

Paper title - The concept of intellectual property: from Plato's views to current copyright protection in the light of open access

Introduction

There exists literature for the concept of intellectual property, its origins and its evolution that helps to understand the rationale as well as reasons that lead the concept of property to be associated not only with lands and goods but also with intellectual endeavors or creations. More importantly, this turn/ transform clarifies that the issue of a better copyright protection regime in the digital age should be considered in the light of open access which determines an effective response to the ongoing technological evolution. To examine this issue, it is necessary to address the concept of property through Plato's views about ownership, Aristotle's ideas for the concept of private ownership, Locke's labour theory, Hegel's notions about the growth of personality and Hohfeld's conceptualization of private property as a bundle of legal relations.

This paper argues that Plato's rationale about the concept of property and its communal framework of sharing through joint ownership is more desirable than others, as it justifies the philosophy of open access. The origins of the notion of property lie in Plato's philosophy. In accordance with Plato's ideas, the concept of property was first introduced as comprising joint ownership (in terms of social justice) and being a beneficial tool that could support the growth of the ideal republic. Plato argued that private property should not exist and property should fall under the 'umbrella' of joint ownership to ensure peace and justice. Aristotle consequently adopted his teacher's notions in relation property but focused on a more individualistic aspect of the property. Aristotle indicated his disagreement with Plato's rationale for joint ownership by asserting that such extreme unification was against the diversity of personal identity and would affect the benefits derived from market exchanges.

In addition, this paper also argues that Locke's philosophy extended the concept of private property ownership. Locke asserted that whatever work is produced by an individual becomes his/her property. He used this premise to make a connection between ownership and creation. It is contended that the period in which Locke wrote represents a shift in the concept of property, as goods went from being viewed as private property to a form of creative effort. In his work entitled the 'Second Treatise on Government', Locke sought to find the right by which an individual can claim to own one part of the world when, according to the Bible, God gave the world to human beings in common. In answer to this question, Locke argued that individuals own themselves and thus the fruits of their own labours. On this point, a connection can be seen between Aristotle and Locke's logic; they both agree that the issue of private property is one of the numerous intricacies. However, Locke took a more individualistic approach to property ownership than Aristotle.

Conversely, Hegel contended that property should be understood as a phase in the growth of humankind and personality. Hegel adopted Aristotle and Locke's logic

and reasoning to extend the appropriate environment and surroundings of the private property. A consideration of these philosophers' arguments in their chronological order and, more specifically, their flow of thinking led me to propose a justification for the emergence of open access as an additional support to current copyright regimes.

From the time of Aristotle to modern times, differences can be seen in how the traits of property have been conceptualised. One by one, philosophers have added new features to the concept. Plato's basic argument of joint ownership and the communal property has often been neglected. Plato's arguments in relation to communal property and joint ownership form a substantial part of the justifications for my argument and the significance of these arguments in relation to open access must be considered. The concept of open access supports the distribution of information resources without requirements and Plato's views should be considered. Accordingly, the argument of this paper is subliminally based on Plato's logic and his notions about the communal use of property, as they highlight several, unique aspects of communities and individuals.¹ In modern times, when information and communication technologies are under 'revolution', it is necessary to return to Plato's concepts to argue that open access is an instrument that benefits the wide dissemination of information resources. Thus, the paper argues that the emergence of property as a concept requires copyright protection to be considered in the context of open access. In order this argument to be supported, it follows discussion about the origins of the concept of property, the reasons for its emergence, its transformation into a monopoly that created patent rights as well as its connection to the copyright protection. Furthermore, this paper presents justifications for the introduction of private property and discusses how the idea of private property (i.e., land and goods) was extended to intellectual creations. All in all, the concept of open access represents an additional means of support for the existing copyright framework of protection in the digital age by enabling information to be distributed and accessed, legally.

1. The first introduction of property as a concept

Plato's philosophy

Plato's ideas about the property were related to his ideas about family, society and the republic. They also contained the origins of patents. In this section, Plato's ideas are examined in more detail. In Ancient Greece (approximately 500 B.C.), the Greek city of Sybaris recognised a form of patent rights for the creation of unique culinary dishes.² These rights encouraged individuals to discover new refinements in luxury, as any profits derived from these discoveries were secured to the inventor for

¹ This mutual philosophical consideration is best described as follows: Aristotle highlighted individualism and self-interest; Locke asserted that property rights represent an individual's natural rights; Hegel asserted that all type of individual's rights lie in property; Hohfeld outlined eight different relations that stem from property as a right; and Honoré considered property as an account of ownership rights.

² Anthony Rich, *A Dictionary of Roman and Greek Antiquities* (Nabu Press, 2010).

one year.³ Thus, creative endeavours were encouraged in Ancient Greece; however, the one-year limitation also protected the market from monopolies or economic advantages being held by a few individuals. Plato's ideas describe an ideal republic in which philosophers conceptualised private property in terms of justice.⁴ Plato argued for a joint ownership system⁵ and, as a fundamental concept of justice, this system provided the basis for the shaping of Plato's ideal republic.⁶ In this period, the first justification for extending the notion of private property in goods (i.e., culinary dishes) to creative endeavours (i.e., patent protection for one year) can be seen.

Another aspect that stems from Plato's ideas is that of wealth and private property. The abolishment of wealth leads directly to the decay of the traditional family. Plato also argued that there should be no legacies, private property or nepotism, as these create negative inherent idioms for the whole society.⁷ In my opinion, it is erroneous to connect legacies with private property, as we must move beyond tangible objects in considering private property. By providing a form of protection to the creators of culinary dishes, Plato's original idea of private property as existing in goods was extended to creative endeavours via a form of patent protection. Legacies and private property do not only consist of tangible objects; this is especially true today. An intellectual creation can comprise a legacy for the public domain and society as a whole.

