

WHAT IS PROPERTY?

Contents

1. [I. PROPERTY AND LEGAL TRADITION](#)
2. [A. Customary Orders](#)
3. [B. Casuistic Orders](#)
4. [C. Conceptualization: Legal Dogmatics](#)
5. [D. Incorporation of Intellectual Property Rights Within Legal Dogmatics](#)
6. [II. PROPERTY, REAL RIGHTS, AND SCARCITY](#)
7. [A. Real Rights and Personal Rights](#)
8. [B. Property and Scarcity](#)
9. [C. Categories of Objects of Real Rights](#)
10. [1. Corporeal Goods](#)
11. [2. Animals](#)
12. [3. Slaves](#)
13. [4. Ideas](#)
14. [III. PROPERTY AND ETHICS](#)
15. [B. Ethical Theories of Individual Property](#)
16. [1. Consent](#)
17. [2. Convention](#)
18. [3. Utility Maximization](#)
19. [4. Self-Ownership and the Good Life](#)

As this Article is intended to provide a broad context for the debate on intellectual property rights, its analysis will be limited to those aspects of property that will be useful in framing the issue for further debate. Indeed, the definition of property is simultaneously simple and complex. It is simple because we can distinguish a generally accepted common-sense notion of property; that is, something that belongs to somebody in a legitimate way, something that is "proper" to somebody. It is complex because this common-sense notion is difficult to apply to particular issues, including the types of objects that can be owned, the legitimate methods for property-acquisition, and the importance of the institution of property for wealth accumulation and wealth distribution. When one gets into questions of that sort, the ensuing Pandora's box of crucial ethical, legal, political, and economic issues may prove to be overwhelming.

The first part of this Article will be devoted to the legal notion of property as it was developed in the continental legal tradition. Property as a generic notion, and intellectual property as a particular species of it, are in the first place notions developed by legal science. In this way, these definitions and the legal theories related to them determine the agenda of political, economic, historical, and sociological research about the accumulation and distribution of wealth and power in society.

Because of particular historic circumstances,[1] continental legal science puts a much stronger emphasis on definitions and general principles than its Anglo-American counterpart. Continental jurists at one time identified this conceptual level of legal science as "legal dogmatics" or "legal theory." [2] By elaborating different legal notions such as rights, real rights, personal rights, contracts, quasi-contracts, obligation, property, and liability, the legal dogmatists aim at bringing intellectual structure to the empirically perceived world of

courts, solicitors, barristers, legislators, administrators and contractual practice. Their systematizing approach is not confined to mere description. By elaborating a conceptual framework, "learned" jurists influence the way in which legal problems and political institutions are denominated and shaped. When new and unforeseen legal questions arise, "learned" jurists will try to integrate them into the already established body of legal notions. In so doing, they determine to a large extent the way these new problems ought to be solved. The political practice of zoning, for example, has its origins in the non-legal mentality of "social engineering," cultivated by planners, architects, engineers, and politicians.

Nevertheless, some continental lawyers tried to integrate this practice of zoning into the body of legal dogmatics. They qualified zoning as the imposition of collective easements, of which the property owners were holders and subjects at the same time.[3] This translation of the planning activities of central and local administrations into a legal dogmatic language permitted the lawyers to individualize some effects of zoning and to incorporate them into the framework of civil law principles, such as the obligation for the government to pay damages for substantial impositions on the freedom of estate-owners.

It would be erroneous and misleading to qualify the legal dogmatic framework as a hidden political ideology. Legal dogmatics can accommodate nearly all potential political solutions to any particular economic or social issue. Thus, legal dogmatists see no difficulties in describing Soviet communism in terms of public ownership, rights of the state as a legal entity, or contractual relations between state enterprises. In this sense, the legal dogmatic framework is politically neutral. Nevertheless, by molding political arrangements into their legal categories, legal dogmatists elicit several questions that the advocates of political arrangements and ideologies tend to neglect or would like to see neglected. For example, by shaping Soviet communism in terms of public ownership, the legal dogmatic approach is able to submit this arrangement to a whole series of embarrassing questions about the relationship of the public owner to individual citizens, the legitimacy of public ownership, the legal responsibility of the people, and who is entitled to manage public property. Yet, under the terms of orthodox Marxist ideology, such questions would be discarded as irrelevant.[4] Orthodox Marxists argue that by applying their legal categories to the communist society, bourgeois jurists tend to forget that the Soviet state is different in nature from the liberal, bourgeois states. A state which by definition represents the interests of the majority of the people, they argue, does not deserve to be accorded the legal suspicion to which bourgeois lawyers subject their own state bureaucracy.

The emphasis we shall put on the importance of the legal dogmatic aspect of property does not preclude the relevance of other approaches to property. Although the jurists of the learned dogmatic tradition determined to a great extent the structure of the questions that should be asked and indicated the range of possible solutions, they were generally unable to generate decisive arguments in favor of any one solution.

For these arguments we must rely on ethics, politics, and political economy. Jurists might be able to tell us how we should understand the notion of property and how this notion differs from other rights such as contractual claims, easements, personal rights, and rights within the family. They are able to conceive of the different ways by which we can acquire property. Because the legal tradition is a repository of centuries-old experience with confrontation among the most diverse range of practical claims that occur in daily life, there is not a better guide in this realm. On the other hand, jurists cannot tell us why we should prefer a particular rule of acquisition above another one, the extent to which we should allow property solutions for different problem areas, or why life would be better and easier with or

without property solutions. For answers to such questions, we have to rely on politics and ethics. These intellectual disciplines are concerned with the central question of the good life. We expect them to generate arguments, in which the institutional question is linked with the aims of moral life. Some of these questions will be dealt with in the second part of this Article.[5]

I. PROPERTY AND LEGAL TRADITION

To outline the birth and the growth of property as a legal concept, the evolution of legal tradition is divided into three phases: the customary phase, the casuistic phase, and the conceptual phase. This subdivision is not intended to suggest that legal history is submitted to some kind of necessary and mechanical scheme of evolution, but only to point out the fact that there is a general tension in the evolution of legal systems between reliance on customs, a professionalized system of judge-made law relying on precedent, and an intellectual tradition of theoretical conceptualization.[6] Historical events may disrupt or retard this tension. For example, in the evolution of continental law after the casuistic phase of Roman law, a relapse to customs occurred during the Germanic Middle Ages (400-1100A.D.). This period was followed by steady growth of a dogmatic legal framework. Because of several factors, a tradition of legal dogmatics arose relatively late in the Anglo-American legal systems and is still less influential there than on the continent. Keeping this proviso in mind, we can compare and differentiate the evolution and the meaning of property within different legal systems.

A. Customary Orders

The reliance on custom for solving what we now perceive as legal conflicts is typical of tribal and conventional societies. The cultural background of such societies consists mainly of an intertwined network of myths, rites, and conventions. Some distinctions essential to social life in modern societies are not made by tribal man. He makes no sharp distinction between the natural and the human. Natural phenomena are perceived as the outcome of the will and whims of anthropomorphic superhuman beings.[7] Tribal man does not draw an intellectual border between nature and convention. The authority of conventional rules and institutions is based on a mythical and ancestral origin. To question these rules and institutions is tantamount to casting doubt upon the whole cultural belief system of the tribal group. Although tribal societies have had to develop rules and institutions to solve interpersonal conflicts about the use of scarce resources, these rules and institutions are not perceived as a separate legal order. They remain closely intertwined within the cultural background of the mythical-conventional world view. This close relationship, however, does not imply that conventional rules and institutions in tribal societies are static. As shown by ethnological and law-and-economics literature, tribal groups change their rules and institutions under the pressure of economic constraints.[8] Nevertheless, their mythical-conventional background determines the limits, the method, and the pace of change. Lacking a perception of law as a separate order and lacking a specialized class devoted to solving legal problems, it is not surprising that we are unable to find a general and abstract notion of property in tribal legal systems.

Tribal societies need rules to solve problems of distributive scarcity. Their conventional orders provide for "property rights," conceived as bundles of power in scarce resources. Nevertheless the rules dealing with these powers over land, tools, food, chattels, slaves, women, children, or religious objects allotted to kinship groups, families, and individuals, are not perceived as categories of one more fundamental notion. The powers the entitled entity can exert over different objects vary considerably. The content of the right and the rules of

acquisition could differ according to the object in question, the party to whom the right was allotted, or against whom it could be employed.[9] The link between property law and religion is illustrated by the fact that ownership and use of a good were often connected with religious duties and rites.[10]

The content of these different "property rights" is shaped primarily by social factors. The survival of the group as a group seems to be the main reason for the tribal system of rights. Property rights, especially those in land, are conceived by the tribal society as belonging to families and kinship groups, not as absolute individual rights. The assignment of arable lands to families is also determined by conventional rules of the group and could only evolve by a gradual adaptation of these conventions.[11] Although the degrees of communalism and individualism of property rights vary considerably among tribal societies, we may conclude that a notion of a property right as an individual right, and as a check on society, remains absent.[12]

B. Casuistic Orders

Customary orders tend to disappear under the pressure of two distinct factors. One is the formation of larger political units, in which custom is gradually replaced by deliberate legislation made by priests, chiefs, kings, oligarchic elites, or popular assemblies.[13] The second is the growth of intertribal trade, through which contacts with other tribes with different conventions are multiplied, causing the customary order to gradually lose its self-evident character.[14]

Although the first factor explains the emergence of legislation concerning public affairs, including conscription, taxation, public order, and criminal law, the second factor is largely responsible for the secularization of private law and the professionalization of legal services. As trade and immigration develops, legal contests with foreigners multiply and a need emerges for rules that are disconnected from the group's religious background. The growing complexity of economic exchanges requires the specialization of legal arbitration, assistance, and advice. Such changes in the legal order are typical with all emerging "great societies," such as the world of the Hellenistic empires, the Pax Romana, the Islamic empire, and the High Middle Ages in Europe. Because the evolution of Roman law is the historical antecedent of the European continental tradition, we shall focus on this legal system in particular.

