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Private Property and the Commons: The Case Study of Water Distribution in Persian Qanats

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Abstract: Despite the polysemic nature a unique and dominant model of “property” has spread globally. It finds in the natural law thought its political and moral justification and in the article 544 of the Napoleonic Code its technical translation. The simple rhetoric of proprietary individualism elaborated within the economic analysis of law become the institutional reference in the governance of global economy. But private property is only one model of resources distribution and has not always been the main one for a long time. Comparative legal method shows us that the term property does not have a unique meaning, but it reveals the existence of alternative resource management models such as collective actions that are careful for the protection of fundamental rights and can preserve natural resources for the benefit of future generation.

Keywords: private property; right to exclude; commons; comparative legal method

1 Property: A Unique Model for a Variety of Meanings

In today’s world we are experiencing a sort of chiasm: while the word “property” has various meanings, a simple dominant model of property has spread globally, largely driven by economic reasons. This has led scholars to question the ambiguous use of the word property and why its institutional structure is so durable.¹

What surprises, is the fact that contemporary social complexity can be governed by a single, powerful legal institution rooted in a very simple property framework, represented by a “sole and despotic dominion which one man claims and exercises

1 Gambaro, A. (2011), *Property Rights in Comparative Perspective: Why Property is So Ancient and Durable*. *Tulane European and Civil Law Forum*, 26, 205.

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over external things of the world, in total exclusion of the right of any other individual in the universe". I just quoted Sir William Blackstone when he describes the law of property in his *Commentaries of the Law of England*.² However, after few lines he confesses that "this proprietary form no subject in England has".³

Blackstone's words are a symptom of the ambiguity surrounding the contemporary notion of property.

In a comparative legal perspective, the word property is highly polysemic: it is characterized by such numerous and complex meanings as to make a unitary conceptual synthesis completely impossible. Indeed, there is no notion of property capable of enclosing the common core to the way in which different social contexts organize their models of use and distribution of resources.

The great wealth of proprietary models present in the different legal traditions are the result of a cultural creation, that is, the result of ways of thinking and organizing the distribution of resources, with which each social organization has endowed itself. A result that is driven by the relationship between persons in connection with the thing surrounding them.

In fact, the utilities that are stemming from resources, especially those deriving from the use of land, can be allocated among the subjects belonging to the social group in an enormous variety of ways, and each of these ways has its own denomination. However, this does not alter the fact that despite the thousands of ways in which resources can be allocated, the number of legal frameworks in which to place them is not such a large number.

Even though modern legal systems depart from each other on their framing property, the debate around the forms of resource allocation has led to the affirmation of a framework that rests on a simplified monolithic structure identified by the sovereignty of an individual over external things, whose essential characteristic is the right to exclude all others, without obligations to anyone.⁴

Its theoretical foundation is grounded in the natural law conception of property⁵ and is described as an evolution of the primitive common property.⁶ This simplification found technical translation in the Napoleonic Code and has been refined by the idea of property as a paradigm of subjective rights elaborated within the German Pandettistic in '800. The global diffusion took place thanks to Law and Economic

² See *Blackstone's Commentaries, Abridged by W. C. Sprague* (9th Ed.), Chicago, 1915, 105.

³ *Ibid.*, at 137.

⁴ Merrill, T.W. (1998), *Property and the Right to Exclude*, *Neb. L. Rev.*, 77: 730–755.

⁵ Stern, J. (2018). *What Is the Right to Exclude and Why Does It Matter?* in J. Penner & M. Otsuka (Eds.), *Property Theory: Legal and Political Perspectives* (pp. 38–68). Cambridge: Cambridge Univ. Press.

⁶ See the essays in Munzer, S.R. (ed.) (2001), *New Essays in the Legal and Political Theory of Property*, Cambridge Univ. Press.

literature that depicts its evolution as a darwinian process responding to the needs of the market.⁷

Relying on the moral justification of the naturalistic philosophy is rather reductive as well as not historically founded. Recent studies in archaeology, anthropology and human genetic have revealed that the legal framework around which the different proprietary solutions have been systematized did not evolve from a communitarian form to the emergence of an individual exclusive right. At the early stage property rights were fragmented and divided among a plurality of actors within the community. Multiple individuals or groups had certain rights and responsibilities related to various resources, land, or assets and the individual power to exclude others from using or accessing these resources was allocated to prevent conflicts, promote cooperation, resource sharing, and the sustainability of the community's cohesion and way of life.⁸ This approach to property was indeed influenced by several factors, with a significant emphasis on environmental factors exposition of human to new goods and technological progress rather than purely economic considerations related to individual utility maximization⁹

2 The Modern Conception of Private Property

In the western legal tradition, private property evokes a specific paradigm developed in continental Europe between the 18th and 19th centuries, which considers property as a private right of exclusion.¹⁰

The paradigm of property finds its roots in the Napoleonic code of 1804 which constituted a founding moment in the modern conception of property.¹¹ Revolutionary thought is consumed around the liberation of the land from a multitude of personal servitudes (hunting rights or labor services) or feudal privileges (seigneurial fees) that the nobility and clergy had exercised for a long time. Denying

7 See for a clear description of this evolution Mattei, U. (1997) *Comparative Law and Economics*, Ann Arbor, pp. 27 ff.

8 LaFargue, P. (1975), *The Evolution of Property. From Savagery to Civilization*, Chicago: Charles H. Kerr.

9 Hodder, I., (2012). *Entangled: An Archaeology of the Relationships between Humans and Things*, Wiley-Blackwell, Malden (Ma), USA.