Plato argued that owning private property creates greed and lust. This argument led to some people calling Plato a proto-socialist or proto-communist. However, it should be noted that Plato only made this argument in relation to the guardian class and auxiliaries to focus their attention on the ever-important matter of the state. This argument also represents the first time that someone initiated a discussion on the importance of private property, its content, how it was going to be used and the main purposes for owning property.⁸

According to Plato, private property was affiliated with the concept of family and, particularly, 'children'. Plato argued that having a child creates greed and lust. In my opinion, given that children become adults and, consequently, active members of society, this view is neither productive nor humanitarian. Plato asserted that children should be taken from their biological parents and redistributed by the state to other parents. This is also how he supported his arguments concerning private property and

³ William Smith, *A Concise Dictionary of Greek And Roman Antiquities* (Nabu Press, 2010).

⁴ Charles H Kahn, *Plato and the Socratic Dialogue: The Philosophical Use of a Literary Form* (Cambridge University Press, 1998).

⁵ Michael Shalom Kochin, *Gender and Rhetoric in Plato's Political Thought* (Cambridge University Press, 2002).

⁶ Leon Harold Craig, *The War Lover: A Study of Plato's Republic* (University of Toronto Press, 1996); Stanley Rosen, *Plato's Republic: A Study* (Yale University Press, 2005); Jonathan Lear, 'Allegory and Myth in Plato's Republic' in Gerasimos Santas (ed), *The Blackwell Guide to Plato's Republic* (Blackwell Publishing Ltd, 2006) 25.

⁷ J Angelo Corlett, *Interpreting Plato's Dialogues* (Parmenides Publishing, 2005) vol 47.

⁸ Press, above n 8, 135.

the right to 'own' a child.⁹ Thus, Plato did not believe in private property as such and ultimately argued that no one, except philosophers, should own anything.¹⁰ Plato influenced his student Aristotle, just as Socrates had influenced Plato. However, each man's influence evolved differently. Plato believed that concepts, such as property, have a universal or ideal form that leads to an idealistic philosophy and ideal republic. Conversely, Aristotle believed that universal forms could not appropriately be attached to objects or concepts and thus each object or a concept must be examined on its own. Plato was more interested in justifying a form of communism among the elites based on joint ownership whereas Aristotle sought to justify a political order based on private property from the individual aspect. Such differences in logic led me to examine Aristotle's views on the concept of property.

Aristotle's philosophy

Aristotle's views are particularly important, as his philosophies have had a significant and even dominant influence on economic and social thought. In the Greek tradition, Aristotle put forth an incisive argument in favour of private property.¹¹ Perhaps influenced by the private property arguments of another Greek philosopher, Democritus, Aristotle delivered a cogent argument for the communisation of the ruling class as originally called for by Plato.¹² However, he denounced Plato's goal for the perfect unity of the state through communism, pointing out that such extreme unity runs against the diversity of mankind and the reciprocal advantage that can be reaped through market exchange.¹³

Aristotle delivered a point-by-point comparison of private and communal property.¹⁴ First, he argued that private property is more productive than communal property and will lead to personal growth. It appears that Aristotle connected creation and production with progress and saw the need to extend Plato's idea of private property to encompass goods to creative endeavours. According to Aristotle, goods owned in common by a large number of people receive little care, as people mainly

⁹ Catherine H Zuckert, *Plato's Philosophers: The Coherence of the Dialogues* (University of Chicago Press, 2009).

¹⁰ Coleen Zoller, 'Interpreting Plato's Dialogues (Review)' (2007) 45 *Journal of the History of Philosophy* 486.

¹¹ Emily Brady, 'Aristotle, Adam Smith and the Virtue of Propriety' (2010) 8 *Journal of Scottish Philosophy* 79; Martin J Calkins and Patricia H Werhane, 'Adam Smith, Aristotle, and the Virtues of Commerce' (1998) 32 *The Journal of Value Inquiry* 43.

¹² Henry William Spiegel, *The Growth of Economic Thought* (Duke University Press, 1991); Jacques Brunschwig, *A Guide to Greek Thought: Major Figures and Trends* (Harvard University Press, 2003); Lawrence Nolan, *Primary and Secondary Qualities: The Historical and Ongoing Debate* (Oxford University Press, 2011).

¹³ Allan David Bloom, *The Republic of Plato* (Basic Books, 1991); Robert Mayhew, *Aristotle's Criticism of Plato's Republic* (Rowman and Littlefield Publishers, 1997).

¹⁴ Elinor Ostrom and Charlotte Hess, 'Private and Common Property Rights' (SSRN Scholarly Paper ID 1936062, 29 November 2007) *Social Science Research Network*, <<http://papers.ssrn.com/abstract=1936062>>.

focus on their own self-interests;¹⁵ however, people will show greater interest and care their own private property.

Second, Plato argued that common property is conducive to social peace, as no one will be envious of, or able to take, the property of another. Conversely, Aristotle argued that common property would be a continuing and intense source of conflict as individuals will complain that they have worked harder and obtained less than others who have done little and taken more from the common store. Further, Aristotle noted that not all crimes or revolutions are powered by economic motives. As Aristotle trenchantly stated: 'men do not become tyrants in order that they may not suffer cold' (p. 25).¹⁶ In interpreting Aristotle's statements, it is clear that the work and contribution of creators to society have to be awarded and protected. Under this rationale, it is imperative to create an appropriate form to protect intellectual creations. Plato's concept of common property creates negative aspects that could easily cause injustice and conflict in relation to creators' profits.¹⁷ Thus, Aristotle provided a justification for transforming Plato's idea of property and expanded it from encompassing private property in goods to private property in creative efforts.

