

The Inefficiency of the Accession Doctrine:

A Case for the Property Rule

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Abstract

The accession doctrine in property law exists in both common law countries and civil law countries. The prior literature does not question, and even makes a case for, the efficiency of the accession doctrine. I argue that the accession doctrine fails to meet the normative standard that the law should allocate property rights to the party who values them the most. Efficiency should be ascertained by comparing the *ex ante* economic values of the original owner and the improver, not by comparing the fair market value of the processed properties before and after the improvements, as the accession doctrine dictates. I also examine whether there are other economic reasons to justify the deviation from the property rule (and thus the normative standard), finding that none of the examined theses makes economic sense. Therefore, I argue that the accession doctrine should be abolished, or at the very least, used more prudently and only rarely—I propose three ways to narrow the applicability of the accession doctrine. I also respond to Thomas Merrill's recent advocacy of the accession principle, a broader concept than the accession doctrine. I argue that the economic rationales behind the accession principle are not applicable to the accession doctrine.

Keywords

The accession doctrine, the accession principle, the normative Hobbes theorem, property rule, liability rule, Rule 5

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I. INTRODUCTION

Paulina, an environmentalist, bought a large tract of land to preserve its forest. She believes that fallen trees should stay where they are to nurture the surrounding soils. Doug comes across the area. Mistakenly perceiving that those logs are unowned properties, Doug tows them away and make them into more valuable hoops.¹

Phil owns a small grape yard. The fruits in his garden could sell for \$350 on the market, but Phil never sells it because he has an idiosyncratic taste for grapes he grows himself; or, put it in another way, the value of the grapes for Phil is \$900, and no one has bothered to offer more than \$350 before. Phil's new neighbor, Dora, makes a mistake about their boundary and thinks that the grapes grow from her own land. Dora makes these grapes into a bottle of wine whose going price on the market is about \$800.

Picasso searches for a type of special-quality canvas for a long time. One day he finally finds one such piece of canvas and pays 10,000 dollars for it, planning to start drawing another masterpiece he has conceived for ten years. Picasso's disciple came to his studio. Believing that the canvas is the one she left off the other day, the disciple worked on it and finished an oil painting that can sell for 50,000 dollars (thanks to her

¹ Part of the facts is borrowed from the leading case *Wetherbee v. Green*, 22 Mich. 311 (1871). Two other accession cases are also regarding the processing of timber. See *Beede v. Lamprey*, 64 N.H. 510 (1888); *E.E. Bolles Wooden Ware Co. v. United States*, 106 U.S. 432 (1882).

skill and her fame as the maestro's disciple). But for the disciple's intervention, Picasso can make his touch on the canvas and create another million-dollar artwork.

Pursuant to the accession doctrine in property law, Doug, Dora, and the disciple in the above examples will get the title of the properties (log, wine, and painting), though they have to pay Paulina, Phil, and Picasso the fair market value of the properties prior to the processing as compensation. These examples, I argue, illustrate that the accession doctrine assign the properties in question to the wrong parties and establish wrong incentive schemes for future potential improvers. In other words, the accession doctrine is inefficient.

To be more specific, the accession doctrine contains two rules. The first rule stipulates that if a good-faith improver transforms (or significantly increases the value of) others' properties, an improver can acquire the title of the processed properties on the condition that she compensates the original owners the fair market value of the properties in their original conditions. It is not a "property rule";² rather, it is a "liability rule."³ The second rule stipulates that when an improver fails the above tests and does not get the title of the processed property, the property owner has to compensate the improver for her labor. This is not a property rule, either; rather, it is a "Rule 5," a type of put-option rules,⁴ because the improver forces the owner to buy her labor.⁵

The main thesis of this article is that, in the accession context, the property rule is more efficient than the two rules contained under the heading of the accession

² Under the property rule, "the state guarantees property right assignments against infringement through the threatened use of its police powers." Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713, 715 (1996).

³ "A liability rule gives at least one party an option to take an entitlement non-consensually and pay the entitlement owner some exercise price." Ian Ayres & J.M. Balkin, *Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond*, 106 YALE L. J. 703, 704 (1996).

⁴ A put option in law is an "option to force a non-consensual purchase on the other side." Ian Ayres, *Protecting Property with Puts*, 32 VAL. U. L. REV. 793, 796 (1998). Following the matrix and naming convention initiated by Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972), a put option law is called either a Rule 5 or Rule 6, depending on which party has the initial entitlement. The literature uses Rule 5 to refer to situations in which "polluters" have initial entitlements and Rule 6 to those in which "residents" have initial entitlements. See, e.g., Saul Levmore, *Unifying remedies: Property Rules, Liability Rules, and Startling Rules*, 106 YALE L. J. 2148, 2160-63 (1997); Ian Ayres, *Protecting Property with Puts*, 32 VAL. U. L. REV. 793, 797 (1998); IAN AYRES, *OPTIONAL LAW* 15-17 (2005). From my perspective, the improver (who has entitlement in her own labor) is more like a polluter, so I use Rule 5 to refer to this part of the accession doctrine.

⁵ Note that this article discusses only the accession doctrine, and the problem of commingled goods is not included. The accession doctrine typically deals with the integration of one thing and labor owned by different persons, while the commingled goods question deals with integration of at least two things owned by different persons, with or without labor by either party or a third party. Though the economic analysis of these two questions should be similar, the doctrinal treatment of the commingled goods is a little more complicated and will be left for future articles.

doctrine. The normative standard of this article is the “normative Hobbes theorem,”⁶ prescribing that “the law should allocate property rights to the party who values them the most.”⁷ Value here refers to economic value,⁸ not fair market value.⁹ The property rule and voluntary exchanges will make resources flow from people who value them less to people who value them more. Generally, each voluntary transaction is efficient. And barring from high transaction costs, each no-deal implies that the current owners value their things more.