10 Garnsey, P. (2007) *Thinking about property: from antiquity to the age of revolution*. Mode of access: Internet via World Wide Web. Cambridge: Cambridge University Press.

11 The celebrated formula of article 544 French civil Code is the most well-known example of such a paradigm «*La propriété est le droit de jouir et disposer des choses de la manière la plus absolue, pourvu qu'on n'en fasse pas un usage prohibé par les lois ou par les règlements*»

any burden or constraint on the land certainly had an ideological foundation, but it also brought strong economic and social reasons.

The technical translation of this approach is developed on two simplifying assumptions: on the one hand, the recomparing of feudal rights into a single proprietary form is the signal of a reaction towards a proprietary model, the feudal one, which was considered anything but rational, due to the fragmentation of interests on the land.¹² The so-called “unitary theory” structures private property as a single shell of containment of all rights over the thing and brings a strong reduction of the number of property rights, which have been standardized into a limited list (*numerus clausus* theory).¹³ This approach makes the legal boundaries of property coincident with the physical boundaries of the object of the right.¹⁴

The second point of simplification is the one that anchors the govern of the entire process of transfer to a single moment linked to the will of the owner. At this moment the effects of the transfer of ownership are done, so that all the rights inherent to it are also transferred. In this way, property transfer was greatly simplified. The fact that a single legal act, together with the thing, was also able to transfer all the rights related to it with a single act of will of the owner had of course strong ideological motivation but certainly it was also functional to the needs of the market.

Once this task is completed, the property unity has been crystallized in reference to a simple paradigm, held in art. 544 of the Napoleon Code, which entails the exclusive relationship of a single person with a single thing at a time, making individual ownership the only form of property in the legal system, while other forms, especially collective or fragmented ones, practically disappeared.

As it always happens, the legal mentality is influenced by environmental as well as cultural factors. The property conception expressed by the Napoleonic code found in the natural law thought the political and moral justification of the powerful revolutionary programs. With Grotius, Hobbes and Locke,¹⁵ above all, an entirely naturalistic vision of private property inextricably linked to work and production took place. According to the philosopher, the human being, who has received his

¹² Parisi, F. (2002), *Entropy in Property*. *Am. Jou. of Comp. Law*, 50 (3): 595–632.

¹³ Merrill, T. W., H. E. Smith, (2000), *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*. *Yale L.J.* 110 (1).

¹⁴ This approach benefited from enormous success far beyond what the Code itself had, which incorporated the idea itself. The German Civil Code BGB goes so far as to state that only tangible things could be the object of ownership.

¹⁵ Kramer, M. H. (1997), *John Locke and the origins of private property: philosophical explorations of individualism, community, and equality*. New York, NY, USA: Cambridge University Press.

body as a gift from nature, modifies nature, transforming and producing things with his work: the reward for his efforts is represented by property.

This idea inaugurates a trend that will characterize constitutionalism from the end of the 18th century where property, recognized in terms of fundamental natural right, is developed as a corollary of individual freedom. On this path it was believed that to own a property over things represented the external manifestation of the right that an individual has on his body. Through this identification the institution of private property has been radically simplified: it detached itself from the material reality of things, escaping its complexity, to take refuge in the personal will of the individual.

The recognition of the status of fundamental right, leads property to isolate the boundaries of a physical object from any external interference and attaching on it the full decision-making power of the owner. As a zone of individual sovereignty, it was not only the most effective barrier against the power of the State but also the necessary precondition for any organized society.¹⁶

Nevertheless, the proprietary paradigm appeared imperfect and not concluded, due to residual contacts that the Code Napoleon still showed with the legal culture of the Ancient Regime. Residual fragmentation, such as servitudes, denoted the presence of some leftovers of the feudal system. This made the private property an institution not perfectly hermetic with respect to the dimension of restrictions.¹⁷

It has been German legal culture that completed the work. The Pandettistic school arrived, a century later, to systematically present the new paradigm of totally individualistic and absolute property. By extending the notion, already elaborated by the school of natural law, of an area in which the individual is sovereign, they make property the true paradigm of the so-called “absolute subjective right”. Free and unaltered property becomes a complete and rigorous legal model and the substance of an organizational structure of social life.

Private property becomes the symbol of the anthropology of an individualized subject, absolutely capable of self-determination in the full and unlimited exploitation of the resources.¹⁸ A small portion of the world in which the autonomous individual is separated from all others and can exercise his sovereign power over the resources he controls fully and unlimitedly. The law excludes from this zone of autonomy, except in truly exceptional circumstances, both the state and all others.

In the Common Law tradition, the naturalistic idea of property as a political statement was never shared on a technical basis: the English common law indeed,

¹⁶ Mattei, U. (2000), *Basic Principles of Property Law*. Westport: Greenwood Press, at 14.

