Xroadgames subcontracts. No figure for how much Xroadgames would pay for levelling were obtained, but it became known that in November 2004 Xroadgames would pay 2.2USD per platinum. This produces a difficulty as by November prices for platinum were dropping and it may well be that Xroadgames had already dropped its buying price. To control somewhat for this possibility I will assume payment of both 2.2 and 3USD per platinum.

With income from selling gold being 57% of the Prydwen business we can extrapolate that, if profit is made from reselling levelling experiences at the same rate as profit is made from reselling gold, then a possible total income from sub-contracting Prydwen services in one month could have been: 4,096 or 3,422USD. This translates into gross income of between 41,000 USD and 49,000USD, which coincides with Dibbell's high rather than Castranova's low annual income findings.

It is impossible to entirely accurately calculate the time needed to make the fifty transactions Xroadgames would have to have made to conduct such a subcontracting business. However, most gold trades require an Ebay auction to be set, the gold to be bought and payment confirmed. Once this occurs contact is made between buyer

and Xroadgames, via E-mail or online chat, and a mutual time is arranged at which Xroadgames logs on a character who passes the platinum to the character notified to Xroadgames. Even assuming some difficulties in connecting and missed arrangements, this process does not seem hugely time consuming. Passing on a levelled character would be even quicker, as it involves sending account details and does not require meeting in-game. Xroadgames must also, of course, spend time paying its subcontractors and meeting with them to exchange goods. However, these would be similar in form to Xroadgame's meetings with buyers. This rough analysis suggests that running such a business might well be within the potential of one or at the very most two people.

Sub-contracted Gold: July 2004

<i>Prydwen Platinum and US Dollars</i>			
	Amount	Cost 2.2 per plat	Cost 3 per plat
Gold Bought (expenditure)	480	1,056.00	1,440.00
Gold Sold (income)	480	3,391.68	3,391.68
Profit		2,335.68	1,951.68

Many assumptions have had to be made. For example, the most favorable business scenario is that of subcontracting but a pure subcontracting business assumes there are enough players willing to be subcontractors. It is far more likely that a mixture of subcontracting and 'in-house' generation of virtual goods will be stable and profitable. This was partially confirmed for Xroadgames when a player posted on a forum:

The guy who is running Xroadgames is (used to be) in my old Alb/Excal [realm of Albion on Excalibur server] guild. I know him pretty well, and yes, let me tell you that he does treat it as a real job. During the weekdays he and his partner roams ToA [Trials of Atlantis, an area in DAOC], the two or three of them controlling an FG [full group] of farm classes (clerics, theurgists, paladins) and going around and getting artifacts they sell for RL [real life] money. (Anon. 2005, brackets added)

This points out that at least two people can be considered members of Xroadgames and that they spend some time creating value themselves. Given the difficulties of time noted above, however, it is certain that Xroadgames also involved itself in sub-contracting.

This analysis largely confirms Castranova and Dibbell's findings that businesses selling virtual goods are viable. It seems likely these are not going to be hugely profitable as it must be kept in mind most of the income figures given in my research are gross. This somewhat contradicts Dibbell's findings and Castranova's optimism but the figures are not solid enough to make completely firm conclusions. While such empirical work has, hopefully, some value in-itself, there remains the question of what this means and how these findings relate to questions of work and play.

Marx and Virtual Capitalists

While much has so far been said about profit, little about work and play has become clear. To return to the analysis of modern play and work, we need to gradually reverse our view from that of the business, which has been necessarily dominant in the previous section, to the player. There are two paths I wish to follow to approach issues of pleasure and work. First, we can look at the generation of value and try to track what that tells us about this economic process. Second, we can extend this discussion beyond the sometimes theoretically vexed issues of the creation of value to grasp at a broader understanding. I shall take these steps in turn.

First, in relation to the generation of value in immaterial commodities I need to specify this a little more by noting that I am addressing here a specific moment in economic cycles: that of the production of value and profit through the production of virtual goods. It is worth noting that this moment exists in a wider context, one which is reasonably well-articulated as three interlocking circuits of technology, marketing and culture which dominate virtual commodities (Kline, Dyer-Witford, and Peuter 2003; Jordan 2004). Within this context I am exploring a quite specific point however, and I will leave Kline et al.'s analysis in the background.

