Contract + Tort = Property: The Trade Secret Illustration

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I. Introduction

For centuries, the substantive foundations of Anglo-American civil law have been the doctrinal trio of contracts, torts, and property.1 Even at present, separate courses on these three basic bodies of civil law are the mainstay of the critical first year of American legal education.2 Legal philosophers have debated and analyzed the nature of the three for almost as long.3 This article describes a new way of evaluating the trio and their interrelationships, based on Hegel’s famous dialectical method. This article suggests an arithmetic analysis, namely that property is the sum of tort and contract, and uses trade secrets, a type of intellectual property, as the paradigm. The rights, remedies, and available defendants in the three doctrines, as trade secret law illustrates, provide evidence that the analysis is sound, and the article concludes with practical consequences and examples the analysis implies.

2 See, e.g., http://www.law.harvard.edu/prospective/jd/about/curriculum.html.
II. Thesis

In the modern American legal system, the concept or doctrine of property is the arithmetic sum of the concepts or doctrines of contracts and torts; trade secret law is an excellent illustration of this principle.

III. Roadmap

This article commences with an introduction to the use of Hegel’s famous dialectical method as an arithmetic analysis of law. It reviews Hegel’s assertion that the sum of property and contract is tort and crime, and then suggests a better dialectic is that contract plus tort equals property. This article then reviews the doctrines of contract, tort, and property, focusing on the plaintiff’s rights and remedies, and who can be defendants in each of the three doctrines. The article next reviews the law of one particular type of intellectual property, trade secrets, because this article uses trade secrets as a good example of how contract and tort total to property. This article then culminates in an explanation of how trade secrets illustrate that property is the sum of contract and tort, because property rights, remedies, and defendants are the total of contract and tort rights, remedies, and defendants. This article gives illustrations of how the thesis explains certain oddities from property law other than intellectual property, and the article then concludes.

IV. Arithmetic legal analysis

Recent decades have seen an explosion of various ways for academics and practitioners to analyze the law. Famous examples include economic analysis of law, feminist analysis of law, psychological (and even psychoanalytic) analysis of law, and so forth. This article is in the spirit of mathematical analysis of law, suggesting that property is the arithmetic sum of contract and tort. Mathematical analysis of law is not new; influential German idealist philosopher Georg Wilhelm Friedrich Hegel was one who used it, with his famous dialectical method.

a. Hegel

i. Dialectics are sums

While regarded as one of the world’s greatest philosophers in all of history, scholars today principally remember him for his dialectical method. The “Idea,”

Hegel’s name for reality, develops or “unfolds,” according to him, through an unending dialectical process.\textsuperscript{11} 

He describes this process as beginning with a concept, any concept, which he called the thesis.\textsuperscript{12} The concept immediately implies its opposite, or negation, which he naturally called the antithesis.\textsuperscript{13} The thesis and its antithesis, being opposites, conflict with each other.\textsuperscript{14} The conflict resolves itself through a creative process of compromise between the thesis and the antithesis. Hegel called the outcome the synthesis.\textsuperscript{15} 

The synthesis is its own wholly new concept; i.e., the synthesis is a new thesis.\textsuperscript{16} This new thesis immediately implies its own antithesis, these two synthesize to create another new thesis, and the process continues forever.\textsuperscript{17} 

One of Hegel’s most famous dialectics, that of existence, serves well as an example. Being is the thesis, but being implies its opposite, the absence of being, which is nothingness. Bringing the thesis, being, and its antithesis, nothing, together, results in the new concept of becoming (which Hegel calls the “unity” of being and nothingness), the synthesis. The synthesis, becoming, is the new thesis, which then implies its own negation, and on the process goes.\textsuperscript{18} 

Hegel’s concept of thesis and antithesis coming together and resulting in something new, while unquestionably brilliant, is nothing more than arithmetic addition (part of the elegant simplicity that makes his concept so remarkable).\textsuperscript{19} In the mathematical process of addition, two values come together (unify) and result in a new value.\textsuperscript{20} 

\textit{ii. Philosophy of Right} 

\textsuperscript{11} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1640 (1812 – 1831, public domain PDF).
\textsuperscript{12} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1631 (1812 – 1831, public domain PDF).
\textsuperscript{13} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1632 (1812 – 1831, public domain PDF).
\textsuperscript{14} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1633 (1812 – 1831, public domain PDF).
\textsuperscript{15} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1633 (1812 – 1831, public domain PDF).
\textsuperscript{16} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1639 (1812 – 1831, public domain PDF).
\textsuperscript{17} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1640 (1812 – 1831, public domain PDF).
\textsuperscript{19} Georg Wilhelm Friedrich Hegel, \textit{The Science of Logic} book III § 1633 (1812 – 1831, public domain PDF).
\textsuperscript{20} See generally, e.g., Bergman, George, \textit{An Invitation to General Algebra and Universal Constructions} (Henry Helson 1998).
Hegel applied his dialectical theory to law (and much else) in his book *Elements of the Philosophy of Right*. In that work, Hegel described property as a function of individualism. A person, a human individual, makes herself complete, according to Hegel, by (among other things) possessing, enjoying, and using property.\(^ {21}\) Property rights are exclusive rights, in two senses: one, only a specific and relatively small group of persons (usually just one) owns any particular private property; and two, property rights are rights to *exclude* non-owners from possession and use of the particular property.\(^ {22}\)

iii. Thesis: property (one person’s rights alone)

One acquires property, according to Hegel, by involving the outside object (which thus becomes the property) with oneself, or conversely, by involving oneself with the object.\(^ {23}\) He believed that property helps define its owner, and helps the owner express himself as a person.\(^ {24}\) Hegel followed the lead of British philosopher John Locke, who earlier suggested a narrower version of Hegel’s hypothesis, writing that a person obtains property by mixing the person’s labor with the property (e.g., farming land to produce edible crops, etc.).\(^ {25}\) Hegel’s broader theory would allow a person to become the owner of, e.g., a tract of land, merely by choosing it and fencing it off.\(^ {26}\)

Hegel’s pure theory of property, as a dialectical thesis, involves only the owning person and the owned object.\(^ {27}\) The very essence of property as a concept is that it excludes everyone, and indeed everything, else.\(^ {28}\) For any given property, all other objects that could be property, and all other persons who could be owners, are by definition excluded from this particular owner / property relationship.\(^ {29}\) Here Hegel followed the celebrated “state of nature” concept of Locke and other champions of the social contract, such as British philosopher Thomas Hobbes and French philosopher Jean-Jacques Rousseau, all of whom suggested that without law, a person can own property only by personally and physically seizing and defending the property.\(^ {30}\)

Hegel’s *Philosophy of Right* states, however, that any person is only truly free and whole living in a civilized society with other people and human institutions.\(^ {31}\) He therefore agrees with Hobbes, Locke, and Rousseau that the social contract is necessary.\(^ {32}\) The pure owner pursuant to Hegel’s property thesis will need to defend her claims against all other persons’ claims by herself; for example, to prevent trespassers,

\(^ {21}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 67 (public domain PDF 1822).
\(^ {22}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 50 (public domain PDF 1822).
\(^ {23}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 52 (public domain PDF 1822).
\(^ {24}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 45 (public domain PDF 1822).
\(^ {25}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 54 (public domain PDF 1822).
\(^ {26}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 67 (public domain PDF 1822).
\(^ {27}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 65 (public domain PDF 1822).
\(^ {28}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 50 (public domain PDF 1822).
\(^ {29}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 50 (public domain PDF 1822).
\(^ {31}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 65 (public domain PDF 1822).
\(^ {32}\) Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 75 (public domain PDF 1822).
she might have to build an electrified fence or remain on the property with a weapon at all times. Another problem she faces is what to do with the bounty of the land (e.g. crops) beyond what she can personally use herself.

iv. Antithesis: contract (rights distributed among people)

Hegel’s property thesis therefore (as always) necessarily implies its own antithesis. To Hegel, the antithesis of property is contract. In order for the property owner to make the most valuable and enriching use of her property (e.g., selling its excess product, not having to guard it personally at all times, etc.), the owner must accede to the social contract and thus become part of human society.

By being a part of functioning society, the individual enhances her use and enjoyment of her property. She can sell it or its products if she chooses, she can rely on the government’s mechanisms and functionaries to enforce her rights in it, she can lease it, etc. She does all these and all similar things regarding her property by making agreements with other people. The government will enforce her agreements, both for her and against her, just as it enforces her property rights. This of course is contract, and contract is thus (according to Hegel), the antithesis of property.

v. Synthesis: “wrong” (i.e. crime and tort; enforces distributed rights)

Hegel’s synthesis of the property thesis and its contract antithesis is what he called “wrong.” He uses the word as a noun in this sense, meaning the whole of what modern American legal philosophers call torts and crimes. Strict liability aside, torts and crimes require the defendant to have some degree of mens rea, ranging from desiring harm to another to simple carelessness. This is why Hegel refers to both as “wrongs.”