The accession doctrine (more specifically, the first rule) cannot do better than the property rule. As the above three hypothetical examples indicate, the rule sometimes allocates entitlements to the party who does not value them more. On its face, the doctrine may have potential merits to overcome high-transaction or other problems. But further examinations reveal that no economic justification exists. Besides, the second rule under the accession doctrine, the Rule-5 compensation, merely transfer wealth and creates wrong incentives at the same time. It cannot pass efficiency muster, either.

Thus, even though the accession doctrine is a fixture in both common law and civil law jurisdictions, and the Law and Economics literature, to my knowledge, has never questioned its appropriateness, I argue that for efficiency’s sake, the accession doctrine should better be abolished, and the law should revert to the property rule. That is, the original owner keeps the title of the improved goods and owes no duty to compensate the improver. Nevertheless, recognizing the difficulty of getting rid of such a “venerable doctrine”¹⁰ supported by the case law¹¹ overnight, and leaving some room for a “safety valve” for unusual circumstances, this article also considers a less radical position. That is, the applicability of the accession doctrine should be narrowed, such as discarding the transformation test, limiting the disparity-of-value

⁶ See ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 97 (5th ed. 2008).

⁷ *Id.* at 98. Accord James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440, 446 (1995); Thomas W. Merrill, *Accession and Original Ownership*, 1 J. LEGAL ANALYSIS 459, 488 (2009).

⁸ Economic value equals fair market value plus the party’s subjective premium. See Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569, 619 (1984); Lee Anne Fennell, *Taking Eminent Domain Apart*, 2004 MICH. ST. L. REV. 957, 963-65; THOMAS J. MICELI & KATHLEEN SEGERSON, *THE ECONOMICS OF EMINENT DOMAIN: PRIVATE PROPERTY, PUBLIC USE, AND JUST COMPENSATION* 20 (2007).

Subjective premium is sometimes called the “consumer’s surplus.” See James E. Krier & Christopher Serkin, *Public Ruses*, 2004 MICH. ST. L. REV. 859, 866.

⁹ Fair market value is “the amount a willing buyer would pay a willing seller of the property, taking into account all possible uses to which the property might be put other than the use contemplated by the taker.” DAVID A. DANA & THOMAS W. MERRILL, *PROPERTY: TAKINGS* 169-70 (2002).

¹⁰ Thomas W. Merrill & Henry E. Smith, *The Morality of Property*, 48 WM. & MARY L. REV. 1849, 1878 (2007)(calling the accession doctrine venerable).

¹¹ For a review of the case law, see Jay L. Koh, *From Hoops to Hard Drives: An Accession Law Approach to the Inevitable Misappropriation of Trade Secrets*, 48 AM. U. L. REV. 271, 321-34 (1998).

test to cases in which highly substitutable commercial commodities are involved and transaction costs are high, and awarding Rule-5 compensation only to good-faith improvers under color of title.

The structure of this article is as follows: Part II gives a brief overview of the accession doctrine in the U.S. and in several civil law countries. Part III compares the relative merits of the property rule and the accession doctrine. Part IV explores the narrow application of the accession doctrine. Part V concludes.

II. THE ACCESSION DOCTRINE

In the U.S., the accession doctrine can be summarized as follows:

- (1) When the improver of a personal property owned by others is bad-faith, the title of the improved property will not transfer, and the improver may not request the owner to compensate her for her labor.¹²
- (2) When the improver is “good-faith,”¹³ and
 - (a) EITHER the improver has so transformed the object physically that retrieving or tracing the original object is difficult (“transformation test”), OR the value of the improved thing relative to the unimproved thing is high enough (“disparity-of-value test”): THEN the improver will gain title but will have to compensate the owner the value of the object before the improvements were undertaken.¹⁴
 - (b) In other scenarios—that is, the improver neither transforms the property nor significantly increases the value of the property—the original owner can keep the property, but there is a disagreement as to whether the owner has to compensate the improver for her labor and other inputs. Henry Smith states that the original owner “may have to compensate a good-faith improver,”¹⁵ while Thomas Merrill argues that “the laborer generally has no right of action for restitution for the value of the labor

¹² See Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 *YALE L. J.* 1742, 1769 (2007); Koh, *supra* note 11, at 326.

¹³ “Good faith” means “[a] state of mind consisting in honesty in belief or purpose.” *BLACK’S LAW DICTIONARY* 713 (Bryan A. Garner ed., 8th ed. 2004). In the accession context, good-faith improvers refer to those who do not know that they are not the owners of the processed things.

¹⁴ See Merrill & Smith, *supra* note 10, at 1878-79; Smith, *supra* note 12, at 1769; Koh, *supra* note 11, at 331.

¹⁵ Smith, *supra* note 12, at 1769.

services.”¹⁶

The accession doctrine is not an American or English invention. In fact, the doctrine can be traced to Roman law.¹⁷ In many civil law countries nowadays, like Germany,¹⁸ France,¹⁹ Japan,²⁰ Taiwan,²¹ etc, a similar accession doctrine is included in their civil codes. For the first rule, the disparity-of-value test is adopted in all of the aforementioned civil law jurisdictions, while the transformation test is codified in Germany only. As for the second rule, unlike the U.S., it is clear in the civil law countries that if the original owner can keep the property, she has to compensate the

¹⁶ Merrill, *supra* note 7, at 466. Accord Koh, *supra* note 11, at 327.