¹⁷ Gordley, J. (1994), *Myths of the French Civil Code*. *The American Journal of Comparative Law*, 42(3): 459.

¹⁸ Grossi, P. (2006), *La proprietà e le proprietà nell'officina dello storico*, Napoli: Editoriale Scientifica.

did not experience a revolutionary break with the past legal order. Even today the structure of property is highly fragmented due to its feudal features. Thus, the underlying framework of relationships that distinguishes the law of real property in common law systems, deals with the sharing of powers and obligations between different owners¹⁹ and still recognize the possibility of protecting different legal interests on the same resource.²⁰

Despite this approach, the natural law idea of property, however, finds a fertile context of reception in the constitutional discourse at the American frontier, through which it becomes effective in common law.²¹ Particularly because of the diffusion of Blackstone's Commentaries, the theory of natural law had a great impact on American legal thought. It influenced the Declaration of Rights of many of the Constitutions adopted in the 13 colonies after the revolution.

Even if it can't find a place among the inalienable rights of the Declaration of Independence of 1776, in favor of the most egalitarian "research of happiness", in the US Constitution property became the main reference of the US political and social organization. The institutional structure of the US Constitution is based on private property,²² which is included in its Fifth Amendment next to life and liberty in the triad of fundamental rights of the American citizen.

Embedded in the process of constitutional adjudication private property assumed the role of being the shield of individual freedom, which was threatened by the redistribution programs of the State²³ till the point of becoming itself the main promoter of social welfare.²⁴

19 Hohfeld, W. N. (1917). *Fundamental Legal Conceptions as Applied in Judicial Reasoning*. *The Yale Law Journal*, 26(8), 710–770 at 716, explains it through the famous metaphor of the bundle of rights and duties theory.

20 Lawson F. H and B. Rudden. (2002), *The Law of Property* 3Rd rev. ed. Oxford: Oxford University Press.

21 Waldron J. (1990), *The Right to Private Property*. Oxford New York: Clarendon Press; Oxford University Press.

22 Ely JW Jr. (1992), *The Guardian of Every Other. Right: A Constitutional History of Property*. Rights. New York: Oxford Univ. Press. Oxford, 2007.

23 *Lochner v. New York*, 198 U.S. 45 (1905), in which the Supreme Court held that a statute that placed a maximum limit to working hours was in violation of the due process clause of the V and XIV Em of the US Constitution.

24 *Kelo v. City of New London*, 545 U.S. 469 (2005), was a decision in which the Supreme court of the United States held that the use of eminent domain to transfer land from one private owner to another private owner to further economic development does not violate the Taking Clause of the V Aem.

3 The Economic Thought and the Global Success of Property Rights

The rhetoric of proprietary individualism, as institutional framework for creating efficient economic and social order, found expansive force in the US legal context around the idea of *property rights* elaborated within the economic analysis of law, a tradition of thought, coinciding with the economist's takeover of US legal thought in the second half of the last century.

The contribution of law and economics to the study of property can be seen mainly as the development of a relatively simple framework in which a variety of legal institutions are working to find a common logic in the attempt to remedy the problem of social cost and to create incentive for individuals to negotiate an efficient resource allocation.

According to this school of thought property rights emerge to address the so-called "Tragedy of the Commons." This concept, associated with Garrett Hardin's 1968 essay, suggests that shared or common resources are at risk of overuse and depletion because individuals have an incentive to maximize their personal gain from the resource, regardless of the negative externalities of their behavior, thus leading to complete degradation of the resource.²⁵

Law and economics traditionally analyze the issues related to the tragedy of the commons within a theoretical framework of the Coase Theorem,²⁶ that postulates that well-defined property rights allow their renegotiation and achieve the efficient results regardless of the legal rules that govern their relationship. As an exclusive power to access and use of scarce resources, private property prevents individuals from consuming them without the owner's consent. Individuals are so willing to acquire a resource through a market transaction only if it is worth them more than to its present owner. Whenever bargaining succeeds, parties reach a Pareto efficient resource allocation, thus achieving welfare maximization.²⁷

Thorough Coase property rights have been elected as the most desirable institutional alternatives for the creation of an economic and social order, able of controlling by their own externalities and promoting economic growth.²⁸ Commons

25 Hardin, G. (1968). *The Tragedy Of The Commons*. *Ekistics*, 27(160), 168–170.

26 Coase, R. H. (1960). *The Problem of Social Cost*. *The Journal of Law & Economics*, 3, 1–44.

27 The literature on Coase's theorem is very extensive. The interpretation used here is that developed by Cooter, R. (1982). *The Cost of Coase*. *The Journal of Legal Studies*, 11(1), 1–33. In any case, an interesting reflection on what Coase meant and what has passed can be read in COASE R. (1988), *The Firm, the Market and the Law*, Chicago: Chicago University Press.

28 See Hart, Oliver. (1995). *Firms, Contracts, and Financial Structure*. New York: Oxford University Press, USA.

perceived as inefficient, did not fit within a theory based on the model of economic rational agents pursuing utility maximization and were rejected as a viable institutional alternative.