In Hegel’s view, the laws of tort and crime, and their enforcement by the government and its courts, are the machinery of defending and exonerating each

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33 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 65 (public domain PDF 1822).
34 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 67 (public domain PDF 1822).
35 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 193 (public domain PDF 1822).
36 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 77 (public domain PDF 1822).
37 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* §§ 67, 251 (public domain PDF 1822).
38 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 79 (public domain PDF 1822).
39 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* § 221 (public domain PDF 1822).
40 Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* §§ 84 – 86 (public domain PDF 1822).
individual’s rights (tort), and society’s rights as a whole (crime).43 The property owner can thus use the police to evict trespassers, get damages for trespass or breach, etc. (While modern American law does not see breach of contract as a moral wrong,44 for various policy reasons,45 the law in Hegel’s time did consider breach a “wrong” in the sense of a tort.46)

vi. So property + contract = “wrong”

One major dictionary describes “synthesis” as “the composition or combination of parts or elements so as to form a whole[,] . . . the combining of often diverse conceptions into a coherent whole.”47 The same dictionary defines “addition” as “the operation of combining numbers so as to obtain an equivalent simple quantity.”48 Note that the definitions of synthesis and addition both contain the concept of combining. Pursuant to Euclid’s geometric law of transitivity (things equal to the same thing are equal to each other),49 the mathematical equivalent of Hegel’s synthesis is therefore the arithmetic function of addition; Hegel is asserting that in his political philosophy, property plus contract equals tort and crime.

b. Criticism

Many philosophers and commentators over the centuries have disagreed with, or criticized, Hegel’s methods, including his assertion that wrong is the sum of property and contract.50 In modern American law, at least, the arithmetic is different. While Hegel supplies a useful precedent for arithmetic analysis of law, the better understanding, at least here and now, is that property is not an addend but instead the sum: the correct addends that equal property are contract and tort, as the following sections explain.

c. Transition: review of contract, tort, and property

Now that this article has introduced the arithmetic analysis of law concept and Hegel’s dialectic positing that contract plus property equals tort and crime, this article next reviews the basics of the modern American law of contract, tort, and property. This review focuses on the various doctrines’ rights, remedies, and possible defendants as a background to the introduction of how trade secret law illustrates that the correct sum is contract plus tort equals property.

V. Contract, tort, and property: rights, defendants, and remedies

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43 Georg Wilhelm Friedrich Hegel, Elements of the Philosophy of Right § 213 (public domain PDF 1822).
46 Georg Wilhelm Friedrich Hegel, Elements of the Philosophy of Right § 218 (public domain PDF 1822).
50 See generally, e.g., Michael Rosen, Hegel’s Dialectic and Its Criticism (Cambridge Univ. Press 1985).
Writers have discoursed extensively for centuries on the definition and nature of these three basic doctrines of civil law; it would be redundant for this article to try to repeat or summarize these extensive writings. This article instead presents one particular method of comparing and contrasting the three doctrines that is useful for demonstrating the validity of this article’s thesis.

That method of analysis is to ask, for each of the three doctrines, against whom does the plaintiff, in a suit based on the doctrine, have enforceable rights? This article considers the answer to this question, the underlying reasons for the answer, and the plaintiff’s related remedies, in turn for each of contract, tort, and property. (As injunctions are generally available in contract, tort, and property cases, this article focuses on the damages remedy.)

a. Contract

i. Right is to performance

A party to a contract’s right pursuant to that contract is the right to the other party to the contract’s performance of the other party’s contract duties.

ii. Plaintiff has rights against the other party to the contract

A plaintiff’s action in contract seeks remedies against the other party to the contract for the breach of that other person’s promise to the plaintiff to do, or refrain from doing, something that the plaintiff wishes. To breach a promise is to fail to perform the promise fully at, or over, the proper time. Almost all contracts are two party agreements, i.e. there are no more than two parties to the particular contract. The parties generally form the contract by mutually agreeing; i.e., they exchange promises. In the typical bilateral contract, the parties, at the time of contract formation, promise to perform in the future.

1. Voluntary defendant

In a contract action, therefore, the plaintiff and the defendant must be the two parties to the contract the plaintiff claims the defendant breached; no one else generally has standing. (There are limited, and relatively recent, exceptions to this rule involving third party beneficiaries.) To be a plaintiff in any particular breach of contract action, therefore, a person must have entered into a specific contract in the past with the

52 See, e.g., 10 Joseph M. Perillo, ed., Corbin on Contracts § 943 (Matthew Bender 2011).
53 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
54 10 Joseph M. Perillo, ed., Corbin on Contracts § 943 (Matthew Bender 2011).
55 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.23 (Matthew Bender 2011).
56 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
57 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.23 (Matthew Bender 2011).
58 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
59 9 Joseph M. Perillo, ed., Corbin on Contracts § 43.1 (Matthew Bender 2011).
There is therefore an extremely limited set of persons that any particular plaintiff can sue for breach of any particular contract. In almost all cases, there is only one person so amenable to the suit. That one person is the other party, to this particular contract, of this particular plaintiff. Contract plaintiffs have thus voluntarily entered into a legal relationship with their defendants.

2. “Choice of defendant”

Commentators therefore often state that the contract plaintiff has chosen her defendant in advance. In breach of contract suits, the defendant is almost never a stranger to the plaintiff. The requirement of mutual assent for contract formation assures that plaintiff and defendant knew each other, at least to some limited degree, and often extensively, before entering into the agreement. The plaintiff chose this defendant from whom to receive this particular performance. In major transactions, the parties usually conduct what they call “due diligence” before executing the agreement; this diligence often involves lengthy and extensive investigation of the other party.

iii. What defendant behavior violates rights

A defendant violates another’s contract rights by not performing an unexcused promise in a legally enforceable agreement to which the defendant and the other are parties.

iv. Remedies are limited

This choice of defendants has significant practical consequences for contract plaintiffs. One of the most important is the sharp limitations that courts usually place on remedies for breach of contract, as opposed to the usual remedies in tort and property actions.

1. Benefit of bargain

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60 9 Joseph M. Perillo, ed., Corbin on Contracts § 47.1 (Matthew Bender 2011).
61 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
62 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
63 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
64 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
65 1 Joseph M. Perillo, ed., Corbin on Contracts § 1.3 (Matthew Bender 2011).
67 See, e.g., 10 Joseph M. Perillo, ed., Corbin on Contracts § 943 (Matthew Bender 2011).
68 See, e.g., Asahi Metal Indus. Co. v. Superior Court of Cal., 480 U.S. 102, 108 (1987) (the reasonable wealth and domicile of defendant can affect the laws applied to the claim and, therefore, the available remedies).
The basic and preferred remedy for breach of contract is expectation damages.\(^70\) This type of damages gives the non-breaching plaintiff the so-called “benefit of her bargain.”\(^71\) A typical measure is the sales price in cases regarding breaches of contracts for sales of property, whether real or personal.\(^72\) If the buyer is the non-breaching plaintiff, the market value of the subject property less the sales price is the expectation damages, allowing the plaintiff to purchase substitute property in the open market.\(^73\)

2. No penalties

Every American first year law student currently learns the important difference between liquidated damages and penalties.\(^74\) Court will of course enforce reasonable liquidated damages, as long as these damages do not amount to penalties.\(^75\) Courts do not enforce penalties that contracts may contain for breach.\(^76\)

The modern economic analysis of law movement has written extensively about the sound public policy reasons behind not enforcing penalties for contract breach.\(^77\) These reasons generally have to do with the fact that all real world contracts are incomplete, and if the parties to any particular contract had completed it, they would rationally have realized, and incorporated into the contract, the undesirability of breach penalties.\(^78\) This leads to the concept of “economically efficient breach,” probably the best known theory of the law and economics movement.\(^79\) Penalties for breach would discourage breaches that are economically efficient, and this would reduce the wealth of society as a whole.\(^80\)

3. No punitive (or emotional distress or pain and suffering) damages

Perhaps the most famous contract remedy limitation is punitive damages. Courts generally refuse to award punitive damages for breaches of contracts, regardless of the

