Property and The Digital:

abstracted ideas, objects, ownership and value

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April 2011

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1) WHAT IS 'PROPERTY'?

The concept of property is an ancient one. Examples of the enforcement of property ownership can be seen in the animal kingdom, such as the cheetah attempting to fend off hyenas from the corpse of a gazelle while her cubs feed, but since this piece is concerned with anthropology rather than zoology it will begin by examining the concept and place of property in human society.

First legally established by Urukagina, the king of the Sumerian city-state of Lagash (who reigned between c2380 and c2360 B.C) in the first recorded laws that forbade compelling the sale of property[1], the idea of private property was also mentioned in The Ten Commandments in Exodus 20:2-17 ('You shall not covet your neighbour's house. You shall not covet your neighbour's wife, or his male or female servant, his ox or donkey, or anything that belongs to your neighbour').

Aristotle (384 B.C - 322 B.C) was an advocate for private property, saying in *Politics book 2*:

'That which is common to the greatest number has the least care bestowed upon it. Every one thinks chiefly of his own, hardly at all of the common interest; and only when he is himself concerned as an individual.'

In addition he believed that when property is common, problems occur:

'If they do not share equally enjoyments and toils, those who labor [sic] much and get little will necessarily complain of those who labor little and receive or consume much. But indeed there is always a difficulty in men living together and having all human relations in common, but especially in their having common property.'

Aristotle was perhaps the first critic of the Commons but he was not the last; more on this in section 2.

The nature of property which in the first instance consisted of land, has changed throughout history, as have the ways in which the value of property is contrived. John Locke (1632 - 1704) conceived of his labour theory of property to explain ownership in 1690; this states that property originally comes about by the exertion of labour upon natural resources. Later, the labour theory of value (stating that the value of a commodity is related to the labour needed to produce or obtain that commodity) was popularised by the economists Adam Smith (1723 - 1790) and David Ricardo (1772 - 1823)[2], and utilised by socialist theorists to relate property to other economic issues, such as profit, interest, and wage-labour; property as a concept moved into the

political sphere rather than being solely resident in those of the legal and philosophical.

In the world today, property has become an integral part of the capitalist system. The economist Hernando de Soto (2006) has argued that legal protection of property rights in a formal system (where ownership and transactions are clearly recorded) is an important characteristic of the capitalist market economy. To facilitate this, legal systems tend to distinguish between different types of property by dividing it into two main categories: land and all other forms of property (which can be further divided into sub-categories such as goods, movable property and personal property). Three categories, land, improvements (immovable man-made things, like buildings) and personal property (movable man-made things) are utilised in other schemas. Personal property can be divided further, into tangible property (e.g. goods, clothing and vehicles) and intangible property (including financial instruments and intellectual property, such as patents, copyrights and trademarks).

In the USA certain property rights are enshrined within the Constitution. Lessig (2004) tells us that:
'The framers of [the US] Constitution loved “property.” Indeed, so strongly did they love property that they built into the Constitution an important requirement. If the government takes your property....it is required, under the Fifth Amendment's “Takings Clause”, to pay you “just compensation” for that taking. The Constitution thus guarantees that property is, in a certain sense, sacred.' (p.119)

Intellectual Property (IP), the concept of ownership of an idea, concept, design, artistic work or other 'non-rivalrous' work (Lessig, 2004), is at the crux of many of the current issues related to digitisation and various legal mechanisms exist to protect this. Modern copyright law originated in the UK with the 1709 Statute of Anne ('An Act for the Encouragement of Learning, by vesting the Copies of Printed Books in the Authors or purchasers of such Copies, during the Times therein mentioned'). Coming into force in April 1710, the Statute granted publishers of a book legal protection of 14 years[3].

Lessig (2004) again has a contribution to make, pointing out the Constitutional distinction between property and IP in the USA:

'...the very same Constitution speaks very differently about....”creative property.” In the clause granting Congress the power to create “creative property,” the Constitution requires that after a “limited time,” Congress take back the rights that it has granted and set the “creative property” free to the public domain....Congress does not have any obligation to pay “just compensation” for this “taking.” ' (p.119)

2) THE DIGITAL DESTABILISATION OF PROPERTY

Digital technology is now entirely ubiquitous in the First World and is impacting the entire globe, be it through mobile communications or the electronic nature of international finance. Though in many ways a by-product of the limits of 1940s engineering, the binary nature of the digital means that much of the technology that is seemingly enriching in the modern world is in fact the ultimate form of reductionism; a binary digit (bit) is either a 1 or a 0, on or off, 'there' or 'not there'. This enables anything that can be encoded in this way to be easily copied or exchanged, and facilitates proliferation on a scale and type that was previously unknown. A key aspect of physical property is altered inexorably by the copy/proliferate characteristic inherent in the digital; scarcity once created value, in the sense that a rare substance or object was deemed more valuable than a common one. In the abstraction of binary code scarcity no longer exists unless it is actively sought and protected. Even when this is the case, it is usually possible to bypass these measures; a situation not repeatable in the physical world of matter and objects.