We can begin our analysis by looking at profit, for even though there is a well-known disjunction between profit and the creation of new value—whole warehouses of new value can be created but until sold there is no profit—profit provides a first insight into sources of value. In my analysis there are two sources of profit. The first involves subcontracting in which the company uses the buy-low and sell-high road to profit. Such buy-low and sell-high tactics do not explain the generation of value; they refer to one means of extracting profit while, by definition, not adding value to the economic system as a whole. It would be foolish of virtual games entrepreneurs to ignore such a source of income but for our purposes this income relies on slightly deeper processes which produce the value that can be exchanged in the first place.

It also seems obvious where and how the production of value occurs from which entrepreneurs can then seek profit. Let me explain one of the most efficient ways to gain gold in DAOC. There is a dungeon called Darkness Falls inhabited by monsters (software controlled avatars) which, when killed, drop seals. These can be looted and accumulated by the player who kills a monster. Once enough seals are accumulated there are merchants in the dungeon who will sell armor, weapons or items for the seals. Once someone has looted enough seals and bought a load of armor or weapons, they then turn this all over to a crafting character who has used the system DAOC has implemented to allow players to learn to make items. With a crafter of high enough skill there are abilities other than making armor or weapons, which include the ability to salvage items; that is, to break them down into blocks of virtual raw materials. A crafter can turn the armor or weapons bought with seals looted in Darkness Falls into a load of metal and then turn that metal into various objects, usually hinges, which can be sold for gold to a nonplayer merchant (that is another software controlled avatar). Putting together the right team and farming seals quickly and then salvaging them is close to the quickest way of gaining gold in DAOC, though there are other methods.

This example shows that the production of value resolves to the player, not to the virtual goods entrepreneur. The entrepreneur can enter into this value production or can buy the product of a player's labor but new value embodied in various virtual goods—themselves reflecting entries in databases which are given graphical representation in the game-world—is the product of players' labor. This labor consists of the time players put into producing virtual commodities. We can now define these two economic positions: the entrepreneur who makes profit through buying other's labor or selling the products of their own labor or the player who produces commodities through their own labour. On first view, the virtual goods entrepreneur, like Xroadgames, looks very much like a combination of a petty bourgeois and a small artisan. To the extent that the entrepreneur buys and sells, they do not own the means of production which produced the value they seek to buy or sell and hence they operate very much as a petty bourgeois. To the extent that the entrepreneur invests their own labor they come across as a small artisan—that figure of precapitalist times—who owns their own means of production. The position of the player is analogous to this second part of the entrepreneur's work: the small artisan self-production. At first sight, and there is much insight here, mmpogs produce an economy that is precapitalist, something of an appropriate situation for games like DAOC that are themed on preindustrial or medieval times. However, there is a significant difference to the real artisans Marx (1976) analyzed, who were embedded in guild systems.

The medieval guild system ... is a limited and yet inadequate form of the relationship between capital and wage-labor. It involves relations between buyers and sellers. Wages are paid and masters, journeymen and apprentices encounter each other as free persons. The technological basis of their relationship is handicraft, where the more or less sophisticated use of tools is the decisive factor in production. ... The master does indeed own the conditions of production—tools, materials, and so on—and he owns the product. To that extent he is a capitalist. But it is not as a capitalist that he is master. He is an artisan in the first instance and is supposed to be a master of his craft. ... his approach to his apprentices and journeymen is not that of a capitalist, but of a master of his craft, and by virtue of that fact he assumes a position of superiority in the corporation and hence towards them. It follows that his capital is restricted in terms of the form it assumes, as well as in value. It is far from achieving the freedom of capital proper. It is not a definite quantum of objectified labor, value in general, at liberty to assume this or that form of the conditions of labour depending on the form of living labor it acquires in order to produce surplus labor. (P. 1029)