\(^{70}\) 55 Joseph M. Perillo, ed., Corbin on Contracts § 55.11 (Matthew Bender 2011).
\(^{71}\) 55 Joseph M. Perillo, ed., Corbin on Contracts § 55.11 (Matthew Bender 2011).
\(^{72}\) 55 Joseph M. Perillo, ed., Corbin on Contracts § 55.11 (Matthew Bender 2011).
\(^{79}\) Lahav, supra n. [ ], at 163.
\(^{80}\) Brooks, supra n. [ ], at 19.
defendants’ bad faith, whereas punitive awards are commonplace in many tort actions.\textsuperscript{81} Our legal system indeed treats all contract breaches as intentional.\textsuperscript{82} There are a variety of justifications for these doctrines\textsuperscript{83} (the basic reason is, as the immediately preceding paragraph suggests, that our legal system does not see contract breach as a moral wrong deserving punishment),\textsuperscript{84} but as the text at V(a)(ii)(2) above explains, one significant justification is the ability of contract plaintiffs to choose their defendants.\textsuperscript{85}

The underlying reasoning for this particular justification is that the court should not punish a defendant, and correspondingly enrich the plaintiff, when the parties had the opportunity to select each other from various possible contractors, and used (as is inevitable) incomplete contracts.\textsuperscript{86} Courts (and law and economics scholars) reason that in typical contract cases plaintiffs and defendants had the opportunity to investigate each other to ascertain, among other things, the other party’s ability to perform, financial solvency, etc.\textsuperscript{87} In this situation, the contracting parties have voluntarily assumed a great deal of risk regarding each other’s ability to perform and pay expectation damages.\textsuperscript{88} (Courts similarly limit other types of damages, such as emotional distress and pain and suffering, in contract cases for similar reasons.\textsuperscript{89} Like punitives, these damages are generally available in tort and property cases.\textsuperscript{90})

4. Avoidability, foreseeability, and certainty

The law places important limitations on damages related to the avoidability, foreseeability, and certainty of the damages requested. Plaintiffs in general must prove that any claimed damages element was a loss the plaintiff could not have reasonably avoided; that both parties could reasonably have foreseen before the loss; and if the claimed damages element is for something occurring after trial, that the loss is reasonably certain to occur.\textsuperscript{91}

\textsuperscript{85} See John A. Sebert, Jr., Punitive and Nonpecuniary Damages in Actions Based upon Contract: Toward Achieving the Objective of Full Compensation, 33 UCLA L. Rev. 1565, 1566 (1986).
\textsuperscript{86} See John A. Sebert, Jr., Punitive and Nonpecuniary Damages in Actions Based upon Contract: Toward Achieving the Objective of Full Compensation, 33 UCLA L. Rev. 1565, 1566 (1986).
\textsuperscript{87} See John A. Sebert, Jr., Punitive and Nonpecuniary Damages in Actions Based upon Contract: Toward Achieving the Objective of Full Compensation, 33 UCLA L. Rev. 1565, 1566 (1986).
\textsuperscript{88} See John A. Sebert, Jr., Punitive and Nonpecuniary Damages in Actions Based upon Contract: Toward Achieving the Objective of Full Compensation, 33 UCLA L. Rev. 1565, 1566 (1986).
\textsuperscript{91} 11 Joseph M. Perillo, ed., Corbin on Contracts § 56.2 (Matthew Bender 2011).
These damage limitations apply to both tort and contract suits, but courts enforce the limitations more strictly in contract cases. Contract damages are indeed generally less generous to plaintiffs (and correspondingly less burdensome to defendants) than tort damages. Courts again use the choice of defendant rationale as one reason so to limit contract damages. (Other reasons include the nature of many tort injuries, such as bodily harm, compared to typical contract “injuries,” which are generally economic in nature.)

As described above in section V(a)(ii)(2), contract plaintiffs are able to investigate their defendants, including the defendants’ financial status and reputation, before the parties enter into their agreements. Tort plaintiffs, on the other hand, are often at the mercy of chance regarding who injures them. Contract plaintiffs typically pay their lawyers by the hour, win or lose; tort plaintiffs usually pay their lawyers on contingency. Tort judgments are therefore also generally more generous to the plaintiff because plaintiffs pay their lawyers out of the judgments’ proceeds.

In summary, contract damages are sharply limited compared to tort damages.

b. Tort

i. Right is to be free of injuries that others cause

Tort rights, at least pre-injury, are negative, in the sense that each person as the right to be free of injuries others cause due to the others’ mens rea or strict liability.

ii. Plaintiff has rights against injurers (involuntary defendants)

As the text above at section V(a)(ii) suggests, tort plaintiffs are not nearly as limited regarding the persons against whom the plaintiffs have rights. At any given time, the universe of persons against whom any individual has contract rights is extremely small; it is limited to those persons with whom the individual has previously

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93 See Sebert, supra n. [ ], at 1567.
94 See Sebert, supra n. [ ], at 1566.
96 Sebert, supra n. [ ], at 1566.
100 See, e.g., J. E. Leonarz, Necessity and Sufficiency of Claimant’s Efforts to Recover from Other Sources As Prerequisite of Participation in Indemnity Fund for Losses Caused by Uninsured or Unknown Motorists, 7 A.L.R.3d 851, *4 (2008).
entered into still enforceable contracts.\textsuperscript{101} The universe is larger for tort victims, because they need not intend to enter into legally enforceable promises with their defendants, tort plaintiffs merely need to interact in some way with potential defendants.

Tort plaintiffs in general have rights against those who have injured the plaintiff in some way.\textsuperscript{102} That is, tort defendants, unlike contract defendants, are not persons whom the plaintiff voluntarily pre-selected for this particular legal relationship.

1. Zone of danger

The universe of possible tort defendants for a given person at any particular time is obviously much wider than that of possible contract defendants. While the plaintiff can only sue a small group of persons whom the plaintiff has pre-selected for contract breach, almost anyone with whom the plaintiff interacts can injure the plaintiff in some legally cognizable way. Many courts (and famously in some cases) refer to this as the plaintiff’s danger zone.\textsuperscript{103}

2. Interaction requirement

Tort law in general requires that the defendant injure the plaintiff’s interests (e.g. body, property, dignity, etc.)\textsuperscript{104} Injuring a person’s interests usually requires some proximity to the plaintiff for the interaction necessary for the injury to occur. The simplest and most concrete example serves the best: to injure someone physically and intentionally, the assailant (esoterica such as letter bombs aside), needs to be spatially close to the victim.\textsuperscript{105} Injuring a person’s property similarly requires proximity, but it is possible to injure a person’s intangible interests (e.g. reputation) without such proximity.

3. Some plaintiff choice

In many cases, tort plaintiffs have exercised some degree of choice regarding the defendants who injured the plaintiffs. If a particular plaintiff fears injury by a particular party, or class of persons, the plaintiff can avoid interacting with those persons.

4. Employers, other drivers, owners of land, etc.

There are, for example, certain situations and locations in which torts occur most frequently. Automobile accidents are of course a common source of torts at present.\textsuperscript{106} If a person wants to avoid such an injury, he can refrain from driving, drive only in less trafficked locations, or drive during off hours; he can avoid stretches of road at time when he knows them to contain careless or reckless drivers, etc. Workplace injuries are

\begin{itemize}
  \item \textsuperscript{101} See, e.g., 9-41 Joseph M. Perillo, ed., \textit{Corbin on Contracts} § 41.1 (Matthew Bender 2011).
  \item \textsuperscript{102} Leonarz, supra n. [ ], at 4.
  \item \textsuperscript{103} \textit{Palsgraf v. Long Island R. Co.}, 248 N.Y. 339, 350 (1928) (Andrews, J., dissenting).
  \item \textsuperscript{104} \textit{Palsgraf v. Long Island R. Co.}, 248 N.Y. 339, 345 (1928).
  \item \textsuperscript{105} \textit{Palsgraf v. Long Island R. Co.}, 248 N.Y. 339, 350 (1928) (Andrews, J., dissenting).
  \item \textsuperscript{106} See generally, e.g., William E. Kenworthy, \textit{Kuhlman’s Killer Roads: From Crash to Verdict} (Matthew Bender 2010).
\end{itemize}
another common tort. (This article ignores workers’ compensation systems for simplicity of analysis; this does not affect the article’s thesis). When a person agrees to take a certain job, she to some degree chooses to run the risk of injury by her coworkers. Landowners and the people who enter the land are choosing to expose themselves to the risk of injury by the other.