Although the origin of our modern concept of property is often attributed to Roman law, the Roman lawyers did not have a clear-cut definition of property (*dominium*) as a legal right. One would look in vain in authentic Roman texts for such a definition. The reason for this dearth of definition is clear. The Roman legal system was conceived not as a framework of rules and concepts, but rather as a loosely intertwined collection of remedies. In this respect, it is highly analogous to the common law up to the Nineteenth Century. Originally *dominium* signified the dominance of the *paterfamilias* over his household and his slaves (his *domus*).[15] During the classical era, *dominium* had different and vague meanings.[16] To assess the property rights regime of Roman law, one must look to the several actions pertaining to the protection of the holders of goods and lands and which were either listed in the Twelve Tables or accepted by the praetor. The most important among these actions was undoubtedly the *rei vindicatio*, under which a Roman citizen was allowed to vindicate movable goods or lands, situated in Italy, from any possessor.[17] From the formula of this action (*hanc ego rem ex iure Quiritium meum esse aio*), the notion of Quiritian property, which would later serve as the base of our modern concept of individual property, was derived. In addition to the *rei vindicatio*, there was the *actio negatoria*, under which the

legitimate owner could sue each person interfering with his control over the owned good.[18]

In what sense were these two actions remarkable and essentially different from tribal-law solutions? They did not differ from tribal-law arrangements with regard to the category of persons entitled to sue. They were strictly confined to the members of the group, that is, the Roman citizens. Like tribal-law arrangements, they did not apply to all goods but only to goods transferred in certain ways, for *res mancipi*, the *mancipatio* or *in iure cessio*, for *res nec mancipi*, the *traditio* or *in iure cessio*.[19]

The revolutionary character of both actions stems rather from the fact that they could be initiated against any possible possessor. In a certain sense these actions were opposable against the whole world, even the Roman state.[20] The fact that these actions were opposable against everybody explains why they were called *actiones in rem*. It did not matter whether the person against whom the action was initiated was a Roman citizen, a foreigner, a neighbor, or a fortuitous passer-by. What mattered was the fact that the defendant exerted a physical control over the good of the dominus. *Actiones in rem* were in this respect different from the *actiones in personam*, which could be initiated for default in the execution of an obligation--contractual, quasi-contractual or delictual--and only against the debtor of the obligation.

Apart from goods, which could be protected by the two aforementioned civil actions (*legis actiones*), we can also distinguish in Roman law pretorian, provincial, and peregrinic property. The first category concerns goods which were not transferred by *mancipatio*, *in iure cessio*, or *traditio*, but by other ways, such as *usucapio* (superannuation). The *juris consults* succeeded in obtaining from the praetor the same legal protection for such goods as for Quiritarian property.[21] The same occurred with goods owned by foreigners (*peregrini*). They too became entitled to sue thieves or trespassers with the *rei vindicatio* or *actio negatoria*. The land of the provinces theoretically belonged to the Roman state. In practice it could be homesteaded by Roman immigrants and protected by actions similar to the *legis actiones* mentioned above.

By the *Constitutio Antonini* (212 A.D.), all inhabitants of the Roman Empire acquired Roman citizenship, making the distinction between Quiritarian and peregrinic goods redundant. The largely theoretical dominium of the Roman state on provincial lands was abolished by Emperor Justinian. By these several steps the *actiones in rem*, which originally protected only some goods, received general applicability. They could be initiated by all inhabitants of the Empire for nearly all goods and against all possible dispossessors or trespassers. By this point in its evolution, the law had already moved far past the diversity and specificity of notions and actions characterizing tribal law. The general applicability of *actiones in rem* reflected a general concern for the protection of legitimate property within the Roman "Great Society."

Nevertheless, Roman law never reached a conceptual phase in which property was defined as a right. The famous *jurisconsult* Gaius (Second Century A.D.), who wrote a systematic textbook about law and who inspired to a large extent the later *Corpus Iuris Civilis* of Justinian, outlined the following scheme, in which he tried to give a systematic survey of Roman law:

ius (law):

- concerning persons (*personae*)
- concerning goods (*res*)
- goods of divine law (*res divinae*)

Boudewijn Bouckaert, "What is Property?" in "Symposium: Intellectual Property," *Harvard Journal of Law & Public Policy* 13, no. 3 (Summer 1990), p. 775.

- goods of human law (res humanae)
- public goods (res publicae)
- private goods (res privatae)[22]

In this survey, the notion of "ius" refers to rules and actions, and not to rights. As a consequence, the approach of the Roman lawyers to legal reality remained confined to a world of actions and goods protected by these actions. They lacked a notion, by which the relationship between owner (dominus) and the owned goods could be expressed; a notion of ownership or property as a right.

C. Conceptualization: Legal Dogmatics

Modern legal science surpasses this casuistic phase by developing an all-encompassing framework of legal principles, rules, and concepts, aiming at a schematic structuring of the whole of legal reality. While legal science in the casuistic phase attempts to order the world of actions before the courts, the so-called dogmatic legal science extends its attention to the legal position of citizens toward each other and toward public authorities. Within this approach, the actions are considered as the practical outcome of a legal position, to which citizens are entitled even outside any context of legal contest. These legal positions become the object of scientific attention and are intellectually distinguished from the practical side of the legal world, that is, the actions by which these legal positions can be protected and enforced.

With regard to property, the evolution toward legal dogmatics implies that legal scientists are concerned by theoretical questions such as the legal relationship between man and goods in general, the possible ways of acquiring goods, the general distinctions of goods, and the different kinds of power man can exert over goods. It is within the context of such a research program that a notion of property as a right arises.

Historically, the legal dogmatic tradition on the European continent owes its origin to the study of Roman law in medieval universities. This phenomenon is rather exceptional in legal history. Many professors and students devoted their lives to the study of a legal system that was dead in practice! Outside the confines of the universities, a hodge-podge of legal orders was practiced, including customary, feudal, manorial, commercial, canonical, and royal legal orders.[23] The medieval Romanists apparently had no practical reason to study this historical curiosity. Nevertheless the study and the teaching of Roman law spread for reasons much deeper than the playing of intellectual games. In the first place, Roman law played a crucial role in the so-called Papal Revolution, which intended a dramatic reorganization of the church.[24] The use of Roman law as a base for the new canonical legal order stressed the ambitions of the pope as the universal leader of Christendom. Also kings and emperors did not hesitate to use the prestige of Roman law as an ideological tool for the strengthening of the nation-state.[25] Finally, Roman law served as a neutral legal framework to solve conflicts between the several legal orders or to fill the gaps left by these orders, using Roman law as *ratio scripta*.

In contrast to the Roman jurisconsult, whose position is much nearer to a barrister or solicitor than to a modern jurist, the medieval law professors were relatively free of practical worries. Their lives were devoted to reading, writing, and debating. It is not surprising that one of them had to fill the conceptual gap about property left by the Roman law. Bartolus (1313-1357), the famous commentator on Roman law, was the first to define property as a right to completely dispose of a material good provided that this was not prohibited by the law.[26]

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Nevertheless, Bartolus did not endorse a single notion of property. He distinguished two kinds of property, namely the "property" of the tenant (*dominium utile*) and the "property" of the owner (*dominium directum*). This double notion of property, which Bartolus probably borrowed from the earlier commentator Pillius, was derived from the distinction the Roman jurists made between the *actio directa*, the action to which the dominus was allowed, and the *actio utilis*, the action to which a person whose situation was comparable with that of the dominus was allowed. With the notion of *duplex dominium*, the teachers of Roman law were able to describe feudal relationships in Roman terms. The tenants were considered as holders of a *dominium utile*, while the lords were considered as holders of a *dominium directum*. By conceiving the position of the tenant as a holder of a real right, opposable to anybody, the medieval Romanists favored indirectly the legal emancipation of the tenants and the withering away of the feudal system.

The conceptual switch from a remedy to a right in the medieval Roman law tradition coincided with another evolution on the theological level.[27] During the Thirteenth Century, the Franciscans challenged the temporal power and the wealth of the church with the ideal of Christian poverty. They argued that a genuine Christian morality could not be reconciled with the accumulation of wealth. True Christians were only entitled to use nature as a creation of God, not to enjoy eternal and complete appropriation. This ideal of Christian poverty nevertheless contrasted uncomfortably with the fact that the Franciscan order had accumulated a dazzling fortune by administering many estates, churches, hospitals, and charity houses. In order to provide some theoretical relief for the "poor" Franciscans, Pope Nicholas III distinguished between *usus facti* and *dominium*. The Church was to be considered as the proprietor of the Franciscan goods, enjoying *dominium* over them, while the Franciscans themselves disposed only of a *usus facti*.

Pope John XXII (1316-1334), who was familiar with the teaching of Roman law, contested this distinction.[28] It was senseless, he argued, to consider the Franciscans as mere users of consumable goods. By eating bread and cheese, by burning wood, by drinking wine, they were in fact consuming the goods, and therefore behaving like proprietors, so they should be considered as such. He argued further that human beings had received from God--from the beginning, before the original sin--a permission to appropriate the goods he had created. In this way Pope John XXII directly challenged the opinion of the Franciscans, who argued that property was the result of human arrangements, established after the original sin. In the theory of Pope John XXII, property received the status of a divine law. Being an owner and acting like an owner did not contradict Christian morality. It was the logical outcome of God's creation and of His donation to mankind.

To save the Franciscans from an ideological disaster, the English friar William of Ockham replied to Pope John XXII by defining property as a competence (*facultas*) to claim a good.[29] By so doing, he tried to reconcile the practice of poverty with the theory. His Franciscan brothers were using their assets without intending to claim something from somebody. Yet, indirectly, Ockham strengthened the opinion that property had to be considered as an *ius*, that is, a power that was distinct from the good itself. Without intending to do so, Ockham prepared the way for the modern concept of property.