¹⁷ Merrill, *supra* note 7, at 463-64.

¹⁸ Section 950 of the German Civil Code stipulates that “[a] person who, by processing or transformation of one or more substances, creates a new movable thing acquires the ownership of the new thing, except where the value of the processing or the transformation is substantially less than the value of the substance. Processing also includes writing, drawing, painting, printing, engraving or a similar processing of the surface.”

Section 951 stipulates that “[a] person who, as a result of the provisions of sections 946 to 950, suffers a loss of rights may require from the person to whose benefit the change of rights occurs payment in money under the provisions on the return of unjust enrichment. The restoration of the former state cannot be required.”

For English translation of the German Civil Code, see http://www.gesetze-im-internet.de/englisch_bgb/.

¹⁹ Article 570 of the French Civil Code stipulates that “[i]f an artisan or any person whatever uses material which does not belong to him to make a thing of a new species, whether the material may resume its original form or not, the one who is the owner of it has the right to reclaim the thing which has been made out of it by reimbursing the price of the labor estimated at the date of reimbursement.”

Article 571 of the French Civil Code stipulates that “[i]f, however, the labor was so important that it far surpasses the value of the material used, the industry will then be considered the principal part, and the worker will have the right to retain the thing wrought, by reimbursing to the owner the price of the material, estimated at the date of reimbursement.”

For English translation of the French Civil Code, see JOHN H. CRABB (TRANSLATOR), THE FRENCH CIVIL CODE 136-137 (1977).

²⁰ Article 246 of the Japan Civil Code stipulates that “if a person (hereinafter in this article referred to as “Processor”) contributes work to the movables of others, ownership of the Thing so worked up shall vest in the owner of the materials; provided, however, that, if the value derived from the work significantly exceeds the value of the materials, the Processor shall acquire ownership in the processed Thing.”

Article 248 stipulates that “A person who suffers loss because of the application of the provisions of Article 242 through the preceding article may demand compensation in accordance with the provisions of Article 703 and Article 704.”

For English translation of the Japan Civil Code, see <http://www.japaneselawtranslation.go.jp/law/list/?re=02&yo=民法&ft=2>

²¹ Article 814 of the Taiwan Civil Code stipulates that “When a person has contributed work to a personal property belonging to another, the ownership of the personal property upon which the work is done belongs to the owner of the material thereof. However, if the value of the contributing work obviously exceeds the value of the material, the ownership of the personal property upon which the work is done belongs to the contributing person.”

Article 816 of the Taiwan Civil Code stipulates that “The person, who has a loss through the provisions of the preceding five articles, is entitled to claim a reimbursement of the value in accordance with the provisions concerning unjust enrichment.”

For English translation of the Taiwan Civil Code, see <http://db.lawbank.com.tw/Eng/FLAW/FLAWDAT01.asp?lsid=FL001351>

improver for her labor.²² Interestingly, at least judged from the civil codes themselves, Germany, France, Japan, and Taiwan do not distinguish between good-faith and bad-faith laborers.²³

In the following, I will use Law and Economics to analyze the American version of the accession doctrine, with occasional comments on the versions adopted by civil law countries.

III. ECONOMIC ANALYSIS

According to the Coase Theorem, if transaction costs are zero or low enough, the use of resource will be efficient, no matter how entitlements are assigned.²⁴ When transaction costs are high enough to prevent bargaining, the efficient use of resources will depend upon how property rights are assigned.²⁵ Accordingly, Cooter and Ulen proposes the “normative Hobbes theorem,” which states that “the law should allocate property rights to the party who values them the most.”²⁶ Usually, current property owners *are* the ones who value their things the most. That is why, in a market economy, they out-bid others and acquire the titles in the first place. To ensure that property rights change hand only when the title successor values the thing more than the current owner, the “property rule” is adopted in property law to protect owners’ entitlements.²⁷ Under the property rule, titles transfer only through voluntary exchanges, and Law and Economics ABC tells us that voluntary exchanges occur only when a buyer’s value (willingness to pay) is higher than a seller’s value (willingness to accept). Adopting the property rule, the law helps resources flow to the parties who value them the most, attaining the goal set forth by the normative Hobbes theorem.

To be sure, sometimes, the liability rule, instead of the property rule, is used to protect owners’ entitlements, condemnations being a prominent example.²⁸ In the eminent domain context, the liability rule is used to overcome the hold-out problem.²⁹

²² See Article 570 of the French Civil Code, Article 248 of the Japan Civil Code, and Article 816 of the Taiwan Civil Code, all cited in the previous footnotes.

²³ This is not universal in civil law countries. Article 726 of the Swiss Civil Code distinguishes between good-faith and bad-faith processors. For the content of the Swiss Civil Code in German, see <http://www.admin.ch/ch/d/sr/2/210.de.pdf>. There is no official English translation of the Swiss Civil Code.

²⁴ See COOTER & ULEN, *supra* note 6, at 89.

²⁵ See *id.*; THOMAS J. MICELI, *THE ECONOMIC APPROACH TO LAW* 175 (2004).

²⁶ See literature cited in note 7.

²⁷ See Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719, 1722 (2004) (“the law treats property rule protection as the norm and liability rule protection as the exception”).

²⁸ See, e.g., Thomas W. Merrill, *The Constitution and the Cathedral: Prohibiting, Purchasing, and Possibly Condemning Tobacco Advertising*, 93 NW. L. REV. 1143, 1158-59 (1999).