In many tort cases, however, it is by random chance that a given defendant harms a given plaintiff. One person can defame another without ever having met the other person or come into any contact with the other’s property. Property law (especially intangible property) is like tort law in this respect because a property defendant can be a complete stranger, with whom the plaintiff has never interacted. For example, the United States Patent and Trademark office publishes all relevant information about every patented invention online; anyone in the world with internet access can easily acquire all the information necessary to infringe.

iii. What defendant behavior violates rights

A defendant violates another’s right to be free of torts by injuring the other person, with some degree of mens rea or by strict liability.

iv. Remedies are expansive

Tort remedies reflect the increased set of possible defendants, and the lesser choice made by plaintiffs in exposing themselves to particular defendants, as opposed to contract cases.

1. More generous than contract

For reasons the text above at section V(b)(ii) mentions, tort remedies are more generous to plaintiffs, *ceteris paribus*, than contract remedies.

2. To make plaintiff whole

The principal goal of contract remedies is to give the plaintiff the benefit of her bargain; i.e., damages representing what she reasonably expected to receive from the breaching defendant. In commercial transactions of all types, both business and personal, contracting parties can reasonably expect to receive only reasonable amounts, and amounts roughly in some proportion with the consideration exchanged.

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111 Sebert, supra n. [ ], at 1569.
112 Sebert, supra n. [ ], at 1569.
In torts, however, the remedial goal is to make the plaintiff whole; i.e., the damages should put her in her pre-tort position as best as money can.\textsuperscript{113} Unlike contract breaches, which cause mostly commercial harm,\textsuperscript{114} torts are much more likely to be personal, bodily, and devastating, and indeed even fatal.\textsuperscript{115} Plaintiffs injured when young can recover a lifetime of lost wages and medical expenses,\textsuperscript{116} plus possibly amounts to compensate them for psychological damage like pain and suffering.\textsuperscript{117} As the text above at sections V(a)(ii) and V(b)(ii) implies, plaintiffs can also recover punitive damages for certain torts. Pain and suffering, mental distress, and the amount necessary to punish a defendant for any particular tort, are often difficult to measure, which may result in sympathetic fact finders choosing very large amounts.\textsuperscript{118}

3. Avoidability, foreseeability, and certainty doctrines more limited

Courts also restrict the principal doctrines limiting recovery, i.e. avoidability, foreseeability, and certainty, in tort cases. In tort cases, courts generally deem foreseeable any injury the plaintiff’s wrongful action or omission caused, even if by indirect means.\textsuperscript{119} In contract cases, by contrast, courts only allow damages for events both parties reasonably should have anticipated, at the time the parties entered into the relevant contract, in event of the eventual breach.\textsuperscript{120}

Avoidability in tort cases usually just prohibits the plaintiff from actions or omissions that would make their injuries worse.\textsuperscript{121} In contract cases, plaintiffs generally have an affirmative duty to mitigate their damages, as by, e.g., seeking alternative buyers or sellers.\textsuperscript{122} Certainty in tort cases is generally equivalent to foreseeability, which in turn is much like causation,\textsuperscript{123} in contracts, however, the plaintiff bears the burden of proving the reasonable certainty of any damages element she claims.\textsuperscript{124} Courts justify relaxing these limitations for the same reasons the text above at section V(a)(ii) describes, at least in part because of the tort plaintiff’s more limited ability to choose his defendant, and the correspondingly larger universe of possible tort defendants.

In summary, tort damages are much more extensive than contract damages.

c. Property

\textsuperscript{114} Sebert, supra n. [ ], at 1569.
\textsuperscript{115} See, e.g., Schwartz, supra n. [ ] at *2a.
\textsuperscript{116} See, e.g., Schwartz, supra n. [ ] at *2a.
\textsuperscript{117} See, e.g., Schwartz, supra n. [ ] at *2a.
\textsuperscript{118} See generally, e.g., BMW v. Gore, 517 U.S. 559 (1996).
\textsuperscript{120} See, e.g., Hadley v. Baxendale, 156 Eng. Rep. 145 (Exchequer 1854).
\textsuperscript{121} See, e.g., Hall v. Dumitr, 250 Ill. App. 3d 759, 765 (1993).
\textsuperscript{122} See, e.g., U.C.C. § 2-715(2)(a).
i. Rights are to exclusive possession, use, and enjoyment

The owner’s rights in a piece of property are to exclusive possession, use, and enjoyment of the property.\textsuperscript{125}

ii. Plaintiff has rights “against all the world” (anyone can be defendant)

The universe of potential defendants is larger in property cases than it is in tort cases (in which, in turn, it is larger than in contract cases). As the text above at section V(a)(ii) explains, in contract cases, the set of possible defendants is those with whom plaintiff has contracted (voluntary defendants); in tort cases, it is those to whom plaintiff has exposed herself regarding injury risk (involuntary defendants).

In property cases, however, the famous expression is that property owners have rights against “\textit{all the world},”\textsuperscript{126} i.e., everyone, everywhere.\textsuperscript{127} There is no limit to the set of potential defendants. When the property in question is tangible, including realty and chattels, the issue may arise of possible defendants having some spatial proximity to the property, but when the property is intangible (such as intellectual property, for example), there is no longer any spatial limitation on possible defendants.

iii. Even total strangers can infringe or trespass

In contract and tort cases, there has to be some relationship between the plaintiff and defendant, even some degree of the plaintiff seeking out the defendant; but in property cases even total strangers to the plaintiff can trespass or infringe.\textsuperscript{128} The archetypical property, real estate, gives the best examples. Real estate, land and the buildings that improve it, is by definition immovable.\textsuperscript{129} Owners of real estate are often absent from the parcel for very long periods, and quite far away from it geographically.\textsuperscript{130} There is, indeed, absolutely no necessity for the owner of a parcel ever to visit it.\textsuperscript{131}

An owner’s dominion does not extend beyond the borders of her real property.\textsuperscript{132} It is beyond her control to prevent anyone (in most cases) from coming to the edge of her property.\textsuperscript{133} She therefore can have no idea who, if anyone, can trespass on her parcel. She does not need to invite or license the stranger’s presence near her real estate. If she

\begin{itemize}
\item \textsuperscript{125}E.g., \textit{Ralston Steel Car Co. v. Ralston}, 112 Ohio St. 306 (1925); \textit{Wilcox v. Penn. Mut. Life Ins. Co.}, 357 Pa. 581 (1947).
\item \textsuperscript{126}John Locke, \textit{Second Treatise on Civil Government} book II ch. V § 39 (public domain PDF 1689).
\item \textsuperscript{127}E.g., \textit{Oliver v. United States}, 466 U.S. 170, 183 (1984).
\item \textsuperscript{128}For an example from 1365, see David S. Bogen, \textit{The Innkeeper’s Tale: The Legal Development of a Public Calling}, 1996 Utah L. Rev. 51, 67.
\item \textsuperscript{129}See, e.g., Am. Jur. 2d \textit{Prop.} § 13 (2011).
\item \textsuperscript{130}See, e.g., Am. Jur. 2d \textit{Prop.} § 29 (2011).
\item \textsuperscript{131}See, e.g., Am. Jur. 2d \textit{Prop.} § 29 (2011).
\item \textsuperscript{132}49 P.L.E. \textit{Trespass} § 39 (Lexis Nexis 2011).
\item \textsuperscript{133}49 P.L.E. \textit{Trespass} § 39 (Lexis Nexis 2011).\
\end{itemize}
is far away, she can be completely unaware of the trespass itself and the trespasser’s identity.

The same is true of chattels, which are often far away from their owners,\textsuperscript{134} and even more true for most intangible property, which has no specific location.\textsuperscript{135} Intellectual property, patents and copyrights in particular, are notoriously difficult for owners to police in today’s networked world. After a patentee sells an embodiment of his invention, for example, he cannot control the embodiment’s subsequent possessors, each of whom may be able to reverse engineer the invention and infringe without the patentee’s knowledge.\textsuperscript{136} In this digital age, the challenge of copyright owners in preventing unauthorized copying is notorious.\textsuperscript{137} Complete strangers to the plaintiff property owner can trespass or infringe and become property claim defendants.

