CHAPTER ONE:
THE GENIUS OF THE ROMAN LAW[52]

As a paradigmatic private-law system, Roman law is amenable to a state-of-the-art fusion with law and economics. Arguing for a return to Roman law may prove to be the best way to introduce law and economics into the civil law tradition.[53] Civil law scholars look at codified private law as a systematic whole. However, during much of the twentieth century, modern legal systems have undergone a process of 'decodification.'[54] The systematic nature of the legal system —a characteristic of civil law systems— has been lost.[55]

A recodification of private law along the lines of law and economics and Roman law is an opportunity to bring new economic coherence to civilian legal systems.[56] Codification projects in civilian quarters are more than an academic enterprise; they directly cut across the interface between law and life.

I. What Makes the Roman Law Admirable?

Law and economics helps us understand why Roman law is still worthy of admiration and emulation,[57] and illustrates what constitutes the genius of Ro-

[52] This Chapter is an extended version of a paper delivered at the XXVI Annual Conference of the European Association of Law and Economics held at Rome, Italy in September, 2009.

[53] See generally Juan Javier del Granado and Matthew C. Mirow, "The Future of the Economic Analysis of Law in Latin America: A Proposal for Model Codes," 83 *Chicago-Kent Law Review* 293 (2008).

[54] See generally Natalino Irti, *L'età della decodificazione* (1978).

[55] *Ibidem.*

[56] One of us brought out a newly-minted civil code from a law and economics perspective. This model code is a project ten years in the making, but several decades overdue in civilian quarters. See del Granado, *De iure ciuili in artem redigendo: Nuevo proyecto de recodificación del derecho privado para el siglo XXI* (2018).

[57] For a magisterial treatment of Roman law in English, see Reinhard Zimmermann,

man law.[58] This Chapter argues that one reason for the success of Rome was its highly efficient legal system and reliance on private law.[59]

Rome is the world's most successful civilization, bar none.[60] Nothing can hide the way Rome's success resonates throughout history. Rome's legacy remains ever present. We still use the Roman alphabet and the Roman calendar. Roman architecture and engineering are still part of modern life. Yet, Rome's greatness, we argue, is due as much to Roman law as it is to Roman aqueducts or Roman roads. Roman private law is admirable because it implemented information and incentive mechanisms, which allowed people to decentralize the management of resources.[61] An enormous and evolving body of private law at Rome made possible a decentralized social order and laid the foundations for a market economy without mediation by public law.

Most social order in human life is based on various forms of hierarchy. People in a hierarchical social order do their duty according to their place in a 'chain of command'[62] with mediation by public law. Societies characterized by hierarchical distinctions of class or caste implement centralized, command and control mechanisms to coordinate collective action between people. Heterarchy exemplifies an altogether different form of social organization. Heterarchy refers to an 'other order' which spontaneously emerges

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The Law of Obligations: Roman Foundations of the Civilian Tradition (1990). As a primer, David Johnston's *Roman Law in Context* (1999) is unsurpassed.

58 Between 1852 and 1865, Rudolf von Jhering published his influential work *Der Geist des römischen Rechts*. In 1912, Sir Frederick Pollock published his Carpentier lectures delivered at Columbia Law School as *The Genius of the Common Law*. Less than a century and a half after Ihering and almost a century after Pollock, we are able to achieve a much better grasp of the spirit of private law through the economic approach, which we explain in Section I.

59 Hans Julius Wolff explains that the "spirit or structure of the system as a whole" developed "primarily as private law." See *Roman Law: An Historical Introduction* 49, 52-53 (1951). For the argument in law and economics literature that the real underlying cause of the efficiency of Roman law is its private-law character, see "The Future of the Economic Analysis of Law in Latin America: A Proposal for Model Codes," at 304.

60 On the expression of Rome as the 'eternal city,' see Kenneth J. Pratt, "Rome as Eternal," 26 *Journal of the History of Ideas* 25 (1965). In contrast, the vast Chinese Empire under the Han dynasty was based on the application of public-law mechanism designs and the Confucian vision of hierarchical power structures. See Grant Hardy and Anne Behnke Kinney, *The Establishment of the Han Empire and Imperial China* 5 (2005).

61 For a robust development of this thesis, see del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI* (2010).

62 For a discussion of the Greek idea that inequality is the natural order of things, see the classic study by Arthur O. Lovejoy, *The Great Chain of Being; A Study of the History of an Idea* (1936).

from the self-coordinated actions of private individuals.[63] As a result, in a heterarchy, social rank plays less of a part. Accordingly, Roman private law is fundamental to the realization of the basic human aspiration to a social order where hierarchical distinctions of class or caste become secondary.

Civil law scholars have long focused on the key distinction between private and public law, a distinction that law and economics would later recognize but fail to develop adequately. Civil lawyers, compared to common lawyers, are more aware that private law is something entirely different from public law. Our analysis of the classical Roman system from a law and economics perspective illustrates how private law is fundamentally different from public law. Through the economic approach, we hope to throw a new light on the private legal order. Without the law of obligations, as provided for in Roman private law, people cannot reasonably be expected to take precautions in the interest of others. Moreover, without the law of property, as provided for in Roman private law, people will expend little effort, even in furtherance of their own interest.[64]

In nations where the legal system betrays an overreliance on public law despite its demonstrated limitations, government officials lack the incentives to take many actions and the information to make many decisions.[65] At the risk of sounding redundant, in the Roman economy, Roman private law provided information to those who made decisions or delegated decision-making to those who possessed the information. Roman private law also provided incentives to those who took action or delegated action-taking to those who possessed the incentives.

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63 The 'spontaneous order' that Friedrich von Hayek conceived; see *The Constitution of Liberty* 230 (1960).

64 Communist dictatorships, which abolished private property in the twentieth century, decreed a legislative and constitutional duty to work. See David Ziskind, "Fingerprints on Labor Law: Capitalist and Communist," 4 *Comparative Labor Law & Policy Journal* 99 (1981). For example, the Bolshevik revolutionaries turned the old catchphrase that "those who do not work should not eat," originally meant for capitalists who lived off the labor of others, against Soviet workers. Leon Trotsky went so far as to suggest that the labor force be organized along the line of military-style hierarchies. See James Bunyan, *The Origin of Forced Labor in the Soviet State, 1917-1921* (1967).

65 Friedrich Hayek, 1 *Law, Legislation, and Liberty: Rules and Order* (1972). For a discussion of the region's failed law as the underlying narrative of law and development literature, see Jorge L. Esquirol, "The Failed Law of Latin America," 56 *American Journal of Comparative Law* 75 (2008).

For purposes of this Chapter, 'Roman law' means the legal system of the Roman classical period, from about 300 B.C. to about 300 A.D.[66] Tracing the thousand-year legal history of the Roman Republic and the Roman Empire is too exacting a task. In the manner of German Pandect science, let us stipulate that we may choose certain parts of classical Roman law as being especially noteworthy to the design of an ideal private law system. This Chapter discusses legal scholarship from the *ius commune* or 'common law' of Europe during the high Middle Ages. This Chapter will also discuss a few Greek philosophical ideas which we believe are important in the classical Roman legal system.[67]

This Chapter revisits Roman private law from a law and economics perspective. Law and economics introduced a register of methods —both quantitative and qualitative—, with which to assess legal institutions. Roman law did not have the benefit of this register, but the institutions of Roman law provide some of the most compelling examples of ideas that would not be formalized until the late twentieth century. So the Chapter not only helps to understand the economic logic of Roman law, it also sheds light on both the virtues and limitations of law and economics by providing an ancient case study of law in the service of private interests.

We would be remiss to assume familiarity with the economic approach on the part of scholars or students of Roman law. At least since the early 1960s in the United States, legal scholars have employed the methodology of mainstream economics, which includes cost-benefit analysis, statistics, price theory, the modern assumption of ordinal utility and revealed preference, and blackboard game theory.[68] The new interdisciplinary field is variously known as the 'economic analysis of law' or simply 'law and eco-

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66 My advice is to limit your reading in English on this inordinately complex subject to the scholarship of Alan Watson and the writing of Fritz Schulz. Schulz's *Classical Roman Law* (1951) is a readable and reliable guide which lays out the basic system. The series of monographs by Watson, *Contract of Mandate in Roman Law* (1961), *The Law of Obligations in the Later Roman Republic* (1965), *The Law of Persons in the Later Roman Republic* (1967), *The Law of Property in the Later Roman Republic* (1968), and *The Law of Succession in the Later Roman Republic* (1971), covers the material. Any student of Roman law may also always profit from reading an English translation of Justinian's *Institutes*.

67 Do note that the Greek ideas that we consider to have an important role in Roman law are quite different from those which philosopher John R. Kroger discusses. See "The Philosophical Foundations of Roman Law: Aristotle, the Stoics, and Roman Theories of Natural Law," 2004 *Wisconsin Law Review* 905 (2004).

68 See Eric Talley's encyclopedia entry, "Theory of Law and Economics," in *The Oxford Companion to American Law* 485 (2002).

nomics.' Moreover, in the last twenty-five years, the field has undergone a paradigm shift.[69] With the Coase Theorem,[70] transaction-cost economics drew a dividing line in the sand between legal institutions, where transaction costs are high, and the marketplace, where transaction costs are low. Now, the mechanism design literature posits the Myerson-Satterthwaite Theorem,[71] which brings to light the inextricable linkage between markets and legal institutions, and pays close attention to how institutional design affects the information and incentive costs that economic actors and decision-makers face.[72]

Finally, the 'ideal' system based on Roman law will be compared to present-day French and German civil law, two systems derived from Roman law. Contemporary German law is an extreme example of a system that distinguishes between public and private law. German civil law recognizes the private *Rechtsordnung* (legal order)[73] as a subsidiary source of legal authority,[74] yet German civil law scholars are unable to say precisely what this private legal order entails.[75] Law and economics scholarship, refashioned along civilian lines, clarifies this vital concept in German law. The contrast made with such modern law will highlight the thorough-going and all-pervading private character of classical Roman law.

This Chapter corrects a long overdue omission in economic research and contributes to an intriguing new field of inquiry: the economic analysis of Roman law.[76] The Roman legal system has long been a source of inspi-

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69 See Robert D. Cooter, "The Cost of Coase," 11 *The Journal of Legal Studies* 1 (1982).

70 For an exposition of what came to be called the Coase Theorem, see Ronald H. Coase, "The Problem of Social Cost," 3 *The Journal of Law and Economics* 1 (1960); reprinted in *The Firm, the Market and the Law* 95-156 (1988).

71 See Roger B. Myerson and Mark A. Satterthwaite, "Efficient Mechanisms for Bilateral Trading," 29 *Journal of Economic Theory* 265 (1983).

72 See Ian Ayres and Eric Talley, "Solomonic Bargaining: Dividing a Legal Entitlement To Facilitate Coasean Trade," 104 *Yale Law Journal* 1027 (1995).

73 See Volkmar Gessner *et alii*, *European Legal Cultures* 65 (1996).

74 See Roger Berkowitz, *The Gift of Science: Leibniz and the Modern Legal Tradition* (2005). German civil law recognizes the private *Rechtsordnung* or private 'legal order,' as a source of legal authority that is subsidiary to public law.

75 On the developing relationship between private and public law in Germany, see Ralf Michaels and Nils Jansen, "Private Law Beyond the State? Europeanization, Globalization, Privatization," 54 *American Journal of Comparative Law* 843 (2006).

76 See the pair of volumes recently edited by Giuseppe Dari-Mattiacci and Dennis P. Kehoe, *Roman Law and Economics: Institutions and Organizations* (2020), and *Roman Law and Economics: Exchange, Ownership, and Disputes* (2020), coming out ten years after our own work in the field.

ration to legal scholars over the centuries. Less obvious is the enormous contribution that the study of Roman law can make to modern law and economics in the twenty-first century.[77]

II. Incentive and Information Mechanisms in Roman Private Law

In this next part of the Chapter, we will discuss how Roman private law made possible and credible reliance upon private effort, private cooperation, and private commercial, financial and investment intermediation by implementing incentive and information mechanisms.

1. *Roman Law of Property*

A. *Clearly Defined Private Domains*

Law and economics literature emphasizes the importance of clearly-defined property rights,[78] yet the literature fails to discuss how the law of property defines these rights.[79] How property rights are defined is of central importance to the functioning of the economic system since the definition of rights *in rem* makes public —'common knowledge' in game-theoretical terminology—[80] the private information that people have over things they possess in fact.[81]

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77 Note that Esquirol assigns continuing importance to Roman law in the curriculum of Latin American law schools, "Continuing Fictions of Latin American Law," 55 *Florida Law Review* 41, 71 (2003).

78 Thomas W. Merrill and Henry E. Smith discuss the law and economics literature on property law, "What Happened to Property in Law and Economics?" 111 *Yale Law Journal* 357 (2001).

79 See Harold Demsetz, "Toward a Theory of Property Rights," 57 *American Economic Review* 347 (1967). Thrainn Eggertsson summarizes much of the literature that Demsetz spawned in *Economic Behavior and Institutions* (1990). For more recent discussions, see the June 2002 symposium issue on the Evolution of Property Rights, 31 *The Journal of Legal Studies* S331-S672 (2002).

80 See Robert J. Aumann, "Agreeing to Disagree," 4 *Annals of Statistics* 1236 (1976); Cédric Paternotte, "The Fragility of Common Knowledge," 82 *Erkenntnis* 451 (2017).

81 Because people privately observe their power over the external world of the things they possess in fact, these observations are private information, and asymmetric information

Roman law defines property using the mechanism design of *numerus clausus*, which refers to the conception of property in a 'closed number' or a closed system of standardized forms.[82] Roman civil law recognizes property *ex iure Quiritum* and Roman Prætorian law recognizes property *in bonis habere*. Ancient Roman law developed separately for citizens and for foreigners. Quiritary legal forms[83] applied to Roman citizens, while bonitary forms[84] applied to foreigners. However, these typical forms of property were unified for all practical purposes in 212 A.D. with the promulgation of the Constitutio Antoniniana. This imperial edict extended Roman citizenship to all the inhabitants of the empire, thus ending the segregated property law system and unifying the two forms into one. By the end of the classical period, the terms *mancipium*,[85] *dominium*[86] and *proprietas*[87] were used interchangeably to denote Roman typical property. Whatever the form, later medieval scholars conceived Roman property in terms of a standardized bundle of rights, which scholars have inferred from the Roman texts to have included the rights of the holder 'to use, enjoy and dispose of' everything that lies within a domain.[88] Roman property arose out of the Roman *actiones* (which like the English writs gave people the capacity to sue.) In the twelfth and thirteenth centuries, Canon lawyers explained "*ius* as a faculty or power" and developed the idea of subjective individual rights.[89] Though anachronistic for classical Roman law, we prefer the canonistic rights vocabulary, in which "*[l]ibertas*, *potestas*, *facultas*, *immunitas*, *dominuim*, *iustitia*, *interesse*

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develops between what they know in private and what is publically known. Property rights make this private information public and remove the asymmetric information. Narayan Dixit defines asymmetric information, *Academic Dictionary of Economics* 12 (2007).