Third, private property is plainly embedded in man's essence. An individual's admiration of personality, individuality, money and property is interconnected in a natural love of exclusive ownership. Fourth, Aristotle noted that private property has existed always and everywhere.¹⁸ To enforce a system of communal property on societies would be to disregard the record of human experience to leap into the new and untried. Ultimately, it appears that abolishing private property would create more problems than it would solve.

Aristotle wove together his economic and moral theories to reach the brilliant insight that private property furnishes individuals with opportunities to act morally, (e.g. to practice the virtues of welfare and charity). The compulsory communal property would destroy these opportunities. Thus, in accordance with Aristotle's philosophy, the concept of private property constitutes a means of wealth, production and justice and should be protected.

¹⁵ Colin Ash, 'Social-Self-Interest' (2000) 71 *Annals of Public and Cooperative Economics* 261; Ian Maitland, 'The Human Face of Self-Interest' (2002) 38 *Journal of Business Ethics* 3; Samantha Besson and José Luis Martí, *Deliberative Democracy and Its Discontents* (Ashgate Publishing, Ltd., 2006); Hector O Rocha and Sumantra Ghoshal, 'Beyond Self-Interest Revisited' (2006) 43 *Journal of Management Studies* 585; Carsten KW De Dreu and Aukje Nauta, 'Self-Interest and Other-Orientation in Organizational Behavior: Implications for Job Performance, Prosocial Behavior, and Personal Initiative' (2009) 94 *Journal of Applied Psychology* 913.

¹⁶ Eugene Garver, *Aristotle's Politics: Living Well and Living Together / Eugene Garver*. (University of Chicago Press, 2011).

¹⁷ Hans-Hermann Hoppe, *The Ethics and Economics of Private Property* (11 October 2004) Mises Institute <<http://mises.org/library/ethics-and-economics-private-property>>.

¹⁸ Murray N Rothbard, *Aristotle on Private Property and Money* (30 November 2009) Mises Institute <<http://mises.org/library/aristotle-private-property-and-money>>.

Aristotle was critical of moneymaking;¹⁹ however, he still opposed any limitation being placed on an individual's right to accumulate private property. He contended that education should teach individuals how to voluntarily curb their rampant desires and lead them to limit their own accumulations of wealth. Despite his cogent defence of private property and opposition to coerced limits on wealth, as an aristocrat, Aristotle was as scornful of labour and trade as his predecessors.

Aristotle raised many issues by morally condemning the lending of money²⁰ for interest as 'unnatural'.²¹ Aristotle contended that as money cannot be used directly, but is employed only to facilitate exchanges, it is 'barren' and should not be used to increase wealth. Thus, Aristotle incorrectly viewed the charging of interest as money production and condemned it as being contrary to nature. As Plato's student, Aristotle pursued his teacher's view on the issue of private property, but, ultimately, took an opposite point of view. After repeatedly rejecting Plato's ideal state as a dream that would never eventuate, Aristotle took a stand in favour of private property.²² He believed that owning private property was necessary to the stability of the state, especially if everyone owned a moderate and sufficient amount of property.

When Locke's political theory was first printed in 1689, the impressive authority of Aristotle stood ready to defeat it. However, when it was confirmed that the renowned author of *An Essay Concerning Human Understanding* had also written the anonymously published *Two Treatises of Government*, Locke was broadly viewed as having put forward a distinctive political theory based on individual rights and social contract; an approach to politics that has often been attributed to Aristotle. The classical philosophy of Aristotle was in due course followed by the development of a liberal philosophy. Locke is one of the foremost liberal thinkers and his ideas on property inform our contemporary understandings. Thus, I will now analyse the concept of private property in relation to Locke's ideas on the property.

2. The introduction of private property: from lands and goods to intellectual efforts

Locke's philosophy on property

The following analysis of Locke's philosophy will highlight the importance of his work in relation to property ownership. First, it should be noted that Locke and Aristotle agreed that the issue of private property is one of the numerous intricacies. However, both philosophers held disparate views on the distribution of land among

¹⁹ Scott Meikle, *Aristotle's Economic Thought* (OUP Catalogue, Oxford University Press, 1997) <<https://ideas.repec.org/b/oxp/obooks/9780198152255.html>>; Harvey C Mansfield Jr., 'Marx on Aristotle: Freedom, Money, and Politics' (1980) 34 *The Review of Metaphysics* 351; Stephen Zarlenga, 'The Lost Science of Money' (2004) 16 *European Business Review* <<http://www.emeraldinsight.com/doi/abs/10.1108/eb.2004.05416eab.004>>.

²⁰ Irene van Staveren, *The Values of Economics: An Aristotelian Perspective* (Routledge, 2013).

²¹ Richard Kraut and Steven Skultety, *Aristotle's Politics: Critical Essays* (Rowman and Littlefield, 2005).

²² Mary Louise Gill and Pierre Pellegrin, *A Companion to Ancient Philosophy* (John Wiley and Sons, 2009).

individuals (Locke took a more individualistic approach to property ownership than Aristotle). In the *Second Treatise on Government*,²³ Locke sought to ascertain the right by which an individual can claim to own one part of the world when, according to the Bible, God gave the world to human beings in common. In his work, Locke argued that individuals own themselves and their own labour; thus, individual property rights are natural rights. This approach was similar Aristotle's approach (who, as stated above, did not support Plato's arguments for joint ownership).