This conclusion assumes a spontaneous and natural emersion of property rights that economic analysis of law nourished by allowing new forms of exclusion²⁹ through the artificial creation of resource scarcity, in order to create the needed requirements of the market economy as the preferable and most efficient economic and social ordering.³⁰ The fences of the lands that characterized the enclosure in the XVIII e XIX centuries³¹ have been extended to various areas that have found in the simplified model of individual property rights their technological structure: air, water, genome, knowledge, culture, satellite orbit space, all have been subjected to this logic.

The relative simplicity of its basic assumption have determined the success of the property rights paradigm and the seeds of its diffusion.³² In comparative law it has been clearly explained that the success of an academic paradigm in the law and its universalistic trend is linked to its apparent easy adaptability to different contexts due to its relative independence from a given legal and textual context.³³ For this reason globalization of the economy proved to be the ideal domain for promoting the worldwide success of the economics of property rights theory. Its easy adaptation in context different from those of its production managed to overcome the differences that the legal systems have been developing in framing their property structures.

International commerce requires a common understanding of property rights to facilitate transactions and freely transferable property rights become the expression of the global legal order based on the winning ideology that shaped the social order that in the last three centuries dominated the Western legal culture.

Privatization and structural reform perpetrated by the institution of global governance,³⁴ such the World Bank, The IMF, and the Wto, rendered the property

29 Demsetz, H. (1967). Toward a Theory of Property Rights. *The American Economic Review*, 57(2), 347–359. But see Komesar, Neil K., (1997). *Imperfect Alternatives*, University of Chicago: University of Chicago Press.

30 Mattei U. (1997), *Comparative Law and Economics*, Ann Arbor, MI: Michigan University Press.

31 Described by Polanyi, K. (1944). *The Great Transformation: Economic and Political Origins of Our Time*. New York: Rinehart.

32 Kennedy D. (2003), *Two Globalizations of Law and Legal thought: 1850–1968*, Suffolk U. L. Rev. 36 (3): 631–679, at 648 ff.

33 Alan Watson, for example, provides evidence of the wide distribution of nutshells and other teaching manuals such as Gaius' *Institutiones* or Blackstone's *Commentaries*; see Watson A. (1994), 'The Importance of "Nutshells"', *Am. J. Comp. L.* 42(1), 1–23.

34 Ferrarese M.R. (2000), *Le istituzioni della globalizzazione*, il Mulino, Bologna, and also *Poteri nuovi*, il Mulino, Bologna 2022.

rights paradigm the only legal platform for the government of the global economy and society.³⁵

This has led to an extension of the property rights paradigm to several contexts outside the logic of the market transaction, by paying little attention to the nature of the resource or the specific features of any local social context. Paradigmatic examples of this approach can be traced to the case of pollution rights created Kyoto Protocol³⁶ or the privatization of water management systems going on in several countries in order to make more efficient water distribution service.³⁷

However, it was at the internet frontier that the simplified proprietary paradigm found ground for its experimentation and attracted into its domain a relevant number of new resources.³⁸ At a global level a constant process of privatization of knowledge products is being experienced using neoclassical institutional models. It brought a paradigmatic metamorphosis of the function of intellectual property which from a vehicle for the dissemination of knowledge was transformed into an instrument for appropriating the social value created by intellectual work.

The application of the proprietary paradigm to the world of ideas is ill-suited to govern the field of knowledge, which includes forms of expression that tend to be unlimited and progressively reproduce and whose value grows with sharing.³⁹ They are based on a collectively constructed heritage of the past, in front of which private property performs an expropriatory rather than a generative function.⁴⁰

Challenges to intellectual property rights have evolved in response to rapid technological progresses, continuously questioning the functionality of the paradigm

35 Rose, C. M. (1998). *Several futures of property: of cyberspace and folk tales, emission trades and ecosystems*. – Minn. Rev. 83, 129:182.

36 Chipman, John S., and Guoqiang Tian. (2012) *Detrimental Externalities, Pollution Rights, and the 'Coase Theorem'* *Economic Theory* 49, (2) 309:27.

37 Italian case law claims that there must be a property rights on water distribution service whenever a potential market profitability arises. See Council of State 5072/2006 e 5181/2008

38 It thus inaugurated what James Boyle called the Second Enclosure Movement. See Boyle J. (2003), *The Second Enclosure Movement and the Construction of the Public Domain*. *Law and Cont. Prob.* 66 (33).

39 Literature on this topic is huge, see for an example Boyle, J. (2008) *The Public Domain: Enclosing the Commons of the Mind*. Yale University Press, ; Hess C., E. Ostrom, (eds). (2007), *Understanding Knowledge as a Commons: From Theory to Practice*. The MIT Press., Lessig, L. (2004), *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*. London, Penguin Books.