82 Merrill and Smith explain the *numerous clausus* principle. See "Optimal Standardization in the Law of Property: The *Numerus Clausus* Principle," 110 *Yale Law Journal* 1 (2000).

83 Quiritary ownership was the standardized form of property that a Roman citizen acquired under the principles of civil law. See Adolf Berger, *Encyclopedic Dictionary of Roman Law* 442 (1953).

84 Bonitary ownership was the standardized form of property that the magistrates introduced, and which could be held by an alien. See Berger, *Encyclopedic Dictionary of Roman Law*, at 495.

85 Berger, *Encyclopedic Dictionary of Roman Law*, at 574.

86 *Idem*, at 441.

87 *Idem*, at 658.

88 See Geoffrey Samuel, *Epistemology and Method In Law* 153 (2003).

89 Brian Tierney, *The Idea of Natural Rights: Studies on Natural Rights, Natural Law and Church Law, 1150-1625* (1997).

and *actio* can all in the appropriate circumstances, be translated as 'right.'"[90] Property holders enjoyed these rights exclusively, that is, they could 'exclude' others from the use, enjoyment, and disposition of resources which fell within privately-held domains.[91]

While Roman property consisted of a bundle of rights,[92] Roman lawyers also formulated unbundled property rights in a 'closed number' or a closed system of standardized forms. These *iura in re aliena*[93] were limited to *seruitutes prædiorum*,[94] *usus fructus*[95] and *usus et habitatio*.[96] (We discuss typical security interests in another's property, also considered *iura in re aliena*, such as *fiducia cum creditore contracta*, *datio pignoris* and *pignus conuentum* in Section II.3.)[97]

In *seruitutes prædiorum*, the rights of exclusion are partly unbundled from the property to which they refer. These rights are instead tied to the dominant property of a neighbor, whom the property holder is now unable to exclude from passing himself or his animals, or conveying water through the servient property.[98] This interpretation echoes the modern insights of the law and economics movement into the exclusive nature of private property,[99] and it is consistent with the Roman conception that such a right-of-way gives no one any positive right to carry out an act.[100] Though common lawyers speak of appurtenant easements or easements in gross as positive nonpossessory rights, Roman lawyers considered that any positive right to perform an act had to be clearly established as an *in personam* right[101] under the law

90 *Idem*, at 262. For the sake of clarity in this Chapter, we utilize a legal language closer to our own time.

91 Digest of Justinian 47.10.13 (Ulpianus, *Ad edictum*, 7).

92 Denise R. Johnson, "Reflections on the Bundle of Rights," 32 *Vermont Law Review* 247 (2007).

93 Berger, *Encyclopedic Dictionary of Roman Law*, at 530. These standardized forms of unbundled property rights entitled someone, other than the owner, to make a certain use of another's property.

94 *Idem*, at 702.

95 *Idem, at* 755.

96 *Idem, at* 755, 484.

97 See Schulz, *Classical Roman Law*, at 401-27.

98 See Watson, *The Law of Property in the Later Roman Republic*, at 176-202.

99 See Thomas W. Merrill, "Property and the Right to Exclude," 77 *Nebraska Law Review* 730 (1998).

100 Institutes of Justinian 8.1.15.

101 Such a conviction reflects the importance that Roman lawyers attached to the distinction between between *actiones in rem* (real actions) and *actiones in personam* (personal actions) as a mechanism design of private-law systems. See William Warwick Buckland, *Roman Law and*

of obligations.[102] Accordingly, because they are not positive rights, *seruitutes prædiorum* are not personal assets held by the property holder,[103] but instead run with the dominant property to which these rights are tied. Moreover, Roman lawyers recognized that *seruitutes prædiorum* might exist only to the extent that they prove useful to the dominant property and increased its value.[104]

Because unbundled property rights are a burden on bundled property rights, Roman lawyers were careful to limit the scope and duration of *iura in re aliena*.[105] In *usus fructus* the rights of use and of enjoyment of fruits are partly unbundled from one's property and given to another.[106] A limited case is *usus et habitatio*, in which one is given unbundled rights of use only —not rights to enjoy the fruits— of another's property.[107] However, Roman lawyers did not recognize one's right to enjoy the fruits of a domain if he was not entitled to use that domain, "*fructus quidem sine usu esse non potest*" (the fruits certainly cannot exist without the use.)[108] After the right of use —and sometimes the use and enjoyment of fruits— were unbundled, the remaining property became almost, though not quite, an empty shell, *nuda proprietas*,[109] to which the property holder retained the rights of disposition.[110] The owner remained entitled to alienate or encumber his property if he did not affect the usufructuary. He also retained the right to monitor the use of his property by the usufructuary and could enjoy whatever fruits the usufructuary did not collect.[111] Yet, the property holder was unable to prevent the usufructuary from using, and enjoying the fruits of, the property. As Roman lawyers were careful to limit the scope and duration of *iura in re aliena*, Roman law limited the life of an *usus fructus* to the life of the usu-

Common Law: A Comparison in Outline 89-90 (1952). This distinction coincides with the property/liability rule distinction in law and economics literature—.

102 The civil law term 'obligations' refers to common law areas such as contract and tort, and closely related matters—everything in between contracts and torts. See *idem*, at 193-96.

103 Digest of Justinian 33.2.1 (Paulus, *Ad Sabinum* 3).

104 See Johnston, *Roman Law in Context*, at 69-70.

105 See Rudolf Sohm, *The Institutes of Roman Law* 258 (James Crawford Ledlie, translator, 1892).

106 See Watson, *The Law of Property in the Later Roman Republic*, at 203-19.

107 *Idem, at* 219-21.

108 Digest of Justinian 7.8.14 (Ulpianus, *Ad Sabinum* 17).

109 Berger, *Encyclopedic Dictionary of Roman Law*, at 601.

110 Institutes of Gaius 2.31, 2.91.

111 See Max Kaser, *Roman Private Law* 122 (Rolf Dannenbring translator, 1965).

fructuary as well as to nonfungible things, and prevented the usufructuary from altering the economic character of the property.[112]

The typical forms of property or unbundled rights discussed above are all inclusive. As we pointed out, Roman private law only allowed for a 'closed number' or a closed system of standardized forms of property bundles and of rights that could be unbundled.[113] The mechanism design of *numerus clausus* allowed everyone in society easily to understand what rights the legal system gave to a property holder. All property is legally alike. Accordingly, people rationally expect that their experience with the property rights for one piece of property will be the same for any other. The content of property rights is also typically the same—for any and all property.

The mechanism design of *numerus clausus* applies in contexts other than Roman property law. An example may help clarify the concept: A dictionary discloses a 'closed number' or a closed system of standardized words. If standard English, Latin, or any language, had an open system, or a *numerus apertus* of nonstandard words, a speaker would be able to invent or create the words he used.[114] As an unwanted result, others might be unable to understand him. In this way, Lewis Carroll's use of nonstandard words makes the meaning of his poem Jabberwocky difficult to understand.[115] Roman private law, as a means of communication, is 'jabberwocky-free.'

Unlike the common law, Roman law avoids the piecemeal approach that would create distinct property regimes for, say, *res mobiles* (movable things)[116] and *res immobile* (immovable things.)[117] While Roman law recognizes the differences between these two types of property, under the mechanism design of *numerus clausus*, both types of property confer the same rights. Note that the distinction between movables and immovables acquires additional importance after the promulgation of the Constitutio Antoniniana in 212 A.D.[118]

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112 See Schulz, *Classical Roman Law*, at 388.

113 For a more in-depth discussion of the standardized forms of Roman bundled property rights and unbundled rights in the property of another, see del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 278-338.

114 See Steve Johnston's compilation of invented words for use when standardized vocabulary lists fall short, *Words for the 90s* (1995).

115 See *Through the Looking-Glass and What Alice Found There* 21-22, 23, 126 (1872).

116 Berger, *Encyclopedic Dictionary of Roman Law*, at 679.

117 *Idem, at* 679.

118 For a discussion of the consequences of the Constitutio Antoniniana, see Adrian Nicholas Sherwin-White, *The Roman Citizenship* 215-27 (1973).

In keeping with a clear, standardized system of property, each quiritary domain had boundaries that were clearly defined by the civil law.[119] The German scholar von Jhering offers a folk etymology for 'quirites,' explaining that the Sabine warriors used to carry lances to stake out property in a way that was highly visible to everyone.[120] Roman surveyors were masters at squaring off real property with *terminationes* as visible markers.[121] The glossator Accursius formulated another boundary principle. In his gloss on a Roman text, Accursius states that the space above, and below, a property surface must be left unhindered. Further, the limits of property extend from the surface in a column down to the center of the earth and up to the heavens, "*cuius est solum eius est usque ad coelum et ad inferos*."[122] His simple and straightforward explanation projected a clear mental image, which later legists could easily grasp—dare we say, see.

Just as land had clearly delineated bounds, Roman lawyers recognized that many movable things also had well-defined boundaries that were recognized by law.[123] Corporeal things have bodies that we can see, touch, and hold, "*quæ tangi possunt*."[124] Roman lawyers understood that many movable things are contained in themselves, "*quod continetur uno spiritu*" or composed of several things attached to one another, "*pluribus inter se coherentibus constat*,"[125] and in some cases, are indivisible, "*quæ sine interitu diuidi non possunt*."[126] Examples of this last class include animals that would die or jewels that would lose their value if they were partitioned.[127]

Using a closed system of standardized forms and clearly-defined boundaries, Roman private law reduces the asymmetry of information be-

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119 For a discussion of quiritary and bonitary ownership, see Charles Phineas Sherman, 2 *Roman Law in the Modern World* 150 (1917).

120 1 *Geist des römischen Rechts, auf den verschiedenen Stufen seiner Entwicklung* chapter 1.

121 For a discussion of the Roman rectangular system of land demarcation known as 'centuriation', see Gary D. Libecap and Dean Lueck, "Land Demarcation in Ancient Rome," in Giuseppe Dari-Mattiacci and Dennis P. Kehoe (editors), *Roman Law and Economics: Exchange, Ownership, and Disputes* 211 (2020).

122 *Accursii Glossa in Digestum vetus* (1488), concerning Digest of Justinian 18.2.1 (Paulus, *Ad Sabinum* 5).

123 For a brief discussion of Roman ownership, see William Smith, *A Dictionary of Greek and Roman Antiquities* 421 (Second edition, 1848).

124 Institutes of Gaius 2.13, 2.14.

125 Digest of Justinian 41.3.30 (Pomponius, *Ad Sabinum* 30).

126 Digest of Justinian 6.1.35.3 (Paulus, *Ad edictum* 21).

127 See William Livesey Burdick, *The Principles of Roman Law and Their Relation to Modern Law* 315 (1938).

tween property holders and everyone else. The private legal system minimized the amount of information that people needed to search to recognize the property of others, and to understand their own property rights by publicizing the boundaries of private domains and what property owners may do with the resources that lie within private domains. But this is not the sole end of a good property law system. The legal system must also solve the problem of clearly defining which property belongs to what property holder. As we show in the next subsection, Roman law has a unique way of defining and making public what property belongs to which property holder.

B. *Clearly Publicized Ownership*

The Roman system used ceremonies, rather than a modern registration system, to publicize who held what private property.[128] Today, most legal systems in the world use a registration system for valuable property, but this is too costly to require for every type of property.[129] In Rome's thriving agricultural economy, valuable types of property such as land, beasts of draught and burden, *seruitutes prædiorum* for passage or conveying water for irrigation purposes, and slaves, were valuable and needed a means to ensure their ownership was publicly known.[130] To perform the functions now embedded in registration systems, Roman lawyers developed a solemn and elaborate ceremony involving bronze and scales to commemorate the conveyance of private property.[131] (In similar fashion, English common law developed another special ceremony—referred to as 'livery of seisin' in Law French.[132]) Ceremonies embed new information in the collective memory of a social group. People visibly took part in symbolic acts and wore various forms of outrageous clothing that naturally attracted the attention of onlookers. Thus, the memorable ceremony of *mancipatio* created publicly available information —'common knowledge' in game-theoretical terminology— about the change in the property's ownership.[133] Alternatively, Roman

[128] Robert C. Ellickson discusses land ownership, "Property in Land," 102 *Yale Law Journal* 1315 (1993).

[129] See Joseph Janczyk, "An Economic Analysis of the Land Titling Systems for Transferring Real Property," 6 *The Journal of Legal Studies* 213 (1977).

[130] *Epitome Ulpiani* 19.1 (edited by Fritz Schulz, 1926).

[131] On the ceremony involving bronze and scales, see Watson, *Roman Law and Comparative Law* 45 (1991).

[132] See John Rastell, *Les termes de la ley* 281 (1812).

[133] See Gyorgy Diosdi, *Ownership in Ancient and Preclassical Roman Law* 62 (1970).

law allowed substitution of a public declaration (after a fictitious trial) with a confirmation before the *prætor*, *in iure cessio*.[134] Sometimes for certain types of property, Roman law relied on the collective memory of local communities to publicize the identity of the property holder. An example may help to clarify the concept: While a dictionary amounts to a registration system for words, the collective memory of local communities also admits a 'closed number' or a closed system of standardized words as a means of communication. For nonvaluable property, Roman law also presumed ownership from possession like modern legal systems.[135]

Roman private law protects both property owners and possessors, though in different ways, as von Jhering explains.[136] A property owner has a right to claim legal protection, whereas a possessor does not under Roman law. Common law lawyers may fail to appreciate civil law debates about the legal protection of possession because the common law, unlike Roman law, clearly recognizes rights incident to possession.[137] In Roman law, *rei uindicatio*[138] and *actiones ad exhibendum et negativa*[139] protect property right holders while *interdicta retinendæ et recuperandæ possessionis*[140] protect possessors without property rights. Ultimately, the Roman legal system protects both property right holders and possessors in fact to align their interests with the development and maintenance of the resources under their domain or in their possession.[141]

C. *Private Management of Resources*

Rather than stipulating how holders were to manage property, Roman private law created incentives and provided the example of the property

134 Berger, *Encyclopedic Dictionary of Roman Law*, at 496.

135 Roman law presumed the possessor of property to be the owner, unless rebutted by the true owner. See Thomas Mackenzie, *Studies in Roman Law with Comparative Views of the Laws of France, England, and Scotland* 164 (1862).

136 Von Jhering argues that legal protection of possession protects the owner because the possessor was frequently the owner, *Der Besitzwille: Zugleich eine Kritik der herrschenden juristischen Methode* (1889).