One can therefore, in sum, think of possible contract defendants as voluntarily chosen by the plaintiff, possible tort defendants as involuntary, and property defendants as the sum of voluntary and involuntary defendants: everyone, or “all the world.”

iv. What defendant behavior violates rights

A defendant violates another’s property rights by unreasonably interfering with the other’s possession, use, or enjoyment of the other’s property.\textsuperscript{138}

v. Remedies regardless of plaintiff’s loss

Contract remedies give the plaintiff what she expected from the defendant; tort remedies make the plaintiff whole after the defendant’s injury. An owner with infringed property rights can receive remedies \textit{regardless of any loss} to the owner.\textsuperscript{139} Property based causes of action are also generally strict liability; as in some torts, the plaintiff need prove no type of \textit{mens rea} on the defendant’s part in order to prevail.\textsuperscript{140} (As section V(a)(iv)(3) above explains, courts generally deem all contract breaches to be intentional, regardless of the defendant’s actual subjective state of mind in any case.)\textsuperscript{141}

1. To exonerate property right

\textsuperscript{134} See, e.g., Am. Jur. 2d Prop. § 30 (2011).
\textsuperscript{139} See, e.g., In re WorldCom, Inc., 320 B.R. 772, 776 (S.D.N.Y. 2005).
\textsuperscript{140} See, e.g., Am. Jur. 2d Trespass § 7 (2011).
The law’s lack of any actual injury or *mens rea* requirement for actions enforcing property rights follows from the very nature of those rights. Property rights after all are by definition *exclusive*. As the text above at section IV(a)(ii) explains, there is a defined finite number of legal persons who are any property’s owners, and the owners’ property right is the legal right to exclude everyone else from the property. Property owners may do almost anything with their property: use it, ignore it, share it, assign it, destroy it, etc.\(^{142}\) To preserve these owners’ rights, the law must prevent, or at least respond to, any interference with a property owner’s rights, even one without injury or any degree of *mens rea*.

2. Nominal damages available

One way the law responds to interferences with a property owner’s rights that are unintentional, harmless, or both, is by awarding nominal damages.\(^{143}\) Trespassers to land, for example, are liable to landowners for nominal damages, even if the defendants trespassed unintentionally, and even if the trespasses caused no harm to the land or landowners.\(^{144}\) If property rights are to be exclusive, the underlying policy requires that there be some vindication of the rights of owners who did not consent to the defendants’ mere presence on their properties.\(^{145}\) Nominal damages are often available in both tort and contract based causes of action.\(^{146}\)

vi. Summary and transition

All the remedies available under both contract and tort law are thus available under property law. Any remedy that it available under either contract or tort law is also available under property law.

This article has reviewed and analyzed the basics of contract, tort, and property law, paying special attention to the rights, remedies, and possible defendants pursuant to each doctrine. This article will next explain trade secrets, so as to use them as a paradigm regarding how contract and tort rights, remedies, and defendants sum to property rights, remedies, and defendants.

VI. Trade secrets

Trade secrets are a common and well known type of intellectual property.\(^{147}\) They provide, intriguingly, an excellent example of how property rights, defendants, and remedies are the arithmetic sum of contract and tort rights and remedies.

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\(^{143}\) *In re WorldCom, Inc.*, 320 B.R. 772, 780 (S.D.N.Y. 2005).
\(^{144}\) *In re WorldCom, Inc.*, 320 B.R. 772, 781 n. 9 (S.D.N.Y. 2005).
a. Definition

A trade secret is simply “. . . business information that is kept confidential to maintain an advantage over competitors. . . .”\(^{148}\) A thorough parsing of the definition aids in a detailed understanding of trade secrets.

i. Information

A trade secret is information. There are two similar, but slightly different, detailed definitions of trade secrets in our modern law: one is from the Uniform Trade Secrets Act, and the other is from the Restatement of Torts.\(^{149}\) Both give an explicitly nonexclusive list of the type of information that can qualify as a trade secret, including such information as formulas, processes, devices, patterns, compilations, programs, methods, techniques, and processes.\(^{150}\)

ii. Independent economic value to possessor

In order for information to qualify as a trade secret, the information must “derive independent economic (i.e., “trade”) value, actual or potential, from not being generally known or readily ascertainable by others who can obtain economic value from its disclosure or use.”\(^{151}\) Independent economic value in this context means that the information’s possessor must have economic value (as opposed to, e.g., psychological gratification, etc.) from possessing the information, and that value must be due to the inability of others (especially the possessor’s competitors) to use the information (not from, e.g., the inherent value of information that is useful but not secret).\(^{152}\) For example, a manufacturer may possess information that allows the manufacturer to make its product more cheaply than competitors.

iii. Because not generally known

The name trade secret indicates that the heart of this intellectual property is its secrecy, and thus the very definition requires that the information, to keep its property nature, must remain unavailable to non-owners.\(^{153}\)

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\(^{149}\) Unif. Trade Secrets Act § 1 (1985) (“‘Trade secret’ means information, including a formula, pattern, compilation, program, device, method, technique, or process”); Christopher Rebel J. Pace, The Case for a Federal Trade Secrets Act, 8 Harv. J. Law & Tech. 427, 431 (setting forth the definition of trade secret from Restatement of Torts § 757).

\(^{150}\) Unif. Trade Secrets Act § 1 (1985) (“‘Trade secret’ means information, including a formula, pattern, compilation, program, device, method, technique, or process”); Christopher Rebel J. Pace, The Case for a Federal Trade Secrets Act, 8 Harv. J. Law & Tech. 427, 431 (setting forth the definition of trade secret from Restatement of Torts § 757); see also, e.g., Conseco Fin. Servicing Corp. v. N. Am. Mortg. Co., 381 F.3d 811, 818 – 819 (8th Cir. 2004).


\(^{152}\) Eric E. Johnson, Trade Secret Subject Matter, 33 Hamline L. Rev. 545, 546 (2010).

b. Property

Trade secret is the rare exception in our legal system in which pure information, by itself, has the characteristics of property. A major law dictionary defines “property” as “… that dominion or indefinite right of use[, control, and disposition [that] one may lawfully exercise over particular things or objects. The right and interest [that] a [person] has in lands and chattels to the exclusion of others. The right of a person to possess, use, enjoy, and dispose of a thing.” Note that this definition, while current, does not comfortably encompass intellectual property (which, while certainly not land, is not exactly a chattel either), or indeed any intangible property.

i. Law recognizes trade secrets as property

Our law does, however, recognize and enforce property rights (i.e., exclusion rights) in various forms of intellectual property; the name is not a misnomer.

ii. Intellectual

Each form of intellectual property comes with a set of exclusive rights; i.e., the right of the property owner to prevent others from using or enjoying the intangible property. Patent owners, for example, enjoy the right to prevent others from making, using, selling, or importing the patented invention; copyright owners have the right to prevent others from reproducing, adapting, or publicly distributing, displaying, or performing the copyrighted work; etc.

c. How owner keeps trade secrets as property: reasonable secrecy

The owner of a trade secret enjoys the right to prevent others from using or disclosing the subject information. To keep property rights in information as a trade secret, the information possessor must take affirmative continuing steps to keep the information to itself.

To win a trade secret infringement suit, the information’s possessor must affirmatively demonstrate that the possessor took reasonable steps to keep the

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162 Ghosh, supra n. [ ], at 803.
163 E.g., Enter. Leasing Co. v. Ehmke, 197 Ariz. 144, 151 (1999).
information secret, even if those steps would not have prevented the particular infringement alleged.\textsuperscript{164} There are two general methods of keeping information secret to which courts look to satisfy this requirement.

i. Physical protection of information

One way for the information possessor who desires trade secret property rights to keep the information secret is by physically protecting the information from discovery by others.\textsuperscript{165} This can be as simple as locking documents containing the information in a drawer, or password protecting the information on computer systems.\textsuperscript{166} If physical plant embodies the information, for example, hiring security guards to keep unauthorized people from observing the plant qualifies.\textsuperscript{167}

ii. Nondisclosure agreements

The other way for the possessor to keep the information qualified for trade secret property right protection is by refusing to share the information with others.\textsuperscript{168} If, e.g., the possessor is a corporation, the possessor must not reveal the information to anyone outside the corporate organization. If the possessor is an individual, the possessor must not reveal the information to anyone else.