Marx points here both to a phenomenon very close to the players who are producing value in mmpogs but also provides us with a crucial distinction. The value produced by players and entrepreneurs is not restricted in its form; it does achieve the 'freedom of capital proper'. This can be seen in the ability to transform virtual value into real world profit, the ability to trade this capital freely within the game, and the lack of any social system of masters, journeymen and apprentices. This may seem slightly paradoxical as crafters in the game do need to learn their skill by crafting, yet this is not in any way controlled—any player can take up a craft and through perseverance rise to the highest levels. The production of virtual commodities does not occur within a guild or master relationship, using Marx's analysis we

can conclude that each player is formally a capitalist.

Inside DAOC, and most likely inside the majority of mmpogs—even acknowledging some differences between mmpogs—each player owns the means of production. Every player has the ability to generate value and they gain this ability simply by playing the game. The means of creating value are universally owned in mmpogs. Each and every player can conduct the process I noted above to gain seals and salvage them, generating capital they are free to dispose. There are more or less efficient means of generating an income. For example, a solo player will gain the highest seals much more slowly than a player who can simultaneously play two characters. However, a solo player can choose other routes. For example, there are rare and highly valuable items that drop from monsters. A solo player can kill many such monsters, though not all, and then sell the items that drop. The occasional lucky break with a rare scroll dropping can generate sudden huge sums. This will be higher risk than the certainty of farming seals but it can also lead to large profits. The point is that each and every player, merely by entering the game, is gifted the means of production. They can exploit this means to a greater or lesser extent but there is no possibility of exclusion from such means.

The resulting conclusion from this is that within mmpogs there is only one factor that fundamentally determines the production of value: time. Two points underline this. First, the techniques for efficiently producing virtual value are generally known, through fora and player communication, and they require only time to master. If one reads and becomes convinced that the best team for producing gold by farming seals should be a shield-warrior, shaman and legendary grand master weapon crafter[5] then the only factor stopping someone achieving this within the game is the time needed to create and equip each of these. Second, the raw materials of virtual production—seals, rare scrolls—never run out. As is often said of mmpogs, these are economies in which the taps are full on; the more monsters you kill, the more seals or scrolls you will receive and the rate at which they drop will remain constant. This all means that, speaking specifically within the game context, value production is measured solely in time.

The translation of such time into value and then profits measured in real currencies begins to introduce further factors which unbalance the equality of access to means of production. For example, in the ideal team for farming seals I noted three characters but only two (warrior and shaman) ever need to be in-game at the same time. This means two accounts and the technical infrastructure to run two accounts simultaneously would be needed. I can do this with a laptop and desktop pc parked next to each other and one character on each, but I found it too hard to manage this by running both accounts on the one pc. [6] One barrier to full participation in this form of production is affording the real world cash to pay for two accounts and highly enough specified machinery. Similarly, to turn oneself into an entrepreneur requires the means of buying and selling, within a semilegal if not overtly illegal, context. Ebay solves much of this but it requires a further time investment.

A further point emerges here that might draw us toward the interpretation of players in mmpogs as artisans or petty bourgeois rather than as capitalists, for technically each player rents their means of production from the company they pay subscriptions to. Entering the game is the condition for becoming a virtual capitalist and entry to the game is controlled by the company who keeps the game running and demands fees to rent time in the virtual world. This is an important point but should draw us not toward medieval times, as the social system of guilds is quite simply absent, but to a form we might think is like a 'rentier capitalist'. However, this also does not quite work as in some theories the rentier capitalist is thought of as being akin to a stock owner, someone who owns capital that is invested in a business but does not take part in running the business. The renting of the means of production in the context of mmpogs is not like that. Rather, these virtual means of production should be understood as being integral to living this particular form of virtual life; it is not possible for someone to choose not to have the means of production; they can choose not to exercise them as vigorously as others but it is impossible to enter DAOC and not, at that exact moment, be given virtual capitalist status. It is not the means of production that are rented by the player, rather it is the means of virtual existence; becoming a capitalist is a part of renting a virtual life. Even taking into account that the virtual life is itself a rented one, allowing the company that owns the game to seek exploitation and profit from the players, the way the player operates within the game in terms of the production of value should be termed as capitalist. This status then underpins any attempt to translate virtual capitalist status into a combined real and virtual capitalist status, by selling virtual goods.