137 Adam Mossoff describes possessory rights as the core of property, "What is Property? Putting the Pieces Back Together," 45 *Arizona Law Review* 371 (2003).

138 Berger, *Encyclopedic Dictionary of Roman Law*, at 627.

139 *Idem, at* 343, 463.

140 *Idem, at* 508.

141 See Watson, *The Law of Property in the Later Roman Republic*, at 91-109.

owner, the *pater familias*,[142] as the basis of the standard of diligent care to be used in the legal system.[143] The choice of what a property holder does with his property is left to the owner; Roman law does not stipulate how a holder may use his property. As the 'bundle of rights' metaphor illustrates, 'property' generally includes an ample range of faculties, uses, attributions, and possibilities. Ownership thereof enables the holder to exclude others from the use, enjoyment, and disposition of that property. In Roman law, property was not held by the individual, as it primarily is in modern law; rather, property was held by the family unit, or more correctly, on its behalf by the head of that family, called the *pater familias*, who personally manages the property. (The *pater familias* will be further discussed *infra* in Section II.3.)

While Roman law left largely unstipulated what a holder could or could not do with his property, it stopped short of conferring absolute rights to property holders.[144] If the legal system conferred absolute rights without considering the effects that one's use of property may have on another's, property values may diminish.[145] Accordingly, Roman law established limits that controlled external effects created using property. For example, a property holder in an apartment-block may not operate a *taberna casearia* (cheese factory,)[146] which causes nauseating odors for the neighbors above unless he acquires a *seruitus prædii urbani*.[147] He also may not flood the property of his neighbors below.[148] Within limits set on a case-by-case basis in the Roman texts, the law leaves the choice of use of property to the *arbitrium* of the property holder.[149] The Roman solution is superior at maximizing the value of property rights because Roman private law controlled external effects from within property law itself, whereas both common law and present-day civil law use nonproperty doctrines, such as nuisance and abuse of rights to limit property rights.[150] These nonproperty doctrines fail to maximize the value of property rights because they are framed in general terms

142 Berger, *Encyclopedic Dictionary of Roman Law*, at 377.

143 Bruce W. Frier and Thomas A.J. McGinn, *A Casebook on Roman Family Law* 239 (2004).

144 Ugo Mattei, *Comparative Law and Economics* 27-67 (1997).

145 Von Jhering explains that certain limits on property increase its value, *Der Besitzwille: Zugleich eine Kritik der herrschenden juristischen Methode*.

146 On Roman shops, see Christopher Francese, *Ancient Rome in so Many Words* 155 (2007).

147 Digest of Justinian 8.5.8.5 (Paulus, *Ad edictum* 21).

148 *Ibidem.*

149 Berger, *Encyclopedic Dictionary of Roman Law*, at 366.

150 Anna di Robilant, "Abuse of Rights: The Continental Drug and the Common Law," 61 *Hastings Law Journal* 687 (2010).

and apply to a wide range of external costs. The Roman solution is limited to specific factual situations. Therefore, under Roman law, property limits are predictable, and parties can thus anticipate the need to negotiate servitudes.

Roman law tied property together using a Gordian knot of wide-ranging standardized rights, which could not be separated out of the bundle (except in the 'closed number' or the closed system of specific limited circumstances previously mentioned.) Ideally, this standardized bundle of property rights was tied to a single property holder because Roman private law avoided situations of *communio*[151] reasoning that all rights in the bundle are largely complementary to one another and thus property loses its efficacy if these rights are scattered among several common property holders other than for a limited time and purpose.

In fact, Roman law's system of 'typical property' tied to one person solves a frequently cited problem with jointly held property—the tragedy of the commons.[152] In law and economics, the tragedy of the commons is a generalized form of a prisoner's dilemma with many players.[153] In the tragedy of the commons, the dominant strategy of each player is not to cooperate. Many people who lack coordination and therefore do not cooperate fail to maintain a resource commonly owned. They thereby condemn the resource to overexploitation and disappearance.[154] Demsetz brought this analysis into law and economics literature.[155] Heller discussed the flip side of this analysis in the literature.[156] The tragedy of the anti-commons is also a generalized form of a prisoner's dilemma. However, under this analysis, property holders, lacking coordination among themselves, raise the price of the resource excessively and thereby condemn the resource to underuse. By removing the need for coordination within a domain between multiple property owners, Roman law solves these joint-property problems.

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151 Berger, *Encyclopedic Dictionary of Roman Law*, at 400.

152 See Garrett Hardin, "The Tragedy of the Commons," 162 *Science* 1243 (1968).

153 In this nonzero-sum game, two people face private incentives to be the first to reveal private information about a crime. See Gordon Tullock, "Adam Smith and the Prisoner's Dilemma," 100 *Quarterly Journal of Economics* 1073 (1985).

154 Shi-Ling Hsu, "What is a Tragedy of the Commons? Overfishing and the Campaign Spending Problem," 69 *Alabama Law Review* 75 (2005).

155 See Demsetz, "Toward a Theory of Property Rights."

156 Michael A. Heller, "The Tragedy of the Anticommons: Property in the Transition from Marx to Markets," 111 *Harvard Law Review* 621 (1998).

The word 'tragedy' here has the essence of the 'inevitable' of Greek theater. Law and economics literature has recovered the analysis of the tragedy of the commons from Roman law. Hardin's Malthusian chapter attributes the idea to an obscure nineteenth century mathematical amateur.[157] The insight behind it goes back to Greek philosophy. Aristotle refutes Plato's community of property by explaining that, "*ἥκιστα γὰρ ἐπιμελείας τυγχάνει τὸ πλείστων κοινόν*."[158] From this passage in Aristotle, the tragedy of the commons became a Roman law trope. Fernando Vazquez de Menchaca, a late scholastic from the school of Salamanca, fully develops the analysis of the tragedy of the commons in his sixteenth century treatise on the Roman law of property,[159] from which Hugo Grotius takes the analysis without supplying any additional insights.[160]

The necessity of public law-implemented coordination of jointly held property is eliminated because private property provides owners the incentives to acquire information and invest in the development and upkeep of the resources that lie within private domains. Roman property law typically gives a single property holder a bundle of rights with respect to everything in his domain, to the exclusion of the rest of the world. The holder thus internalizes the external benefits and costs from the use, enjoyment, or disposition of the property. Incentives are aligned with the care and maintenance of that property because the holder is able to put a price on the resources involved.[161] Roman private law gives the right holders the incentives to invest in the maintenance and improvement of property because they are able to reap both the use value and the exchange value of those resources.[162] In short, the economic problems with common-held property are avoided in the Roman legal system because a single person, the *dominus proprietarius*,[163] is the residual claimant of the resources managed in the domain.

However, with unbundled property rights such as *usus fructus*, the *dominus usufructus*[164] fails to be the residual claimant of the property. Since the incen-

157 On the tragedy perspective, see Michael Goldman, "'Customs in Common': The Epistemic World of the Commons Scholars," 26 *Theory and Society* 1, 25 (1997).

158 Aristotle, *Politics* book 2 (350 B.C.)

159 Fernando Vazquez de Menchaca, *Controuersiarum illustrium aliarumque usu frequentium libri tres* (1564).

160 Hugo Grotius, *De jure belli ac pacis libri tres* (1625).

161 Del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 305.

162 *Ibidem.*

163 Berger, *Encyclopedic Dictionary of Roman Law*, at 422.

164 *Idem, at* 385.

tives of the usufructuary are not perfectly aligned in the long-term with the management of the resources in the domain, Roman private law requires that the usufructuary post a bond, the *cautio usufructuaria*, to guarantee the diligent management of the property and its return according to the standard of care of a man of good judgment, "*et usurum se boni uiri arbitratu et, cum usus fructus ad eum pertinere desinet, restituturum quod inde exstabit.*"[165] Roman private law requires the *dominus usus* to post a similar bond, the *cautio usuaria*, for the same reason.[166]

As we discuss in Section I.2.B *infra*, incomplete contracts are an abiding theme in the literature. However, few law and economics scholars have investigated the related theme of incomplete property. Defining "full ownership" would be requiring too much of a legal system "for there is an infinity of potential rights [...] that can be owned [...]. It is impossible to describe the complete set of rights that are potentially ownable."[167] The legal system is unable to "stipulate every tiniest use of each property."[168] Rather than stipulating how holders are to manage property, Roman private law supplements, rather than substitutes for, incomplete property with: standardized bundles of property rights tied to a single property holder, and standardized temporarily unbundled rights in the property of others; limits to the *arbitrium* of the property holder set on a case-by-case basis in the Roman texts, and quasi-contractual obligations.

D. *Institutional Mechanisms for Maintaining Typical Property Through Time*

To provide for proper management of resources, Roman law incorporates institutional mechanisms that maintain standardized property through time.[169] The institutional mechanisms of *accessio*,[170] *nouam speciem facere*,[171]

165 Digest of Justinian 7.9.1 (Ulpianus, *Ad edictum* 79).

166 See Watson, *The Law of Property in the Later Roman Republic*, at 218.

167 Demsetz, "A Framework for the Study of Ownership," in Demsetz (editor), 1 *The Organization of Economic Activity: Ownership, Control and the Firm* 12, 19 (1988).

168 Yun-chien Chang and Henry E. Smith, "An Economic Analysis of Civil versus Common Law Property," 88 *Notre Dame Law Review* 1, 31 (2012).

169 Del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI*, at 316.

170 Berger, *Encyclopedic Dictionary of Roman Law*, at 340.

171 *Idem*, at 712.

and *confusio uel commixtio*,[172] as well as *successio*,[173] *usucapio*,[174] and *longi temporis præscriptio*,[175] are methods of maintaining typical Roman property as people, property, and attachments between these elements change throughout time. Each will be treated in turn in the following paragraphs.[176]

In *accessio*, one's property becomes combined with, or incorporated into, another's property.[177] Instead of establishing *communio* between common property holders, Roman private law subjects the accessory property to the *dominium* of the property holder of the principal property. Thus, the dominant property holder acquires the accretion in the natural area along a river,[178] the threads woven into a piece of cloth,[179] the dyes used to process cotton fabric,[180] the wood panel containing an oil painting,[181] the writing on a goatskin parchment,[182] the buildings put up on[183] or the crops sown in the ground.[184] As is evident from the case law, Roman private law avoids a situation of *communio* between common property holders whenever possible as a mechanism design.

In *nouam speciem facere*, one applies one's labor to another's materials to create a thing of a new species.[185] Instead of establishing *communio* between these common property holders, Roman private law subjects the thing of the new species to the dominium of the laborer, "*si ea species ad materiam reduci possit*"[186] (unless the materials can be returned to their primitive state.) Thus, the person applying the labor acquires the wine made from grapes, the oil pressed from olives, and the flour ground from wheat kernels; but not the goblet cast in gold, nor the clothing made of wool, nor the boat

172 *Idem*, at 399.

173 *Idem*, at 722.

174 *Idem*, at 752.

175 *Idem*, at 645.

176 Traditionally, civil lawyers referred to these legal institutions as modes of 'acquiring' property rights. Our law and economics analysis suggests they are, more precisely, modes of 'maintaining' typical Roman property.

177 See R. A. Burgess, *Accessio and related subjects in Roman Law* (1972).

178 Digest of Justinian 41.1.7.1 (Gaius, *Libri rerum cottidianarum siue aureorum* 2).

179 Institutes of Justinian 2.1.26.

180 Digest of Justinian 41.1.26.2 (Paulus, *Ad Sabinum* 14).

181 Institutes of Gaius 2.72.

182 Institutes of Gaius 2.77.

183 Digest of Justinian 41.1.12 (Neratius, *Membranarum* 5).

184 Institutes of Justinian 2.1.32.

185 See Schulz, *Classical Roman Law*, at 366.

186 Institutes of Justinian 2.1.12.

assembled with planks of wood belonging to another.[187] The goblet can be melted down, the vestment can be ripped back into sheets of wool, the boat can be dissembled, and the planks stacked singly again and returned to their primitive states.

In *confusio uel commixtio*, one's property becomes confused or intermingled with another's property.[188] Thus, if the boundary fence comes down between two neighboring fields, the flocks of sheep may become so intermingled that the farmers are unable to reckon who owns what animal. If the intermingling occurs by chance or the will of the property holders, Roman law will allow a situation of *communio* between common property holders. If not, and the component things cannot be separated, the property holders may ask the *iudex*[189] to partition the property in proportion to the value that corresponds to each.[190]

Through time people move, leave, or perish. In *successio*,[191] any one of the heirs, at any time, is able to ask the *iudex* to divide an *hereditas*.[192] In this way, Roman law avoids a situation of *communio* among coheirs. Or a *pater familias* may executive a *testamentum* and leave the family property to a single heir.[193]

When property comes to be held by new possessors, Roman private law puts an end to the divorce between possession and property through *usucapio* and *longi temporis præscriptio*.[194] The possessor acquires dominium over another's property through usage over time.[195] That way, the legal system assures that every domain is managed by a single property holder who has an interest and control over the domain. Roman private law avoids situations of commonly-held ownership whenever possible.

The ability to price the resources held within privately held-domains, and the expectation of becoming property holders, give people incentives to invest in the conservation and development of the scarce resources that

187 Institutes of Gaius 2.79.

188 See Paul Van Warmelo, *An Introduction to the Principles of Roman Civil Law* 89 (1976).

189 Berger, *Encyclopedic Dictionary of Roman Law*, at 518.

190 Digest of Justinian 6.1.5.1 (Ulpianus, *Ad edictum* 16).

191 For a short discussion of the Roman law of succession, see Johnston, *Roman Law in Context*, at 44-52.

192 Berger, *Encyclopedic Dictionary of Roman Law*, at 485.

193 See Thomas Rüfner, "Testamentary Formalities in Roman Law," in Zimmermann *et alii* (editors), 1 *Comparative Succession Law: Testamentary Formalities* 1 (2011).

194 See Watson, *The Law of Property in the Later Roman Republic*, at 21-61.

195 Digest of Justinian 41.3.3 (Modestinus, *Pandectarum* 5); 44.3.3 (Modestinus, *Differentiarum* 6).

lie within their control.[196] Note that Roman law's various ways of giving property rights to a possessor aligns his incentives with the care and management of the resources in the domain and gives him the expectation of obtaining the residual interest over time. In addition to stability in his possession, the legal system gives the good faith possessor immediate property rights over the fruits or products of what he possesses, without having to wait for *usucapio* or *longi temporis præscriptio*.[197]

Roman law relies on standardized forms of property bundles, temporarily unbundled property rights, clearly defined boundary markers for property, and publicized ownership to reduce asymmetric information. Roman law also employs institutional mechanisms that maintain typical property through the vagaries of time to avoid situations of *communio* whenever possible between common property holders. Where a situation of common ownership is unavoidable, as in *communio incidens*, we will show in Section II.2.C that Roman private law turns *communio* into a quasi contract under the law of obligations. That way the legal system provides a legal mechanism for coordination of commonly-held ownership.