Although the roots of our modern notion of property have to be sought in these medieval debates, the notion itself acquired its definitive shape in the legal tradition of continental rationalism. Beginning in the Sixteenth Century, legal science came under the influence of the mathematical methodology (*more geometrico*). While the medieval teachers relied on commentaries on the authentic texts, argument of authority, and scholastic method of

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debate, the modern jurists became fascinated by the scientific model of mathematics, especially geometry. They believed it was possible to elaborate a complete system of rules and notions by further deductions from simple and evident axioms. The Romans feared definitions in law, but the modern jurists considered clear and all-encompassing definitions the most important tool of a rational jurisprudence.[30]

Although the Dutch jurist Hugo Grotius is often considered as the initiator of our modern notion of property, he retained the medieval distinction of duplex dominium. He still defined real rights such as tenancy, usufruct, use, and easement as dominium utile, as opposed to full ownership.[31] On the other hand, Grotius broke new ground by including respect for private property as one of the four axioms of natural law that a rational Prince had to endorse.[32]

The most direct precursors of the definition of property endorsed by the French Civil Code are those writers of the Sixteenth Century: the Spanish Jesuit Vazquez and the French jurists Francois Hotman and Hugues Donneau.[33] They define property as the right to keep a good, to use it, to benefit from its yields, to exclude anybody else from its use, to alienate it, and even to destroy it. This is not to say that these jurists propagated a liberal, individualist property system. They all believed that the power of the owner could be limited by other legal provisions. They tried instead to explain exactly what was meant when somebody was considered a proprietor. When somebody could be legitimately called a proprietor, it implied that he was entitled to do everything with a good that was not prohibited by a specific legal provision.

From this expansive notion, modern rationalist jurisprudence could proceed to a systematic subdivision of rights and goods. Because the proprietor is entitled to the most encompassing power, he is able to split off some partial powers over his property by giving others rights in the good of someone else (*Jura in re aliena*), such as usufruct, uses, easements, or tenancy. The persons entitled to these rights also enjoyed the general "opposability" of the property right, unlike the persons who were only entitled to a personal right (*ius in personam*). Unlike creditors, who are entitled to a personal right only, the holders of the different rights on a good ("real rights"), could claim their good from any dispossessor. This systematization was further elaborated by the jurists of the German rationalist school, such as Pufendorf, Thomasius, and Christian Wolff, and by the French jurists such as Domat and Pothier, whose works were the direct sources of the Code Civil.[34]

This systematic approach to individual civil rights still clashed considerably with the remnants of the feudal order under the Ancien Regime. In the first place, absolute monarchs referred to feudal law in order to claim the right to "eminent domain." This claimed right implied that the sovereign could expropriate lands without paying compensation because the citizens did not possess full property ownership of the land but only a use, granted by the sovereign.[35]

Hugo Grotius, who wrote his *De Jure Belli ac Pacis* as an exile in France and therefore had to be careful about his opinions, made a prudent attempt to refute the eminent domain theory. He distinguished between political sovereignty (*dominium civile, ius regendi imperium*) and private property (*dominium privatum*).[36] This distinction between political sovereignty and private property, which became later systematized by rationalist jurisprudence, is at the base of our modern subdivision of private law and public law. Property became an essential notion of the private law, regulating the civil society, while public law regulated the exercise of political power. This distinction became fully recognized only upon the French Revolution. During the Ancien Regime we can refer to many

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institutional arrangements in which a title on land was linked with a participation right in a political decisionmaking unit within smaller political units (for example, manors, villages, and cities). This linking of property and political rights, called "a vote in the estate," was abolished with the French Revolution.[37]

D. Incorporation of Intellectual Property Rights Within Legal Dogmatics

This historical outline of the concept of property raises several further questions which deserve ample attention but which are difficult to answer within the confines of this Article. Nevertheless, the outline reveals one remarkable characteristic in the evolution of continental legal doctrine: its rather "spontaneous" and international character. By spontaneous I mean that the evolution toward a relative consensus about the property concept was not organized from a single center. It was neither the product of a brilliant Lycurgean legislator or the outcome of the action of an organized social group. The growing consensus about the property concept evolved from a dialogue among learned jurists from different parts of the European continent.[38] This dialogue was an ongoing intellectual process lasting several centuries. The jurists of France, the Netherlands, Spain, Germany, and Italy consulted foreign texts, commented on them, and gradually refined their theoretical approach.

Although this spontaneous origin of the property concept does not provide a conclusive argument for its rightness, it reveals at least its intersubjective and intertemporal character. The least we can say is that the property theory of the continental legal tradition passed through a test of a multitude of critical insights of learned and experienced legal scholars. For this reason, it is legitimate to assign to such a gradually evolved theory a presumption of rightness and to charge its opponents with the burden of proof about the contrary. With regard to the debate on intellectual property, the question arises whether this presumption of rightness by tradition can be extended to this kind of property. Is it possible to allot intellectual property the same traditional weight as corporeal property goods? The history of the origin of the several kinds of intellectual property on the continent suggests a negative answer to this question. The origin of intellectual property rights has its historical roots in deliberate interventions by political authorities rather than in the spontaneously evolved continental legal tradition.

During the Ancien Regime, some legal protections of artists and inventors developed but were nevertheless considered exceptional. Each protection was labeled as a privilege, meaning literally a special law (*privata lex*), a measure conceived for a specific person. The city of Venice, for instance, conceded to Aldo Manuce the privilege of printing with italic letters, and as a reward for this invention, the privilege of a monopoly to print the works of Aristotle. These privileges were at the pleasure of the Prince and remained outside the conceptual framework of legal doctrine.[39]

The notion of artistic property (*propriete litteraire*) appeared in France during the Eighteenth Century within the context of the struggle of authors against the system of royal privileges. Such privileges were mostly granted by the king to publishing companies in Paris. Authors claimed the right to sell their manuscripts to editors of their choice or even to edit and print the documents themselves. They invoked the concept of property on their artistic production--their manuscripts. This property right implied the right to sell their product to whomever they wanted. These claims reflected the general aversion among Eighteenth Century intellectuals to the royal control on intellectual production. In fact, authors claimed nothing more than the individual freedom to choose their partners for contracts with regard to the editing and printing of their manuscripts. The influence of the authors' claims,

however, extended beyond their classical individual freedom. The authors also asked that the exclusivity for editing, printing, and selling, which was implied by the royal privileges, should be generalized to all publishing companies with which authors had made a contract. They did not consider this exclusivity as inherently wrong. They only challenged the right of the king to grant it at his pleasure. The acts of the king should not be considered as acts of will by which artistic property rights were created but merely as acts of confirmation by which already existing artistic property rights were noticed. The acts of the king could be compared with the deeds of notaries that were drafted at the occasion of a purchase of land.[40] During the French Revolution the kind of argument represented by the authors' claims became generally accepted. In 1793, a law concerning literary and artistic property was enacted by the Parliament. Under this law, the right of the author to act freely with his intellectual product was recognized. This freedom was linked with the generalization of the exclusivity for reproduction previously granted by the king to individual publishers. The legal protection of this exclusivity was granted to authors during their lifetimes and to their heirs for ten additional years.[41] It has to be remarked that use of the notion "property" in the mentioned debates during the Ancien Regime and in the revolutionary legislation was not the result of a gradual adaptation of the legal dogmatic tradition. Rather, it was due to the urge to find another coat stand that clearly differed from the Ancien Regime notion of privilege.

After the turbulence of the French Revolution and with the consolidation of the civil law tradition in the Napoleonic code, legal theorists attempted to integrate this new notion of artistic property into the classical conceptual framework of private law. Several authors within the legal dogmatic tradition rejected the possibility that the classical notion of property could be extended to the so-called artistic property. Renouard, a Nineteenth Century authority in this field, argued that the notion of property was inadequate for the legal protection of literary and artistic production. So-called artistic property, he argued, has neither the same base, the same object, the same rules, the same consequences, nor the same limits as ordinary property, and it was therefore impossible to qualify artistic property as a category of classical property.[42] It should be considered as a legal privilege, he argued, outside the scope of civil law doctrine. Nevertheless, he considered this legal privilege justified as a legitimate reward for a social service, that is, the creation of a work of beauty. A famous Swiss professor, Ernest Roguin, also criticized the idea of an artistic or industrial property. He incorporated the protection of the artist or the inventor into the classical civil law framework by calling this protection a universal obligation. Neither the artist nor the inventor acquired a property right by creation alone. Rather, the legislator merely establishes a negative obligation for all others to abstain from copying or imitating the work. By this obligation, authors, artists, inventors, or their cessionaries, could enjoy a legally protected monopoly. As a consequence, Roguin characterized his theory as "la theorie du monopole." [43]

It was only toward the end of the Nineteenth Century that some unanimity about the conceptual status of artistic and industrial property was reached. Edmond Picard, a Belgian jurist, reproached his colleagues for their attempts to contort artistic and industrial property so as to fit into the classical subdivision of rights, such as personality rights (self-ownership), real rights (property, usufruct, easements), and personal rights (contractual claims, claims for compensation).[44] He proposed a fourth category, intellectual rights. The object of such rights would be an intellectual creation such as an artistic concept, the plot of a novel, or a technological recipe. The recognition of such rights implied that one had to distinguish

between the material objects, on which or in which the intellectual creation was expressed, and the creation itself. The former was protected by property rights. For the latter, a new category of rights had to be distinguished. This theory remained, until now, the generally accepted conceptual framework among jurists in the French-speaking area.

In the German-speaking area of the continent, an analogous evolution can be recounted. Joseph Kohler, a professor in Berlin, developed his theory of "Immaterialguterrecht."^[45] Unlike Edward Picard, Professor Kohler assimilated the rights of authors, artists, and inventors with the classical category of real rights. The object of these rights on immaterial goods was not the intellectual creation itself but the good produced by this creation. Such a good became materialized in its purchase value when the intellectual creation was exploited on the market.

Notwithstanding this difference, the French and German theories coincided in their recognition that the rights of authors, artists, and inventors were rights opposable to all others. The creator of an intellectual production is entitled to claim from all others the obligation to refrain from copying or imitating without the creator's consent. In this respect, the difference between the theories takes on less importance. Both accept that such rights share with property rights their most notable characteristic, which is their opposability against the whole world (*erga omnes*). As is the case with unique and identifiable goods, the author can claim "restitution" from any unauthorized user of his creation by demanding cessation and claiming damages. In this sense, ideas, artistic constructions, processes, recipes, designs, and trademarks became the objects of legal reification.