²⁹ About using liability rules to overcome hold-out problems, see Richard A. Epstein, *A Clear View of*

But not every condemnee is a hold-out, some condemnees (Wilhelmina Dery³⁰ coming to mind) are “hold-in,”³¹ who have extraordinary subjective premium on their properties. Hence, the eminent domain regime cannot ensure that property rights go to the party who value them the most, because sometimes condemnees simply value their things more than condemnors. But most scholars would accept the eminent domain regime as a necessary evil, at the high expense of the normative Hobbes theorem.

The accession doctrine also deviates from the property rule default. In cases in which the accession doctrine is applicable now, if the property rule is applied instead, the original owners keep the titles. Period. It does not matter whether the improver significantly increases the value of the property or not. In the Picasso example above, for instance, Picasso will keep the new painting. Under current law, however, the accession doctrine allows titles of properties to transfer to good-faith improvers (if the improvement is significant), without the consents of their original owners. This is clearly not a pure property rule; rather, the entitlement of the owner, as opposed to the improver,³² is only protected by the Rule-2-type liability rule.³³

In addition to the liability rule, the accession doctrine contains another potentially controversial, non-property rule. When good-faith improvers do not get the title, owners (may) have to compensate improvers for their labor (despite the fact that owners probably do not want such improvements;³⁴ otherwise owners would have improved the property themselves or contracted someone else, like the improver, to do it). This less noticed part of the accession doctrine could be characterized as a Rule 5, a type of put-option rules,³⁵ because the improver forces the owner to buy her labor.³⁶

the Cathedral: The Dominance of Property Rules, 106 YALE L. J. 2091, 2092 (1997).

³⁰ Wilhelmina Dery is one of the plaintiffs in the famous takings case *Kelo v. City of New London*, 545 U.S. 469 (2005). According to the majority opinion’s description, “[p]etitioner Wilhelmina Dery was born in her Fort Trumbull house in 1918 and has lived there her entire life. Her husband Charles (also a petitioner) has lived in the house since they married some 60 years ago.”

³¹ See Gideon Parchomovsky & Peter Siegelman, *Selling Mayberry: Communities and Individuals in Law and Economics*, 92 CALIF. L. REV. 75, 83 (2004)(defining “holdins” as people who refuse to sell because they place high subjective value to the properties, as oppose to people/“holdouts” who strategically refuse to sell to obtain higher compensation).

³² The owner’s entitlement against people other than the improver, however, is still protected by the property rule.

Some would argue that the accession doctrine is an example of the “pliability rule,” a term coined by Abraham Bell & Gideon Parchomovsky. Pliability rules are defined as “contingent rules that provide an entitlement owner with property rule or liability rule protection as long as some specified condition obtains; however, once the relevant condition changes, a different rule protects the entitlement—either liability or property, as the circumstances dictate.” Abraham Bell & Gideon Parchomovsky, *Pliability Rules*, 101 MICH. L. REV. 1, 5 (2002).

³³ For a general analysis of Rule 2, see IAN AYRES, *OPTIONAL LAW* 13-15 (2005).

³⁴ Therefore, such “improvements,” for the original owners, are essentially personal property torts, because they reduce the value of the properties.

³⁵ See explanations and literature cited in footnote 4.

The property rules are not embodied in the accession doctrine, but property rules may not be the only way to achieve the normative Hobbes theorem. I will examine, in Section A, whether the accession doctrine can always use the liability rule to assign entitlements to parties who value them the most. I will argue that it does not. Like eminent domain, the accession doctrine may have some redeeming benefits that could outweigh the concern of assigning entitlements to the right person. In Sections B and C, I will then discuss several possible justifications for not adopting the property rule, concluding that the accession doctrine is not efficiency-enhancing. In Section D, I will respond to the arguments by Thomas Merrill in a recent article in favor of the accession doctrine,³⁷ concluding that the accession doctrine is not as efficient as Merrill describes.

A. Owner or Improver Values the Property More?

The implicit logic behind the literature supporting the accession doctrine seems to be the following: because the improver creates a more valuable, new thing, she values the property more than the original owner does. And entitlements shall be assigned to the party who values it the most. While I accept the second part of the inference (the normative Hobbes theorem), I argue that the improver does *not necessarily* value the property more than the original owner; therefore, contrary to what the literature implies, the accession doctrine does not always produce efficient results.

Recall the hoops/logs example in the Introduction. Indeed, the fair market value of the hoops is higher than that of the logs. Nevertheless, when we talk about which party “values” the property the most, we are not talking about fair market value; otherwise, the value for the two parties and everyone else is the same—the fair market value—and the normative Hobbes theorem will become meaningless. Instead, the measurement of value is economic value.³⁸ Therefore, to determine whether Paulina

³⁶ Granted, the improver *unintentionally* processes the thing, so it is not like the improver consciously exercises a put option. Nevertheless, when the improver realizes that she is not the owner, she still *requires* the owner to pay her. In other words, the improver at least exercises her put option *ex post*.

³⁷ Merrill, *supra* note 7.

³⁸ Moreover, the economic value should be the *ex ante* economic value, not *ex post* economic value. Law and Economics uses *ex ante* economic value because doing so gives parties the right incentives to make efficient decisions. In the accession context, the “improvement” usually decreases the economic value for original owners. For a conservationist like Paulina, after fallen trees become hoops, it became much less useful for the environment. For someone who likes to eat fruits but does not drink alcohol, like Phil, home-grown grapes are especially precious but wine only worth its market value. Therefore, if we compare *ex post* economic value, it is very likely to ignore the most valuable use of the property (the original use by the original owner). Thus, *ex ante* economic value is the right benchmark to carry out the normative Hobbes theorem.