Access to the game means the gifting of the means of production to all players and the only restriction on the production of value in-game is time. For example, during my ethnographic immersion within the game I reached a point at which I was playing less and less, due to real world commitments, but the items needed by my characters to compete evenly were becoming hideously rare or expensive due to changes in the game design. My limited time as

a casual player was affecting my enjoyment because I was becoming even more ineffective. I solved this problem, at one point, by buying platinum and spending this on items I needed. In effect, I bought other players' time creating profit for Xroadgames based on their exploitation of either other players or themselves.

It is by excavating the entrepreneurs that we see these economic relations most clearly. The identification of time as the source of value also points us to a wider definition of exploitation than a strictly Marxist one. It is worth pursuing such a broader definition as the peculiar economic circumstances of mmpogs perhaps indicates issues beyond Marxism's focus. But before moving on two caveats are needed.

First, what I have identified as the production of value in the buying and selling of time incarnated as virtual goods should not be taken as the only form of mmpog economic relation. In addition, there are thriving gift economies. I remember passing on items to players and being chased in late December by a friend who wanted to give me a 'Christmas present', which turned out to be one of the rarer rings of Midgard. Such gift economies are common. Games also often provide means of players selling virtual items to each other using in-game currency. DAOC implemented a system of computer-controlled merchants who could hold goods for a player and sell them for pre-determined amounts, when combined with a means of searching these merchants the in-game economy was facilitated. World of Warcraft implemented an auction house which players could place goods on with reserve and buyout prices, again however only for the in-game currency. Second, I am not claiming these economic relations as either unique to or typical of all virtual economies. Clearly time is a major factor in all economies, though for how many time is the only factor in the production of value is a question posed by this analysis. Further work would be needed to compare different virtual economies and various real economic situations. I do however wish to suggest that the universal ownership of the means of production and the reduction of value production to time are typical of DAOC and many mmpogs and is an economic form worth comparing to other virtual and real economies.

I wish to complete this analysis by refusing to let Marxism retain sole possession of the theoretical field. Some will happily assume this is because Marxism is no longer a worthwhile theoretical field itself and may already be puzzled as to why I pursued it. This is not my assumption, though I accept Marxism's flaws are now widely and profoundly known, there remains much valuable work based on various Marxisms (Terranova 2004; chapter 3). Instead, I wish to make a different point; which is that Marxism does not exhaust discussion of exploitations. Marxism defines one type of exploitation but there are others (Jordan 1999). The definition of time as the core resource which produces economic activity in mmpogs now provides a basis on which to widen the definition of this activity, particularly by defining more clearly why we might see this as an exploitative relation. It also points us in a, perhaps, unusual theoretical direction.

Heidegger and the Standing-Reserve

Heidegger's work is not at first sight an easy companion to Marx's. Yet, Heidegger's analysis of technology makes some useful remarks which, though not the only or even main point of his analysis, are relevant in exploring the meaning of exploitation in the context I have created. Interestingly they also point up a connection to the environmental movement. First, we should remember that mmpogs involve entirely technologically mediated social relations. This does not mean I am covertly asserting there can be non-technologically mediated social relations, but that the context of mmpogs is one in which technology saturates social relations as their foundation and condition of existence. Having noted this we can turn to Heidegger on technology to find the following comments.

Heidegger (1977) argues that modern science and technology demands "that nature reports itself in some way or other that is identifiable through calculation and that it remains orderable as a system of information" (p. 23). Furthermore, he argues that technology uncovers or unconceals nature as a 'standing-reserve' or as something available to calculation and then to use. This approach, inherent in technology, produces a number of dangers one of which is the following:

As soon as what is unconcealed no longer concerns man even as object, but does so, rather, exclusively as standing-reserve, and man in the midst of objectlessness is nothing but the orderer of the standing-reserve, then he comes to the very brink of a precipitous fall; that is, he comes to the point where he himself will have to be taken as standing-reserve. (Heidegger 1977:26-7) [7]

Exploitation is here understood as dehumanization, as the necessity driven by technology and science of treating

human beings as part of the reserve of nature which is able to be coldly calculated and then utilized. This is a point in Heidegger's work at which a connection is made to the modern environmental, particularly the deep ecological movement through the work of Hans Jonas (Wolin 2001). We see here a potentially expanded notion of exploitation which encompasses what I have been arguing is exploitation as time in mmpogs.