This limitation is impractical, of course, if the possessor, as is very often the case, needs others to know the information in order for the possessor to exploit the information fully.\textsuperscript{169} The law is therefore flexible on this point, allowing information possessors to share the information with others, without losing the information’s property exclusion characteristic, as long as the possessor first requires the recipient to agree (by contract, express or implied) to keep the information confidential.\textsuperscript{170} Even without any enforceable contract, a person who receives information pursuant to a confidential (i.e. fiduciary) relationship, may not legally misuse or disclose the information without the beneficiary’s consent.\textsuperscript{171}

As trade secret information is (by definition) commercial, most businesses, as a matter of course, require their employees and contractors who need to know the information to execute confidentiality agreements before the businesses disclose the information.\textsuperscript{172} As long as a possessor requires reasonable and legally enforceable

\textsuperscript{164} E.g., Enter. Leasing Co. v. Ehmke, 197 Ariz. 144, 151 (1999).
\textsuperscript{166} Brian Bolinger, Focusing on Infringement: Why Limitations on Decryption Technology Are Not the Solution to Policing Copyright, 52 Case W. Res. L. Rev. 1091, 1103 (2002).
\textsuperscript{172} See, e.g., Friemuth v. Fiskars Brands, Inc., 681 F. Supp. 2d 985, 989 (W.D. Wis. 2010).
nondisclosure agreements before disclosing the information, courts will enforce a property right in the trade secret.\textsuperscript{173}

d. How defendant infringes owner’s legal rights

Before relating how defendants infringe trade secret owners’ rights, this article briefly recounts, for context, how defendants infringe other plaintiffs’ rights.

i. Contract and tort

As the text above at sections V(a)(iii), V(b)(iii), and V(c)(iv) describes, a defendant infringes a contract right by failing to perform a legally enforceable promise.\textsuperscript{174} A defendant infringes a tort right (more precisely the plaintiff’s right to be free of torts)\textsuperscript{175} by an unexcused action or omission that has the requisite degree of \textit{mens rea} or strict liability, and that causes a cognizable injury to the plaintiff.\textsuperscript{176} A defendant infringes a property right by unreasonably interfering with the plaintiff owner’s use, possession, or enjoyment of the relevant property.\textsuperscript{177}

ii. Property other than intellectual

1. Tangible

Courts enforce most non-contractual causes of action arising from the plaintiff’s tangible chattels as torts.\textsuperscript{178} Minor interferences constitute trespass to chattels;\textsuperscript{179} major interferences, such as dispossession and destruction, constitute conversion.\textsuperscript{180} Some major non-contractual causes of action arising from plaintiff’s realty are also torts, principally trespass to land.\textsuperscript{181} Causes of action for nuisance are quasi-tort.\textsuperscript{182} Property based torts are generally strict liability, while most other torts require some degree of \textit{mens rea}.\textsuperscript{183}

The purest property causes of action (neither contract nor tort based in our legal system) regarding realty are in gross rights and corresponding burdens such as prescriptive easements,\textsuperscript{184} and appurtenant rights and corresponding burdens such as involuntary servitudes.\textsuperscript{185} These are nevertheless theoretically based in either contract or

\begin{footnotesize}
\footnote{\textsuperscript{173} See, e.g., \textit{Friemuth v. Fiskars Brands, Inc.}, 681 F. Supp. 2d 985, 989 (W.D. Wis. 2010).}
\footnote{\textsuperscript{174} 1 Joseph M. Perillo, ed., \textit{Corbin on Contracts} § 1.3}
\footnote{\textsuperscript{175} See, e.g., \textit{Sonnier v. United States Casualty Co.}, 157 So. 2d 911, 913 (La. App. 1963).}
\footnote{\textsuperscript{176} See, e.g., \textit{Ballentine’s Law Dictionary} (LexisNexis 2010) (definition of tort).}
\footnote{\textsuperscript{177} See, e.g., \textit{Am. Jur. 2d Prop.} § 1 (West 2011).}
\footnote{\textsuperscript{178} See, e.g., \textit{DIRECTV, Inc. v. Ostrowski}, 334 F. Supp. 2d 1058, 1062 (N.D. Ill. 2004).}
\footnote{\textsuperscript{179} Spickler v. Lombardo, 3 Pa. D. & C.3d 591, 599 – 600 (1977).}
\footnote{\textsuperscript{180} \textit{DIRECTV, Inc. v. Ostrowski}, 334 F. Supp. 2d 1058, 1062 (N.D. Ill. 2004).}
\footnote{\textsuperscript{181} \textit{Winters v. Turner}, 74 Utah 222, 228 (1929).}
\footnote{\textsuperscript{182} See, e.g., Eric R. Claeys, \textit{Jefferson Meets Coase: Land-Use Torts, Law and Economics, and Natural Property Rights}, 85 Notre Dame L. Rev. 1379, 1381 (2010).}
\footnote{\textsuperscript{183} See, e.g., \textit{Am. Jur. 2d Trespass} § 7 (West 2011).}
\footnote{\textsuperscript{185} See generally, e.g., \textit{Ohio Oil Co. v. Ferguson}, 213 La. 183, 205 (1946).}
\end{footnotesize}
tort (e.g., prescriptive easements can arise when property owners ignore trespassers, thereby presumably either waiving the owners’ tort rights or impliedly agreeing to the use\(^\text{186}\)).

2. Intangible

Courts have traditionally had more difficulty in general dealing with intangible property, because of its ethereal nature.\(^\text{187}\) This challenge has run through all aspects of property law: it took centuries for courts even to accept tangible chattels as property like land,\(^\text{188}\) and even longer for courts to grant the same dignity to intangibles.\(^\text{189}\)

Intangible property currently represents more of American wealth than ever before,\(^\text{190}\) and property law now protects intangibles just as it does tangible property. Dispossessing a rightful owner of her non-currency money (e.g., bank accounts, intangible property that represents about 90% of the money supply)\(^\text{191}\) amounts to the tort of conversion,\(^\text{192}\) as does similar dispossession of assets like marketable securities (most of which are now non-certificated).\(^\text{193}\)

iii. Intellectual property

1. Other than trade secrets

All intellectual property is intangible; it is, indeed, intangible to the second order, because not only are the legal rights intangible (as are all legal rights), but the subject matter of the rights are intangible as well.\(^\text{194}\) While machines, manufactured articles, and compositions of matter may embody patented inventions,\(^\text{195}\) changes in ownership of these embodiments do not change the ownership of the underlying patent.\(^\text{196}\) Copies and so-called “phonorecords” (which now includes compact disks, video disks, computer drives containing digital copies, etc.)\(^\text{197}\) embody copyrighted works of authorship,\(^\text{198}\) but

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\(^{186}\) See Am. Jur. 2d Easements and Licenses in Real Property § 39 (West 2011).


\(^{188}\) See, e.g., Jesse Dukeminier & James Krier, Property 7 n. 4 (Little Brown 1981).


\(^{191}\) See, e.g., \url{http://www.ny.frb.org/aboutthefed/fedpoint/fed49.html} (one of many money supply publications by the Federal Reserve System of the United States).


\(^{195}\) For an old example, see Day v. Union India-Rubber Co., 7 F. Cas. 271, 272 (C.C.S.D.N.Y. 1856).

\(^{196}\) See Day v. Union India-Rubber Co., 7 F. Cas. 271, 272, 274 (C.C.S.D.N.Y. 1856).


again, these tangible embodiments (chattels) are property separate from the underlying copyright. 199

To infringe a patent, a person must make, use, sell, or import embodiments of the patented invention without authorization. 200 To infringe a copyright, a person must reproduce, adapt, or publicly distribute, display, or perform the copyrighted work without authorization. 201 Infringement actions are strict liability; that is, the defendant need not intend to infringe in order to be liable. 202 Infringements of intellectual property rights are pure property causes of action. 203 Infringements are also not breaches of contract; no one need first agree not to infringe to be liable. 204

2. Trade secrets

Trade secrets are intellectual property, as are patents and copyrights, 205 but trade secrets’ method of infringement is unique in a way that dramatically demonstrates that property is the sum of tort and contract. To infringe on the trade secret property right, a person must do one of two things: breach a contract or commit a tort. (While the Uniform Trade Secrets Act calls the action creating liability relating to trade secrets “misappropriation,” 206 “infringement” is a better word. This is not only because “infringement” is consistent with liability regarding other forms of intellectual property, 207 but also because some actions causing trade secret liability do not in fact amount to misappropriation, but rather misuse, such as acquiring trade secret information by mistake and using or disclosing it after notice of the mistake. 208)

a. By breaching nondisclosure agreement

One of the two ways to infringe a trade secret is to use or disclose the relevant information in contravention of a legally enforceable confidentiality agreement. 209 If a recipient of information, in order to receive information that qualifies as a trade secret, first promises (whether expressly or impliedly) not to use or disclose that information in a

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201 17 U.S.C. sec. 106; see, e.g., TMTV Corp. v. Pegasus Broad. of San Juan, 490 F. Supp. 2d 228, 235 (D.P.R. 2007).
205 Johnson, supra n. [ ], at 546.
208 Unif. Trade Secrets Act §1(2)(ii).
particular way, and then does so, the recipient is liable for trade secret infringement (i.e. has violated a property right), because the recipient has breached a contract.210

b. Or by tort

The only other way to infringe a trade secret is by acquiring, disclosing, or using the information against the will of the information’s lawfully rightful possessor (i.e. the trade secret property owner).211 Note that, as the text immediately below describes in detail, one can only do this by committing a tort.