In law and economics, an Edgeworth box graphically represents how people can benefit from exchange.[198] Goods have both a use value and an exchange value. This analysis again goes back to Greek philosophy. People will not enter exchanges if they hold like things. How, then, can people find an equivalence between unlike things to make an equal exchange? In a brilliant response to this paradox, Aristotle observes that a voluntary exchange is equivalent even if it is not equal, "*καὶ ἀναλογίαν καὶ μὴ καὶ ἰσότητα*."[199] However, a voluntary exchange requires more than mere possession in fact; it requires property rights.[200] Otherwise, the asymmetry of information between possessors may defeat attempts at barter. Even a barter economy requires property rights. Moreover, the law of property supports the marketplace. As we explain above, rights of exclusion are logically prior to the pricing mechanism.

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196 Del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 305.

197 See Johnston, *Roman Law in Context*, at 59.

198 See Richard A. Ippolito, *Economics for Lawyers* 6-14 (2005).

199 Aristotle, 5 *The Nicomachean Ethics* (340 B.C.)

200 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* 296.

Hernando de Soto, a Peruvian economist, has strongly urged developing countries to create property titling programs.[201] During the last twenty-five years, many developing countries, including a large number in Latin America, have followed de Soto's policy recommendations. The intended beneficiaries of these programs are the urban poor. Because the urban poor generally live and work in the informal economy, they traditionally do not hold recognized legal title to their assets. Therefore, they have been unable to post collateral for bank loans needed to improve their productivity. Nevertheless, these well-intended titling programs have failed to produce the expected, substantial economic growth. This Chapter provides an explanation for the failure of these titling programs. Because de Soto is a development economist rather than a law and economics scholar, his analysis is incomplete. Our short explanation of Roman law shows how an ideal private law system defines property, even without land registration systems. Our law and economics perspective suggests that for the legal system to define and maintain property rights, more than a simple registration system is required.

2. *Roman Law of Obligations*

A. *Private Choices to Cooperate*

Law and economics literature is still under development with respect to contract law.[202] The economic approach, in the hands of common law lawyers, seems unable to posit a "economic theory" of contract law.[203] Law and economics models fail to describe contract doctrines as they exist under the common law. These models also fail to provide a conceptual framework for a critical reworking of the common law system.[204] The historical origins of common law doctrines of contract in Canon law, rather than in Roman law, give common law lawyers a substantially incomplete

201 De Soto *et alii* argue that property titling programs can spark economic development, *El otro sendero: La revolución informal* (1986).

202 Eric A. Posner discusses the failure of law and economics literature to explain contracts law, "Economic Analysis of Contract Law After Three Decades: Success or Failure?" 112 *Yale Law Journal* 829 (2003).

203 *Idem*, at 830.

204 *Ibidem.*

picture of contracts.[205] Roman law reveals the full range of possible mechanism designs in the law of obligations.

Roman private law encourages economic liberalization because it supports private choices to cooperate. Yet, cooperation requires credible commitments, which themselves require that the committed parties have the incentives to comply in the future.[206] The Roman law of contractual obligations provides such incentives and, therefore, encourages expectations of cooperation between private parties. In law and economics, this is a beneficial outcome because 'trust' —in its nontechnical sense— between people has economic value.[207]

The Roman law of obligations enables people to commit to future actions in a legally binding contract. The debtor who enters a contract gives the creditor a legal claim against his person (*actiones in personam*), thus rendering his commitment to future action credible when made. Without such legal support for commitment, we would be forced to use more extreme measures as demonstrated by Hernán Cortés, the sixteenth century Spanish conquistador who burned his ships in the harbor of Veracruz to foreclose the option of retreat during the conquest of Mexico.[208]

Part of the credibility of obligations under Roman law is the distinction between *actiones in rem* (see *supra* Section II.1) and *actiones in personam* as a mechanism design[209] —known as the property/liability rule distinction in law and economics literature—.[210] Under the Roman law of obligations, if the debtor breaches, the creditor is able to force him, through an *actio in personam*, to pay an amount of money equal to, but not more than, the value of the performance.[211] Even where the obligation is *incertum*,[212] the pro-

205 See Juan Javier del Granado, "The Path Dependence of the Common Law from a Romanist Perspective," paper delivered on August 3, 2011 at Bogota, Colombia at the XV Annual Conference of the Latin American and Caribbean Law and Economics Association.

206 See Alan Schwartz and Robert E. Scott, "Contract Theory and the Limits of Contract Law," 113 *Yale Law Journal* 541, 562 (2003).

207 See Claire A. Hill and Erin Ann O'Hara, "A Cognitive Theory of Trust," 84 *Washington University Law Review* 1717 (2006).

208 Letter to Emperor Charles V (Oct. 30, 1520), in 1 *Cartas de Relacion de La Conquista de Mejico* (1519). Without such legal support for commitment, we would be forced to use other more extreme measures as demonstrated by Cortés.

209 Berger, *Encyclopedic Dictionary of Roman Law*, at 346.

210 See Calabresi and A. Douglas Melamed "Property Rules, Liability Rules and Inalienability: One View of the Cathedral," 85 *Harvard Law Review* 1089 (1972).

211 See Zimmermann, *The Law of Obligations: Roman Foundations of the Civilian Tradition*, at 771.

212 Berger, *Encyclopedic Dictionary of Roman Law*, at 387.

cedural formula stipulates that the *iudex* must assess, *tantum pecuniam* —an amount of money equal— *quidquid Numerius Negidius Aulo Agerio dare facere oportet* or whatever the defendant ought to give to, or do for, the plaintiff.[213] Accordingly, when performance becomes costlier to the debtor than the value of the performance to the creditor, the system of Roman private law allows the debtor to breach and pay monetary damages through the mechanism design of *omnis condemnatio est pecunaria*, that is, all judgments are for monetary damages.[214] The contract restructures the future incentives of the debtor and makes his promises credible. Unlike modern civil and common law systems, the classical Roman *prætor* uniquely refused to provide authoritative instructions for decrees of specific performance.

The Roman contract system transforms the private expectations that people hold about the future actions of others into public information —'common knowledge' in game-theoretical terminology— by utilizing an appropriate ceremony or standardized contract forms.[215] The legal system adopts the same institutional mechanisms, long-winded verbal statements in ceremonies and a 'closed number' or a closed system of standardized forms as those used in the Roman law of property (see *supra* Section II.1.) As we saw earlier, modern civil law systems substitute the entry of public records in registration systems for the ceremonies of classical Roman law.[216] Using the mechanism designs of standardized forms and clearly stipulated obligations, Roman private law reduces asymmetric information between contractual parties.

Scholars today dispute whether Roman law, in archaic times, required contractual parties to participate in a ceremony involving bronze and scales to enter an enforceable agreement.[217] If such a ceremony existed, its purpose was to subject parties to seizure if they failed to perform an obligation.[218] The ceremony openly established the parties as *nexus* or bound.[219] However, under the legal system of the Roman classical period, the most important ceremonial means of forming binding legal commitments was the verbal

213 Zimmermann, *The Law of Obligations: Roman Foundations of the Civilian Tradition*, at 771.

214 Institutes of Gaius 2.31.

215 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 319.

216 On civil law notary publics, see Armando J. Tirado, "Notarial and Other Registration Systems," 11 *Florida Journal of International Law* 171, 174 (1996).

217 On the controversial *nexum*, see Kaser, *Roman Private Law*, at 167; de Zulueta, "The Recent Controversy Over Nexum," 29 *Law Quarterly Review* 137 (1913).

218 See Watson, *Rome of the XII Tables: Persons and Property* 111-24 (1975).

219 Berger, *Encyclopedic Dictionary of Roman Law*, at 595-96.

question-and-answer sequence of *stipulatio*.[220] In the immediate presence of each other and before witnesses, the *reus stipulandi*[221] asks the question, and the *reus promittendi*[222] responds directly with a promise in terms that mirror the question. *Dari spondes? Spondeo. Dabis? Dabo. Promittis? Promitto. Fidepromittis? fidepromitto. Fideiubes? Fideiubeo. Facies? Faciam*,[223] Accordingly, Roman law enables the parties to stipulate to a mutually understood unilateral obligation, which is legally enforceable as a contract. (See Section II.3 *infra* for a discussion of the literal contractual form.)

Besides a ceremony, the other Roman method of publicizing private agreements was by use of standardized contracts.[224] Parties during the classical period could form binding legal commitments by concluding any one of a 'closed number' or a closed system of standardized forms, eliminating the need for long drawn-out ceremonial verbal statements.[225] The typical contracts under Roman law were either *consensu* or *re*.[226] The parties could form a consensual contract simply by manifesting their agreement.[227] The parties could form a real contract simply by handing over *res corporales*[228] while manifesting assent to such a standardized contract form with a name. Because Justinian was particularly fond of the number four, the system of Pandects identifies four consensual contracts, *emptio uenditio*,[229] *locatio conductio*,[230] *mandatum*[231] and *societas*,[232] as well as four real contracts, *depositum*,[233] *mutuum*,[234] *commodatum*[235] and *pignus conuentum*.[236]

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220 *Idem*, at 716.

221 *Idem*, at 684.

222 *Ibidem.*

223 Institutes of Justinian 3.15. Note that we retain the Latin terms throughout the Chapter, because the translation of legal terms is invariably imprecise and possibly misleading.

224 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 319.

225 Interestingly, law and economics scholars have failed to see that the mechanism design of *numerus clausus* also operates in the law of obligations.

226 See Watson, *The Law of the Ancient Romans* 64-72 (1970).

227 See Johnston, *Roman Law in Context*, at 78.

228 Berger, *Encyclopedic Dictionary of Roman Law*, at 677.

229 *Idem*, at 452.

230 *Idem*, at 567.

231 *Idem*, at 574.

232 *Idem*, at 708.

233 *Idem*, at 432.

234 *Idem*, at 591.

235 *Idem*, at 399.

236 Idem, at 630.

The typical contracts —referred to as the 'nominate contracts' by civilians because they are named— are one of the greatest achievements of Roman private law.[237] By referring to a nominate contract, the parties knew that they had concluded an enforceable contract and easily understood what obligations they had assumed without having to stipulate them in detail.[238] To illustrate, when the parties entered into an *emptio uenditio*, they only had to specifically stipulate the *pretium* (price)[239] and the *res* (thing.)[240] However, the obligation of the seller to respond for eviction, *euictionem præstare*, was created without being mentioned because it was part of the typical contract invoked by the name, '*emptio uenditio*'.[241] Thus, the parties took on all implied obligations of an *emptio uenditio* by giving their contract that name.

Modern law and economics teaches that when one party is better able to anticipate future contingencies and risks than the other, mutually beneficial transactions may fail to take place. Roman law encourages such mutually beneficial contracts by incentivizing revelation of privately-held information through default rules.[242] Roman law enables parties to stipulate out of implicit legal rules that are not essential to the standard contractual form.[243] For example, when the parties enter an *emptio uenditio*, the parties may agree that the seller does not respond for eviction by entering into a *pactum de non præstanda euictione*.[244] The seller who has private information about any circumstance which may affect the peaceful possession of a thing by the buyer responds for eviction as an implicit obligation. Accordingly, Roman private law provides parties an incentive to reveal private information to avoid the responsibility that the legal system imposes by default.

While the Roman legal system allows some modifications of the typical forms, it prevents formation of agreements that change the essential

237 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 319-20.

238 *Ibidem.*

239 Berger, *Encyclopedic Dictionary of Roman Law*, at 649.

240 *Idem*, at 677.

241 See Watson, *The Law of Obligations in the Later Roman Republic*, 40-45, 70-86.

242 Ayres and Robert Gertnert discuss how parties reveal information when they contract around default provisions, "Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules," 99 *Yale Law Journal* 87 (1989).

243 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 328.

244 See de Zulueta, *The Roman Law of Sale* 46 (1945).

mechanism design of a standardized contractual form.[245] Thus, the parties are unable to agree to a *commodatum* in exchange for *merces* (rent),[246] which makes the transaction something other than a gratuitous loan.[247] The Roman lawyers indicated that such a transaction would have to be enforced by another legal action, *ex locatione conductio*.[248] In the Roman contractual system, any odd agreement, which lacks the long, drawn-out ceremonial verbal statements of *stipulatio* and fails to fit into one of the standardized forms, is unenforceable. Roman law refuses to provide a legal remedy to enforce it, *nuda pactio obligationem non parit*.[249] Roman law refused to enforce naked pacts without a ceremony or a standardized contractual form with a name to publicize the content of the obligations.

As explained *infra* in Section V, Latin American notary publics inconsistently insist on interpreting atypical contracts along the lines of typical molds. Notary publics must understand their primary responsibility is to give publicity to unstandardized business deals.

B. *Private Choices to Cooperate Without Stipulating All Eventualities*

The Roman law of obligations establishes full freedom of contract, including the ability to enter into and enforce incomplete contracts, an abiding theme in law and economics.[250] However, the mechanism design of freedom of contract is a necessary, but not sufficient, condition for realizing a decentralized marketplace economy.[251] Law and economics literature emphasizes that writing a complete contract which stipulates all eventualities is often impossible or undesirable because parties to a contract are incapable of anticipating every future contingency.[252] Moreover, because negotiating and drafting clauses to resolve possible contingencies and risks is costly,

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245 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 328.

246 Berger, *Encyclopedic Dictionary of Roman Law*, at 581.

247 See Ferdinand Mackeldey, *Handbook of the Roman Law* 337 (Moses A. Dropsie translator, 1883).

248 Digest of Justinian 13.6.5 12 (Ulpianus, *Ad edictum* 28).

249 Digest of Justinian 2.14.7.4 (Ulpianus, *Ad edictum* 4).

250 See Richard A. Epstein, *Simple Rules for a Complex World* 327 (1995).

251 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 326.

252 See Robert E. Scott and George G. Triantis, "Incomplete Contracts and the Theory of Contract Design," 56 *Case Western Reserve Law Review* 187, 190 (2005); Maskin and Jean

parties may decide to leave remote contingencies unstipulated.[253] Rather than abridging full freedom of contract, Roman private law supplements, rather than substitutes for, incomplete contracts with: standardized contractual forms; the concept of good faith[254] of Roman Prætorian law, and quasi-contractual obligations.[255] Roman law works because it supports private choices to cooperate without stipulating all eventualities. These supplemental mechanism designs enable people, whose rationality is limited, to cooperate despite their inability to completely know and provide for the future.