Regarding Law and Economics’ focus on *ex ante* perspective, see Henry E. Smith, *Law and*

or Doug value the wood more and who should get the title, we should *not* compare the fair market value of logs and hoops, but Paulina's conservation value and Doug's value (for a merchant like Doug, his economic value usually approximating the fair market value). Suppose that the fair market values of logs and hoops are \$100 and \$250 respectively, as long as Paulina's willingness to accept is higher than \$250, Paulina is the party who values the property more. Ditto for the Dora-Phil example. As long as Phil's economic value (\$900) is higher than Dora's economic value (\$800 plus some subjective premium, derived from the fact that she made the wine herself), Phil values the property more.

This is not to deny that Dora or Doug could be the party who has the higher value. Certainly it is possible. My point here is to show that a good-faith improver who significantly increases the fair market value of the property is not necessarily the party who values it more.³⁹ Consequently, the accession doctrine fails the normative Hobbes test. In the next Section, I will discuss whether the accession doctrine has other redeeming benefits as justifications.

B. Justifications of Accession Doctrine over Property Rule?

1. Overcoming Hold-out Problem?

The first possible advantage of the accession doctrine is to overcome the hold-out problem, as it is the major justification for the eminent domain regime, the prime example of the liability rules. But few, if any, accession problems arise in the bilateral monopoly context. Moreover, improvers must be good-faith, meaning that they never have a chance to negotiate with the original owners. How could there be a hold-out problem if original owners never refuse to deal? Hence, hold-out (or, for that matter, high transaction costs more generally) is not a proper justification for the broad scope of the accession doctrine.

2. Reducing the Court's Decision-making Costs?

The second possible justification is that the accession doctrine could reduce the court's decision-making costs. As Henry Smith puts it, "in the compensation question,

Economics: Realism or Democracy?, 32 HARV. J. L. & PUB. POL'Y 127, 134 (2009) ("Law and economics in particular is concerned with incentives for the future and is ex ante in this sense."); Richard R.W. Brooks & Warren F. Schwartz, *Legal Uncertainty, Economic Efficiency, and the Preliminary Injunction Doctrine*, 58 Stan. L. Rev. 381, 392 (2005); Lucian Arye Bebchuk, *Property Rights and Liability Rules: The Ex Ante View of the Cathedral*, 100 MICH. L. REV. 601 (2001).

³⁹ Although I use the "disparity-of-value" test as the example in the text, the same argument can be applied to the "transformation test."

both the transformation test and the disparity-of-value test allow the court to concentrate on valuing the lesser contribution, which perhaps is thought to be the one that can be valued more easily and at lower error cost. For the disparity-of-value test, the value of the overall object need only be established in a rough way.”⁴⁰ Smith is discussing the relative merits of the disparity-of-value test and transformation test versus other possible tests, given the existence of the accession doctrine. But when it comes to comparing the merits between maintaining the accession doctrine and reverting to the property rule, the court’s decision-making costs are actually higher under the former regime. If the property rule is the norm, as long as the original owner can meet her burden of proof to persuade the judge or the jury that she is the original owner, she gets the title. No ambiguous “transformation test” or “disparity-of-value test” is necessary. And the compensation question can be avoided altogether. Under the accession doctrine, by contrast, the court has to make an estimate of the property value before and after the processing, or determine whether the improvement by the processor constitutes “transformation,” in addition to verifying whether the claimed original owner is indeed the original owner and whether the improver is intentional or bona fide.⁴¹ Hence, the judicial decision-making costs are obviously higher under the accession doctrine, and thus not a persuasive justification for the doctrine. This is yet another example of how property rule reduces the “measurement costs” of producing information about assets and activities.⁴²

3. *Saving Improvers from Verification Costs?*

The third possible justification is that the accession doctrine saves improvers from verification costs. This thesis can be explicated as follows: Verification of property titles can be costly (since there is generally no record system for personal properties). Without the protection of the accession doctrine, however, laborers who plan to process a personal property will still have strong incentives to verify its title to reduce the risk of giving the fruits of her labor to the actual title owner without charge. When the verification costs are higher than the expected value of the improvement, laborers will decide to give up improving altogether. Therefore, some efficient improvements (in which the expected value of improvement is larger than the labor cost) will not be done.⁴³ With the protection of the accession doctrine, as long as

⁴⁰ Smith, *supra* note 12, at 1770.

⁴¹ Stewart Sterk also argues that it is difficult for the court to differentiate good faith from bad faith, and the distinction will create perverse incentives to be good-faith, even when the verification costs are low. See Stewart E. Sterk, *Property Rules, Liability Rules, and Uncertainty About Property Rights*, 106 MICH. L. REV. 1285, 1313 (2008).

⁴² See Smith, *supra* note 27, at 1723.

⁴³ Stewart Sterk’s recent article on the uncertainty of property rights argues that high verification costs

improvers believe that they are working on things of their own,⁴⁴ they can save the costs of verifying the true owner. Hence, the accession doctrine saves the improver from verification costs.

Verification costs, however, are not the only costs that concern us. Original owners do not want to lose their properties and will spend “prevention costs” to fend off improvers. Using our recurrent examples, Phil will fence his grape yard, and Paulina will hire a ranger to patrol the forest. Prevention costs and verification requirements are negatively correlated. Loosening the verification requirements forces owners to increase their expenditure on protecting their own properties.