Regardless of laws and protections, much intellectual and creative property was purchased in the past because the technologies of the day did not readily allow for economically viable copying. Books were not easily transcribed and, prior to the pervasion of tape-recording and cassette technology, music and audio material was impossible to reproduce, other than by performance. This effect was exacerbated by the purely physical formats available in the past; the book and the vinyl record as opposed to the PDF document and the MP3 audio file. The effect of the digitisation of creative material, plus the global phenomenon of the internet, is therefore twofold - both the ease of making a digital copy and the non-physical method of distribution have rendered copying and redistribution much *easier* than purchase in many cases. Lanier (2010) has pointed out that '[f]or millions of people, the internet means endless free copies of music, videos, and other forms of detached human expression.' (p.75)

Computer software in the past, though easy to copy as it came on diskettes or cassettes, was not easy to distribute until the advent of the internet. Even so, because software manufacturers were aware of the nature of the digital before anyone else, it was often (and still can be) prohibitively expensive and bound by a complex and limiting licence, as a certain amount of redistribution was expected. The desire to see freedom from such licences, and offer individuals the opportunity to customise software for their own use and the use of others, led to the birth of the Free Software Foundation (FSF) in 1985. Originally centred around efforts to

build a UNIX-like operating system (GNU, a self-referential acronym – GNU's Not UNIX), the main achievement of the FSF has (arguably) been the development of the GNU General Public Licence (GPL), written by the founder of the FSF, Richard Stallman, in 1989. This facilitates the release of free software ('as in free speech, not in free beer' to paraphrase Stallman), including source code, and insists that further distributions are offered under the same terms. The GPL does this without compromising the rights of the authors to be acknowledged or indeed to be paid, since the GPL does not limit the ability to charge for the software.

The problems with licensing other types of copyrighted material for 'remix' purposes led to the formation of the Creative Commons (CC) Foundation in 2001[4]. The Foundation developed a series of licences, based largely around the GPL, which allow copyright owners to grant a variety of permissions to consumers of their IP, ranging from redistribution to reuse, and facilitates doing so without loss of the ownership rights.

The need for CC licensing and the birth of remix culture was partially foreseen by Nicholas Negroponte (1995) when he wrote:

'[i]f Herbie Hancock released his next piece on the Internet, it would not only be like playing to a theatre with 20 million seats in it, but each listener could transform the music depending on her personal situation. For some this may be as simple as varying the volume. For others it may be turning the music into karaoke. For yet others, it may be the modification of the orchestration. The digital superhighway will turn finished and unalterable art into a thing of the past....We will see serious digital manipulation performed on said-to-be-complete expressions moving across the Internet.' (p.223)

He continued:

'[w]e are entering an era when expression can be more participatory and alive. We have the opportunity to distribute and experience rich sensory signals in ways that are different from looking at the page of a book and more accessible than travelling to the Louvre.' (p.224)

Though highly enabling for many, and allowing a great deal of flexibility for authors who wish to ensure that their work will be available in the public domain in the future, the Commons does have critics. Lanier (2010) asks whether 'Digital Maoism' (DM), the wisdom of the crowd, is anything other than intellectual mob-rule. He questions the very nature of the Commons and it's compatriot in DM, the Open-Source movement (including the FSF), and asks what truly creative ideas have emerged from these, citing Wikipedia ('an encyclopedia') and Linux ('a derivative of UNIX, an old operating system from the 1970s') as the two crowning

achievements of DM. Lanier talks about the nature of digital property and argues that without true ownership of IP the iPhone (for example) would not have been developed, though he does point out that the iPhone is itself running on a variant of an open-source UNIX kernel.