40 As Isaac Newton argued using the metaphor of the dwarf scientist walking on the shoulders of forgotten giants This metaphor is encountered for the first time (c. 1159) in the *Metalogicon* (III, 4) of John of Salisbury, who attributes its authorship to his teacher Bernard of Chartres: “dicebat Bernardus Carnotensis nos esse quasi nanos gigantium humeris insidentes”; we can, That is, to see farther not because of the sharpness of our sight or the height of our body, but because we are carried up by the greatness of giants.

offered by the individual property.⁴¹ Just think of the issues generated by patenting genes and genetically modified organisms and the impact they have to the access to healthcare and scientific research,⁴² or big data collection and how much control individuals should have over their personal information;⁴³ or the questions about the ownership of algorithms, data, and the creative works generated by AI.⁴⁴

Rather than working to develop new legal categories capable to reflect the social complexity in a truly interdisciplinary effort, law and economics scholars have bought into their theory the abstract natural law model of property that lies on the imagine of an owner, legitimate, as an individual holder, by an absolute subjective right to rule over commodities from which the only derivable utility is their market value. The tendency to commodification is a prevailing pattern in today's legal culture and found in the model of *property rights* the vehicle of its diffusion. However, globally applied the economic logic to property law, means buying conservative biases against redistribution and the rejection of communitarian values. Such a risk materializes when the notion of property is extended far beyond the limits of an economic institution, into domains of human relations in which the economic logic poorly reflects the real-life complexity of human motivations and political platforms.⁴⁵

4 Different Forms for Different Situations

The contribution of law and economics to the study of property law can be seen mainly as the development of a relatively simple framework in which a variety of legal institutions are working to find a common logic in the attempt to remedy the problem of social cost and to create incentive for individuals to negotiate an efficient resource allocation. This framework, rendered property rights the technological

41 Godt, C., Van Overwalle, G., Guibault, L., & Beyleveld, D. (Eds.). (2022). *Boundaries of Information Property* Mattei U., M. Bussani, *The Common Core of European Private Law*, Intersentia.

42 Rao, R. (2007). "Genes and Spleens: Property, Contract, or Privacy Rights in the Human Body?", *Journal of Law, Medicine & Ethics*, 35(3), 371-382

43 Zuboff, S. (2019), *The Age of Surveillance Capitalism* London, England: Profile Books.

44 Samuelson, P. (1986). "Allocating Ownership Rights in Computer-Generated Works." *University of Pittsburgh Law Review*, 47, 1185.

45 Ugo Mattei U., A. Pradi. (2007), "Property Rights: Economic of" in Clark D. S. (ed). *Encyclopedia of Law & Society: American and Global Perspectives*, Thousand Oaks, CA: Sage Publications, 1198–1208.

backbone along which an impressive number of new situations were transformed by law into commodities easily exchangeable on the market.⁴⁶

From a simple tool for the allocation of resources private property has been transformed into an icon of individualism, functional to the creation of capital value, in a sort of selective process dictated by economic rationality.⁴⁷ The explanation of the advent of private property as a darwinian evolution thorough economic logic however is a misleading simplification. Justified by the moral and philosophical reasons purported by the natural law school, this approach is a poorly understanding of the evolution of human history.⁴⁸

Literature on the origins of property shows individuals organizing themselves in social groups to pursue the allocation of resources in different forms. These forms of “property” have not followed one to another in an alternative way, but they have coexisted within the same social organization, sometimes in a complementary way, often in a competitive way.⁴⁹ Private property is only one of these and has not always been the main model for a long time.

In quite recent decades, the archaeological records, anthropological studies and human genetic evidence show that at the dawn of human history *homo sapiens* lived as hunters and gatherers: individual appropriation, characterized by an absolute right to exclude, has played more than a marginal role. During periods of settlement, the exclusive appropriation of resources that the territory provided was indeed a mere corollary of space control by the human community, and it was tied more to the cohesion of the group and its survival needs, rather than to an “instinct” of individual satisfaction.⁵⁰

The entire community shared access to and responsibility for the territory and its resources. There was a collective right to exclude in order to ensure that the interest resources (hunted animals and harvested fruits) were not exploited by outsiders or competing groups, as well as collective was the appropriation and distribution of resources. Natural fruits and animals were gathered and hunted collectively and then collectively distributed according to established rules and

46 Reich, C. A. (1964). *The New Property*, *The Yale Law Journal*, 73(5), 733–787.

47 Demsetz, H. (1967) *Property Rights*, in Newman, P. (ed.), *The new Palgrave Dictionary of Economics and the Law*, London, McMillian.

48 Gambaro, A. (2012). *Property Rights in Comparative Perspective: Why Property is So Ancient and Durable*, cit., at 229.

49 Graeber, D., D. Wengrow, (2021). *The dawn of everything: a new history of humanity*. Dublin: Penguin/Allen Lane.

50 Sacco R., (2007), *Antropologia giuridica. Contributo a una macrostoria del diritto*, Bologna, Il Mulino.

norms.⁵¹ The primary concern was closely linked to the benefit of the group as a whole and its individual members in order to ensure that everyone had access to enough food, water, and other necessities for survival.⁵²

While individuals within the community had a role in obtaining resources, this individual appropriation falls only indirectly on the resources that the territory provided being limited to the immediate consumption needs for the daily survival of a single-family unit. But it did not extend to the territory itself or any part of it. The territory remained a communal space, as well all the other resources from which the exclusion of outsiders was not claimed.⁵³

The transition from nomadic, hunter-gatherer lifestyles to settled farming communities brought about a profound metamorphosis with regards to the forms of appropriation.⁵⁴ The introduction of agricultural practices leads to an increase of the sense of territoriality and to a more precise delimitation of the spaces. The blurred territorial boundaries become more defined and the weak and selective exclusion mechanisms of the previous era rigid and rigorous.⁵⁵ It is no longer the space that matter but the resources within it.⁵⁶

The material civilizational changes are given by the confront of humans with a series of “new goods” that share a common characteristic: they are not spontaneously produced or preserved by nature but need human action for their production and care.⁵⁷ Because of these characteristics the rights and obligations that the legal system designed have been shaped in the form of exclusive property. These exclusivity was recognized and guaranteed by, and for, the community, entailing both the right to use a resource and the obligation to take care of it for the benefit of all group members and for maintaining community cohesion.