Minimizing the total costs (verification costs plus prevention costs), however, is not a proper efficiency goal, because the value of verification and that of prevention are different. Prevention is a waste of resource, a necessary evil to fend for one’s own properties. Verification, by contrast, produces valuable information. After verification, if it turns out that the improvers are the owners, they can do whatever improvements they desire to maximize their economic value, without having to discounting the expected payoff because of the title uncertainty.⁴⁵ On the other hand, if improvers through verification find out that they are not entitled to the properties they are interested in processing, they know who to bargain with. And barring from the rare occasions that transaction costs are high, any bargaining result (no improvements, a sale, or owners contracting laborers to improve the properties) will be efficient; that is, the properties will belong to the party who value them the most and their economic value will be maximized through bargaining.

Moreover, the argument that efficient improvements will not happen because of high verification costs also neglect the fact that the improvers do not necessarily assess the “increased value of improvement” correctly, as they do not know the original owner’s economic value. There’s the rub. Economic value is subjective and in the real world, it is difficult for improvers to assess the economic value of the owners.⁴⁶

Finally, the current accession doctrine cannot even pass the test of a sympathetic

(or search costs, in his term) may bar efficient improvement; thus, at least under some circumstances the law should adopt liability rules to reduce verification costs. *See* Sterk, *supra* note 41. Sterk’s analysis, however, neglect the prevention costs aspect discussed in the text.

⁴⁴ Jay Koh, however, has observed that “courts have been reluctant to apply the law of accession to provide *negligent* improvers of property with compensation for their efforts” (emphasis added). Koh, *supra* note 11, at 327.

⁴⁵ Such discount may prevent would-be efficient improvements from happening.

⁴⁶ Stewart Sterk, the leading advocate for using liability rule to reduce verification costs, bases his arguments on an often-unrealistic assumption that the improver knows the harm to the owner. *See* Sterk, *supra* note 41, at 1318.

commentator. Stewart Sterk points out, “When the stakes increase, failure to search becomes less reasonable.”⁴⁷ The accession doctrine does just the opposite. When the disparity of value is high (then usually the stakes are high), the accession doctrine awards the improver with the title and reduces her incentive to search/verify. If the accession doctrine is really designed to facilitate marginally efficient improvements, improvers who significantly increase the value of the processed thing will *not* get the title; rather, those who minimally increase the value will be awarded with the title.

In summary, the economic justifications for the accession doctrine are at most weak. The improvers do not necessarily value the properties more than the original owners do. There is no hold-out problem to overcome. The court’s decision-making costs actually increase because of the accession doctrine. Verification is not just a cost; rather, it provides useful information. It is the prevention costs that should be saved.

Accordingly, the law should revert from the accession doctrine to the property rule. To be more specific, the original owner keeps the title of the processed property, no matter the improvement significantly increases the fair market value of the property or not. To simplify the legal relationship and deter non-consensual improvements, the contribution of the improver’s labor and materials (like painting oils in the Picasso example), even her intellectual property rights (like the disciple’s IP right of the painting),⁴⁸ will be assigned to the original owner through the “principle of accession.”⁴⁹ Whether it is efficient to require the original owner to compensate the improver for her contribution is explored in the next section. Some would argue that application of property rules would be harsh under some circumstances. I discuss the possibility of a narrower application of the accession doctrine in Part IV.

C. The Problematic Rule-Five Compensation

As explicated in Part II, the Rule-5 compensation requirement is controversial in the U.S., but it is contained in the civil codes of several civil law countries. Is this requirement economically justified? A law review article has claimed that “[a]s an abstract principle, a mistaken improver’s claim for restitution is unassailable: conscience and equity are on his or her side.”⁵⁰ While that might be the case, and

⁴⁷ *Id.*, at 1322.

⁴⁸ I thank Lee Anne Fennell for raising the problem of intellectual property rights.

⁴⁹ The principle of accession is defined as “ownership is established by assigning resources to the owner of some other thing that is already owned.” See Merrill, *supra* note 7, at 460. See more discussions on the accession principle in Section III.D.

⁵⁰ Kevin H. Dickinson, *Mistaken Improvers of Real Estate*, 64 N.C.L. REV. 37, 75 (1985).

probably the major reason that this compensation requirement is a fixture in civil law jurisdictions, this put-option rule does not seem to make efficient sense, either.

First of all, after the improvement is done, whether the original owners compensate the improvers or not is merely a transfer of wealth. Thus, compensation does not enhance efficiency (for transfer itself does not create value), and enforcing the compensation (the costs of litigating in court, etc.) is costly.

In addition, compensation is usually required in order to make the compensator internalize the externality his previous behavior imposes on others (think car accident compensation), or to set a right “price” for the compensator (think expectation damages in efficient breach). But in the accession context, the original owner does *nothing* (do we fault him for not fending off intruders more effectively?). The compensation can hardly change original owner’s behavior *ex ante*.

Indeed, sometimes compensation is required so that recipients have the right incentives (think takings compensation awarded to prevent condemnees from taking political actions to stall the public project). From this angle, compensation should not be paid to improvers. From a social standpoint, the improvements in the accession context are not necessarily value-enhancing. Guaranteed compensation, however, will induce good-faith improvers to process the properties no matter what, because at the very least they can recoup the expenses. It follows that some inefficient improvements will be done. But if compensation is not required, rational, good-faith laborers will take into account the probability that the property she improves on may not be hers, and have more incentives to verify the entitlements of the property.⁵¹ As argued above, verification can channel non-consensual improvements to voluntary transactions, which guarantee efficiency. Therefore, not awarding compensation is better than awarding.