Roman standardized contractual forms approximate complete contracts.[256] Insofar as the near future will resemble the recent past, Roman private law supports personal autonomy by providing a default framework of implicit legal heteronomy. The nominate contracts in Roman law are based on long experience and incorporate supplemental provisions that provide for probable contingencies which may escape the attention and present awareness of contractual parties. As discussed earlier, each standardized or nominate contractual form in Roman law includes implied obligations covering unstipulated matters. The obligations implied in each standardized nominate form cover the unstipulated eventualities most likely to arise in the contract with that name.[257]

In the Roman legal system, the *ius honorarium*[258] developed, *adiuuandi uel supplendi uel corrigendi iuris ciuilis*,[259] which is like the development of equity introduced by the chancery courts in common law systems.[260] Both the *ius honorarium* and equity supplement and mitigate the rigors of strict law.[261] In classical Rome, the *prætor* allowed a defendant to request the insertion of an *exceptio doli* into the procedural formula.[262] This addition instructed the *iudex* to consider the equity of the case, *si in ea re nihil dolo malo Auli Agerii*

Tirole, "Unforeseen contingencies and incomplete contracts," 66 *Review of Economic Studies* 84 (1999).

253 *Ibidem.*

254 Berger, *Encyclopedic Dictionary of Roman Law*, at 374.

255 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 327-33.

256 *Idem*, at 327.

257 *Ibidem.*

258 Berger, *Encyclopedic Dictionary of Roman Law*, at 529.

259 Digest of Justinian 1.1.7 (Papinianus, *Definitionum* 2).

260 Buckland describes the kinship between Roman and English lawyers, *Equity in Roman Law* (1911).

261 *Idem*, at 7.

262 Berger, *Encyclopedic Dictionary of Roman Law*, at 459.

factum sit neque fiat,[263] if no fraud has been committed by you as plaintiff.[264] When enforcing any of the four consensual contracts, *emptio uenditio*, *locatio conductio*, *mandatum* and *societas*, or the real contract of *depositum*, the Prætorian formula contains an authoritative instruction to the *iudex* to consider more than whether both parties strictly performed their legal obligations *quidquid ob eam rem Numerium Negidium Aulio Agerio dare facere oportet ex fide bona*, whatever the defendant ought to give to, do for, or is fitting for, the plaintiff according to the concept of good faith.[265]

Modern scholars have been unable to fully explain the meaning of good faith.[266] However, law and economics suggests that *bona fides* allowed Roman law to supplement incomplete contracts.[267] When the parties are able to stipulate the entire content of a contract, the mechanism design of *bene agere* or acting fairly requires that each party faithfully execute the obligations expressly stipulated, and nothing more.[268] When the parties are unable to stipulate the entire content of a contract, Roman law does not require the parties to act altruistically, but rather requires parties to go beyond the mere express terms.[269] Parties are required to act with *bona fides*; to respond to unstipulated eventualities without *dolus*[270] or *culpa*[271] within the bounds of foreseeability, *non etiam improuisum casum præstandum esse*.[272]

Modern scholars disagree about the exact standard of care that Roman lawyers applied because they miss the point of Prætorian *bona fides*.[273] The *iudex* evaluates on a case-by-case basis whether each party has acted as a *bonus uir*,[274] thus the standard of care varies. Whereas modern German civil law fits good faith and fair dealing, or *Treu und Glauben*, into groups

263 Digest of Justinian 44.4.4 (Paulus, Ad Edictum 7).

264 Translation taken from Samuel Parsons Scott, 5 The Civil Law 60 (1932).

265 See Abel Hendy Jones Greenidge, 1 *The Legal Procedure of Cicero's Time* 205-06 (1901).

266 See generally Simon Whittaker and Zimmermann, "Good Faith in European Contract Law: Surveying the Legal Landscape," in Zimmermann and Whittaker (editors), *Good Faith in European Contract Law* 16 (2000).

267 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI*, at 331.

268 See Digest of Justinian 19.2.21 (Javolenus, *Epistularum* 11).

269 See Digest of Justinian 19.2.22.3 (Paulus, *Ad edictum* 34).

270 Berger, *Encyclopedic Dictionary of Roman Law*, at 440.

271 *Idem*, at 419; Digest of Justinian 18.1.68 (Proculus, *Espistularum* 6).

272 Code of Justinian 4.35.13 (Diocletian and Maximian 290/293).

273 The concept gets rather short shrift in the literature. *Exempli gratia*, George Mousourakis, *The Historical and Institutional Context of Roman Law* 34 (2003).

274 Berger, *Encyclopedic Dictionary of Roman Law*, at 767.

of cases or *Fallgruppen*, Roman lawyers adopted a case-by-case approach to *iudicia bonæ fidei* where every situation will be different. If *iudicia bonæ fidei* could be reduced to typical situations, Roman lawyers would have adopted a solution based on the standardized contractual forms.[275] The Prætorian formula instructs the *iudex* to look at the unique circumstances of each case to figure out whether each party acted *ex fide bona* precisely because the unstipulated eventualities fail to conform to typical patterns.[276]

Incomplete contracting is particularly problematic and expensive when the *causa* or reason[277] of a contract is precisely that one party is better positioned than the other to acquire private information. Only in these situations of asymmetric information, does *bene agere* in Roman law demand that a party subordinate his interests entirely to the interests of others. Roman lawyers approach these situations by applying quasi-contractual obligations which are subsidiary to incomplete contracts.

C. *Private Cooperation Within Extracontractual Relationships*

Another aspect of Roman law that encourages cooperation involves extracontractual relationships. Whether the relationships arise through mistake, prior circumstances, or consensual acts, Roman private law recognizes and enforces certain 'extracontractual obligations,' as they are referred to by civilians. In general, persons who are supposed to act for the benefit of others are considered to have special relationships with each other which demand 'trust' —in its nontechnical sense—, despite the absence of any express agreement between them. Roman lawyers refer to certain obligations as *quasi ex contractu* or almost arising from a contract. The quasi-contractual obligations are similar, but not identical to obligations formed through a contract. Paralleling the closed system of typical contracts discussed in Section II.2.B, Roman lawyers conceived a 'closed number' or a

275 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI,* at 320.

276 Epstein discusses why different standards of fault are proper in different contexts, "The Many Faces of Fault in Contract Law: Or How to Do Economics Right, Without Really Trying," 107 *Michigan Law Review* 1461 (2009).

277 Pollock explains that the doctrine of consideration in the common law descends from the civil law *causa*, *Principles of Contract* 149-50 (1876).

closed system of standardized quasi-contractual forms: *negotiorum gestio*,[278] *tutela uel curæ gestio*,[279] *communio incidens*,[280] and *indebitum solutum*.[281]

In *negotiorum gestio*, someone undertakes to take care of some business or affair for another.[282] Roman law requires that the *negotii gestor* or person meddling in another's affairs[283] act in the interest of this other.[284] Once begun, the *negotii gestor* must attempt to complete his obligation,[285] and after finishing, he must give a full accounting of his actions to the *dominus negotii* —owner of the business or affair[286]— as well as return any fruits he may have acquired. Because of conflict of interest problems, a person is prevented from acquiring a private interest in the business he oversees. While the Roman law encourages cooperation, it also enforces realistic limits. It prevents what might look like cooperative arrangements but is actually one person interfering with another's property. Because one meddles in another's affairs without authorization, no contract is freely entered between the parties to this extracontractual relationship. To avoid officious interference with private interests, Roman law requires some underlying utility that necessitates meddling in the affairs of another: "*non autem utiliter negotia gerit, qui non necessariam uel quæ oneratura est*."[287]This limit is enforced by denying the *negotii gestor* a claim for reimbursement while still requiring the officious *negotii gestor* to be liable for *culpa levis*[288] and *casus fortuitus*.[289]

In *tutela uel curæ gestio*, someone looks after the affairs of another who is a minor or of unsound mind.[290] The tutor must look after the interests of his ward as if they were his own.[291] Where the incentives of the tutor are not perfectly aligned with the interests of the ward, Roman private law requires

278 Berger, *Encyclopedic Dictionary of Roman Law*, at 593.
279 *Idem*, at 747.
280 *Idem*, at 400.
281 *Idem*, at 498.
282 See Watson, *The Law of Obligations in the Later Roman Republic*, at 193-207.
283 Berger, *Encyclopedic Dictionary of Roman Law*, at 593-94.
284 Digest of Justinian 3.5.6.3 (Julianus, *Digestum* 3).
285 Digest of Justinian 3.5.3.10 (Ulpianus, *Ad edictum* 10).
286 *Ibidem.*
287 Digest of Justinian 3.5.9.1 (Ulpianus, *Ad edictum* 10).
288 Berger, *Encyclopedic Dictionary of Roman Law*, at 420.
289 *Idem*, at 476. Digest of Justinian 3.5.11 (Pomponius, *Ad Quintus Mucius* 21).
290 See Richard H. Helmholz, "The Roman Law of Guardianship in England, 1300-1600," 52 *Tulane Law Review* 223 (1978).
291 Digest of Justinian 26.7.15 (Paulus, *Sententiarum* 2).

the posting of a bond, the *cautio*, *cauere rem pupilli saluam fore*,[292] to guarantee the diligent management of the ward's affairs.[293]

Roman law also applies quasi-contractual obligations, in *communio incidens*, where several people unavoidably become joint property holders (see Section II.1) and in *indebitum solutum*, where someone unjustly enriches another.[294]

All quasi-contractual obligations are *iudicia bonæ fidei*.[295] The Prætorian formula instructs the iudex to review the circumstances of each case to decide whether a person has acted as a *bonus uir*.

Additionally, Roman lawyers refer to certain no-fault obligations as *quasi ex delicto* or almost arising from a delict. In civil law, a delict is a private wrong redressable by compensation. These obligations are similar to those imposed as a result of fault or carelessness. Roman lawyers conceive of a 'closed number' or a closed system of standardized quasi-delictual forms. Thus, Roman law subjects the *iudex*, to objective responsibility —'strict liability' is the term used by the common lawyer—, *qui litem suam fecerit*, who makes a trial his own;[296] the sea carrier, innkeeper and stable keeper whose employees steal or damage the property of a customer, *furtum uel damnum in naui aut caupone aut stabulo*;[297] as well as anyone from whose dwelling something is *deiectum uel effusum* (thrown or poured) onto the street,[298] or from whose building something is *positum uel suspensum* (placed or suspended) which falls and obstructs traffic.[299]

As we show, Roman private law recognizes and enforces a 'closed number' or a closed system of both quasi-contractual and quasi-delictual obligations as mechanism designs. However, modern civil law scholars disfavor the Justinianian labels of 'quasi contract' and 'quasi delict."[300] These schol-

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292 Berger, *Encyclopedic Dictionary of Roman Law*, at 385.

293 Institutes of Justinian 1.24.

294 Emily Sherwin dates the law of restitution back to Roman law, see "Restitution and Equity: An Analysis of the Principle of Unjust Enrichment," 79 *Texas Law Review* 2083 (2001).

295 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI*, at 331.

296 Berger, *Encyclopedic Dictionary of Roman Law*, at 519.

297 *Idem*, at 592.

298 See Kaser, *Roman Private Law*, at 216.

299 *Ibidem.*

300 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI*, at 332-33.

ars are unable to find any common thread linking these seemingly unrelated causes of action.[301] Law and economics suggests that what links the motley collection of personal actions is some kind of pre-existing or just-created relationship between people. These standardized extracontractual obligations —which lie between contracts and delicts— all involve what we will call 'relational obligations.'

D. *Private Cooperation Between Strangers*

One of the central functions of any legal system is to promote responsible behavior. One way to describe such behavior is consideration for the interests of others, but expecting altruism would be requiring too much of a legal system. Roman law encourages cooperation between persons acting for the benefit of others, even when such persons have not formed any agreement or are even unknown to each other.

Modern law uses criminal prosecution by the state's bureaucracy to impose cooperation even among strangers. Bureaucratic inertia, however, where government officials lack both the private incentives and information, impairs the effectiveness of such prosecution. Roman law is more adept in encouraging cooperation because it enables individuals to bring legal actions against others for intentional harms, without state involvement.

Roman law protects property and persons through civil rather than criminal means. Roman law imposes responsibility for intentional harms with *dolo malo* through a 'closed number' or a closed system of standardized civil delicts.[302] The standard Roman law delicts include several harms which modern law classifies as crimes against persons or property.[303] A wide variety of behaviors involving the involuntary removal of property from the control

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301 Nor can the motley collection of situations be subsumed under the law of restitution for unjust enrichment. See, *exempli gratia*, James Gordley, "Restitution Without Enrichment? Change of Position and Wegfall der Bereicherung," in Johnston and Zimmermann (editors), *Unjustified Enrichment: Key Issues in Comparative Perspective* 227, 236-37 (2002).

302 See Watson, *The Law of Obligations in the Later Roman Republic*, at 220-33, 248-73.

303 See David D. Friedman, "Private Prosecution and Enforcement in Roman Law," in Dari-Mattiacci and Kehoe (editors), *Roman Law and Economics: Exchange, Ownership, and Disputes*, at 327. Friedman's thesis is based on a mistaken chronology of private and public wrongs. For archaic examples of state enforcement and sanctions, look to the Law Stele of Hammurabi, Martha T. Roth, *Law Collections from Mesopotamia and Asia Minor* (1995); "Mesopotamian Legal Traditions and the Laws of Hammurabi," 71 *Chicago-Kent Law Review* 13 (1995).

of its rightful holder, *inuito domino*,[304] constitute *furtum*,[305] and if done with force, *rapina*.[306] As with modern law, the offense does not include removing property under the mistaken belief of ownership.[307] Roman law *iniuria*[308] includes many modern crimes against the person.[309] However, as with modern law, the offense does not include injuring someone negligently during a sports competition.[310] Roman private law prefigures the essential components of a modern legal system.

While Anglo-American common law retains its closed system of intentional torts, modern Latin American civil law relies overly on criminal, as opposed to civil liability. The intentional delicts of Roman law were left out in the nineteenth century codifications of civil law. Law and economics literature teaches that private law imposes civil liability for reasons other than compensating people for their losses or redistributing wealth or risk in a society.[311] Instead, a system of private law redistributes losses from those who are injured to those who caused the harms, creating incentives for people to prosecute those who fail to exercise due care for others.[312]

Moreover, Roman law imposes liability, even for unintentional harms done with culpa or negligence. The Roman civil delict *damnum iniuria datum*[313] evolved from a system which imposed objective responsibility to a system which declared subjective responsibility. Law and economics scholars may be puzzled by the change.[314] A determination of objective responsibility —'strict liability' at common law— in a case seems more straightforward for a *iudex* than establishing the proper subjective standard of care. Presenting evidence about inadequate precautions adds to the cost of the litigation. Transaction-cost economics overlooks the existence of asymmet-

304 Berger, *Encyclopedic Dictionary of Roman Law*, at 516.

305 *Idem*, at 480.