51 Dowling, J. H. (1968) *Individual Ownership and the Sharing of Game in Hunting Societies*; *American Anthropologist* 70 (3), 502–7.

52 Ingold, T. (1987), *The appropriation of nature: essays on human ecology and social relations*. University of Iowa Press.

53 Kitanishi, K. (1998) “Food Sharing among the Aka Hunter-Gatherers in Northeastern Congo.” *Afr. Study Monographs Supplement* 25 (3), at 22–24 states that “land and its resources were communally owned procured food were owned individually in hunter-gatherer societies”, however, that “ownership” of food carried with it an obligation to share by way of obligatory gifts.

54 Earle, T. 2000. “Archaeology, Property, and Prehistory.” *Ann. Rev. Anthropology* 29, 39–60.

55 Bintliff, John. (2012). “Territoriality and Politics in the Prehistoric and Classical Aegean”, *Archeological Papers of the American Anthropological Association*. 22 (1), 28–38.

56 The transition to an entirely agricultural economy was not instantaneous but developed gradually over the millennia. See L.L. Cavalli-Sforza, Menozzi P. Piazza A., (1992) *The History and Geography of Human Genes*, Princeton University Press, at. 403ff, see also L.L Cavalli-Sforza *Geni, Popoli e Lingue*, Adelphi 1996 at 148 ff.

57 The Bible is full of examples: the garden, the vineyard, the storehouse, the sword, the boat, but also the canal, the temple, the city are all “new goods” unknown in previous millennia.

The power to exclude is a strict consequence of the needs of the agricultural cycle that require that during the cultivation period everyone was physically kept off the field, in the sense that it was physically forbidden to cross its boundary, in order to allow the farmer, to organize the land, plant the seeds and to harvest the fruits.

At the beginning this exclusive right was recognized only during the cultivation period and was linked to possession; the evolution towards intensive agricultural practices, then, required the availability of community members to recognize legal exclusion even in periods in which the land was not in the hands of those who cultivated it. This availability was thus recognized through the award of a title assigned to the owner by the whole community through ceremonies often surrounded by sacred rituals.⁵⁸ The violation of this exclusivity involved heavy sanction mainly related to the isolation from the group.

However property wasn't that absolute or individual exclusivity as we recognize it today: the history of agricultural property is indeed a history of a divided and not compact, plural and not individual property and it depends largely on how property is distributed alongside the organization of the community, reflecting their cultural, economic, and social inclinations.

Neolithic communities were organized along kinship lines where land and resources were distributed among extended clans, lineages, families and individuals. The property was fragmented along this chain where the different prerogatives are distributed to the different levels of the social organization. The exclusive right to enjoy the fruit was transferred with the consensus of the group, to the family unit, and within it, to individuals, in different degrees.

Alongside the power to exclude, however, there was a shared obligation to maintain the fundamental interests of community cohesion, that encompassed not only the preservation of the well-being of the community but also ensured the surrounding environment.⁵⁹ At the top of the chain the entire community, or a representative part of it, plays a crucial role in enforcing the social obligation that individual property brought with it, by maintaining control over the management and economic destination of the property.⁶⁰

As human groups grew larger and more complex, they faced challenges in organizing beyond simple kinship ties. Religious constraints, complex rituals, constructions of identities elaborated in an abstract way, are the foundations on which the first important agricultural societies, organize their proprietary

⁵⁸ See Burkert W., (1996), *Creation of the Sacred. Tracks of Biology in Early Religions*. Cambridge (Mass.), Harvard University Press, 1996.

⁵⁹ Dyson-Hudson, R., & Smith, E. A. (1978), *Human Territoriality: An Ecological Reassessment*, *American Anthropologist*, 80(1), 21–41

⁶⁰ The most evident expression of it lies in the prohibition of transferring the right to property to an outsider without the consent of the entire community see Sacco R. *Antropologia cit.*, at 270 ff.

relationships.⁶¹ This form of property's distribution can be found in the organization of every large community in which, at least theoretically, property is fragmented between a collective and an individual dimension in a complementary way, where the latter is recognized and limited by the needs and demands deriving from the former.

It is only at the dawn of modernity that the two spheres became two separate entities: on one side, the sovereignty of the state and, on the other, individual property. They have two different tasks to pursue: the first is a political power aimed at the public interest, the second at the interest of its holder.

5 Rediscovering the Commons

From an historical point of view property presents itself as a complex group of fragmented rights, where the different prerogatives and obligations were spread along a whole chain of social and political relations. At the end of this chain, individual property was only an aspect of this complex network, and it carried the fulfillment of public functions within. It is only with modernity that property has been recompact and ceased to incorporate public functions to become an instrument of the sole will of the individual owner.