More generally, the literature is mostly conservative about implementing a Rule 5,⁵² as it obviously creates moral hazard.⁵³ As there is no particular efficiency reason to compensate good-faith improvers,⁵⁴ the default position should be no

⁵¹ A man who sincerely believes that he owns the things can still recognize that it is possible that he makes an honest mistake.

⁵² See Levmore, *supra* note 4, at 2167-68 (warning that the Rule 5 should be deployed cautiously). For other criticism of Rule 5, see Richard A. Epstein, *Protecting Property Rights with Legal Remedies: A Common Sense Reply to Professor Ayres*, 32 VAL. U.L. REV. 833, 844 (1998).

⁵³ Merrill, *supra* note 7, at 466 n.10.

In civil law countries that do not distinguish between good-faith and bad faith laborers, the moral hazard problem will be even more serious.

⁵⁴ In the adverse possession context, Lee Ann Fennell has persuasively argued that “[t]here is no reason to think that people who are making honest mistakes are necessarily also making efficient mistakes.” Thus, good-faith improvement is not coterminous with efficient improvement. See Lee Anne Fennell, *Efficient Trespass: The Case for “Bad Faith” Adverse Possession*, 100 NW. U. L. REV. 1037,

compensation. In addition, because the above analysis does not depend on whether and how frequent laborers acquire titles under the accession doctrine, the inefficient Rule-5 compensation should be abolished no matter the liability rule is maintained or discarded.

D. Potential Challenges: A Response to Prof. Thomas Merrill

Thomas Merrill, in a recent article *Accession and Original Ownership*, makes a case for the “accession principle” over the rule of first possession.⁵⁵ Merrill defines the accession principle as “ownership is established by assigning resources to the owner of some other thing that is already owned.”⁵⁶ The accession principle contains doctrines such as *fructus naturales*, *confusio*, *accessio*, *specificatio*, etc.⁵⁷ The “accession doctrine” that this Article discusses refers to *specificatio* (in this Section, I will use these terms interchangeably).⁵⁸ Merrill argues that the accession principle is sometimes more efficient than the rule of first possession. While I am not against this general thesis, I will contend that the accession doctrine (ironically) is an odd ball in the accession principle family, and thus the efficient characteristics of the accession principle that Merrill pointed out are not applicable to the accession doctrine. Thus, the accession doctrine is still inefficient, as compared to the property rule.

First of all, the accession doctrine applies to cases in which labor is added to properties, while other doctrines in the accession principle apply to cases in which at least two non-labor (usually physical) properties are involved. Merrill argues that “[a]ccession is grounded in a conception of original title as an attachment to existing ownership rights.”⁵⁹ Accordingly, a newborn kitty belongs to the mother cat’s owner, and trees belong to the owner of the soil. While we can follow the Lockean tradition and regard one as the “owner” of her labor, assigning the title of the improved property to the owner of labor, rather than the owner of materials, does not easily fit into the above cited conception of accession principle.⁶⁰ It can be further argued that pursuant to the accession principle, the transformed property should belong to the original owner, as she has “existing ownership rights.” This conceptual, doctrinal difference is not fatal to the efficiency argument for *specificatio*, the following

1067 (2006).

⁵⁵ Merrill, *supra* note 7.

⁵⁶ *Id.*, at 460.

⁵⁷ *Id.*, at 464-69.

⁵⁸ See the same criterion in defining the accession principle and the accession doctrine in THOMAS W. MERRILL & HENRY E. SMITH, *PROPERTY: PRINCIPLES AND POLICIES* 165 (2007).

⁵⁹ Merrill, *supra* note 16, at 463.

⁶⁰ Merrill apparently disagrees with this point, arguing that in *specificatio*, the holder of the primary resource (that is, labor) has a claim to the title. *Id.*, at 485.

arguments are.

Merrill argues that instead of adopting the competition strategy utilized by the rule of first possession, the accession principle adopts a competence strategy, awarding ownership to someone who has already “demonstrated she has the capacity to function as the owner of some prominently connected asset,” because the new owner has capital, physical access, and local knowledge to develop the resource.⁶¹ However, improvers have labor, but do not necessarily have capital. Improvers may have physical access to the resource and knowledge to develop the resource, but the original owner has them, too. Recall the Picasso example. While the disciple has access and skills, Picasso has legitimate access to the canvas and better painting skills. To be fair with Merrill, he is comparing the accession principle with the rule of first possession, while this article is comparing the accession doctrine with the property rule protection of entitlement. Hence, his arguments need not fit into my framework. But in demonstrating that *specificatio* does not have the efficiency advantages proposed by Merrill, I further call into question the wisdom of re-assigning entitlements from the original owner to the improver. Merrill concluded his important article by raising a dilemma—the accession principle is normatively problematic and yet efficient.⁶² At least in terms of *specificatio* (the accession doctrine), the dilemma dissolves, because the accession doctrine is inefficient.

IV. ALTERNATIVE TO ABOLISHMENT: A NARROWER ACCESSION DOCTRINE

In the previous part, I argue that the accession doctrine, including the title-transferring rule and the Rule-5 compensation rule, is inefficient and should be abolished. In civil law countries, before the civil code is changed, the court is obliged to employ the accession doctrine. In the U.S., the court may be reluctant to throw out such a “venerable doctrine” at once, because of *stare decisis*. In this part, I propose a Plan B, which interprets the accession doctrine more narrowly to reduce its probability of causing inefficiency. This narrow application of the accession doctrine also provides what Henry Smith calls “a safety valve” for certain good-faith, efficiency-enhancing improvers.⁶³

The first thing we do, let’s kill the transformation test. If the transformation test is coterminous with the disparity-of-value test, it is redundant. If the transformation test

⁶¹ *Id.*, at 489.