Adopting this line of thought, it is arguable that when an individual's work (relevant to the outcome of the work) manifests in tangible objects it becomes the property of the individual. Political philosopher Nozick calls this idea a Lockean proviso. According to Locke, labourers must hold a natural property right in the resource itself as the ownership was an appropriate component of production. Additionally, Locke asserted that a preceding natural right interconnects property and ownership with production; thus, the concept of property includes exclusive rights on tangible ideas, especially those produced through creative endeavours. Aristotle and Locke disagreed on many issues in relation to property ownership, including acquisition, maintenance and divine intervention. However, it should be highlighted that there are several issues in relation to property rights on which these two philosophers agreed, including the issue of equity.

Locke's theory on property can be viewed as an expansion of Aristotle's main argument in relation to private property. Locke argued that individuals could acquire full property rights over moveable and non-moveable parts of the earth in a state of nature. The terms moveable and non-moveable represent tangible and intangible ideas (e.g., notions, innovations, thoughts and intellectual creations). Locke's contribution to property theory expanded Aristotle's concept. Locke stated that every individual has his own property to which nobody else has any right. However, unlike Locke, Aristotle argued that owners of private property should share it. Locke revised Aristotle's ideas about sharing and argued that individuals should only acquire as much property as appropriate and should not acquire property in an endless manner. Thus, Locke developed Aristotle's concept of property and provided justifications the application of the principle of private property in goods to creative endeavours. Hegel further developed Locke's ideas in relation to property by transforming them into a natural right. Hegel's philosophy is considered in the following section.

Hegel's philosophy

From a philosophical perspective, there are several approaches and different definitions of property; however, each of these definitions has a common element: each definition treats property as a means rather than an end. Property can be viewed

²³ Jonathan Bennett, 'Second Treatise of Government-John Locke' <<http://www.earlymoderntexts.com/pdfs/locke1689a.pdf>>; John Locke, *Two Treatises of Government* (CreateSpace Independent Publishing Platform, 2013); John Locke, *Second Treatise of Government: An Essay Concerning the True Original, Extent and End of Civil Government* (John Wiley & Sons, 2014).

as a means to a ‘good life’, as a means to gain freedom or social recognition.²⁴ Hegel followed Locke’s rationale in respect of the relationship between individuals and property, arguing that property is the embodiment of personality. Hegel’s arguments can be seen as extending Locke’s notions in relation to private property, as he claims that property is the embodiment of personality and, in this way, it is transformed into a natural right.

Additionally, Hegel argued that the basis of individuals’ rights lies in property. Hegel followed the same logic as Locke and noted that, despite being central to an individual’s assertion of identity and personality, property does not merely represent a material acquisition. Thus, according to Hegel, property comprises both material and non-material aspects (i.e., tangible and intangible ideas). By describing private ownership as an aspect of self-interest, Aristotle encouraged philosophers like Locke and Hegel to further develop the argument that property rights are natural rights and embody personal growth. Thus, individuals’ notions and self-interests are inherently distinguishable from intellectual creations. This philosophical concern suggests that intellectual creations should be secured and protected to ensure that the concept of property moves from goods to personal creations.

According to Hegel, property is an expression of ourselves and represents the ‘location’, room or space where an individual is able to assert his or her rights (respected by others) and state that ‘this is mine’.²⁵ The system of private property establishes individuality via contract and exchange. Hegel used this point to justify the inevitable links among property, personality growth and profits stemming from self-interest. Contracts demonstrate ownership through institutionalised patterns of mutual respect of the rights and commitments of individuals. Economic life, governed by a free exchange of goods, is based on an institutionalised notion that the individual has some claim to recognition as a right-bearing person. For exchange markets to operate effectively, economic actors have to identify universal standards by which individuals can claim to own property. Established patterns of mutual recognition in the modern economic sphere are embodied in economic actors and depict a ‘common will’.²⁶

²⁴ Margaret Jane Radin, *Reinterpreting Property* (University of Chicago Press, 1993); DB Resnik, ‘A Pluralistic Account of Intellectual Property’ (2003) 46 *Journal of Business Ethics* 319; Christopher May, *The Global Political Economy of Intellectual Property Rights: The New Enclosures?* (Routledge, 2013).

²⁵ Dudley Knowles, ‘Hegel on Property and Personality’ (1983) 33 *The Philosophical Quarterly* 45; Michael Salter, ‘Justifying Private Property Rights: A Message from Hegel’s Jurisprudential Writings’ (1987) 7 *Legal Studies* 245; Hans-Christoph Schmidt am Busch, ‘Personal Respect, Private Property, and Market Economy: What Critical Theory can Learn from Hegel’ (2008) 11 *Ethical Theory and Moral Practice* 573.

²⁶ J Rogers Hollingsworth and Robert Boyer, *Contemporary Capitalism: The Embeddedness of Institutions* (Cambridge University Press, 1997); Christoph Knill and Dirk Lehmkuhl, ‘Private Actors and the State: Internationalization and Changing Patterns of Governance’ (2002) 15 *Governance* 41; Kalypso Nicolaidis and Gregory Shaffer, ‘Transnational Mutual Recognition Regimes: Governance

Consequently, an individual has no particular traits or reference to a social environment. Thus, under Hegel's idea of private property, rights are abstract and individuals are engaged as universal subjects without specific features.²⁷ Hegel also introduced morality to the concept by combining the system of mutual recognition and abstract rights; for example, morality represents the subjective part of mutual social commitments institutionalised in contracts and the economic market. Moreover, individuals observe these commitments as moral obligations. Therefore, they respect intellectual rights as an ideal good based on mutual recognition.