II. PROPERTY, REAL RIGHTS, AND SCARCITY

A. Real Rights and Personal Rights

As shown by the historical outline of the concept of property in the continental legal tradition, property was considered the most fundamental of real rights (*droits reels, dingliche Rechte*). The continental legal doctrine traditionally makes a sharp distinction between these real rights and the so-called personal rights (*droits personnels, Forderungsrechte*). Within the category of real rights, property is considered as the most complete right. The holder of it is entitled to the right to use property, to enjoy the yields of it, to alienate it, and even to destroy it (*ius utendi, ius fruendi, ius abutendi*). Property implies the right to complete control of the good. All other real rights have to be qualified as partial alienations of this right to complete control, such as usufruct, easements, pledge, mortgage, and the right to build plants on land owned by third parties.

Nevertheless, this traditional distinction between property and other real rights did not remain safe from criticism within continental legal doctrine. At the end of the Nineteenth Century, some civil law authors, of whom Planiol was the most famous representative, developed the so-called personalist theory (*theorie personnaliste*), in which the distinction between real and personal rights was maintained, but conceived in an alternative way.^[46] According to this theory, real rights differ from personal rights because they establish a different kind of interpersonal obligation. Real rights imply a universal and passive obligation, that is, the obligation of everybody to refrain from acts that interfere with the owner's control of his good. Personal rights, on the other hand, imply a specific obligation of the debtor either to transfer a good under his legitimate control, to perform a specific action, or to refrain from a specific action.

This personalist theory is undoubtedly more in accordance with the economic approach of property rights as developed by the American school of property rights. Pejovich for instance defines property rights as follows:

[P]roperty rights are defined not as relations between men and things but, rather as the behavioural relations among men that arise from the existence of things and pertain to their use. The prevailing system of property rights assignments in the community is, in effect, the set of economic and social relations defining the position of interacting individuals with respect to the utili[z]ation of scarce resources.[47]

This approach can lead to a broad use of the notion of property rights, which differs substantially from the classical notion as developed by continental legal dogmatics. In effect, all kinds of entitlements which are recognized by the law and are enforceable by the courts, can be qualified as property rights. From this point of view, property fights could include not only real rights, but also the personal rights of creditors to performances of debtors, the familial rights of parents who are owed some duty by their children and vice versa, the fiscal rights of the state towards its citizens, and even the administrative powers of civil servants over assets of the public domain that pertain to the use of scarce resources.

By accepting this conceptual explosion of the notion of property rights, some debates, such as the aforementioned controversy about the legal nature of intellectual rights, are reduced to a matter of degree. Conceiving intellectual rights as real rights would then merely consist of questions about the obligations of third parties. When one conceives of intellectual rights as mere personal rights, the rights imply only obligations from specific debtors that result from contractual arrangements (for example, the editors and the purchasers of books, works of arts, and software programs). By conceiving of them as real rights we extend intellectual obligations to everyone, even those who are not in contractual privity with the author. In both cases, intellectual rights have to be qualified as property rights. Only the extension of the obligations will be different.

The question now arises whether this whole discussion about the definition of property rights is only a matter of terminological convention, or whether it has some deeper relevance with regard to the economic and ethical foundation of property rights. In my opinion, the latter is the case. To argue this, I will first revive the old distinction of real and personal rights, and second I will show that this distinction has some economic and ethical relevance because the same kind of arguments that are applicable to real rights are not apposite to personal rights.

The distinction between universal obligations and specific obligations is by no means novel in the continental legal tradition. As mentioned earlier, Roman law made a distinction between actiones in rem and actiones in personam. The personalist theory is wrong to reduce the distinction between both categories of rights to a difference in the obligations they entail. Universality of obligation is linked with a fundamental characteristic of real rights that logically precedes the difference of the involved obligations. In contrast to personal rights, real rights protect physical control of the good by its owner. The existence of real rights requires two conditions: first, a factual condition, such as the physical control by somebody of something; second, a legal condition, such as the compatibility of this physical control with the given property rules within a legal system. This double aspect of real rights can be illustrated in several ways. It would be, for instance, a pointless debate about who should own the sun, the universe, and the ozone layer. It is clear that in these cases real physical control by an owner is inconceivable.

This double aspect of real rights also underlies the classical legal distinction between possession and property. Possession implies only the element of physical control, while property also requires the legal element. For practical reasons, the law has weakened the consequences of this distinction by recognizing some ways by which possession can evolve

into property. The universality of the obligation, entailed by a real right, is logically consistent with the factual element of this kind of right. Once the owner establishes this legal element concerning his relationship with the object, others have a duty of non-interference. By his act he has incorporated the good in his personal plan and made it a part of his personal history.

This type of possession does not occur with personal rights. The creditor does not exert a physical control on the debtor. He does not own the debtor or even the object of the obligation such as the money to be paid by the promisor or the performance to be executed by the debtor. The only thing a creditor actually "has" is a claim toward the debtor: an expectation that the courts and the executive authorities will be ready to enforce the performance. In the case of personal rights the existence of the correspondent obligation coincides completely with its legal protection. In the case of real rights, there is something, the fact of physical control, that pre-exists the legal protection.

This difference explains why the scope of real rights is not expandable in an infinite way. Its scope is limited by the objects on which we can exert physical control and by the possible degrees of alienation of full ownership. To the contrary, the scope of personal rights has no limits. Because personal rights pertain to arrangements regarding performances in interpersonal relationships, the content of these rights can vary without limit.

B. Property and Scarcity

The notion of scarcity serves at the same time as the most important explanation and justification of property rights arrangements. Scarcity is explicitly the rationale for modern "law and economics,"[48] and it is implicit in several older works of other legal philosophers and theorists.[49] It is argued that scarcity will involve a dimension beyond mere allocation when two or more persons consider one good as a means for the satisfaction of their wants and when the use they intend to make of it is incompatible. One cannot reduce this distributive scarcity to mere allocative scarcity because this would require the possibility of weighing utilities by a super-individual authority. Because distributive scarcity is unavoidable, only three outcomes are possible: (1) permanent conflict--the assignments of scarce means are the result of the use of violence, ruse, and tactical games;[50] (2) resignation--a resource becomes the object of competition, both parties withdraw, and such withdrawal means isolation and a massive drop in world population; (3) rules--assignments of power over scarce resources to individuals, groups, families, the government, and so forth. Not only is it difficult to imagine how one might provide reasonable arguments for the two first solutions, but these solutions also would imply tremendous costs to the working of society. As a consequence, distributive scarcity can be considered a probable explanation and a compelling justification for some arrangements of property rights in society.

The question arises whether this line of reasoning is applicable to the whole range of property rights, such as real rights and personal rights. To illuminate this question, one must examine another distinction: the difference between natural and artificial scarcity. Natural scarcity is that which follows from the relationship between man and nature. Scarcity is natural when it is possible to conceive of it before any human, institutional, contractual arrangement. Artificial scarcity, on the other hand, is the outcome of such arrangements. Artificial scarcity can hardly serve as a justification for the legal framework that causes that scarcity. Such an argument would be completely circular. On the contrary, artificial scarcity itself needs a justification.

By linking this distinction between natural and artificial scarcities with the aforementioned distinction between real and personal rights, one can say that real rights are related to natural

Boudewijn Bouckaert, "What is Property?" in "Symposium: Intellectual Property," *Harvard Journal of Law & Public Policy* 13, no. 3 (Summer 1990), p. 775.

scarcity, while personal rights are often arranged to create artificial scarcity. Full ownership, as the "mother-right" of all real rights, owes its origin to the pre-institutional distributive scarcity of corporeal goods. Incompatible uses of corporeal goods arise constantly, and rights that assign physical controls on these goods are necessary. The other real rights, such as usufruct, easements, and mortgage, leave the option for the full owner to vary the degree of his control with others.

Many personal rights, arranged in contracts, are intended to make goods and services artificially scarce. When, for instance, a labor contract between a corporation and an engineer includes a restrictive covenant regarding specialized technology that the latter learns on the job, his knowledge is made artificially scarce. When unionized workers agree among themselves not to sell their labor below a certain price, they create an artificial scarcity of labor.

C. Categories of Objects of Real Rights

This section will analyze those categories of entities that could be conceived as objects of real rights. As argued earlier, only naturally scarce entities over which physical control is possible are candidates for such categories.

1. Corporeal Goods

Continental lawyers still put a high emphasis on the distinction between movables and immovables (real estate or land). With regard to the question of physical control, this distinction has some relevance. The possibility of physical control of movable items is quite evident. Movables may be appropriated and are subject to conflicting uses. The meaning of physical control of land is more complicated. Ownership of land implies control of two different components. First it implies control of the soil as a physical object, similar to movables. One can till it, extract raw materials from it, and dig pits, wells, and mines in it. One can link the factual base of ownership of land with observable actions. As a result, it is possible to draw the limits of the right of ownership of the soil on the basis of these factual terms. Therefore, there is no need to rely on arbitrary limits determined by a legislator. Second, control of land also includes control of land surface. As a quantity, defined in mathematical measures, one can neither manipulate nor destroy it like movables and the soil. What physical control means as a condition for ownership of land-surface is a difficult question that has provoked ample discussion. The ownership of land-surface is related to the need for space by the user of the soil. One cannot use soil without having the right to exclude others from invading the land-surface on which the soil is located. In contrast, merely walking over land and placing placards declaring ownership can hardly be called real physical control. In this sense the famous homesteading formula, "first come, first served" is somewhat misleading. This approach also applies to externalities affecting uncleared and unappropriated areas. To emit noise, smoke, and stench upon the lands surrounding one's property can hardly be considered physical control of those properties. The emitter has not created an easement on the lands.[51]

2. Animals

In legal science, animals are equated with movables. The similarity is apparent with regard to domesticated animals. Humankind has gradually succeeded in adapting the instincts of these animals. We can nearly say domesticated animals are "created" by the person who raises them, who feeds them, and who arranges mating to improve their breeding. The factual basis of ownership refers to the whole process of domestication. With regard to wild animals, physical control can mean only capture and imprisonment. Ownership of non-captured wild animals is meaningless because of the lack of a factual basis for the ownership. Hunting

rights or shooting rights of feudal lords, for instance, cannot be equated with ownership rights. Such rights merely imply a monopoly to hunt in certain lands. They express a relationship between the lord who is entitled to prohibit other people from hunting on these lands and those prohibited from hunting. From the point of view of continental legal doctrine they should be qualified as personal rights, not real rights.