i. By the tort of conversion

For example, if a paper document that is not the property of the infringer contains the trade secret information, the infringer converts a chattel by taking the document. If an intangible document (e.g. a computer file) that is not the infringer’s property contains the information, it is still conversion if the infringer takes the intangible document, or the information it contains, without the owner’s permission.212

ii. By the tort of trespass

Many cases show that a typical way for a trade secret infringer to acquire the subject information, without authorization, is to enter the trade secret owner’s property so that the infringer can, by observation, obtain the information.213 Such behavior is of course the tort of trespass to land, even if the owner is merely leasing the land or building into which the infringer entered.214 Courts presume that the owner would never authorize an entry that is wrongfully to acquire information the owner treats as a trade secret.215

iii. By the tort of invasion of privacy

There are cases in which trade secret infringement defendants acquire the relevant information not pursuant to a contract and without entering the plaintiff’s premises either without permission or under false pretenses.216 In these cases, the defendants often observe the relevant information from a distance, using some type of surveillance equipment (possibly as simple as cameras,217 or as complex as hiring photographers to fly over defendant’s site218). These cases still involve some sort of tortious or at least quasi-

211 See, e.g., City Slickers, Inc. v. Douglas, 73 Ark. App. 64, 68 (2001) (the trade secret holder’s active concealment of the secret implies that obtaining and using information is against the will of the trade secret holder).
218 E. I duPont de Nemours & Co., Inc. v. Christopher, 431 F.2d 1012, 1013 (5th Cir. 1970).
tortious behavior by the defendant or her agents, namely invasion of privacy.\textsuperscript{219} Trade secret law requires that the defendant, to be liable for infringement in these cases, have some degree of tort \textit{mens rea}, such as “commercial immorality.”\textsuperscript{220}

iv. By the tort of fiduciary duty breach

In some cases recipients of information may have not have agreed to keep the information secret and may have received the information in a manner that did not involve any wrongful conduct by the recipient. The recipient may nevertheless have received the information pursuant to a relationship in which the recipient was acting as a fiduciary. Many relationships, most notably agency (which includes employment and most professional relationships), make one of the parties the fiduciary of the other.\textsuperscript{221} The fiduciary relationship places strict legal obligations on the fiduciary in favor of the other party to the relationship (the beneficiary),\textsuperscript{222} including a duty of confidence.\textsuperscript{223} (Indeed, writers often call fiduciary relationships “confidential” relationships.)\textsuperscript{224}

A person who receives information pursuant to a fiduciary relationship therefore has a legal obligation to keep the information confidential, and not to use the information for the recipient’s own purposes, unless waived by the beneficiary. Breach of this confidentiality obligation is a tort.\textsuperscript{225}

v. By a strict liability tort

Trade secret infringement can be strict liability, just as in patent, copyright, and other property and tort law.\textsuperscript{226} That is, a defendant need not have any degree of \textit{mens rea} to be liable for intellectual property infringement, although intentional infringement may lead to enhanced damages.\textsuperscript{227}

There are several ways a recipient of trade secret information can violate the owner’s rights without intending to infringe.\textsuperscript{228} For example, if an information recipient learns the information due to a third party’s breach of a confidentiality requirement, but the recipient does not know that the information is a trade secret and that the third party breached, the recipient can use or disclose the information without liability.\textsuperscript{229} Once the

\textsuperscript{219} \textit{E. I duPont de Nemours & Co., Inc. v. Christopher}, 431 F.2d 1012, 1016 (5th Cir. 1970).
\textsuperscript{220} \textit{E. I duPont de Nemours & Co., Inc. v. Christopher}, 431 F.2d 1012, 1015 (5th Cir. 1970).
\textsuperscript{221} \textit{CemenTech., Inc. v. Three D Indus., L.L.C.}, 753 N.W.2d 1, 13 (Iowa 2008).
\textsuperscript{223} \textit{CemenTech., Inc. v. Three D Indus., L.L.C.}, 753 N.W.2d 1, 8 (Iowa 2008).
\textsuperscript{224} \textit{E.g., Restatement (Second) of Torts § 874} (1979).
recipient constructively learns of the breach and the trade secret status of the information, continued use is infringement.\textsuperscript{230}

iv. Transition and synthesis

When one thoughtfully considers all the facts above together, one can see how trade secret law illustrates that property law is the arithmetic sum of contract law and tort law.

VII. Trade secrets are sum of related contract and tort rights, defendants, and remedies

a. Trade secrets are property, \textit{but} . . . .

In review, our law treats qualifying trade secret information as the property of the rightful possessor. Trade secrets are one of the four basic types of intellectual property (the others being copyright, patent, and trademark).\textsuperscript{231} The owner of a trade secret can get courts to enforce his property rights in the information, by awarding him damages from the infringing defendant, by enjoining the defendant, or both.\textsuperscript{232} To do this, however, the owner must prove at least one of two things.

i. Infringement requires breach of contract

The owner must prove that the defendant failed to perform a legally enforceable promise of the defendant’s to the plaintiff, even if only implied. That promise must be that the defendant would keep the trade secret information confidential, use the information only in a certain way, or both. The plaintiff must prove, in short, that the defendant breached a contract.

ii. Or tortious behavior

The only other way a trade secret owner can enforce his property right against a defendant is if the owner proves that the defendant trespassed on his land, invaded his privacy in some commercially immoral way, committed a strict liability tort, or breached the defendant’s fiduciary duty. The owner must prove, in short that the defendant committed tortious behavior.

To enforce trade secret rights, which are property rights, the owner, as plaintiff, must prove that the defendant either breached a contract or committed a tort, or both. Trade secrets, as property, contain within them both the owners’ rights to enforce related agreements limiting disclosure and use, and the owners’ rights to be free of conversions,

trespasses, fiduciary duty breaches, privacy invasions, etc. Trade secret rights, which are property rights, are therefore a composite of contract rights and tort rights.

b. Remedies

Just as trade secret rights are the sum of tort rights and property rights, trade secret remedies are the sum of the corresponding contract remedies and tort remedies.

i. Include contract remedies

Trade secret owners that are prevailing plaintiffs can receive awards of damages representing the owners’ reasonable expectations regarding the defendants’ performances. These damages include the plaintiffs’ lost profits due to the infringement. The owner expected the defendant to honor the defendant’s nondisclosure obligation; when the defendant breaches, the plaintiff’s lost profits are the expectation interest. Courts will also grant equitable relief to owners, preventing defendants from additional breaches of related agreements regulating the use and disclosure of the information.

These remedies are of course the standard breach of contract remedies. Courts grant these remedies, however, without regard to whether any particular plaintiff proves breach of contract; i.e., courts grant contract remedies in appropriate cases even if the plaintiffs proved infringement by defendant’s tortious behavior (e.g. trespass, etc.).

ii. And tort remedies

Trade secret owners that are prevailing plaintiffs can receive awards of damages that make owners whole after the losses the defendants’ infringements caused. These damages include the plaintiffs’ lost profits, i.e. the amount the plaintiffs lost due to the defendants’ tortious behavior. Plaintiff trade secret owners can recover lost profits even in the absence of breached nondisclosure agreements. Owners can also recover the defendants’ wrongful profits made from defendants’ use of plaintiffs’ trade secrets;

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237 E.g., Restatement (Second) of Contracts § 345 (1981).
239 See, e.g., Smith, supra n. [ ], at 826 -- 866.
241 Smith, supra n. [ ], at 836.
these are restitutionary recoveries. Plaintiff owners can, in addition, recover nominal damages when appropriate, and punitive damages for defendants’ willful trade secret infringement.

Trade secret owners that are prevailing plaintiffs can also, as stated above, receive injunctions preventing further use or disclosure of the information by the defendants. This remedy is the same as injunctions preventing future or continuing torts, which courts commonly grant. Courts therefore grant to prevailing trade secret plaintiffs all the same remedies courts regularly grant to successful tort plaintiffs; this is without regard to whether any particular plaintiff proved facts amounting to a tort in a specific case.

c. Trade secrets:

Consider the integration of what the text above demonstrates regarding trade secrets.

i. Are property

Trade secrets are property; i.e. the law gives owners exclusive rights in trade secret information, which owners can enforce in court by receiving the corresponding property remedies.

1. Alienable

Trade secrets have all the legal characteristics of all property interests. Trade secrets are freely alienable by the rightful possessors of qualifying information. Owners can exploit, sell, lend, license, hypothecate, or keep trade secrets to themselves; these are defining characteristics of property.