From the perspective of freedom and in accordance with Hegel's philosophy that emphasises human needs, property is the first component of freedom and a substantial purpose. On this point, Hegel stated that if possession (i.e., the power over items) is simply pursued to satisfy self-interest then it provides a means to satisfy these types of need. However, according to Hegel, human satisfaction is the attempt to bring to an agreement that recognises the subject of free agency. In this manner, power over items is a means for the growth of individual personalities. Thus, this justification demonstrates the importance of an effective interconnection among self-interest, property and personal progress or individual advancement.

Hegel claimed that property is the manifestation of an individual's effort to deploy his or her powers and become self-consciousness by the appropriation of his or her environment.²⁸ Consequently, Hegel's task was not to provide a justification for property but to comprehend and understand it as a phase in the process of intellectual production. Hegel did not make any effort to justify property in the context of Plato's ideas in relation to joint ownership. Indeed, he ignored the role of property in the growth of an individual's self-awareness. In my opinion, intellectual property demonstrates an individual's thoughts, ideas, notions and ways of thinking. Thus, it is necessary to clarify whether individuals participate in a process whereby their notions or thoughts are developed in accordance with their subliminal willingness. This statement supports Hegel's understanding of property as a phase in the process of human mind production.

without Global Government' (2005) 68 *Law and Contemporary Problems* 263; Wenchao Zhang et al, 'Local Gabor Binary Patterns Based on Mutual Information for Face Recognition' (2007) 7 *International Journal of Image and Graphics* 777; Caifeng Shan, Shaogang Gong and Peter W McOwan, 'Facial Expression Recognition Based on Local Binary Patterns: A Comprehensive Study' (2009) 27 *Image and Vision Computing* 803.

²⁷ George Wilhelm Fredrich Hegel, *Hegel: Elements of the Philosophy of Right* (Cambridge University Press, 1991); Russell Cropanzano et al, 'Self-Enhancement Biases, Laboratory Experiments, George Wilhelm Friedrich Hegel, and the Increasingly Crowded World of Organizational Justice' (2001) 58 *Journal of Vocational Behavior* 260.

²⁸ Richard Teichgraber, 'Hegel on Property and Poverty' (1977) 38 *Journal of the History of Ideas* 47, 47; Stephen R Munzer, *A Theory of Property* (Cambridge University Press, 1990); Jeanne L Schroeder, 'Unnatural Rights: Hegel and Intellectual Property' (2005) 60 *University of Miami Law Review* 453, 453–456; May, above n 24, 45–47.

To support my argument, I briefly explained Hegel's theory of property. Hegel showed that in relation to self-interest, private property exists in either tangible or intangible objects that should be protected, as property 'participates' in the process of human mind production. Thus, it is evident that the ideas and notions of Plato, Aristotle, Locke and Hegel on the concept of property developed from a consideration of communal ownership to individual ownership. Further, their justifications for ownership expanded the concept of property from physical to intellectual goods. The concept of private property as a natural right gradually lent itself a number of notions that reflected the elements of such a right.

Hohfeld's philosophy

Since Hegel first argued that property was a natural right, many other philosophers have elaborated on what a natural right in property means. The most notable forerunner in this respect was Wesley Hohfeld whose theory comprised eight legal relations.²⁹ Hohfeld further developed and clarified the meaning of property as a right. In the following discussion, Hohfeld's ideas in relation to property rights are explained, as they inform the bundle theory, a legacy of legal realism.³⁰ The origins of bundle theory can be traced back to late 19th century and early 20th century analytical jurisprudence.³¹ Hohfeld sought to categorise 'rights' into clear and unambiguous parts. Thus, an entitlement might be proper or claimed. An entitlement might also be a legitimate entitlement (e.g., an entitlement under which an individual could be required to undertake or refrain from undertaking an action) representing an equivalent duty in a person.

Under Hohfeld's views about property rights, there is no unified concept describing private property as a natural right or an intellectual creation under the law. On the contrary, the law grants rights over tangible objects to particular individuals.³² Further, any property that an individual holds is simply the sum total of a set of specific rights that the law has granted to him or her in that state. Such rights have been metaphorically referred to as 'sticks' and the property that an individual holds is the particular bundle of 'sticks' the law grants to them in a given situation. Thus, the

²⁹ Wesley Newcomb Hohfeld, 'Some Fundamental Legal Conceptions as Applied in Judicial Reasoning' (1913) *The Yale Law Journal* <<http://archive.org/details/jstor-785533>>.

³⁰ Henry E Smith, 'Property is not just a Bundle of Rights' (2011) 8 *Econ Journal Watch* 279.

³¹ Thomas W Merrill and Henry E Smith, 'Making Coasean Property More Coasean' (SSRN Scholarly Paper ID 1758846, 9 February 2011) *Social Science Research Network*, <<http://papers.ssrn.com/abstract=1758846>>.