306 *Idem*, at 667.

307 Digest of Justinian 47.2.21.3 (Paulus, *Ad Sabinum* 40). A mental element of *contrectatio* (laying hands on with an intent to misappropriating, meddling with or misusing another's property) was a prerequisite. See Berger, *Encyclopedic Dictionary of Roman Law*, at 413.

308 *Idem*, at 502.

309 See Watson, *The Law of Obligations in the Later Roman Republic*, at 248-55.

310 Digest of Justinian 47.10.3.3 (Ulpianus, *Ad edictum* 56).

311 See Calabresi, *The Costs of Accidents: A Legal and Economic Analysis* 26 (1970).

312 Epstein argues that private actions in tort work better than state prosecution, "The Tort/Crime Distinction: A Generation Later," 76 *Boston University Law Review* 1, 13 (1996).

313 Berger, *Encyclopedic Dictionary of Roman Law*, at 548.

314 Epstein describes the choice between strict liability and negligence as a debate without conclusion in the literature, *Torts* 85, 89-107 (1999).

ric information. Because people privately observe the costs incurred in taking precautions and avoiding accidents, asymmetric information develops. Thus, a finding of civil responsibility for *damnum iniuria datum* under *culpa* makes public —'common knowledge' in game-theoretical terminology— private information regarding cost-effective precautions and fixes standards of care in different cases. For example, someone trimming and pruning a tree who risks dropping heavy branches onto a public walkway and fails to shout a warning is responsible for killing the slave passing by, "*si is in publicum decidat nec ille proclamavit*."[315]A farmer who chooses a windy day to burn thorny trees and grass is responsible for the damage to his neighbor's crops, "*si die uentoso id fecit, culpæ reus est*."[316] Asymmetric information explains why Roman lawyers moved away from objective responsibility and toward defining explicit subjective standards of care in specific cases. The later Roman juristic literature on *culpa* —'negligence' at common law—, thus, publicized the comparative costs of taking specific precautions, while the earlier no-fault system of responsibility neither inquired into, nor made public, this private information.[317]

3. *Roman Law of Commerce, Finance and Investment*

Roman private law works because it supports the marketplace. At the beginning of the twenty-first century, even conservative political pundits decried the excesses of unregulated capitalism (i.e., the 'free market'.)[318] These commentators generally assumed that public law, in the guise of a regulatory regime which oversees market participants, must exist alongside market institutions.[319] At the same time, mechanism design theory represents a powerful new paradigm.[320] A very able —perhaps incipient— line of law and economics scholarship, at last, is poised to show exactly how private

315 Digest of Justinian 9.2.31 (Paulus, *Ad Sabinum* 10).

316 Digest of Justinian 9.2.30.3 (Paulus, *Ad edictum* 22).

317 The Roman jurists wrote commentaries on the edict and the civil law. See Watson, *The Spirit of the Roman Law* 57-63 (1995).

318 Even Judge Posner has entered the fray with two recent books, which describe how insufficient public regulatory oversight led to the crisis. See *The Failure of Capitalism: The Crisis of '08 and the Descent into Depression* (2009); *The Crisis of Capitalist Democracy* (2010).

319 *Ibidem*, Judge Posner is mistaken. The solution to the global financial crisis of 2008, and the market problems we face in the twenty-first century, is to improve private legal institutions, rather than to ratchet up regulatory oversight.

320 See discussion of law and economics *supra* Section I.

litigation, as opposed to public regulation, supports, supplements, and corrects markets. Accordingly, talking about the vicissitudes of savage capitalism is naive. Marketplaces never go unregulated. As the Roman system shows, private law, rather than public law, can vitally support, supplement, and correct market institutions.

The marketplace intermediates between supply and demand through the price mechanism.[321] Rather than depending on the centralized control of a public authority, the price mechanism relies on the decentralized decisions made by countless private actors.[322] Economists tend to assume that markets clear effortlessly.[323] However, law and economics scholars know better.[324] For markets to clear, intermediaries must make markets. Market makers are brokers who manage inventories of commercial, financial and investment assets across space and time. They can buy where and when people want to sell, and sell where and when people want to buy.[325]

Roman private law supports the making of markets through the laws of property and obligations. Moreover, Roman commercial, financial and investment legal norms allow principals to reduce agency costs either by aligning their agents' interests with their own, or by monitoring their agents.[326] Principals accrue monitoring costs to keep agents from hiding their actions.[327] When a creditor hands over money to a debtor, many of the

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321 John Black, *A Dictionary of Economics* 353 (1997).

322 Market participants adjust prices or quantity up when faced with excess demand, and prices or quantity down as a response to excess supply. At equilibrium, the price mechanism produces a market-clearing price, at which the quantity demanded equals the quantity supplied. See Donald Rutherford, *Routledge Dictionary of Economics* 152 (1992). In this sense, the market clears.

323 Kenneth J. Arrow and Gerard Debreu formalize the assumptions of general market equilibrium, "Existence of Equilibrium for a Competitive Economy," 22 *Econometrica* 265 (1954).

324 Instead, law and economics scholarship pays close attention to instances of market failure, see, *exempli gratia*, Cooter and Thomas S. Ulen, *Law and Economics* 44-47 (Fourth edition, 2004.

325 Market intermediaries buy and sell with a spread between the asking price and the bid price. The bid/ask spread is the market maker's profit margin. See Naravan Dixit, *Academic Dictionary of Economics* 21-22 (2005).

326 The principal-agent problem arises because the agents, instead of acting and making decisions for the benefit of the principal, do so for their own benefit and contrary to the interests of the principal, where the principal is unable to observe the actions of the agents. See Graham Bannock *et alii*, *Dictionary of Economics* 307 (Fourth edition, 2004).

327 *Ibidem.*

actions of the debtor are unobservable by the creditor.[328] Thus, creditors risk the potential loss of their money.[329] To support financial intermediation, as briefly mentioned in Section II.1, the Roman law of property includes standardized forms of security interests in another's property such as *fiducia cum creditore contracta*, *datio pignoris* and *pignus conuentum*, discussed in Section II.3.[330] Law and economics literature clarifies that the collateral pledged must be more valuable to the debtor than to a creditor to align their interests.[331] However, debtors are less able to give up possession of valuable collateral. The *pignus conuentum* is especially useful because a debtor pledges property without delivering possession of the collateral. Moreover, the Roman law of obligations enables people to enter an arrangement of *fideiussio*[332] or personal guarantee through a *stipulatio* with the verbal form,[333] *Quod mihi debet, id fide tua esse iubes? Fideiubeo*.[334] Law and economics literature clarifies that a surety commonly has an ongoing relationship with the principle debtor, or is better able to observe the actions of the debtor.[335] Accordingly, by stipulating to an obligation accessory to that of the debtor, the surety effectively lowers the creditor's monitoring costs and the debtor's capital costs.[336]

Moreover, as discussed earlier, the typical Roman consensual and real standard contractual forms greatly facilitate commerce, finance and investment. *Depositum in sequestre* is particularly useful for business transactions or disputes.[337] Pending the outcome of a controversy or the satisfaction of a

328 *Idem*, at 323 (defining lender's risk).

329 *Ibidem.*

330 See Schulz, *Classical Roman Law*, at 401-27.

331 George G. Triantis explains that secured lending allows the creditor to hold the debtor's assets hostage, "Secured Debt Under Conditions of Imperfect Information," 21 *The Journal of Legal Studies* 246 (1992); Oliver E. Williamson, "Credible Commitments: Using Hostages to Support Exchange," 73 *American Economic Review* 519 (1983); ten years earlier, Thomas H. Jackson and Anthony T. Kronman were close to the answer, but failed to explain how collateral reduces the cost of monitoring the debtor, see "Secured Financing and Priorities Among Creditors," 88 *Yale Law Journal* 1143, 1150-61 (1979).

332 Berger, *Encyclopedic Dictionary of Roman Law*, at 350.

333 Schulz, *Classical Roman Law*, at 499-502.

334 Institutes of Gaius 3.116.

335 Avery Wiener Katz, "An Economic Analysis of the Guaranty Contract," 66 *University of Chicago Law Review* 47 (1999).

336 *Ibidem.*

337 Zimmermann, *The Law of Obligations: Roman Foundations of the Civilian Tradition*, at 219-20.

condition, several parties deposit a thing with a *sequester* —'escrow agent' in the common law— for safekeeping.[338] Once the controversy is resolved or the condition is met, the *sequester* must return whatever the parties deposited to the prevailing party or to the party stipulated.

The Romans also used the verbal contractual form of the *stipulatio* with a *pactum fiduciæ*[339] to make a *donatio sub modo*.[340] As part of a *donatio inter vivos*,[341] the donor imposes an obligation on the donee to do something or to make a distribution of funds.[342] The usefulness of a *donatio sub modo* is that the donor can stipulate almost anything he wants, and attach a *stipulatio poenæ* (discussed *infra* in Section IV) to guarantee that the donee will carry out the obligations. If the donee fails to carry out the charge, the donation is revocable.[343]

A variant of the verbal contract form useful in commercial and financial transactions is the literal contract form. Roman lawyers recognized that some kinds of written records of business transactions created enforceable obligations. Mere annotations made in a *codex expensi et accepti*[344] fail to create obligations, "*nuda ratio non facit aliquem debitorem*."[345] For example, a *ratio mensæ*,[346] or a *pecunia fænerare*[347] becomes binding only after money is handed over, as in the real contracts.

Further, Roman lawyers standardized various types of banking transactions. Banking transactions typically included interest without the need to enter a *stipulatio*. Charging *anatocismus coniunctus* or compound interest[348] was standard practice, at least during the Roman classical period.[349] Moreover, bankers or *argentarii*, held auctions for their clients, devising bidding systems that would attract the highest and best bidder, "*melior autem condicio*

338 Digest of Justinian 6.3.6 (Paulus, *Ad edictum* 2); Digest of Justinian 16.3.17 (Florentinus, *Institutionum* 7).

339 Berger, *Encyclopedic Dictionary of Roman Law*, at 471.

340 *Idem*, at 443.

341 *Ibidem.*

342 Code of Justinian 8.55 (Philippus 249).

343 Kaser, *Roman Private Law*, at 56.

344 Berger, *Encyclopedic Dictionary of Roman Law*, at 391.

345 Digest of Justinian 39.5.26 (Pomponius, *Ad Quintum Mucium* 4).

346 Berger, *Encyclopedic Dictionary of Roman Law*, at 667.

347 *Idem*, at 625.

348 *Idem*, at 361.

349 See Zimmermann, *The Law of Obligations: Roman Foundations of the Civilian Tradition*, at 169 and note 87 (clarifying that Justinian prohibits the charging of compound interest).

adferri uidetur, si pretio sit additum."[350] as well as issuing *receptum*[351] through a letter to guarantee payments for clients.[352]

Other nonspecialized private Roman legal institutions related to commerce, finance and investment also supported the market. Modern scholars fail to recognize that a Roman law of commerce, finance and investment existed.[353] The reason for this may be because it was not a separate body of law, but was embedded in the basic Roman civil law.[354] Modern legal systems separate the body of commercial, financial and investment law as a *lex specialis* from the *lex generalis* of the body of civil law.[355] Classical Roman private law was more congruent because it lacked this separation. The modern *ius mercatorum* developed during the Middle Ages between 500 and 1500 A.D.[356]

Similarly, many modern commentators fail to recognize that slavery was an economic institution.[357] The law of slavery was an important component of the Roman law of commerce, finance and investment. Roman law improved the efficiency of ancient slavery by improving slaves' incentives. Slavery is a highly inefficient and oppressive legal institution.[358] By giving slaves the option to manage a *peculium* which could include a fund, land, or business[359] and to buy their *manumissio*,[360] Roman private law simultaneously rendered slavery more efficient and less oppressive.[361]

As noted above, under classical Roman law, property was held by the *pater familias*.[362] However, conducting every transaction on behalf of his *filii*

350 Digest of Justinian 18.2.4 (UIpianus, *Ad Sabinum* 28).

351 Berger, *Encyclopedic Dictionary of Roman Law*, at 668.

352 Digest of Justinian 13.5.26 (Scævola, *Responsorum* 1).

353 Johnston argues that Roman commercial law has slipped through the consciousness of historians, *Roman Law in Context*, at ix (1999).

354 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI*, at 333.

355 Jurgen Basedow explains that mercantile law fails to be state-bound, "The State's Private Law and the Economy—Commercial Law as an Amalgam of Public and Private Rule-Making," 56 *American Journal of Comparative Law* 703 (2008).

356 See Raoul Charles van Caenegem, *An Historical Introduction to Private Law* 84-85 (D.E.L. Johnston translator, 1992).

357 See del Granado, *Œconomia iuris: Un libro de derecho del siglo XVI, refundido para el siglo XXI*, at 333.

358 See Richard A. Posner, "Ethical and Political Basis of Efficiency," 8 *Hofstra Law Review* 487, 501-02 (1980).

359 Berger, *Encyclopedic Dictionary of Roman Law*, at 624.

360 *Idem*, at 575.

361 See generally Watson, *Roman Slave Law* 95 (1987).

362 Berger, *Encyclopedic Dictionary of Roman Law*, at 620.

familias[363] and slaves was difficult and time-consuming. Accordingly, Roman law allowed both *filii familias* and *slaves* to manage a *peculium*.[364] The *peculium* is the property of the *pater familias*.[365] However, self-interest and social norms reinforced a social convention in Roman society requiring the *pater familias* to respect the *peculia* of both his *filii familias* and slaves.[366] This limit on the *pater familias* was in his best interest—without it, a *filius familias* would be strongly motivated to commit patricide. Similarly, this limit on the *pater familias* better aligned the interests of the *pater familias* with his slaves'. Without any expectation of manumission, a slave would also lack the incentive to exert effort for the benefit of the *pater familias* or to share information with him. The Roman poet Vergil, conveying a slave's despair at his inability to save his way to freedom, said: "*nec spes libertatis erat nec cura peculi*."[367]

Classical Roman private law does have at least one overall shortcoming: it lacks a sufficient system of agency.[368] The Roman law consensual contract of *mandatum* is a form of indirect agency,[369] but this is not a sufficient substitute for agency-proper.[370] The *mandatarius* is only able to act on his own behalf, even when he transacts business in the interest of another.[371] However, the Romans were not entirely without agency law. Both *filii familias* and slaves could act on behalf of the *pater familias*.[372] While this is not a well-regarded solution today, the Roman empowerment of the *pater familias* over both slaves and *filii familias* does lower what modern scholars recognize as a ubiquitous and endemic inefficiency in modern society: agency costs.[373] By simultaneously allowing the slave and *filius familias* to act for the

363 Schulz, *Classical Roman Law*, at 154.

364 *Idem*, at 154.