We may now reinterpret much of what goes on in mmpogs as players treating themselves as standing-reserves of time. We have now reversed our view from the virtual goods trader to the player and can see that the trader is a special case of the player; the special case in which the standing-reserve of time is translated into profit. The exploitation embodied by treating oneself and others as standing-reserves of time can now be seen to be embedded deeply inside the digital play of persistent worlds. It is not that these worlds are the only ones in which humans are treated as standing-reserves of time, as so many hours to be felled in order to chip value out of humanity, but it is within the virtual realm of persistent game worlds that all become absolutely dependent on treating their subjectivity in this way. This self-exploitation is carried out in part by predefining players through game design as capitalists, in control of their own means of production. Let me offer one final example from DAOC.

Virtual worlds are subject to major upgrades that expand areas or imbue whole new dynamics. DAOC in 2005 was an mmpog older than three years and had by then been subject to five[8] such major upgrades, as well as innumerable patches that adjust and correct. When I began playing the aim was to gain 50 levels, hope to have some good equipment and then to spend time fighting human controlled avatars from opposing realms or in high level encounters against software controlled avatars. By the time of writing, to participate on a reasonably equal basis, particularly in realm war against other human controlled avatars, the following things were roughly needed. [9] Level to 50 at least one of only certain types of characters as some are significantly less powerful than others, though this process has been made considerably easier than the early days. Gain access to a second level 50 character on a different account who is a shaman, this because shaman add spells to other players that considerably enhance abilities, such that not having these enhancements renders one at a significant disadvantage. Design and construct a suit of armour and weapons that maximize one's abilities, this involves first designing and then gaining items from monsters, farming gold to pay for items and to pay crafters to make items and to imbue them with magic. Some items themselves need to be levelled up by killing certain monsters and only when levelled reveal their full abilities, so this must also be done. The nature of such suits has changed with the introduction of new types of bonuses meaning all who designed suits when the expansion Shrouded Isles occurred, had to go through the whole process again and in a more difficult and complicated way after the expansion Trials of Atlantis emerged. A player should also gain master-levels which confer new abilities, of which there are ten and each level of which consists of ten tasks. These levels can only be completed in conjunction with either full groups of eight people or larger raids of multiple groups. Also, there is a need to gain realm ranks by killing player-controlled enemies from which you gain points which, once they accumulate to certain levels, give you access to new abilities; there are twelve levels of this, each level requiring ten stages. None of this involves much except time and some organization, and the organization often itself devolves simply into needing time. A lot of this is fun but can be felt as a significant grind. The fundamental need was to inject time from my life to achieve a state which allowed me, finally, to do what I enjoyed most which was fighting against other human- controlled avatars.

It is this need to farm time that creates the market for virtual goods entrepreneurs, not the unavailability of the goods. The conditions for successful virtual goods entrepreneurs are thus primarily a full population among who will be people who need to make use of others' time. Once the population drops to too low a level, as Prydwen did in early 2005, then there is no market for those such as Xroadgames. We have been able to begin with the professionals of time management in mmpogs and from here uncover some of the more general conditions of leisure in persistent virtual worlds.

The nature of this activity, of the pleasure of play in mmpogs, involves treating oneself as a standing-reserve of time which needs to be farmed. This self-exploitation is strongly, if not primarily, implemented by making each and every player, as a condition of entering the game world, a capitalist. Renting a virtual existence means becoming a virtual capitalist.