3. Slaves

In several legal systems, human beings were openly equated with movables as objects of ownership. The most notorious and elaborated example is the Roman law. Slaves, as a category of objects of ownership, differ from all mentioned categories in one respect: they share with the owner his most essential characteristic: rational self-consciousness. Master and slave share this characteristic that distinguishes humankind from all other living species. This factual equality has some important implications for the meaning of ownership in this case. The thoughts, opinions, and feelings remain in the natural ownership of the slave. The master is not able to control him like a domesticated animal because the slave understands him, can value him, see through his strategy, and even cheat him by lying and flattery. The factual base of ownership is limited to the use of physical violence on the body of the slave when he refuses to obey commands. One can even doubt whether the notions "ownership" and "property" are appropriate in the case of slavery. Slavery appears to be much more a case of personal rights, in which the master is entitled to determine unilaterally the personal obligations and sanctions of the slaves.

The unique aspects of ownership of corporeal goods also raises doubts about whether "voluntary slavery" is logically conceivable. Voluntary slavery occurs, it is argued, when the seller sells himself to the master for a price which is sometimes paid to a third party. The sale of oneself as a human being in its completeness would be possible if the seller inevitably "re-trained" his natural ownership of his rational self-consciousness. At the moment of the sale the seller might be willing to suppress entirely his own opinions and to follow unconditionally his master. But he cannot alienate to the master his ability to change this attitude and to harbor rebellious opinions, which may include the opinion and the decision to oppose the commands of the master. By this, the contract voluntary slavery cannot be considered as an alienation but only as an impossible promise about future opinions and decisions. Once this promise has been broken, the voluntary slavery turns into enforced slavery and loses any contractual legitimation.[52]

4. Ideas

As discussed above, ideas were conceived by legal science as a category of objects. This conception is reflected by the fact that we speak of intellectual rights as distinguished from, but analogous to, real rights, artistic, literary, industrial, and commercial "property," "owning" ideas, and "selling," and "buying" ideas. What, however, could be the meaning of having a property right in ideas? For an answer to this, it may be useful to discuss three distinct cases.

First, the idea is not expressed. The idea, conceived as a logical entity produced by a self-conscious mind, remains in the natural ownership of the author. He owns it and he cannot be dispossessed of it. For this case, property rights are redundant. As is the case with natural ownership of the self-conscious mind, the physical structure of human beings provides us with a natural exclusivity.

Second, the idea is expressed but not communicated. In this case, the idea is expressed in a system of symbols and signs, and is decodable by others on a material substratum (paper and ink, diskette, microfilm, canvas, or tape). This case differs from oral, face-to-face

communication in which expression and communication occur at the same time. Once expressed, the natural ownership of the idea by the author ceases. Others are then able to appropriate the idea by dispossessing the author of the material substratum. Ownership of the idea is tantamount to ownership of a movable. The property rules, protecting the ownership of movables, protect at the same time the exclusive control of the idea. Of course, the author of an expressed but not communicated idea cannot limit himself to maintaining his physical control on the material substratum. He must also conceal it. By this, the author of ideas faces higher costs, *ceteris paribus*, than does the owner of a material substratum, on which no ideas are expressed. The difference in cost, however, can hardly justify special treatment of producers of ideas. Such differences in cost are also the case for other goods. For instance, an owner of a vast farm probably faces higher costs in protecting his property than the owner of shares of the same value in dollars. This difference is not a sufficient reason to subsidize the farmer for his fencing and patrolling costs.

Third, the idea is expressed and communicated. Once communicated, others share the natural ownership of the author's ideas. In this respect the transfer of corporeal goods is strikingly different from the transfer of ideas. Transferors of corporeal goods give up complete or partial control of the good itself. The author, on the other hand, completely preserves his natural ownership of the communicated idea. He loses only his position as the unique natural owner, his monopoly of natural ownership.

This difference between corporeal goods and ideas implies that the rights assigned to authors by the laws pertaining to the protection of intellectual producers have to be different in nature from the classical real rights on corporeal goods. For reasons of natural distributive scarcity, these latter rights protect the exclusive physical control on a specific good. With regard to ideas, such a natural distributive scarcity can never occur because either the author is the unique natural owner by which others are not even aware of the existence of the idea, or others share with the author this natural ownership by which they are all able to use the idea at their convenience. In fact, intellectual property rights do not protect a factual and physical control on ideas but rather protect the monopoly of natural ownership of the author and the ones to whom he alienates this monopoly. Therefore intellectual property rights can hardly be qualified as real rights or as rights analogous to them.

If one has to qualify ideas within the continental framework of rights, they should be placed under the category of personal rights. The so-called intellectual property rights impose on third persons the obligation to refrain from the use of ideas, either in the absolute sense in the case of inalienable intellectual property rights, or in the relative sense in the case of alienable intellectual property rights.[53] These obligations do not have any relationship with a physical control over something, as is the case with real rights on corporeal goods. They are merely intended to create an artificial scarcity to the advantage of the author and of the persons to whom he alienates his monopoly. In this respect, the theory of intellectual monopoly of Ernest Roguin, is much more correct than the established theories of intellectual property.[54]

Continental legal doctrine relies upon several possible sources of personal rights and obligations: contract, tort, factual (such as quasi-contracts), and direct imposition by the law.[55] From an individualist point of view, which is undoubtedly underlying classical private law doctrine, the first two sources--contracts and tort--are considered the normal ones. The creation of personal rights and obligations by contract is considered an expression of individual liberty because the individual is entitled to bind himself for the future. The obligation to compensate for damage is seen as a direct consequence of corrective justice to

restore the balance between the tortfeasor and the victim. The last two sources--factual inference and direct imposition--are rather exceptional ones within the framework of continental legal doctrine. Obligations following from quasi-contracts are imposed more for reasons of natural justice than as the consequences of strict justice. It appears to be reasonable, for instance, to oblige the recipient of an undue payment to refund the received amount.[56]

The last source of personal rights and obligations is the direct imposition by the law. It is rather exogenous towards the inner logic of private law because in this case the government imposes rights and obligations on individuals without consent of the concerned parties. To what extent can the obligations, provided by the laws concerning intellectual property rights, be linked to the mentioned sources of personal rights and obligations? In the case of a communication of ideas that was caused by force or fraud, the author should be allowed, as a victim of a tort, to recover for his damages. This tort approach would imply that the author is entitled to sue not only for the restitution of the material substratum of the idea but also for damages he incurred for the breach of the secrecy of his idea (the *damnum emergens, lucrum cessans* rule).

In the case of voluntary transmission of the ideas, the obligation to refrain from the use of the idea or to use the ideas under certain conditions (for example, the payment of royalties) could be linked with contracts as a source of personal rights and obligations. In this case, it is important to analyze whether the act of communication can be interpreted as a contract and whether such obligations are provided or implied by it. There is of course no legal difficulty when the author and the editor include explicit clauses in their contract pertaining to the use of the ideas. According to the classical theory of contracts, it is not even necessary to include such obligations explicitly. Contractual conventions, which are common in society, are considered contextual material for contracts provided that they are not explicitly excluded by it.[57] Suppose that the obligation to respect the basic structure of a literary work is generally accepted as a standard obligation of contracts between authors and editors. A violation of this obligation should then be considered a breach of contract.

In the case of involuntary transmission of ideas and in the case of voluntary transmission without any explicit or implicit contractual background (such as visiting an art gallery where no warning with regard to copyrights is made), neither contract nor tort can be considered the source of the obligation to refrain from the use of ideas. To qualify involuntary transmission of ideas as facts analogous to quasi-contracts is hardly defensible. When somebody makes a mistaken money transfer, the possession of the amount by the recipient is without basis; it is reasonable to ask him to repay the amount. In the case of an involuntary transmission of ideas, the person who made the idea public did not make a mistake and the recipient did not receive any scarce resource. They were merely exposed to information without asking for it. Consequently, there is hardly any basis in natural justice to require from involuntary receivers of ideas a compensation when they happen to use the information. If this should be the case, one could question why such an obligation should be limited to the kind of information the current legislation happens to protect. The way people clothe themselves, the way they comb their hair, the way they paint their houses, and the way they seduce their partners are all kinds of information communicated involuntarily. When a reason of natural justice applies for novels or technological recipes, why not for other kinds of information? This logical extension to all kinds of information would result in a multiplication of obligations, actions, and trials.

The obligations of third parties that result from the laws with regard to the protection of intellectual property can, as a consequence, be qualified only as obligations that are directly imposed by the government. In this respect they are exogenous to the inner logic of private law. They belong to the realm of macro-economic measures by which the government pretends to stimulate particular activities to foster the general welfare. To create artificial scarcity with regard to the use of ideas that are involuntarily transmitted is tantamount to the imposition of taxation to finance subsidies for particular groups that are considered to be in the public interest. The only difference is that the users of the ideas compensate producers directly without the intermediation of the government.

If it is true that the so-called intellectual property rights have nothing to do with the classical notion of property, but rather have to be qualified as a kind of government intervention in the market place, it would be appropriate to treat them as such in our ethical and economic valuation. For instance, we can ask whether the government is entitled to provide additional revenue to some categories of citizens by limiting the classical property rights of the other citizens. In fact, this practice is representative of the so-called intellectual property rights. By putting restraints on the free use of information that is received by citizens outside any contractual framework, governments create an opportunity for intellectual producers to increase their revenue by allowing them to "sell" the use of this information to third parties. One can question whether overall welfare is really increased by taking from citizens a part of their liberty as defined by classical property rights to foster intellectual production.

III. PROPERTY AND ETHICS

A. Economic and Formal Requirements for the Ethics of Property

The previous section defined the scope of property rights and explained how they differ from personal rights and obligations. This section will outline the extent to which property is subject to ethical analysis. First, however, we need to discuss whether economic reasoning places some constraints on the ethical debate about property.

Economists tend to claim they are value-free scientists. Economics is explanatory, they argue, because it merely attempts to show causal connections between various classes of human choices. In this respect, economics cannot generate direct arguments either in favor of or against specific property arrangements. Such arguments would violate the classical "is-ought" distinction, which implies that normative conclusions cannot be inferred from explanatory statements. However, it does not follow that economic analyses are without any ethical significance. Economic science provides ethical theorists with useful information concerning the beings about whom they theorize. Economics has yielded several basic insights about property, and each ethical theory of property should address these insights if it is to avoid contradiction or lack of credibility. After all, ethical theories are designed neither for angels nor for beasts, but for human beings. They must, therefore, take into account the essential features of human nature.