365 *Ibidem.*

366 See Johnston, *Roman Law in Context*, at 100.

367 Vergil, Ecloga I (42 B.C.)

368 See generally Watson, *Roman Slave Law*, at 107-08.

369 See Kehoe, "Mandate and the Management of Business in the Roman Empire," in Dari-Mattiacci and Kehoe (editors), *Roman Law and Economics: Institutions and Organizations* 307 (2020).

370 *Ibidem.*

371 Watson, *The Law of Obligations in the Later Roman Republic*, at 149.

372 See generally Aaron Kirschenbaum, *Sons, Slaves, and Freedmen in Roman Commerce* 32-33 (1987).

373 For an alternative account of agency costs in Roman business organizations, see Barbara Abatino and Dari-Mattiacci, "Agency Problems and Organizational Costs in Slave-Run Businesses," in Dari-Mattiacci and Kehoe (editors), *Roman Law and Economics: Institutions and Organizations*, at 273.

pater familias, and giving the *pater familias* enormous power —even ownership and the power of life and death— over his agents, Roman law went a long way in reducing agency costs.[374]

Roman law created incentive-compatible mechanisms for information revelation, thus supporting commercial, financial and investment intermediation. The *peculium* introduced limited liability to Roman law.[375] Both *filii familias* and slaves could manage a *peculium* independently.[376] Roman law limited the liability of the *patrimonium*[377] for obligations incurred by *filii familias* and slaves to the amount of the *peculium*.[378] If either a *filius familias* or slave incurred a delictual obligation, the *pater familias* had the option to hand over his *filius familias* or slave in lieu of payment.[379] In either case, the legal system limited the liability of the *sui iuris* to the *peculium*. The institution of limited liability enabled people to separate ownership and control in the economy.[380] Roman private law of commerce, finance and investment aligned the incentives of both *pater familias* and *filii familias* or slaves because the *peculium* was the separate interest of the filius familias or slave, less the payments to the *patrimonium* for the cost of capital.

Roman private law of commerce, finance and investment offered a flexible structure for business organizations. The Roman family operated effectively as a default sole-proprietorship limited-liability entity.[381] The *peculium* of a *filius familias* or slave included any *res in patrimonio nostro*.[382] Under Roman law, even *serui uicarii* or other slaves were deposited in their *peculium*.[383] Accordingly, a *pater familias* was able, under Roman law, to set up a *taberna* or *officina* and put the business into the *peculium* of either a *filius familias* or slave.[384] The variety of *tabernæ* in the Roman economy ran all the way from *tabernæ argentariæ* or banks to *tabernæ deuersoriæ* or inns; from *naues instructæ*

374 The power of the business owner over his managers aligned their interests. See Kirschenbaum, *Sons, Slaves, and Freedmen in Roman Commerce*, at 32-34.

375 See Johnston, *Roman Law in Context*, at 101.

376 *Idem*, at 101.

377 Berger, *Encyclopedic Dictionary of Roman Law*, at 622.

378 See Digest of Justinian 15.1.3.11 (Ulpianus, *Ad edictum* 29).

379 See generally Kirschenbaum, *Sons, Slaves, and Freedmen in Roman Commerce*, at 17.

380 See generally Adolf Augustus Berle Jr. and Gardiner Coit Means, *The Modern Corporation and Private Property* 4-6 (1932).

381 See Dari-Mattiacci *et alii*, "Depersonalization of Business in Ancient Rome," 31 *Oxford Journal of Legal Studies* 1 (2009).

382 Berger, *Encyclopedic Dictionary of Roman Law*, at 677.

383 Watson, *The Law of Obligations in the Later Roman Republic*, at 189.

384 Digest of Justinian 14.4.1 (Ulpianus, *Ad edictum* 29).

or *societates exercitorum* with fleets of ships to *societates publicanorum* or public companies for purposes of tax collection or public works; from *tabernæ casearіæ* or cheese factories, to *officinæ lateribus* or brick factories. The Roman poet Horace, describing such a workshop as a fiery hell, said: "*dum grauis Cyclopum Uulcanus ardens uisit officinas.*"[385]

Limited liability was the norm in Roman businesses or *negotiationes*[386] held in *peculia*.[387] However, Roman law also allowed individuals to choose nonstandard terms in their business organization, thus waiving limited liability.[388] For example, a *pater familias* who wished to opt out of limited liability could establish his unlimited liability by posting a sign in a visible place in the establishment, indicating that he runs the business under his own management.[389]

As mentioned above, incentivizing an optimum level of savings and investment requires markets.[390] People fail to know what the future will bring and never know when they will need to sell and when they will need to buy.[391] Accordingly, people will only save and invest in commercial and financial assets if market brokers make markets liquid enough so that people can buy and sell as needed.[392] Moreover, participants are similarly unwilling to transact or make investments unless commercial or financial assets are accurately priced by the market.[393] Market prices reflect accurate valuations of the utility and scarcity of assets when all material private information is publicized. In addition to the information revealing aspects of the law of property and the law of obligations, Roman private law includes uniquely commercial, financial or investment legal norms to support information revelation.[394]

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385 Horace, Odes 1.4 (23 B.C.)

386 Berger, *Encyclopedic Dictionary of Roman Law*, at 593.

387 Johnston, *Roman Law in Context*, at 101.

388 For an alternative account of asset partitioning in Roman business organizations, see Henry Hansmann *et alii*, "Incomplete Organizations: Legal Entities and Asset Partitioning in Roman Commerce," in Dari-Mattiacci and Kehoe (editors), *Roman Law and Economics: Institutions and Organizations*, at 199.

389 Digest of Justinian 14.3.11.3 (Ulpianus, *Ad edictum* 28).

390 Tibor Scitovsky describes benefits of real-world markets, "The Benefits of Asymmetric Markets," 4 *Journal of Economic Perspectives* 135, 136, 142 (1990).

391 Sanford J. Grossman and Merton H. Miller describe market intermediaries as filling gaps arising from imperfect synchronization, "Liquidity and Market Structure," 43 *Journal of Finance* 617, 619, 620 (1988).

392 *Idem*, at 618.

393 Graham Bannock *et alii*, *The Penguin Dictionary of Economics* 47 (Sixth edition, 1998).

394 For a discussion of the Roman norms that induce the revelation of information, see

The *uenaliciarii* or slave dealers[395] who frequented the slave market in Rome brokered equity capital markets. Slavery, as discussed above, lowered agency costs.[396] Slaves also constituted a form of living tradable shares in businesses. The sale of a slave who held a *taberna* or *officina* in his peculium was equivalent to selling the business. *Serui communis* or commonly-owned slaves[397] were used in conjunction with the consensual contractual form of *societas* to bring rationally ignorant investors together, without forfeiting the protection of limited liability.

The Ædilitian regulation of the slave market addresses problems of asymmetric information that go beyond supplying a much-needed skilled labor force.[398] The *ædile* —magistrate in charge of public works— required a *uenaliciarius* to *pronuntianto in uenditione* (reveal at the moment of sale) any material private information affecting the valuation of the slave (or business.) Moreover, the *ædile* established objective responsibility for the failure to divulge information or for any contradiction with a *dictum promissumue* or express warranty given.[399] However, *nudam laudem* or mere puffery or laudation of a slave (or business) was excused.[400] In addition, Roman law allowed the buyer of a slave (or business) to institute legal proceedings against the majority shareowner or *cuius maior pars aut nulla minor est*[401] of a *serui communis*.[402] Law and economics literature explains that information revelation gives better protection to market makers than a system which *ex post* imposes a penalty on persons for trading with private information.[403]

The Roman law of business organizations was not a separate body of law; it was embedded in the basic Roman civil law. Nor did *societates publicanorum* have a clear corporate personality or *partes* —nonliving tradable shares—, which are mechanism designs of the modern joint-stock compa-

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Abatino and Dari-Mattiacci, "The Dual Origin of the Duty to Disclose in Roman Law," in Dari-Mattiacci and Kehoe (editors), *Roman Law and Economics: Exchange, Ownership, and Disputes*, at 401.

395 Berger, *Encyclopedic Dictionary of Roman Law*, at 759.

396 See Watson, *Roman Slave Law*, at 107.

397 Berger, *Encyclopedic Dictionary of Roman Law*, at 705.

398 *Exempli gratia*, J. A. Crook states that the division of labor in society means that sellers have more information about their products than do buyers, *Law and Life of Rome* 181 (1967). See also Scitovsky, "The Benefits of Asymmetric Markets," at 138.

399 Digest of Justinian 21.1.1.1 (Ulpianus, *Ad edictum aedilium curulium* 1).

400 Digest of Justinian 21.1.19 (Ulpianus, *Ad edictum aedilium curulium* 1).

401 Digest of Justinian 21.1.44.1 (Paulus, *Ad edictum aedilium curulium* 2).

402 Digest of Justinian 21.1.44 (Paulus, *Ad edictum aedilium curulium* 2).

403 See generally Henry G. Manne, *Insider Trading and the Stock Market* 86-90 (1966).

ny.[404] Instead, the forms that Roman business organizations took were more flexible and less well-defined than modern legal[405] or business scholars[406] realize.

III. Social Norms Complete Private Ordering in Roman Private Law

Inert legal positivism has discussed the possibility of combining law and morality.[407] The law and economics movement, however, demonstrates the usefulness of including morality within the law. Law and economics scholarship has only begun to explore this interaction.[408] Roman legal scholarship may help law and economics scholars better understand how social and legal norms interact.

The Roman system creates a competitive environment of bounded private domains within which both central planning and social norms can operate. Roman law removes public regulation from private spaces and replaces it with private initiative.[409]

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404 Geoffrey Poitras and Manuela Geranio rebut the claim of significant trading in *partes* or 'nonliving shares' of the *societates publicanorum*, "Trading of shares in the Societates Publicanorum?," 61 *Explorations in Economic History* 95 (2016); Poitras and Frederick Willeboordse rebut the claim of corporate personality of the *societates publicanorum*, "The *societas publicanorum* and corporate personality in Roman private law," 2019 *Business History* 1 (2019).

405 For an alternative account of Roman business organizations, see Andreas Martin Fleckner, "Roman Business Associations," in Dari-Mattiacci and Kehoe (editors), *Roman Law and Economics: Institutions and Organizations*, at 233.

406 Ulrike Malmendier, "Law and Finance at the Origin" 47 *Journal of Economic Literature* 1076 (2009); "Societas," in R. Bagnall, K. Brodersen, C. Champion, A. Erskine, and S. Hübner (eds), *Encyclopedia of Ancient History* (2012); "Publicani," *idem*; "Roman Law and the Law-and-Finance Debate," in I. Reichard and M. Schermaier (editors), *Festschrift für Rolf Knütel* (2010); "Roman Shares," in W. Goetzmann and G. Rouwenhorst (editors), *The Origins of Value: The Financial Innovations that Created Modern Capital Markets* 31-42, 361-365 (2005); *Societas publicanorum* (2002).

407 See generally John Austin, 1 *Lectures on Jurisprudence or the Philosophy of Positive Law* (Fifth edition, 1875). See generally Herbert Lionel Adolphus Hart, *The Concept of Law* (Second edition, 1994).

408 Early explanations of the interaction between law and morality fail, see Cooter, "Normative Failure Theory of Law," 82 *Cornell Law Review* 947 (1997).

409 Our succession of 'oohs' and 'aaahs' over Roman private law have been shared by other scholars in the past. On the German Pandectists's embrace of private-law ideology, see Peter Stein, *Roman Law in European History* 121-23 (1999).

The Roman law of property defines a domain where the *dominus* may act as he chooses (with the limits discussed above in Section I.1.B) and protects the possessor who acquired his possession *nec vi, nec clam, nec precario*, that is, not by force, nor stealth, nor license.[410] Within the boundaries of a *dominium* or of a legally protected possession, private property holders or possessors are able to manage resources without any interference from others. Where social norms are more effective in private ordering, a property owner might allow these informal norms to operate within the domain that he controls.[411]

The Roman law of obligations includes gratuitous typical contracts, such as the consensual contract of *mandatum* and the real contracts of *depositum* and *commodatum*.[412] Roman gratuitous contracts may seem odd from a modern vantage point. However, through these contracts, social norms such as *fides*,[413] *pietas*,[414] *officium*,[415] *humanitas*,[416] *munificentia*,[417] *grauitas*[418] and *amicitia*,[419] alongside complex networks of patronage, operated to complete private ordering.[420] Thus, *mutuum* was a gratuitous loan when done to maintain friendly relations between neighbors. Otherwise, the parties would include a *stipulatio* to cover the interest due.[421]

Moreover, in classical Roman law, violations of quasi-contractual obligations were publicly frowned upon, carrying the type of stigma reserved for criminal convictions in modern society.[422] In addition to legal liability, the legal system imposed a reputational punishment, *infamia*.[423] Such extra-contractual relationships presupposed honest behavior, and a condemnatory judgment for a betrayal of confidence attracted social censure and sub-

410 Rudolph Sohm, *The Institutes of Roman Law* section 54 at 254 (James Crawford Ledlie translator, 1892).

411 O. F. Robinson, *The Sources of Roman law: Problems and Methods for Ancient Historians* 89 (1997).

412 Watson, *The State, Law, and Religion: Pagan Rome* 41 (1992).

413 Berger, *Encyclopedic Dictionary of Roman Law*, at 471.

414 *Idem*, at 630.

415 *Idem*, at 607.

416 *Idem*, at 489.

417 Charlton T. Lewis, *An Elementary Latin Dictionary* 52 (1915).

418 Berger, *Encyclopedic Dictionary of Roman Law*, at 483.

419 Lewis, *An Elementary Latin Dictionary*, at 53.

420 See Mousourakis, *The Historical and Institutional Context of Roman Law*, at 45-47.

421 See Watson, *The Spirit of the Roman Law*, at 130.

422 See generally Peter Garnsey, *Social Status and Legal Privilege in the Roman Empire* (1970).

423 Berger, *Encyclopedic Dictionary of Roman Law*, at 500. See generally Greenidge, *Infamia: Its Place in Roman Public and Private Law* 18-40, 154-70 (1894).

jected the person to legal and procedural disabilities. Thus, the private enforcement of social norms acted to reinforce the efficacy of formal legal sanctions.

As we have seen in Section II.3, Roman law conflates together the family and the firm. Social norms govern Roman family life. Thus, a social convention in Roman society required the *pater familias* to respect the *peculia* of both his *filii familias* and slaves. Much of the area that modern law closely regulates through labor legislation, Roman law largely leaves to social norms.[424] Under the Roman law of obligations, employment contracts are largely indistinguishable from other consensual contracts for hire —'at will' contracts in the common law—.[425]

Roman law explicitly removes legal regulation from countless areas where the private enforcement of social norms is more effective than formal legal sanctions, such as enforcing promises to marry.[426] Roman private law left an *obligatio naturalis* to the internal moral compass found within every Roman and to the private enforcement of social norms. Accordingly, Roman legal scholarship offers law and economics scholars a rare and unique opportunity to take an up-close look at the interaction of legal and social norms in private ordering.