This idea has been modeled around the naturalistic conception of private property which had a single object as a reference: agricultural land. Through a process of abstraction from its object this idea has been spread to any situation where a potential market exists.

However, this is a misleading simplification since in large communities, social and political organization could not be reduced solely to the proprietary structure of agricultural land. In framing property objects matter⁶² and are something ontological different from the individual who owns them. In this sense is the nature of the object that defines the utility that the owner can derive from it and not vice versa.

⁶¹ In the first important agricultural societies, such as in the Sumerian area and ancient Egypt during the 4th millennium BC, the land was often regarded as sacred. It was considered the property of the Temple or the Pharaoh, emphasizing the spiritual and communal significance of the territory, and from there fragments and spreads throughout the social chain, along which is then attributed the right to appropriate part of the fruits and to exercise the right to exclude in various forms. See Diamond, Jared M. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: Norton, 2005.

⁶² Hodder, Ian. (2012). *Entangled: An Archaeology of the Relationships between Humans and Things*. Oxford: Wiley-Blackwell.

The material object sets limits on what an owner can do with it. You can't get blood out of a turnip, nor climb stairs with a bicycle.⁶³

Jurists have jealously maintained a view of property as a legal concept to be kept separate from the material and political conditions of life to such an extent that few are those who today consider the unequal distribution of resources or environmental disaster as a matter that has to do with the legal nature of property.⁶⁴

A wide range of essential resources, including water, forests, natural ecosystems other than cultural knowledge does not fit in the individual property scheme. Resources that express common utility require the recognition of a collective nature of their access as an essential feature for their equitable distribution, in order to ensure that they are used and preserved for the benefit of the entire community as well as for future generations.⁶⁵

An intellectual effort is therefore needed to propose or rediscover institutional models of resource management alternative to that of private property. Models that have characterized a not too distant past and that the liberal revolution has expelled from the legal universe because they are not functional to market economy, but that perhaps are more suitable to govern those categories of goods that express utility of high social utility.⁶⁶

Property law is a topic of extensive legal pluralism, made by a wide range of legal formants which compete one to the other.⁶⁷ It results in an aggregate of formal and informal set of rules that recognize and permit the exercise of decision making by the individual or group on the use of resources. Next to legal rules we may find many customary rules rooted in local tradition that are at play in defining property law in a given geographical area.

When private property became the paradigmatic figure of systems of the Civil Code, everything that did not fit the paradigm slipped out of the legal world. Communal property for example, is supported only as a special regime (family or succession), for which, however, the Code provides mainly rules for its dissolution. Collective property, as well, is considered an exceptional form of property of which, however, the liquidation is requested.

63 Gambaro, A. (2012), *I beni*, Cicu A., F. Messineo; L. Mengoni, *Trattato di Diritto Civile e Commerciale*, Milano, Giuffrè.

64 See Mattei U., A. Quarta 2018, "The Turning Point in Private Law Ecology, Technology and the Commons" Edward Elgar Pub. Nothampton (Ma), USA.

65 Valguarnera, F. (2017). "Access to nature" Graziadei M., L. Smith (eds.), *Comparative Property Law: Global Perspective*. Cheltenham, UK: Edward Elgar Publishing.

66 Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*, Cambridge University Press.

67 Sacco, R. (1991). "Legal Formants: A Dynamic Approach to Comparative Law (Part I)", *American Journal of Comparative Law*, 39 (1), 1–34.

These proprietary relationships continue to live in a resilient way in the informal background of all legal systems, in situations in which legal scholars or professionals would find it difficult to conceptualize as property law.

The recovery of these collective forms of property is fundamental to create an institutional alternative ecologically focused for the govern of the commons.⁶⁸ They have the eminent characteristic of regulating the use of resources belonging to a group organized in participatory forms, to satisfy the basic needs of its members and at the same time preserving the benefits that derive from them permanently.

The enjoyment of the utilities generated by the resource is individual but bring with it the social obligation to preserve the use value of the resource, in the interests of the community with an eye towards future generations. Due to this reason collective properties are particularly suitable to guarantee the conservation of a given territory and to cure social relations in a sympathetic way.

In all legal systems we find experiences of collective management of resources. They took root in a customary bottom-up process within the community of reference through a system of social norms of a private nature. Their survival today depends on the level of legitimacy and protection that the legal system gives them.

In Europe, few have survived the liquidatory attempts perpetrated in the past two centuries. The collective property for example does not find space in the Italian Civil Code of 1942 compressed between the two recognized forms of individual property, both private and public one.

Present in the legal system only on a customary level, the collective property has been subject of a confinement by the legislator who intervened for the sole purpose of reducing his own scope.⁶⁹ Only a few years ago there was an official recognition, accompanied by a shy guarantee, of those collective properties that have been maintained in mainly mountainous and wooded spaces.⁷⁰

Much of the anthropological study has been looking to African tradition where examples of collective property are accompanied by a cultural element of a religious

68 Capra, F., U. Mattei, (2015), *"The Ecology of Law. Toward a Legal System in Tune with Nature and Community"*. Berett-Kohler Oakland (CA).