Earlier in this Article, it was pointed out that the economic notion of scarcity implies that society needs some form of property arrangement. Besides this basic necessity, economics provides us with other constraints for an ethical theory of property. A viable ethical theory of property should be in accordance with the following three economic theories:

Joint use of a good can generate negative externalities and undesired depletion.[58] When several people are allowed to use the same good without any restriction, the efficient use of it becomes dependent on the moral choice and the time horizon of every user. When some users prefer pure self-interest and short-term yields, they induce others--who may be more concerned with the common wealth and long-term effects--to act in the same way. The

short-term users externalize the costs of their use to the detriment of long-term users. If the latter adhere to their long-term or altruistic commitment, they will forgo yield in both the short and long run. As a consequence, common ownership at the start requires a high moral and economic lucidity on the part of the participants, surely a tenuous foundation. It is therefore arguable that a paradigm which provides initial individual rights of use, which may lead by negotiations to a joint use, is for the purposes of ethics more realistic.

Knowledge about the capabilities and qualities of men and resources is unequally spread over society.[59] Humans and goods have unique and varying qualities. For this reason, it is impossible for a single government to possess all the knowledge needed for an optimal allocation of goods. Centralization of decisions impoverishes the knowledge base and prevents even the most beneficent government from securing the best possible life for each of its subjects. Centralized decisions, inspired by ethically "superior" intentions but based on a poor knowledge base, may be inferior to decentralized decisions that may proceed from "inferior" intentions but which are based on a richer knowledge base.

There is no guarantee that people who receive political power will act according to the purposes for which they were elected.[60] A political system that grants to some authorities the power to define property rights is ethically unrealistic. In such cases, the ethical quality of the property allocation simply reflects that of the sovereign, who may not adhere to the most desirable standards. One should not assume that people placed in such a position will be ethically superior to the average person. This economic theorem suggests that a viable ethical theory about property should aim for a "closed" set of rules. "Closed," means that if the relevant facts are known, then each dispute about the content of property rights and about the rights to title can be solved by the application of the rules or by logical inference from the rules.

Besides these economic theorems, which considerably constrain the range of ethical choices about property rules, other purely formal requirements circumscribe an ethical theory of property.[61]

The first and the most important of these requirements is compatibility. The property theory must allow for a non-conflicting exercise of all the rights and acquisition rules provided for by the theory. The rules of acquisition must be conceived in ways that never allow for more than one entitlement to the same object. When a property rights system fails to be compatible, no property system is possible for those objects of conflictive entitlements. A second requirement is determinacy. This requirement demands that it be possible to determine whether a person owns some particular good. An ethical theory that fails this requirement is self-contradictory. Ethical theories that require that their indeterminate criteria should be made determinate by another authority suffer from the same defect. In fact, they simply delegate the task of filling the ethical voids to an arbitrary power, without any guarantee that the missing ethical pieces chosen will be compatible with the ethical framework.

A third requirement is completeness. The ethical property theory must provide rules for each ownable object concerning the content of the right of its possible owners and rules concerning its acquisition. This requirement does not rule out the possibility that a theory might provide for different property rights with respect to different goods. It might, for example, provide that certain categories of ownable objects be neither used nor consumed at all. The requirement might be that virgin forests, for example, remain forever so. Nevertheless, the theory must indicate which person or authority is entitled to protect these goods against de facto appropriation by others. The theory is not made complete by

plausible arguments in favor of the virginal conservation of these goods but rather by sound arguments about the institutional guarantees for the conservation.

B. Ethical Theories of Individual Property

The ethical arguments in favor of individual property, as developed by the Western civil- or common-law tradition, are constructed in a variety of ways. This final section attempts to classify these arguments and to discover the extent to which they apply to intellectual property rights.

1. Consent

The consent theory justifies property as the result of an explicit and unanimous approval by the members of society. Consent in this category of justifications marks the transition from a propertyless state of nature to a propertied society. Consent theories are liberal, their proponents can argue, because they respect the will of each member of society.[62] To remain credible, this theory must account for the unwillingness of property-less individuals to enter a propertized society. At least some members of the society in the state of nature presumably believed that they could best profit by refusing to enter a proper-tied state. To avoid these problems, some defenders of the consent theory ascribe some ethical or intellectual qualities to the population of their state of nature, by which consent and even its determinate form become inevitable. James Buchanan, for instance, seems to assume that his state of nature population adheres to assumptions such as the distinction between private and public goods, the enormous benefits of exchange and allocation of private goods by the market, and the dangers of relying on the political market.[63]

By attributing such hypothetical qualities to the social contractants, the consent theorists in fact smuggle ethical presuppositions into their arguments. The participants of the consent procedure are not real people. They are people who should be discussed from a certain ethical or intellectual background and not from any other. The ethical question arises again, although in another form: Why should property be analyzed from an original position? Why should future possibilities be ignored? Why should economic truths about wealth maximization in society be important?

In this respect we have to credit Hobbes with realism in his consent theory because he assumes nearly no qualities with respect to his state-of-nature population. These people ruthlessly pursue what they perceive to be in their interest. Hobbes, however, also assumes that the people are keen enough to perceive at a certain point that unfettered freedom to promote self-interest is in the long term counterproductive. At this point of the "state of nature equilibrium," they do not decide to establish a property system. Hobbes remains consistent at this point by perceiving that his brutish population could never reach such an agreement. Instead of deciding about property rights, they decide to leave themselves to the mercy of a sovereign, to whom all further decisions about the "mine and thine" are delegated. By this voluntary subjection they improve remarkably their situation. Instead of being reciprocally the "slaves" of anybody, they become slaves of one authority who will protect them from his other slaves. Of course, Hobbes was well aware of the advantages of private property and free markets. For this reason he advised the sovereign to grant property rights to his "slaves." [64] Because the sovereign defines and assigns these rights they may not be wielded against the sovereign himself.[65] In this sense, Hobbes did not develop a genuine property theory. The rights of the "slaves" have no political meaning. Hobbes's consent theory is interesting because it shows that it is very improbable that a pure consent theory could yield a basis for property without smuggling ethical assumptions into it.

To what extent these consent theories provide some arguments for intellectual property rights is difficult to answer in a brief way. Much depends on the ethical or intellectual qualities that are assumed on behalf of the parties to the social contract. For example, it is difficult to argue for intellectual property rights within the Hobbesian theory of consent. People in the Hobbesian state of nature are, in their decision to join the social contract, mainly motivated by their urge for self-preservation. As a consequence, a wise Hobbesian sovereign should care in the first place for the definition and enforcement of rights concerning life and property.

The Rawlsian variant of the consent theory does not provide us with a firm basis for intellectual property rights.[66] People, covered by a "veil of ignorance," do not know anything about their future chances of being a beneficiary or a victim of such rights. But whether they favor intellectual property rights or not, they do not risk very much with regard to their position in the future. In this respect, the Rawlsian variant is inconclusive with regard to intellectual property rights.

2. Convention

Another group of property theories rely on the notion of convention. Notable examples are the approaches of Hume and Hayek. According to them, rules emerge, are maintained, and are adapted because they benefit the whole of society. When a certain property arrangement stimulates wealth accumulation, groups that adopt this arrangement flourish, grow, and attract others, which allows one to say that these property rules are based on tacit convention. Of course this conventionalist, evolutionist approach does not stop with pure evolutionary quietism. Both Hume and Hayek proceed to a retrogressive analysis in order to demonstrate why some property arrangements are more beneficial than other ones. In doing so, they reach normative conclusions about property systems. These systems must allow maximum decentralization in decisionmaking by allowing private, individual property rights. Moreover, the property rules must be stable and must be safe from political interventions. The current success of this approach seems to have much more to do with these normative conclusions than with a supposed firm conventional foundation for property rules. These conclusions are firmly rooted in a sound economic theory and are illustrated by an overwhelming amount of historical evidence. An ethical theory about property should take into account these conclusions in order to be realistic. Nevertheless, the conventional evolutionist approach remains clearly insufficient as a foundation for a property system. The requirements of justifiable property systems, such as decentralization, generality, and stability, still allow a broad range of alternative subsets of property rules. For example, whether we give people property rights in their ideas or not does not foreclose the possibility that the paradigm will not meet the requirements of justifiable property systems. The procedure by which the most efficient among all these subsets must be selected remains vague and indeterminate.

3. Utility Maximization

Under the utilitarian approach, property fights should be addressed with cost-benefit analyses in which the cost of a property rule (such as the enforcement costs, negotiation costs, costs incurred by the "victims" of the exclusivity, and transaction costs) should be compared with the benefits (such as increased productivity because of an improved incentive structure, increased efficiency because of internalization, better use of knowledge because of decentralization, and more optimal allocation because of exchange).

No economist will question the analytical insights of this approach. The question is whether this approach has made ethical argumentation redundant. More than in any other field of

Boudewijn Bouckaert, "What is Property?" in "Symposium: Intellectual Property," *Harvard Journal of Law & Public Policy* 13, no. 3 (Summer 1990), p. 775.

law, the normative economic approach about property faces questions about distributive justice. Decisions about establishing new categories of property rights inevitably make some people better off and others worse off. As a consequence, solutions based on cost-benefit analyses face several methodological problems, such as the problem of a consistent procedure to assign simultaneously several types of property rights, the problem of the commensurability of the involved costs and benefits, and the problem of interpersonal comparison of utilities.[67]

For instance, to decide for which period intellectual property rights should be assigned, the following aggregates are put in the balance: as benefits, the increased incentives for intellectual production caused by the expected benefits of the exclusivity; as costs, the loss of wealth caused by the exclusion of potential users. It seems difficult to imagine how the conductor of the property orchestra will be able to measure these aggregates. The economic analyses about the optimal duration of such rights do not sound convincing.[68]

Moreover this method raises hard questions about distributive justice, questions to which the cost-benefit method does not provide answers. So, for instance, nothing guarantees that the class of individuals that pays the costs by enduring the exclusivity is congruent with the class that will receive the benefits of the increased intellectual production. When the utility maximization approach is not able to solve these methodological problems, it relapses into a kind of Hobbesian solution, by which the decision about property rights is delegated to a utilitarian Leviathan.