³² A Kameas et al, 'An Architecture that Treats Everyday Objects as Communicating Tangible Components', *Proceedings of the First IEEE International Conference on Pervasive Computing and Communications, 2003. (PerCom 2003)* (2003) 115; Richard A Epstein, 'Liberty versus Property? Cracks in the Foundations of Copyright Law' (SSRN Scholarly Paper ID 529943, 1 April 2004) *Social Science Research Network* <<http://papers.ssrn.com/abstract=529943>>; Michael J Madison, 'Law as Design: Objects, Concepts and Digital Things' (SSRN Scholarly Paper ID 709121, 27 April 2005) *Social Science Research Network* <<http://papers.ssrn.com/abstract=709121>>.

law can reform the subject matter of property rights by adding or removing specific sticks from a bundle.

Hohfeld also argued that, under the law, rights can be broken down into constituent element blocks upon which more complex legal rights can be built. Hohfeld termed these basic rights ‘jural relations’ (i.e., legal relations). Hohfeld outlined eight legal relations of which the following two are significant to the conceptualisation of property: power and immunity. Hohfeld’s analysis showed that property was not as simple a notion as it first appeared; rather, property comprises a particular pack of determinate types of Hohfeldian legal relations.³³ In accordance with Hohfeld’s logic, property can be conceptually analysed in relation to particular rights that the law gives to the Aristotelian individual. A subliminal link exists between Aristotle and Hohfeld’s notions on the importance of individuals. Further, this link highlights the importance of personal growth and the further social benefits to Plato’s republic or state. Since the first introduction of the concept of property, philosophers have considered personal growth continuously. Despite its long history, property as a concept and the subject of philosophical considerations has only recently been the subject of discussion within different disciplines (i.e., disciplines other than the law) and it is through these discussions that the complexity of the content has become clear.³⁴ This provides additional justification for Hohfeld’s view that the concept of property is built on complex rights and legal relations.³⁵

This theory does not provide a new normative notion; rather, it provides analytical and descriptive notions (despite its origins within a long-lasting and critical philosophical debate on legal rights and legal liberties).³⁶ Hohfeld’s views approach Plato’s in relation to joint ownership. In particular, under Hohfeld’s theory and from a legal perspective, the concept of property is complex, contains no element of private property or connection with private property and contains no characteristics relevant to the private property upon which private ownership can be delineated. Thus, by showing that there is no determination of private ownership and detailing the limits private ownership, joint ownership emerges as a necessity. The origins of property as a concept that lies in Plato’s philosophy in relation to the communal use of property represents a more desirable model that can be used to justify the philosophy of open access.

Justifications for the extension of property to intellectual creations

³³ Curtis Nyquist, ‘Teaching Wesley Hohfeld’s Theory of Legal Relations’ (2002) 52 *Journal of Legal Education* 238.

³⁴ Peter K Yu, ‘International Enclosure, the Regime Complex, and Intellectual Property Schizophrenia’ (SSRN Scholarly Paper ID 1007054, 15 August 2007) *Social Science Research Network* <<http://papers.ssrn.com/abstract=1007054>>.

³⁵ May, above n 24.

³⁶ Denise R Johnson, ‘Reflections on the Bundle of Rights’ (2007) 32 *Vermont Law Review* 247; Hugh Breakey, ‘Property Concepts’ [2012] *Internet Encyclopedia of Philosophy* <<http://www.iep.utm.edu/prop-con/>>.

An important form of property in contemporary society is intellectual property. Intellectual property refers to original expressions of thoughts and new applications of ideas.³⁷ The quantity of intellectual property efforts and its related market have developed considerably over the course of this last century due to intellectual creations stemming from ongoing Information Technology (IT) advancements.³⁸ Consequently, under this technological progress, another aspect of property that must be considered is tangible profits, as intellectual creations are affiliated with such profits.³⁹

Robert Merges, a notable scholar in the area of intellectual property theories, claimed that property does have a future. He stated that if property has proper respect for individual proprietors and social needs, it could contribute positively to a well-organised socio-political framework.⁴⁰ However, as long as modern society's profitable resources are intangible will be served by the crucial part of property law referred to as IP.⁴¹ Merges outlined the basic features for a workable justification of intellectual property as follows: a) the properties of creative labour (as a form of creative work) should be recognised and rewarded with true legitimate rights; thus, work from hourly wages should be converted into a freestanding economic asset whenever possible; b) granted and real rights, but not absolute rights, acknowledge a creator's contribution and also acknowledge society's contribution to the creative work; and c) the accommodation of consumers' and users' needs by facilitating and encouraging cost-effective and easy intellectual property permission and licencing tools and methods that allow a binding dedication of the rights to the public. This last intellectual property element supports my argument and provides additional support for a model of open access.

Currently, the economic perspectives of intellectual property outweigh other perspectives and thus can help us to understand that these perspectives should be considered. Thus, economic justifications for intellectual property should be addressed as they are additional factors that determine why the concept of property should be extended to creative endeavours and provide further support for my argument in relation to the designation of an appropriate framework for open access repositories. Further, economists have explored ways to efficiently allocate scarce

³⁷ Mark A Lemley, 'Property, Intellectual Property, and Free Riding' (2004) 83 *Texas Law Review* 1031.

³⁸ Nagesh Kumar, 'Intellectual Property Rights, Technology and Economic Development: Experiences of Asian Countries' (2003) 38 *Economic and Political Weekly* 209; Lei Yang and Keith E Maskus, 'Intellectual Property Rights, Technology Transfer and Exports in Developing Countries' (2009) 90 *Journal of Development Economics* 231.

³⁹ Cyril Ritter, 'Refusal to Deal and Essential Facilities: Does Intellectual Property Require Special Deference Compared to Tangible Property?' (SSRN Scholarly Paper ID 726683, 26 May 2005) *Social Science Research Network* <<http://papers.ssrn.com/abstract=726683>>; Emanuela Arezzo, 'Struggling around the Natural Divide: The Protection of Tangible and Intangible Indigenous Property' (2007) 25 *Cardozo Arts and Entertainment Law Journal* 367.