IV. Private Self-Help in Roman Law Procedure

In Roman law, litigation before an *iudex* is considered a private contract, *litis contestatio*.[427] To litigate their claim or offer a defense, the parties must stipulate before the magistrate that they will abide by the *sententia*[428] of the *iudex*.[429] The new contract novates the earlier obligation that formed the basis for their claims, defenses, or counterclaims—no matter what their nature.[430] After

424 Jürgen Habermas is disingenuous when he denies the private character of Roman law and makes bold to compare local understandings of Roman social norms with public law limitations, see *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society* 76 (Thomas Burger translator, 1992).

425 Habermas concedes as much, *ibidem.*

426 Code of Justinian 5.1 (Diocletan and Maximus 293).

427 Berger, *Encyclopedic Dictionary of Roman Law*, at 566.

428 *Idem*, at 700.

429 Greenidge, *Infamia: Its Place in Roman Public and Private Law*, at 243-48.

430 *Idem*, at 248.

the *litis contestatio*, the pre-existing obligations cease to exist.[431] Accordingly, the Roman system of procedure under the control of the *prætor* is a private system of legally-binding arbitration without appeal.[432]

Moreover, in Roman law, private parties can use self-help measures by executing *sententiæ*. Beyond constituting means for the execution of *res iudicata*,[433] private self-help measures provide a means to effectively bring a legal action.[434] Any creditor whose claim was untrue, yet laid their hands on the debtor or *manus iniectio*[435] or took property of the debtor in pledge or *pignoris capio*, risked liability in *duplum*.[436] However, debtors who faced claims knowing they were true made arrangements for payment, through a *confessio in iure*[437] rather than proceeded before the iudex, as von Jhering explains.[438] Accordingly, *manus iniectio* and *pignoris capio* are private self-help means of collection, able to work without the intervention of the curule authorities.[439]

If the debtor breaches an obligation, the *iudex* must assess the value of the performance to the creditor. However, establishing *quanti ea res est*[440] can be difficult where an obligation is uncertain. Accordingly, Roman law allowed the parties to agree privately on the amount of damages, by entering a *stipulatio poenæ*.[441] The long-winded ceremonial statements of the verbal contractual form publicized an enforceable unilateral obligation to pay a specified amount of damages for a breach of contract. Moreover, *stipulationes poenarum* were also a means to enforce immaterial interests that could not be reduced to a pecuniary amount.[442] What Anglo-American scholars overlook, and a *stipulatio poenæ* may capture, is that damages from disappointed expectations

431 *Ibidem*.

432 A defendant rarely refused to confirm or rebut a plaintiff's claim because he would be *iudicatus*, that is, condemned. Greenidge, *Infamia: Its Place in Roman Public and Private Law*, at 255.

433 Berger, *Encyclopedic Dictionary of Roman Law*, at 678.

434 Mousourakis, *The Historical and Institutional Context of Roman Law*, at 137-39.

435 Berger, *Encyclopedic Dictionary of Roman Law*, at 577.

436 *Idem*, at 406.

437 *Ibidem.*

438 See generally von Jhering, *Der Besitzwille: Zugleich eine Kritik der herrschenden juristischen Methode*.

439 H. F. Jolowicz and Barry Nicholas describe legalized self-help, *Historical Introduction to the Study of Roman Law* 165-66 (Third edition, 1972).

440 Digest of Justinian 13, 3, 4 (Gaius, *Ad Edictum Provinciale* 9).

441 Berger, *Encyclopedic Dictionary of Roman Law*, at 718.

442 Zimmermann, *The Law of Obligations: Roman Foundations of the Civilian Tradition*, at 97.

are often much greater than the amount of the obligation.[443] Nonetheless, the parties had to enter into *stipulationes poenarum* in good faith in estimating the value of the performance to the creditor.

Lastly, rather than prosecute certain public claims against private persons, the Roman state privatized tax and debt collection. *Societates publicanorum*[444] could purchase these claims and use the private self-help measures discussed above to satisfy them.[445]

V. Roman Legal Scholarship in the Restatement of Civil Law Along the Lines of Law and Economics

The Latin America-Caribbean region must grasp the nettle of globalization. To survive, each Latin American and Caribbean country needs a competitive economy. Many countries in the region liberalized and privatized their economies in the 1990s, forgetting that their legal systems had been socialized and constitutionalized during much of the twentieth century under the influence of French legal sociology.[446] Latin American and Caribbean leaders are no longer the naive backers of an earlier state-centered, economic age. However, the new crop of technocrats remains unaware of the extraordinary transformation of the legal system that must precede privatization of inefficient state enterprises.

The way that civil law scholars organize the texts of Roman law (or Pandects) is called the 'system of Pandects.' The economic analysis of Roman law suggests a new *Pandektensystem* within the civil law tradition.[447] Rather than classifying legal institutions along the lines of Quintus Mucius Scævo-

443 See Charles Calleros, "Punitive Damages, Liquidated Damages, and Clauses Penales in Contract Actions: A Comparative Analysis of the American Common Law and the French Civil Code," 32 *Brooklyn Journal of International Law* 67, 117 (2006).

444 *Publicani* are discussed *supra* in Section II.3.

445 See Hilary Swain and Mark Everson Davies, *Aspects of Roman History, 82 BC-AD 14: A Source-Based Approach* 363 (2010).

446 See generally Martin A. Rogoff, "The Individual, the Community, the State, and Law: The Contemporary Relevance of the Legal Philosophy of Leon Duguit," 7 *Columbia Journal of European Law* 477 (2001), reviewing Leon Duguit, *L'Etat: Le Droit Objectif et la Loi Positive* (1901).

447 See del Granado, *De iure ciuili in artem redigendo: Nuevo proyecto de recodificación del derecho privado para el siglo XXI* (2018).

la's classification of 'persons,' 'things,' and 'actions,'[448] a law and economics approach suggests a new arrangement of civil law.

Civil and commercial law must be brought together. The centuries-old civil law category of 'modes of acquiring property' should be replaced with a new category of 'modes of maintaining property over time.' Moreover, the 'modes of maintaining property,' should be moved to the book on 'property.' New standardized forms of rights in the property of others, such as private mineral or industrial rights in the property of others, must be added to the book on 'property.' New standardized contractual forms, such as 'insurance' and 'annuity' contracts, must be added to the book on 'obligations.' Law and economics suggests the expansion of the Roman system of subsidiary quasi-contractual or relational obligations, undergirded by the concept of good faith.[449] Law and economics suggests the depenalization —'decriminalization' at common law— of the legal system and the expansion of the Roman system of civil delicts, including the intentional delicts which have all but disappeared from civil law.[450] Titles on 'commercial and financial intermediation' must be added to complement the book on 'obligations.'

Most fundamentally, a book on the law of 'civil procedure' must be brought back into the civil code. The nineteenth century codifications of civil law placed civil procedure in the hands of the state and professional judges. Thus, Napoleon, to excoriate the excesses of the French Revolution,[451] promulgated all matters relating to civil procedure as a separate code, the Code de procédure civile of 1806.[452] Bringing procedural law back into the realm of private civil law (in essence, privatizing legal procedure) is the most effective way to improve civil legal systems. Separate nineteenth century codes for civil procedure must be reintegrated into basic civil law. Modern legal systems could incorporate privatized procedural law through the reintroduction of Roman-type arbitration proceedings.

Here are some other points to keep in mind: Roman law lacks labor law. Employment contracts are 'at will'—they are treated like any other consen-

448 Alejandro Guzmán Brito, "El carácter dialéctico del sistema de las Institutiones de Gayo," in *Estudios de derecho romano en homenaje al Prof. Dr. D. Francisco Samper* 427-457 (2007).

449 *Ibidem.*

450 See generally Guzman Brito, *La codificacion civil en Iberoamerica* (2000).

451 The French revolutionaries had sought for a brief, magically elusive moment, to move away from public adjudication toward private dispute resolution. See Alain Wijffels, "French Civil Procedure (1806-1975)," in Cornelis Hendrik van Rhee (editor), *European Traditions in Civil Procedure* 26 (2005).

452 *Idem*, at 25.

sual contract for *locatio conductio*.[453] Roman law lacks consumer protection law, other than incentive-compatible mechanisms for information revelation.[454] When the emperors intruded into the legal system, private law created new forms to escape the public law's most severe restrictions, such as in the shift from *fidepromissio*[455] to *fideiussio*.[456] Roman law lacks antitrust law. Antitrust law seeks to promote competition through state intervention. That is quite a paradox, considering that most limits on competition are themselves created by state intervention. Roman law lacks regulatory law. Roman *iuris prudentes* favored letting markets self-regulate against the background of an effective system of private law. Because Roman private law enabled the private sector to decentralize the management of resources effectively, the Roman economy of the second century B.C. achieved levels of prosperity that remained unparalleled until the late eighteenth century A.D. with the beginning of the Industrial Revolution.

Roman law controlled external effects from within property law itself. In contrast, both present-day common law and civil law uses nonproperty doctrines to limit property rights. In the early twentieth century, French legal scholars interpreted a newly discovered Roman text by the jurist Gaius about the mistreatment of slaves which suggested that a property holder may not use his rights with *dolus* or the intention to do harm to another—"*male enim nostro iure uti non debemus*."[457] Civil law must avoid the use of nonproperty doctrines to avoid external effects that would destroy the value of property.

Moreover, in the early twentieth century, French legal sociology undermined the well-worn concept of the *ius commune* of private subjective rights.[458] French legal authors attempted to objectify the concept of private rights as a 'social function' of property, contracts or companies, provisionally given to private persons to manage, with a hesitation ready to blossom into outright distrust under the ever-watchful eye of the state. Private law must leave to owners all choices (allowed under the law) with respect

453 Berger, *Encyclopedic Dictionary of Roman Law*, at 567.

454 See Bruce W. Frier, "Tenant Remedies for Unsuitable Conditions Arising after Entry," in Roger S. Bagnall and William V. Harris (editors), *Studies in Roman Law: In Memory of A. Arthur Schiller* 64-79, 73 (1986).

455 Berger, *Encyclopedic Dictionary of Roman Law*, at 350.

456 Zimmermann, *The Law of Obligations: Roman Foundations of the Civilian Tradition*, at 121.

457 Institutes of Gaius 1.53.

458 See generally M.C. Mirow, "The Social-Obligation Norm of Property: Duguit, Hayem, and Others," 22 *Florida Journal of International Law* 191 (2010).

to the use, enjoyment, and disposition of things within private domains. Private choices to cooperate within what the law allows must be left to the private contracting parties.

Contractual rigidity is another modern problem with a Roman solution. Standardized contractual forms are insufficient for the variety of private choices to cooperate. Therefore, social cooperation is hampered unless people are empowered to form unstandardized atypical contracts. Atypical contracts in Roman law take the verbal contractual form of *stipulatio* with ceremonial trappings. This alternative means of contracting has survived into modern civil law in the form of notarial instruments. However, modern civil law misses the atypical character of stipulated notarial instruments. Therefore, the civil law system has lost the flexibility that the Roman *stipulatio* gave to contractual parties. The legal scholarship from the *ius commune* makes atypical contracts enforceable through the doctrine of *causa* or consideration.[459] The commentator Bartolus misreads a text that mentions that a *stipulatio* has a reason or *causa* (consideration) to mean that atypical contracts with a *causa* are enforceable even without the ceremonial trappings of the *stipulatio*.[460] Although atypical contracts are enforceable in theory, in practice, modern notary publics often attempt to make atypical agreements fall into one of the typical standard contractual forms. All too often, notary publics rewrite contracts along typical standardized lines. A better alternative would be to follow the practice of Roman *tabelliones*. *Tabelliones* publicized the atypical obligations that contractual parties stipulated, without changing the terms of the agreements.[461] An example of where modern civil law has lost the flexibility of the *stipulatio* is the *pactum fiduciæ* to make a *donatio sub modo*. In civil law jurisdictions today, trust-like relationships —where they exist— straitjacket contractual parties with standardized commercial contracts that are too rigid, if not utterly inflexible.

The civil law and the common law are equal in their protection and enhancement of freedom of contract. However, the common law consists of a unique system of quasi-contractual or relational obligations. The development of the *ius honorarium*, under which the *prætor* formulated the concept of good faith, parallels the historical development of equity in common

459 See Gordley, *The Philosophical Origins of Modern Contract Doctrine* 49 (1991).

460 Bartolus, *Digesti noui partem commentaria* (1544), on Digest of Justinian 44.4.2.(a).3 (Ulpianus, *Ad legem Iuliam et Papiam* 19).

461 Berger, *Encyclopedic Dictionary of Roman Law*, at 727-28.

law systems.[462] At equity, the chancery courts established quasi-contractual or relational obligations in the form of 'fiduciary duties.' Latin American civil law needs to go further in this direction. One way to do this is by following the model of German civil law in its expansion of *bona fides*.[463] This expanded *bona fides* accomplishes many of the same tasks that fiduciary duties carry out in the common law.[464] Unfortunately, German civil law has expanded the meaning of *bona fides* to the point where it abridges the freedom to contract.[465] The *Fallgruppen* where *bona fides* applies are too broad.

By far, the greatest danger facing Latin American law today is the German tradition of constitutionalization of private law—the so-called doctrine of *mittelbare Drittwirkung* of fundamental rights in private law, made possible through the *Generalklauseln* that require the observance of *Treu und Glauben* in the German Civil Code.[466] German law stretches the mechanism design of *bona fides* by giving judges the counter-productive ability to interfere with private choices regarding the substance of contracts.[467] In this regard, perhaps French civil law is a better model for Latin America because it has been less prone to deny freedom of contract.[468]

Addressing the problems of civilian legal systems is an exquisitely difficult balancing act, one legal scholars have shown to be ill-equipped to handle in the past. But handle it they must. In short, Roman law combined with law and economics are particularly reliable guideposts to the paradigmatic private legal system of the twenty-first century.

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462 See generally Buckland, *Equity in Roman Law*.

463 Burgerliches Gesetzbuch sections 138, 157, 242, 826.

464 See generally Franz Wieacker, *Zur rechtstheoretische Prazisierung des § 242* (1956).

465 Whittaker and Zimmermann, "Coming to Terms with Good Faith," in Whittaker and Zimmermann (editors), *Good Faith In European Contract Law* 690 (2000).

466 See generally Hans Carl Nipperdey, *Grundrechte und Privatrecht* (1961).

467 *Ibidem.*

468 *Ibidem.*