Conclusion

Exploitation as time lies embedded within the leisure and game worlds of mmpogs. However strange and fantastic they are-and I spent many hours over years 'being' a stone skinned troll who could fire lightning, use

shields and wield hammers-what we find within mmpogs is the intermingling of forms of work and leisure. Play as employment.

Strangely, this should not be read as play becoming necessarily less pleasurable. Fora associated with games frequently erupt into arguments about whether certain activities within an mmpog are 'fun' or 'a grind needed to get to the fun' and the difference between the two often depends on players' differing definitions of pleasure. The mmpog Planetside took this to its logical conclusion and offered very limited levelling, instead injecting nearly everyone straight into widespread conflict of human-avatar against human-avatar. The nonpersistent world online games, such as Counterstrike, similarly offer an 'off the shelf' experience in which no career is really created within the game. Mmpogs differ from these because the world is persistent and this supports a social and cultural realm that exists virtually, within the imaginary computer and Internet based world, albeit supported by various offline resources.

The collective imagination of leisure and work for those who play in mmpogs is more confused than some would make out. Earlier I quoted Mythic Entertainment's CEO Mark Jacobs criticizing Sony's decision to design into their game a mixture of real and virtual economies. Jacobs clearly distinguished the role of games as being that of 'creativity and entertainment'. My analysis points in a different direction. I argue that the possibility of selling virtual game commodities for real currency is based on design decisions, by company's like Jacobs' own, which predetermine each player to be, formally speaking, a capitalist who possesses their own means of production. The leisure of mmpogs means renting an existence which is, in part, capitalist. However much creativity and entertainment can be gained from mmpogs, the economics of the game cannot be divorced from the universal endowment of ownership of the means of production and the self-exploitation this then mandates as players must farm themselves for time. Within the fantasy and leisure world of mmpogs, the social relations of work reemerge.

What we find within mmpogs is the line between work and leisure shifted such that leisure engages some of the same social structures as work. In the definition of time as standing-reserve as exploitation we find one way in which virtual play realms replicate, if not help produce, relations of virtual and nonvirtual socio-economies.

Endnotes

1. Thanks to Jason Toynbee for comments and to those I have gamed with. Of course, all claims are my own fault.

2. These names are genuine.

3. On Ebay each auction can have an option to 'buy it now' by stating an amount which if paid closes the auction and awards the commodity to the buyer immediately. This is effectively a buy out price in a real auction. In this context the 'buy it now' is actually the primary vehicle with no-one expecting to pay less by participating in an auction because the 'buy it now' and the minimum auction price will be the same.

4. This figure for levelling from 1-50 may well be contested and it is possible there are faster records. It is however based on my only personal experience of a character being levelled and so is at least firmly founded in real experience. For DAOC aficionados, this character was pl'd in the 'old' Moderna days, according to the pbaoc/fop method. This is a method available to Midgard realm only though there are other methods for the two other realms.

5. Warrior and Shaman are types of DAOC characters who work well together in killing high level monsters. I am not asserting this is the best team, though it is likely to be one of the best. I base this assertion on knowledge of such teams, though perhaps the highest claims I ever heard for per hour production of seals was made buy a Shaman Savage team. The basic point that a tank

type and a shaman will do well at this particular form of production seems to me incontestable, which does not exclude the definition of better teams or of more complicated debates about how to construct such a team (kobold or troll warrior?).

6. It is technically possible to run two accounts on the one pc but my experience was that this was too difficult on my desktop which did not possess the power to do this efficiently.

7. Heidegger goes on to argue that the second danger is that man then forgets his relation to Being and that this forgetting is the more fundamental danger. There is no need for my analysis to go to this point, though future work I am hopefully involved in will extend consideration of Heidegger and the virtual.

8. Shrouded Isles, Trials of Atlantis, Catacombs, New Frontiers and Housing.

9. They are not compulsory, but my ethnographic record makes clear that all these things, except for one, make realmwar more competitive and the lack of many of them makes a character close to useless in realmwar. The exception is the need to gain realm ranks which becomes progressively harder. I would suggest some realm rank level, perhaps about realm rank five, is close to necessary to remain competitive but becoming the highest ranks is not.

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