69 For decades, from the unification of Italy (1861), and also in the pre-unity states there were numerous provisions on the partial or total liquidation of collective domains. In other cases, however, these legal provisions aimed at a general reorganization of the common lands, limiting the extension of civic domains. Until 1927, however, the Kingdom of Italy had not yet formulated ad hoc legislation to manage the enormous extension of the collective territories. The Statue no. 1766/1927 for the reorganization of the civic domains of the Italian kingdom at it first article clarifies the most immediate and practical purposes of the legislation: [...] the assessment and general liquidation of collective property.

70 Law no. November 20, 2017, n. 168 "recognizes" and regulates collective domains, however called, and is a law of fundamental importance for the history, the protection and enhancement of the agro-silvo-stastoral heritage of the ancient communities.

character. The enjoyment of the usefulness of the land is entrusted to individuals, whose faculties remain subordinate and limited to respect for the sacred and the interests of the group. Today, a little space remains for traditional collective property experience, due to the spread of Western models of civilization inherited from the colonial era or transferred by the institutions of globalization in international projects of law and development⁷¹

Less indagate but of great interest is the evolution of the proprietary organization in the Islamic tradition where the regime of traditional collective property is complicated by a dense network of mediations between the substratum constituted by the shariatic tradition and the rules that are introduced to varying degrees by modern civil codes and regulations. In relation to proprietary assets, the latter have paid a great attention to traditional property.⁷² This means that the coherence of the system varies from country to country depending on the greater or lesser propensity of each one to move away from the shariatic system. The entire picture is complicated by the fact of the different interpretations that are given to Islamic sources by different schools.

In general, however, the system of traditional Islamic categories can be articulated according to the status of the single land. In fact, some land are susceptible to full private property (*aradi al mamluka*), others are reserved for the Muslim community, or to the State (*aradi al almiya*); still others are bound to the special *waqf* regime, founded on a religious concept, by which an individual gave up his property “for the love of God” in order to sustain and support the needs of the community at large. *Waqf* for a long time in the Islamic word served as a major instrument for delivering public goods and services in a decentralized manner.⁷³

The sacral bond that commonly characterized the variety of structures and forms present in traditional Islamic law certainly did not favor the circulation of resources, that was later introduced by codes and modern legislation inspired by Western models.

From this point of view, it is very interesting the history of Persian Qanats that represent a traditional pattern of collective water management system that have favored the creation of farming communities in arid regions of Iran.

Qanats are underground irrigation channels that have been used for centuries in arid and semi-arid regions to access groundwater and distribute it to agricultural fields and communities. As a supplier of fresh water Qanats provided the opportunity for people to live in areas where otherwise few would have managed to survive. The construction of qanats helped to create agricultural communities around a common good through a technological structure that is socially and ecologically sustainable.

71 Gluckman M. (1969), “Property Rights and Status in African Traditional Law”, in Gluckman M. (eds) “Ideas and Procedures in African Customary Law”, Oxford: OUP, 252–265.

72 Hallaq, Wael B. (2009) “An Introduction to Islamic Law”, Cambridge, Cambridge University Press.

73 Kuran, T. (2001). “The Provision of Public Goods under Islamic Law: Origins, Impact, and Limitations of the Waqf System”. *Law & Society Review*, 35(4), 841–898

Qanats are underground tunnel technology that bring infiltrated groundwater to the earth's surface using only gravitational force. This water supply system led to the development of interesting social patterns embodying a successful ecological and cultural adaptation that kept water flowing through desert settlements.⁷⁴ Informal set of rules has grown around the qanat to preserve its value and to regulate the access to water for community members.

Often qanats were incorporated into the waqf system and served a vital role in delivering public goods and services in a decentralized manner, addressing the diverse needs of local communities. By promoting social welfare, infrastructure development, education, and healthcare, qanat served to strengthen community cohesion.

Over time, many traditional management practices related to qanats have undergone adaptation and formalization, often involving government authorities. The reasons for these changes are multiple and can be attributed to changes in land use, urbanization, water scarcity and the modernization of governance and the economy. The delegation of the provision of public services to municipalities, influenced by Western-inspired economic transformation, reflects not only a response to practical challenges but also a political choice. Choosing centralized, government-controlled water management systems over decentralized, community-based management, has been considered more efficient and politically desirable because they supports economic development by providing consistent access to water to industries, businesses, and urban areas.

The transition from community-based management, as seen with qanats, to centralized systems has resulted in significant social effects including the potential loss of community cohesion, as well as local knowledge and experience in understanding the complexities of the qanat system and the ecology of the surrounding environment. Due to these challenges, it is important to consider how to preserve the positive aspects of qanat's community-level water management and not deplete the cultural and social significance of such an experience.

Studying the collective experiences of commons governance in an interdisciplinary way just to understand how they are working and what is the logic they share is important not only to measure resistance to the strength of global culture but also to find an alternative model to preserve natural resources also for the benefit of future generations.

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⁷⁴ English, P. W. (1968). "The Origin and Spread of Qanats in the Old World." *Proceedings of the American Philosophical Society*, 112(3), 170–181.