Another aspect of this topic that has become prevalent is that of virtual property, be it in game-systems, online games or other online environments. In Sony Computer Entertainment's motor racing simulator *Gran Turismo* (GT) for example, one competes in races for in-game credits that can then be used to purchase vehicles or parts for vehicles. This forms a loop of activity (labour-pay-assets-labour) that allows the player to compete at progressively higher levels and earn increasing amounts of credits. Players accumulate more and more virtual property in the form of better and faster cars. In environments such as *Second Life* virtual objects can be created by users or purchased using real-world money (converted into in-world currency), so the labour can enacted within the online system or in the real world. This concept of virtual property is even more prevalent in other online environments, such as the *World of Warcraft* (WOW) MMORPG (Massively Multi-player Online Role Playing Game) produced by Blizzard Entertainment. WOW is incredibly popular; recent figures suggest that over 5 million man-years have been spent playing this game since it's inception (Sims Bainbridge, 2010), and Blizzard are reputedly making US$1.5 Billion per annum from the online game (Heeks, 2008). This multi-billion dollar revenue stream has created a black market for high-level characters, weapons and magical objects; this in turn has caused the creation of a new industry based around the accumulation and sale of these artefacts. Known as Gold Farming, this involves wage-gamers accumulating goods, currency and experience points within the virtual environment, and then selling these on to regular players. Heeks (ibid.) estimated the Gold Farming industry to be worth US$500 Million per annum at the time of his research in 2008. Virtual property, generated from real, wage-labour, is therefore directly exchangeable for real currency and thus real property and, as such, is equivalent to real property in most senses.

3) THE ANTHROPOLOGY OF PROPERTY AND THE DIGITAL

Anthropology has long dealt with the physical object, particularly in the field of material culture, and the object plays an important part in many overlapping areas such as the giving of gifts and the ritual use of items. Indeed, if property law is considered as being mainly concerned with the social organization of rights and entitlements over resources, then an anthropological approach could be seen as the best way to examine property and the influence it has over society.

An important factor when looking at property today from an anthropological perspective is that of globalisation. As Hann (2007) states, 'The most basic element in the anthropologist's approach to property (and to other key concepts) is to question whether the understanding that has emerged in Western intellectual traditions can provide an adequate base for understanding the whole of humanity. The English term 'property', in technical, legal and academic as well as in 'folk' understandings, is closely tied to the history of enclosures and the emergence of capitalism. How, then, can the patterns of access and use characteristic of pre-capitalist land tenure be described in terms of property relations? Moreover the currently dominant understandings may be a highly distorted representation of how contemporary Euro-American property systems actually function. ' (p.289)

In an inextricable link between digitisation and globalisation (where the former has seemingly accelerated the progress of the latter), property today is often seem as a single concept, from a specifically westernised viewpoint.

Digital objects are entirely reliant on context in order to *mean* anything. The nature of the file in computing, which was not a bygone conclusion in terms of the way that people and computers can interact, but a choice made by operating system engineers, is defined by a header (Lanier, 2010). This tells the machine what to do to understand the content of this data object. If a person were to attempt to read this content, ultimately (having passed through several levels of technical abstraction) it would appear as a string of binary information; abstraction to the point of meaningless.

The advent of the 3D printer is moving the issues of the digital from the intangible into the realm of the physical; it is possible to obtain a copyrighted plan of a copyrighted item and then make as many instances of this as desired with ease. The costs of producing these objects will inevitably drop with time until the point

is reached where producing an item will be cheaper than purchasing it. Given this, it is vital that society forms clear views and policies regarding the state of property in the digital age, and addresses the many questions this raises. Money can offer clues here since it is also a form of abstraction, whereby seemingly inequivalent items can be made equivalent by assigning a value to them. The meta-data within a digital object, it's definition, has the same effect as the value placed upon a physical object by it's monetary value. An image file, abstracted to binary, is of more value when defined and viewable than a random string of unreadable bits. In the same way, a hand-crafted, designer garment containing many hours of labour is (normally) of a higher value than a mass-produced item of clothing. That is not to say that useful data makes it worth anything in a monetary sense, since most digital content is not deemed to have any direct economic value at all. That is, in fact, the ultimate form of the destabilisation of property caused by the digital; that which once had a monetary value (through scarcity, labour-value, use-value or convenience) is now often thought to be worthless in any real, economic sense.

With the advent of the digital and the digital object, be it an ASCII encoded text, a Java software class, a digital audio file or a JPEG formatted photograph, it has become more important for society to ensure that the study of this is not confined to the technical, and it is equally important that it is not carried out solely by technologists. As digital technologies become more and more embedded in the worlds of the natural and the human, other perspectives should have equality with those of computer scientists and business analysts who have, until recently, been the sole voices in the debate about hardware and software pervasion into society, and the effect these will have.

Notes

1. http://en.wikipedia.org/wiki/property
2. http://www.dreamscape.com/rvien/Economics/Essays/LTV-FAQ.html
3. http://en.wikipedia.org/wiki/Copyright_law_of_the_United_Kingdom
4. http://wiki.creativecommons.org/History

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