[4. Self-Ownership and the Good Life](#)

Within the range of ethical theories in favor of individual property, that of John Locke is undoubtedly the least utilitarian and most directly linked with the ethical notion of self-ownership. The link between self-ownership and property on corporeal goods is made by the act of appropriation of a *res nullius*. [69] In the Lockean approach, this appropriation is considered to be an extension of the individual self. By mixing an unowned but ownable good with his labor, the individual incorporates it into his own moral project.

This Lockean argument for private property has some roots in the classical legal tradition because it puts a high emphasis on the ethical meaning of real physical control of a good. For clarification of the meaning of the notion of appropriation, the Lockean theory relies upon classical legal notions such as occupation and possession. Because of these notions, the Lockean rule is relatively closed. It is not necessary to rely on arbitrary decisions from some legislative authority to determine what should be considered as a genuine act of appropriation. If appropriation has a non-arbitrary meaning, it seems to be ethically plausible to assign the property right to the first appropriator. Second, third, and following appropriations are then either violent dispossessions or authoritative dispossessions. The latter type occurs when kings, lords, or governments claim to have rights of "eminent domain" and exercise them on lands that are already settled by individuals. But the most fundamental objection that can be made against the Lockean theory concerns the theory of self-ownership. By casting doubts upon the individual's full ownership of himself, including his own labor, the ownership of the goods he mixed with his labor is also called into question.

Locke's defense of self-ownership ultimately rests on a religious base. Contrary to Filmer, who argued that God had established a hierarchical relationship among men, Locke assumed the polar position by defending the view that God had created men as equal beings. A lack of respect of someone's self-ownership rights equalled a lack of respect of the equality imposed by God on the creation.[70]

The question arises whether a secular basis for self-ownership is possible. To rely on religion may convince people with the same faith of Locke (Christianity), but it may not appeal to others. To render the Lockean theory of property complete, this Article will conclude by giving some general ideas that a secular and moral argument for self-ownership must take into account.

A moral argument for self-ownership must be linked with the possibility of moral perfection. To defend self-ownership on moral grounds we must accept that different aims, purposes, and life projects can differ with regard to their moral quality. In other words, the moral defense of self-ownership requires a notion of the "good life," of the "eudaimonia." On the other hand, when all possible life projects are supposed to have the same moral quality, moral progress is not enhanced by the addition of self-ownership. When the life project chosen by A is per se as good or as bad as the life project of B, nothing is morally lost by the enslavement of B by A.

A moral argument for self-ownership requires a relative notion of the "good life." The notion of the "good life" is often related with absolute moral rules. If this were the case, there would be no moral argument for self-ownership. An absolute notion of the "good life," implying moral rules valid for all possible life projects, would require a Platonic political system in which a moral superman (the philosopher-king) imposes the absolute moral rules on his subjects.[71] As owned subjects of the moral state, the individuals would then participate in the morality of the whole. Nevertheless, it must be possible to develop a notion of good life in relative terms without sinking into moral nominalism.

The morality of self-knowledge. Both moral absolutism and moral nominalism can be avoided by relying on the Socratic precept of self-knowledge (gnoti seauton). Following Socratic morality, the search for the "good life" requires first of all that we should live in accordance with ourselves and therefore that we should constantly try to know ourselves. Only by learning about our own capabilities, talents, and sensibilities are we able to imagine what happiness could mean for ourselves. Because we may suppose that each human being is unique, it is probable that the particular contents of the eudaimonic projects of each may differ. In this sense the rules following from the precept of the good life are relative but not arbitrary. Individuals may neglect to strive for self-knowledge thereby engaging in a life of moral waste.

Self-knowledge requires self-ownership. In order to know myself and to find out what could be the precepts of a good life for myself, I need at least the basic liberty to act freely in order to experiment with different possible life projects. We do not know ourselves at birth. We cannot know ourselves only by thinking. For self-knowledge, we need acting and experimentation with the outside world. Slavery precludes this possibility of such self-knowledge. Restrictions on our individual liberty diminish this possibility. The master cannot know the slave better than the slave knows himself. He is only able to observe and control him externally. We may conclude from this that a denial of self-ownership prevents the possibility of aiming for a good life. Such a denial is, as a consequence, morally indefensible.

[a] This Article results from the adaptation of a discussion paper that was presented at the Liberty Fund Colloquium on Intellectual Property Rights on August 24-27, 1980, in Aix-en-Provence, France. The author would like to express his gratitude to the organizers of the colloquium and to the participants, whose remarks allowed the author to improve the quality of this Article considerably. Special thanks also to Mr. Tom Palmer, who suggested numerous corrections regarding use of language. Any remaining errors are entirely the responsibility of the author.

1. See *infra* note 23.
2. This notion is close to what Roscoe Pound defines as the analytical approach to law. "This method," according to Professor Pound, "consists in examination of the structure, subject matter, and precepts of a legal system in order to reach by analysis the principles, theories and conceptions which it logically presupposes, and to organize the authoritative materials of judicial and administrative determination on this logical basis." R. POUND, *JURISPRUDENCE* 17 (1959).
3. See, e.g., J. HANSENNE, *LA SERVITUDE COLLECTIVE* (1969).
4. For this reason, E.B. Pasukanis, the famous Marxist legal theorist, considered the whole Western legal tradition as a legacy of hidden bourgeois class interest. In his opinion, not only the rules and principles developed by this tradition, but also the concepts such as rights, liability, and contract reflected bourgeois thinking. Because law defines social relationships in terms of acting subjects such as the individual, the group, and the state, it always reflects the idea of social isolation instead of social cooperation. For this reason, Pasukanis has argued that legal thinking as such should be banned from a socialist society and replaced by unilateral economic regulations of the socialist state. E. PASUKANIS, *LA THEORIE GENERALE DU DROIT ET LE MARXISME* (1970).
5. More specifically, this Article will attempt to explore the different political and ethical arguments regarding property in general and determine to what extent they generate a case for intellectual property in particular. See *infra* part II.
6. A similar scheme of evolution is suggested by the jurists of the German Historical School when they distinguish between "Volksrecht," by which they mean customary law, and "Gelehrtes Recht" by which they mean a systematic body of rules and concepts developed by a professional class of judges, lawyers, and teachers. See, e.g., I G. PUCHTA, *DAS GEWOHNHEITSRECHT* 78-79, 143-48 (1828).
7. On the relationship between myths, religion, magic, and law in tribal societies, see E. HOEBEL, *THE LAW OF PRIMITIVE MAN: A STUDY IN COMPARATIVE LEGAL DYNAMICS* 257-74 (1954).
8. See, e.g., Ault & Rutman, *The Development of Individual Rights to Property in Tribal Africa*, 22 *J.L. & ECON.* 162 (1979). Hoebel also mentions cases of deliberate changes in tribal law. See E. HOEBEL, *supra* note 7, at 278.
9. See 2 P. VINOGRADOFF, *OUTLINES OF HISTORICAL JURISPRUDENCE* 197-229 (1920) (describing the property law of the Greek city states and pointing to the lack of a single property notion for the relative and interpersonal character of property actions).
10. In ancient Roman law, the property of the house (*domus*, from which *dominium* derives) implied the obligation to worship the gods of the house and the family (*lares familiares*, *penates*). See Dirks, *The Roman Concept of Dominion and the Idea of Absolute Ownership*, in *ACTA JURIDICA* 1 (1986).
11. See P. VINOGRADOFF, *supra* note 9, at 321-43 (citing numerous examples, including Welsh customary law, about which we have detailed records, which is very illustrative of the communal character of land ownership and land distribution).
12. On a more general level, we may certainly link this absence of property rights, opposable to the group or the tribe, with the inherent "socialist" character of tribal societies. See generally 3 F. HAYEK, *LAW, LEGISLATION AND LIBERTY: A NEW STATEMENT OF THE LIBERAL PRINCIPLES OF JUSTICE AND*

- POLITICAL ECONOMY (1979); F. HAYEK, FATAL CONCERT: THE ERRORS OF SOCIALISM (1989) [hereinafter F. HAYEK, SOCIALISM].
13. See H. MAINE, ANCIENT LAW 1-20 (London ed. 1901); A. DIAMOND, THE EVOLUTION OF LAW AND ORDER (1950); Diamond, The Rule of Law Versus the Order of Custom, in THE RULE OF LAW 115-44 (Wolff ed. 1971).
 14. See F. HAYEK, SOCIALISM, *Supra* note 12.
 15. The original notion of "dominium" was derived from "domus," the house of the paterfamilias. Because children and slaves were linked to the agricultural exploitation unit of a domus, we may suppose dominium referred more to the relationship between master and slave. See M. KASER, EIGENTUM UND BESITZ IM ALTEREN ROMISCHEN RECHT 310 (1943).
 16. For instance, in the Corpus Iuris Civilis the notion dominium is used for usufruct. See CORPUS IURIS CIVILIS section 7.6.3 ("Qui usura fructum sibi ex causa fideicommissi desiit in usu habere tanto tempore, quanto, si legitime eius factus esset, amissurus eum fuerit, actionem ad restituendum eum habere non debet: est enim absurdum plus iuris habere eos, qui possessionem dumtaxet ususfructus, non etiam dominium adepti sint. "). The notion proprietas, for instance, is used for tenancy. See *id.* at section 11.3.9.1 ("Si in servo ego habeam usufructum, tu proprietatem si quidem a me sit deterior factus, poteris mecum experiri. ").
 17. See *id.* at section 6.1.1 ("Post actiones quae de universitate propositae sunt, subjicitur actio singularum rerum petitionis. Quae specialis in rem actio locum habet in omnibus rebus mobilibus, tum animalibus, quam his quae anima carent, et in his quae solo continentur. ").
 18. See *id.* at section 8.5.12 ("Egi ius illi non esse ligna in parietem meum immissa habere: an et de futuris non immittendis cavendum est? respondi: iudiciis officio contineri puto, ut de futuro quoque opere caveri debeat. ").
 19. See J. VAN OVEN, LEERBOEK VAN HET ROMEINS PRIVAATRECHT 69-81 (1948).
 20. Originally, the rei vindicatio was allowed only against the possessor non-owner. Later, during the classical era, juriconsults also accepted an action against the holder of the good, who kept the good on the basis of a contractual relationship with the possessor, that is, through leasing or deposit. See *id.* at 103.
 21. For a discussion of Roman law on these issues, see *id.* at 98-105; W.W. BUCKLAND, A MANUAL OF ROMAN PRIVATE LAW 111-17 (1981); R. LEAGE, ROMAN PRIVATE LAW 157-75 (1961).
 22. See THE INSTITUTE OF GAIUS 67-89 (F. de Zulucka ed. 1946).
 23. See H. BERMAN, LAW AND REVOLUTION--THE FORMATION OF THE WESTERN LEGAL TRADITION (1983).
 24. See *id.* at 204-05.
 25. Some jurists serving as advisers in the royal bureaucracy (the so-called "legists") liked to compare the position of the king with the role of Justinian, who was regarded as a legislative genius. By this they attempted to promote the image of the king as the sovereign legislator in temporal matters against the claims of the church and other quasi-independent political units. See E. LAMBERT, LA FONCTION DU DROIT CIVIL COMPARE 112 (1903).