⁴⁰ Robert P Merges, *Justifying Intellectual Property* (Harvard University Press, 2011).

⁴¹ Ikechi Mgbogji, 'Justifying Intellectual Property' (2012) 50 *Osgoode Hall Law Journal* 291.

resources to unlimited wants and have noted that intellectual property rights are a plausible way of dealing with the issue of scarcity in an efficient manner.⁴²

Another significant justification is that of utilitarianism. Proponents argue that technological inventions are utilitarian works; thus, utilitarianism has been the principal economic theory applied. Utilitarian theorists generally endorse the creation of intellectual property rights as an appropriate instrument to foster innovation.⁴³ It is acknowledged that freedom of expression and the creation, dissemination and protection of information ought to co-exist to support effective outcomes (e.g., innovation). However, this justification illustrates the importance of creators' rights and efforts and distinguishes social evolution. Thus, information needs to be both protected and shared.⁴⁴

The majority of authors who have adopted economic analyses of intellectual property have relied on the 'Kaldor-Hicks' criterion that counsels lawmakers to select a system of regulations that maximises aggregate welfare measured by end users' ability and willingness to pay for goods and services in relation to information. Thus, three different economic theories dominate the literature. First, the most common, incentive theory claims that the optimal doctrine maximises the difference between (a) the current discounted value to the end users of intellectual products (created because the inventors were induced by the possibility of a monopoly power); and (b) the ensemble detriments generated by a system of incentives. In uneven terms, this theory urges governmental lawmakers to establish or develop intellectual property protection, as doing so will assist end users by stimulating their creative efforts more than it would harm them by constricting their access to intellectual property products or raising taxes. The second economic theory is based on patent regimes that reduce rental dissemination. This theory seeks to eliminate or reduce the tendency of intellectual property rights to advance duplicative or uncoordinated inventive activity. Economic waste can occur at three stages in the inventive process.

It is indispensable to realise that copyright and patent systems have the crucial role of letting potential producers of intellectual products know what end users want. With this information, these producers can channel productive outcomes in the

⁴² Meir Perez Pugatch, *The International Political Economy of Intellectual Property Rights* (Edward Elgar Publishing, 2004); Meir Perez Pugatch, *The Intellectual Property Debate: Perspectives from Law, Economics and Political Economy* (Edward Elgar Publishing, 2006).

⁴³ Peter S Menell, 'Intellectual Property and the Property Rights Movement' (SSRN Scholarly Paper ID 1000061, 12 July 2007) *Social Science Research Network* <<http://papers.ssrn.com/abstract=1000061>>; Peter S Menell, 'The Property Rights Movement's Embrace of Intellectual Property: True Love or Doomed Relationship?' (SSRN Scholarly Paper ID 965083, 1 February 2007) *Social Science Research Network* <<http://papers.ssrn.com/abstract=965083>>.

⁴⁴ Réjean Landry, Nabil Amara and Moktar Lamari, 'Does Social Capital Determine Innovation? To What Extent?' (2002) 69 *Technological Forecasting and Social Change* 681; David Lane et al, *Complexity Perspectives in Innovation and Social Change* (Springer Science and Business Media, 2009); Stephen J Guastello, *Chaos, Catastrophe, and Human Affairs: Applications of Nonlinear Dynamics to Work, Organizations, and Social Evolution* (Psychology Press, 2013).

direction most likely to enhance end users' welfare. Based on this rationale, sales and licenses will ensure that goods are delivered to people who need them and are able to pay for them. Only in specific circumstances (i.e., when transaction costs prevent such voluntary exchanges) should the holders of intellectual property rights be denied total scrutiny in relation to the use of their works. Thus, a sound public policy on the governance of open access repositories of educational material is essential.

3. The concept of open access as additional support for the modern copyright protection in the digital age

Scholars have been communicating and examining thoughts, considerations, claims and research outcomes throughout the ages in a diversity of forms. Lectures, discussions, essays, manuscripts, monographs, articles and books are common ways that intellectual ideas or scholarship have been shared. With the coming of the Enlightenment age, the first scholarly periodicals (i.e., *Philosophical Transactions of the Royal Society of London* and the *Journal des savans*) were published in 1665 by leading learned societies.⁴⁵

Since then, scholarly articles have become the principal form of beneficial scholarly communication.⁴⁶ Learned societies managed the editing and publishing of scholarly journals during these early times.⁴⁷ Today, the approach remains the same as scholarly societies continue to publish some of the leading journals on a variety of scientific areas. After World War II, government investments in Western Europe and the United States (US) in the field of scientific research increased the class of researchers communicating with their fellow scholars. However, at the same time, the learned societies were slow to adapt to this instant flow of information and representatives of the printing press industry entered the area in growing numbers to provide new titles in a variety of scientific areas.

The growing number of publications obliged subscribers of scholarly journals, including academic libraries, government agencies, industrial research centres and individuals, to obtain access to scholarly data.⁴⁸ The expenses affiliated with such access began to increase with the rise of electronic publications.⁴⁹ Further, journal publishers were forced to produce their content in two different forms (i.e., hard copy journals and electronic/digital versions, hosted on a digital network). The costs of scholarly journals increased, as did concerns about how affordable access to these

⁴⁵ David J Weber, *Bárbaros: Spaniards and Their Savages in the Age of Enlightenment* (Yale University Press, 2005).