2. Need not exploit

Trade secret owners do not need to exploit the information to preserve the information’s character as property. Owners can destroy or ignore the information as they choose, just as property owners may in most cases. (There are of course familiar exceptions to this latter rule for some property owners in some cases, particularly

242 Smith, supra n. [ ], at 841.
245 See generally, e.g., Hyde Corp. v. Huffines, 158 Tex. 566 (1958).
247 E.g., Milgrim on Trade Secrets § 2.01 (Matthew Bender 2011).
248 E.g., Ruckelshaus v. Monsanto Co., 467 U.S. 986 (1984), Milgrim on Trade Secrets § 2.02 (Matthew Bender 2011).
249 See, e.g., Milgrim on Trade Secrets § 2.01 (Matthew Bender 2011).
in situations in which there are multiple possessors of, users of, or claimants to a given parcel of real estate.\textsuperscript{252} In those situations, courts often invoke such doctrines as those regarding "owners sleeping on their rights"\textsuperscript{253} or “highest and best use.”\textsuperscript{254})

ii. But also sum of tort and contract

As the discussion above at section VII(b) demonstrates, however, trade secret rights and remedies are also the aggregation of contract and tort rights and remedies. Infringement of trade secret requires the defendant either to breach a legally enforceable promise or commit tortious behavior such as trespass or invasion of privacy.\textsuperscript{255}

1. rights and defendants are cumulative

A trade secret owner’s rights, as a property owner, are to exclusive use, possession, and enjoyment of her property: the trade secret information.\textsuperscript{256} The owner’s rights are also to satisfaction of its reasonable expectations when sharing the information (contract rights) and to be free of conversion, trespass, and fiduciary duty breach regarding the information (tort rights).

The possible defendants in a trade secret infringement case consist of breach of contract defendants (those who received the trade secret information pursuant to an express or implied agreement not to disclose or misuse the information) and tort defendants (those who acquired or misused the information pursuant to conversion, trespass, fiduciary duty breach, etc.).

2. remedies are cumulative

A trade secret owner’s remedies for infringement are damages representing the plaintiff’s lost profits, the defendant’s wrongful profits, a reasonable royalty for the infringing activity, or some combination of these to restore the plaintiff to his pre-infringement position and give him the benefit of any bargain he made with the defendant; and injunctions preventing further infringement.\textsuperscript{257} These remedies consist of breach of contract remedies (lost profits and reasonable royalties are expectation damages, and a combination restoring the plaintiff to his pre-infringement position is


\textsuperscript{257} See, e.g., Smith, supra n. [ ], at 826-866.
reliance damages and tort remedies (the injunction preventing future wrongful activity, as well as nominal and punitive damages).

VIII. Explanatory Power

While the analysis above is interesting theoretically and from a jurisprudential standpoint, one must consider what ramifications the insight has for the law in general, especially property law outside of the intellectual property field.

One of the signs of a valuable analytic method is its ability to explicate existing unexplained outcomes. This is especially valuable in law: economic analysis of law, for example, has been well received and influential at least in part because it is able to explain many of what observers might perceive to be inconsistencies or oddities in our legal system. (E.g., economic analysis of law has successfully justified such doctrines as the unenforceability of penalties for breaching contracts, etc.)

a. Rights and defendants

Property owners’ rights are to exclusive use, possession, and enjoyment of their properties, and within reason, how the owners choose to use and enjoy their properties are the owners’ choices. This is a composite of the tort right, to be free of injuries to their properties, and the contract right to the owner’s expectations that others will perform as promised regarding the property. That is, if others injure the property (or property rights) of an owner, or do not perform regarding the property as promised (as to redeliver, repair, care for, the property, etc.), the owner is denied exclusive use, possession, or enjoyment of the property.

Plaintiffs choose their potential contract defendants by entering into legally enforceable agreements with the defendants. Plaintiffs exercise less choice, and occasionally none at all, regarding their potential tort defendants. Potential contract defendants are therefore voluntary, and potential tort defendants involuntary. Potential property defendants include everyone: “all the world” in Locke’s famous phrase. The sum of voluntary defendants and involuntary defendants is everyone.

b. Remedies

i. Assumpsit

Viewing property as the sum of tort and contract helps explain certain oddities of property law. Some of the easiest examples come from the field of property remedies. An obvious one is that favorite of law school and bar examination students: the doctrine

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258 E.g., Unif. Trade Secrets Act § 3 and accompanying official comments (2011).
260 E.g., Lahav, supra n. [ ], at 163.
261 E.g., Lahav, supra n. [ ], at 163.
of “waiving the tort and suing in assumpsit.” While modern practice disfavors such old fashioned Latin legalese terms as “assumpsit,” the doctrine is alive and well in current practice, although often called “quasi-contract,” a name that better illustrates how property is the sum of tort and contract.

In property based causes of action such as conversion, the plaintiff property owner often has a choice of remedies. The tort remedy is generally damages for the market value, at the time of conversion, of the converted property. If the plaintiff can show the property was unique and hence irreplaceable (meaning that the presumption that the plaintiff can use the damages to purchase a substitute does not apply), the court will sometimes issue a mandatory injunction requiring the defendant to return possession of the property to the plaintiff. These are the common law tort remedies of replevin, for chattels, or ejectment, for realty. There is also the quasi-contract remedy of assumpsit.

To begin with the simplest example, consider a defendant who misappropriates the plaintiff’s money. Money is of course property, so the plaintiff’s causes of action and remedies are property based. The plaintiff’s cause of action is for conversion. Despite money being fungible, the conversion tort cause of action requires the plaintiff, in an action for damages, to prove specifically which identifiable money the defendant wrongfully took. If the plaintiff can satisfy that requirement (along with, of course, all the other elements of the cause of action), the plaintiff can receive a damages judgment for the value of the misappropriated money.

Conversion being a property based cause of action, however, the plaintiff can choose an alternate, contract based, remedy to the tort damages remedy already discussed. This is what the common law of restitution called “waiving the tort and suing in assumpsit.” Assumpsit means quasi-contract, that is, an implied contract between the plaintiff and defendant. In this alternative, the plaintiff does not have to prove the misappropriation of specific identifiable funds, but merely that the circumstances have unjust enriched the defendant. The theory is one of the “common counts” of debt

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267 For an interesting historical treatment of the definition of money, see In re Estate of Miller, 48 Cal. 165, 169 (1874).
268 E.g., In re Thebus, 108 Ill. 2d 255, 261 (1985).
collection: that the defendant “had and received” the plaintiff’s money, and that receipt and possession contains an implicit promise to repay the money to the plaintiff. By keeping the plaintiff’s money, the defendant breaks the implicit promise (and thus breaches an implied contract), and it would be unjust to allow the defendant to keep the money.274

The money conversion plaintiff, as a property owner, thus has remedies in both tort and in contract. This doubling of remedies, one tort based, and one contract based, in property related causes of action is the rule, not the exception. For example, the cause of action for the conversion of a chattel (i.e. tangible personal property that is not money275) provides the same choice of tort damages or quasi-contract restitution as does the cause of action for money misappropriation.276

ii. Bailments

Bailments are another example of this accumulation of remedies. A bailor gives temporary possession of the subject property to the bailee, such as when one leaves one’s car with a mechanic for repairs or leaves one’s clothes with a cleaner.277 If the bailor wrongfully refuses to return the bailed property, the owner has, again, a choice of a contract based remedy and a tort based remedy. The property owner can sue the bailee for damages resulting from the breach of contract, such as the money the bailor paid the bailee for work not done or improperly done on the bailed goods.278 The owner can also recover tort damages for destruction, conversion, or damage to the goods bailed.279

Both the conversion and bailment examples demonstrate that property based causes of action have two sets of remedies: a basic contract like remedy, which essentially effects the sale of the subject property, and also an additional, often restitutionary, tort remedy that is frequently more generous to the property owning plaintiff than the contract remedy. This article’s thesis, that property is the sum of contract and tort, helps explain this apparent oddity in property law.

VIII. Conclusion

In summary, Hegel argued that tort and crime law are together the sum of contract and property law. A better, more current, explanation in American law property is the sum of contract and tort. Trade secret law illustrates this proposal well, because trade secret rights, defendants, and remedies are the total of respective contract and tort rights, defendants, and remedies. Trade secret law thus illustrates how contract and tort come

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together to create property rights. This theory helps understand why, e.g., property based causes of action, even those outside the intellectual property field, have both a tort based and a contract based remedy.