26. "Quid ergo est dominium? Respondo: est ius in re corporali perfecte disponendi, nisi lege prohibeatur. Ius: hoc dico ad differentiam ipsius rei corporalia, quae est facti . . ." BARTOLUS, COMMENTARIA Tom. V (Venetiis 1596).
27. See M. VILLEY, SEIZE ESSAYS DE PHILOSOPHIE DU DROIT (1969); H. LEPAGE, POURQUOI LA PROPRIETE 50-55 (1985).
28. See H. LEPAGE, supra note 27.
29. See M. VILLEY, HISTOIRE DE LA PHILOSOPHIE DE DROIT 180 (1957).
30. See F. WIEACKER, PRIVATRECHTSGESCHICHTE DER NEUZEIT 249-347 (1967); VON STEPHANITZ, EXAKTE WISSENSCHAFTEN UND RECHT (1970).
31. See H. GROTIUS, INLEIDING TOT DE HOLLANDSE RECHTSGELEERDHEID 2.33.1, 2.38.5 (1631).
32. See H. GROTIUS, DE IURE BELLI AC PACIS TRES, Lib. I, Cap. I, X, 4 & 7 (1646).
33. See F. VAZQUEZ, CONTROVERSARIUM ILLUSTRUM, Lib. I, Cap. XVIII (1559); F. HOTMAN, COMMENTARIUS DE VERBIS JURIS (1569); H. DONEAU, COMMENTARIUS DE JURE CIVILI, Lib. 9, Cap. 8-12 (1595).
34. See S. PUFENDORF, DE JURE NATURAE ET GENTIUM, Lib. 4, Cap. 4, par. 14 (1759); H. THOMASII, DISSERTATIONUM, Lib. II, Diss. 61 (1773); C. WOLFF, IUS NATURAE METHODO SCIENTIFICA PERTRACTATA, PARS SECUNDA, par. 109 (1742); R. POTHIER, TRAITE DU DROIT DE DOMAINE DE PROPRIETE, Art. 1, IX, 103 (1771).
35. This theory of eminent domain was linked with the adagium "nulle terre sans seigneur." As the king considered himself the ultimate dominus of all the lands, he considered himself entitled to waste uncleared lands, as well as lands of a vassal who had broken his pledge. This theory, which clashed with a homestead theory of eminent domain, was finally buried with the approval of article 17 of the Declaration des Droits de l'Homme et du Citoyen in 1789, which restricted the possibility of expropriation and required a just and preceding compensation.
36. See H. GROTIUS, DE GROOT, DE JURE BELLI AC PACIS LIBRI TRES 1.3.8.6, 2.4.19.2, 2.14.7 (1625).
37. See N. ALGRA, ENRELE RECHTSHISTORISCHE ASPECTEN VAN DE GRONDEIGENDOM IN WESTERLAUWERS FRIESLAND (1966).
38. See B. LEONI, FREEDOM AND THE LAW (1972); I F. HAYEK, supra note 12.
39. See J. DE BORCHGRAVE, LES DROITS INTELLECTUELS--EVOLUTION HISTORIQUE DU DROIT D'AUTEUR 11-39 (1916).
40. See id. at 21.
41. See P. RECHT, LE DROIT D'AUTER, UNE NOUVELLE FORME DE PROPRIETE 39 (1969).
42. See E. RENOUARD, TRAITE DES DROITS D'AUTEUR (1835).
43. E. ROGUIN, LA REGLE DE DROIT-SYSTEME DES RAPPORTS DE DROIT PRIVE (1989).
44. See PICARD, Le Droit Pur, in COURS D'ENCYCLOPEDIE DU DROIT 119-29 (1899).
45. J. KOHLER, URHEBERRECHT AN SCHRIFTWEREN UND VERLAGSRECHT (1907).

46. Precursors of this so-called personalist theory are I. KANT, *METAPHYSIQUE DU DROIT* 137, 149 (Paris ed. 1971); J. DOMAT, *LES LOIS CIVILES* 12-13, 17 (1828). A French professor in civil law, M. Planiol adopted this theory in his teaching. M. PLANOIL & G. RIPERT, *TRAITÉ ÉLÉMENTAIRE DE DROIT CIVIL*. (1950). One of his students, H. Michas refined this theory in his thesis, *Le Droit réel considère comme une obligation passive universelle* (1910). In Germany this theory was adopted in B. WINDSCHEID, *LEHRBUCH DES PANDEKTENRECHTS* 90 (1891).
47. Pejovich, *Towards an Economic Theory of the Creation and Specification of Property Rights*, in *ECONOMICS OF LEGAL RELATIONSHIPS* 35-52 (H. Manne ed. 1975).
48. See, e.g., R. POSNER, *ECONOMIC ANALYSIS OF LAW* 29-77 (1986); PEJOVICH, *FUNDAMENTALS OF ECONOMICS* 1-45 (1984); R. COOTER & T. ULEN, *LAW AND ECONOMICS* 123209 (1988); Alessi, *The Economics of Property Rights: A Review of the Evidence*, in *2 RESEARCH IN LAW AND ECONOMICS* 1-47 (R. Zerbe ed. 1980).
49. See, e.g., S. PUFENDORF, *LE DROIT DE LA NATURE ET DES GENS* 186 (1734).
50. See E. MACKAAY, *L'ORDRE SPONTANÉ COMME FONDAMENT DU DROIT--UN SURVOL DES MODELES DE L'ÉMERGENCE DES RÈGLES DANS UNE SOCIÉTÉ CIVILE* 347 (1988); R. SUGDEN, *ECONOMICS OF RIGHTS, COOPERATION & WELFARE* 55-103 (1986).
51. *Contra* ROTHBARD, *Property Rights and Air Pollution*, 1 *CATO J.* 77 (1982).
52. See Barnett, *Contract Remedies and Inalienable Rights*, 4 *Soc. PHIL. & POL'Y* 179-202 (1987).
53. See Palmer, *Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects*, 13 *HARV. J.L. & PUB. POL'Y* 815, 849-53 (1990) (this issue) (discussing the distinction between alienable and inalienable intellectual property rights in continental law).
54. See *supra* note 43 and accompanying text.
55. See B. NICHOLAS, *FRENCH LAW OF CONTRACT* 28-55 (1982) (discussing the sources of obligations in French law).
56. See G. CHESHIRE & C. FIFOOT, *LAW OF CONTRACT* 698 (J. Starke & P. Higgins 4th Australian ed. 1981) (quoting Lord Mansfield's opinion in *Moses v. Macferlan*, 2 *Burr* 1005 (1760)).
57. *Accord* B. NICHOLAS, *supra* note 55, at 146 (discussing French contract law); G. CHESHIRE & C. FIFOOT, *supra* note 56, at 135.
58. This point is inspired by the so-called "tragedy of the commons" formulated in Hardin, *The Tragedy of the Commons*, 162 *SCI.* 1243, 1243-48 (1968).
59. See generally F. HAYER, *THE USE OF KNOWLEDGE IN SOCIETY* (1971); T. SOWELL, *KNOWLEDGE AND DECISIONS* (1980); G. O'DRISCOLL & M. RIZZO, *THE ECONOMICS OF TIME AND IGNORANCE* (1985).
60. This argument is explored extensively in the public-choices tradition. See D. MUELLER, *PUBLIC CHOICE II*, at 229-246 (1989).
61. This portion of the discussion draws heavily on J. GRUNEBAUM, *PRIVATE OWNERSHIP* (1987).

Boudewijn Bouckaert, "What is Property?" in "Symposium: Intellectual Property," *Harvard Journal of Law & Public Policy* 13, no. 3 (Summer 1990), p. 775.

62. See Barry, Unanimity, Agreement, and Liberalism, 12 POL. THEORY 579, 579-96 (1984).
63. See J. BUCHANAN, THE LIMITS OF LIBERTY (1975).
64. See T. HOBBS, LEVIATHAN 149 (Cambridge 1904).
65. See T. HOBBS, ELEMENTARIA PHILOSOPHIA DE CIVI 198 (1642).
66. J. RAWLS, A THEORY OF JUSTICE (1971).
67. See Rizzo, The Mirage of Efficiency, 8 HOFSTRA L. REV. 487 (1979-80).
68. See, e.g., Nordhaus, The Optimum Life of a Patent: Reply, 62 AM. ECON. REV. 428 (1972); Tandon, Optimal Patents With Compulsory Licensing, 90 J. POL. ECON. 470, 470-86 (1982).
69. See J. WALDRON, THE RIGHT TO PRIVATE PROPERTY 149-56 (1988) (discussing the non-conventionalist character of John Locke's theory of property).
70. See id. at 141-47 (discussing the theological foundation for Locke's theory of self-ownership); E. EISENACH, TWO WORLDS OF LIBERALISM 76-112 (1981).
71. See PLATO, THE REPUBLIC 111-18 (M. Cornford trans. 1966).

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