⁶² *Id.*, at 504.

⁶³ Smith discusses the safety valve in the intellectual properties and boundary encroachment contexts. See Henry E. Smith, *Institutions and Indirectness in Intellectual Property*, 157 U. PA. L. REV. 2083, 2127-29 (2009).

means something else, it does not induce improvers to make value-enhancing decisions (because transformation may or may not alter fair market value or economic value), and it does not give the judge or the jury something economically meaningful to grasp. The transformation test seems to serve only doctrinal purposes—when a thing is transformed, the old title disappears and a new title emerge; the law is justified to assign the new title to the new thing’s creator, the improver. But the test fails to pass efficiency muster, and thus should be dispensed with.

The disparity-of-value test is more likely to attain the normative Hobbes theorem when the original owner’s economic value approximates the property’s fair market value.⁶⁴ Economic value tends to approximate fair market value when, for example, the property in question is a commercial commodity that is highly substitutable and the owner has not owned it for a long time. If Picasso simply walks into a canvas store and randomly pick a standardized, \$100 canvas, and the next day his disciple works on the canvas, it does not hurt efficiency much to employ the accession doctrine, because Picasso can without much effort acquire the same type of canvas. By contrast, Phil has high subjective premium regarding his home-grown grapes. Property rule should be used to protect Phil’s entitlement—maybe he highly appreciates the home-brew.

There should be a second restriction on the use of the accession doctrine; that is, transaction costs should be high.⁶⁵ It is generally accepted that when transaction costs are low, property rights should be protected by the property rule.⁶⁶ Henry Smith even argues that in high transaction cost situations, property rules should have some presumptive force as well (though liability rules are worth considering).⁶⁷ Thus, the accession doctrine should be limited to only high-transaction-cost contexts.⁶⁸ For example, there are 100 co-tenants on a raw material and they have never reached any

⁶⁴ Bell & Parchomovsky argues that while the improver’s “encroachment may deleteriously affect the non-market value to the owner, including the stability of ownership, the increased market value ensures at least a partial offset.” Abraham Bell & Gideon Parchomovsky, *A Theory of Property*, 90 CORNELL L. REV. 531, 599 (2005). “A partial offset” is not good enough for efficiency purposes. By imposing the restriction in the text, this article hopes to minimize the incidents in which economic value is deleteriously affected.

⁶⁵ Stewart Sterk, in the boundary encroachment context, has argued that when search costs (a type of transaction costs) are high; the probability of encroachment is significantly less than one; and the harm to the property owner is low (a prime example being economic value approximate fair market value), liability rules should be considered to replace property rules. *See Sterk, supra* note 41, at 1319. So Sterk’s thesis is consistent with what I propose here.

⁶⁶ *See Calabresi & Melamed, supra* note 4, at 1108-10; Kaplow & Shavell, *supra* note 2, at 722-23 (arguing that “there is a strong theoretical case favoring the use of property rules for protection of possessory rights in things”). *But see* IAN AYRES, *supra* note 33, at 185 (“information-forcing effects may give liability rules advantages over property rules when transaction costs are low.”)

⁶⁷ *See* Smith, *supra* note 38, at 138.

⁶⁸ Consequently, the accession doctrine should not be applied to the Picasso example in the previous paragraph (in which the canvas is worth only \$100), because of low transaction cost.

agreement as to how to deal with it. Improvements by a third party could be value-enhancing.

In the U.S., the Rule-5 compensation requirement is contentious, so it should not be difficult to dispense with it altogether. In case the requirement sticks around (and for civil law countries which have codified it), the compensation should be awarded to improvers who are good-faith without fault (for instance, under “color of title”⁶⁹). Improvers who are good-faith simply because they do not bother to verify the entitlement should not be rewarded.

V. CONCLUSION

The property rule is the default rule in property law, because through voluntary transfer of entitlements, the resources are ensured to flow to people who value them the most. The title-transferring rule under the accession doctrine deviates from the property rule, but this doctrine does not necessarily transfer entitlements to parties who value them more, violating the normative Hobbes theorem. Furthermore, there are no other economic reasons, like solving hold-out problems, reducing court’s decision-making costs, or reducing improvers’ verification costs, which can justify the title-transferring rule. Besides, the Rule-5 compensation rule incurs high litigation costs and does not induce improvers to verify the true owners before processing. Notwithstanding Thomas Merrill’s advocacy for the efficiency of the accession principle, I find those arguments unpersuasive when applied to the accession doctrine. Therefore, the accession doctrine is inefficient, and I argue that it should be discarded. At the very least, the accession doctrine should be narrowly interpreted to ensure that whenever it applies, resources actually flow to parties who indeed value them more.

⁶⁹ “Color of title” refers to “a claim founded on a written instrument (a deed, a will) or a judgment or decree that is for some reason defective and invalid.” JESSE DUKEMINIER ET AL., *PROPERTY* 129 (6th ed. 2006).

In the adverse possession context, Fennell argues that title insurance, improved title searching, etc. better protect improvers than the adverse possession doctrine. *See* Fennell, *supra* note 54, at 1083. The alternatives that Fennell mentions are not available to personal properties in the accession context, so the justifications to protect good-faith improvers under color of title should be stronger.