⁴⁶ Carl Bergstrom, 'Measuring the Value and Prestige of Scholarly Journals' (2007) 68, 314; Carol Tenopir et al, 'Electronic Journals and Changes in Scholarly Article Seeking and Reading Patterns' (2009) 61 *Aslib Proceedings* 5.

⁴⁷ James Hopkins, 'The Role of Learned Societies in Knowledge Exchange and Dissemination: The Case of the Regional Studies Association, 1965–2005' (2011) 40 *History of Education* 255.

⁴⁸ Danah Boyd and Kate Crawford, 'Critical Questions for Big Data' (2012) 15 *Information, Communication and Society* 662.

⁴⁹ Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (University of Chicago Press, 2010); David Lyon, *The Electronic Eye: The Rise of Surveillance Society—Computers and Social Control in Context* (John Wiley and Sons, 2013).

journals could be maintained. Further, the development of the Internet, specifically the World Wide Web, created a number of new terms, challenges and circumstances in respect of scholarly communication. Thus, this paper argues that printing press started shifting its operations to keep up with the digital platform of Internet, which was attracted by cost effective solutions.

The Internet revolutionised computers and communicating. The invention of the telegraph, telephones, radios and computers set the stage for this unprecedented integration of capabilities. The Internet has a world-wide broadcasting capability, a mechanism for information distribution and is also a medium for collaboration and interaction between individuals and their computers regardless of geographic locations. The Internet represents one of the most successful examples of the benefits of sustained investment and commitment to research and the development of an information infrastructure. Beginning with early research on packet switching, the government, industries and academics have worked together to evolve and deploy this exciting, new technology. The Internet emergence created the possibility of extending access to the scholarly articles in cost-effective ways and in circumstances where the scholarly printing press had become dominated by for-profit publishers (rather than non-profit scholarly societies) and increasingly consolidated. By using their collective pricing power, publishers set journal subscription prices and obliged academic libraries and other subscribers to pay these prices to have the benefit of accessing up-to-date research.

A renowned author in the open access area, Michael Carroll, argued the concept of open access was born out of the frustrations caused by the increasing diffusion of scholarly research on the Internet and the ever-rising price of journal subscriptions.⁵⁰ These frustrations led academic librarians, autodidacts and other academic leaders to unite and initiate open access. Carroll argued that the principal goal of open access was simply to enable open access to scholarly literature and relevant information resources and ensure that these materials were freely available on the public Internet for end users and researchers of all kinds.⁵¹

It is obvious that via open access there are minor obstacles regarding online availability of information that end users should enjoy by using scholarly journal articles. However, copyright protection issues emerge and should be considered. In this context, advocates argue that there are two ways within which scholars can make their articles accessible and copyright protected; either by publishing via the ‘gold road’ of open access through which publications are freely available to the public online or by publishing via the ‘green road’ of open access in subscription-access journals in which authors self-archive an e-print of their work in an online open access repository.⁵² Once an article is freely accessible within either method, it is

⁵⁰ Michael W Carroll, ‘The Movement for Open Access on Law’ (2006) 10 *Lewis and Clark Law Review* 741.

⁵¹ Michael W Carroll, ‘Creative Commons and the Openness of Open Access’ (2013) 368 *New England Journal of Medicine* 789.

⁵² Stevan Harnad, ‘The Green Road to Open Access: A Leveraged Transition’

indexed by search engines, immediately locatable and retrievable by anyone with internet access.⁵³ Taking everything into account, the concept of open access is a response to current technological developments in conjunction with creative efforts that should be formulated and attached to modern copyright laws, appropriately.

Conclusions

Clearly, an emerging issue in various theories of property ownership relates to the proper equilibrium between self-interest and the social good. Property philosophers are engaged in devising appropriate means to balance individuals' interests with the common good. Therefore, it should be mentioned that any concept or property should be considered through the lens of Plato's views for justice, Aristotle's ideas for private ownership, Locke's theories of labour, Hegel's notions of personality growth and Hohfeld's full account of ownership rights. However, the define-feature preceding in all these theories is that the concept of private property led to evolution, production and intellectual creativity. Subsequent philosophers elaborated on this notion, but, being influenced by their specific social surroundings, attributed different traits to the concept of property.

At this point, it is logical to ask how the concept of property ownership has informed the development of notions of intellectual property and relevant endeavors. Intellectual property refers to the rights associated with the expression of an idea or some other abstract object.⁵⁴ Thus, intellectual property refers to the 'goods' created by human minds. Forms of intellectual property include patents, trademarks and copyrights. In general, the law of intellectual property supports the appropriator's exclusive rights over the use of intellectual property and the aforementioned 'goods'. This paper argues that the notion of intellectual property rights was originally created to protect the creative procedures of inventors and scientists and benefit society as a whole. However, by increasing this 'shield' of protection, an inverse result occurred. Consequently, a number of alternative initiatives were implemented in the early nineties to protect intellectual property that, in response to the progressively high level of capitalisation of intellectual property rights, placed less emphasis on the trade element.

<<http://users.ecs.soton.ac.uk/harnad/Hypermail/Amsci/3379.html>>.

⁵³ Stephen Cramond, 'Explainer: Open Access vs Traditional Academic Journal Publishers' (July 27, 2011) *The Conversation* <<http://theconversation.com/explainer-open-access-vs-traditional-academic-journal-publishers-2511>>.

⁵⁴ Adam Moore and Ken Himma, 'Intellectual Property' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2014) <<http://plato.stanford.edu/archives/win2014/entries/intellectual-property/>>.