A Pasture Theory of Creative Controls: A New Approach to Copyright and Patent Subject Matter Overgrowth

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INTRODUCTION

In the many years since their inception in 1787, American copyright and patent law have each grown beyond their original meager bounds. Generations have struggled over the proper way to cabin and define such a simple, but empowering phrase: “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” From this singular point, numerous legislative amendments and common law rulings pulled the boundary lines wider. As technology began rapidly progressing in the twentieth century, the subject matter jurisdictions of copyright and patent law saw healthy—and arguably gluttonous—growth. Whether the speed of progress, lack of understanding by adjudicators, or disagreement among intellectual property scholars have separately or jointly contributed to the expansion, the implications are clear: the defining lines are neither definite nor linear. In response, this Note establishes two overarching goals: (1) to properly relegate copyright and patent law to their own separate fields; and (2) to prevent either form of intellectual property protection from absorbing sui generis territory unconfronted as new areas of idea and expression emerge.

To put the problem of subject matter overgrowth in perspective, imagine that a few decades from now a brilliant young architecture student is visiting Los Angeles for the first time. While on a city tour, the student is inspired by the sights, in awe of how artistic
some of the buildings are. Nothing compares, however, to the beauty of one particularly magnificent concert hall, resplendently covered in steel and glass that artfully twists across the building’s surface.7 The student, taken in, leaves the city with a book full of sketches of that building—an important milestone in her career. All of her future work, whether designing office buildings or public parks, is inspired and clearly reminiscent of her singular inspiration. But one day, her inspiration turns to consternation, when a legalese-laden letter crosses her desk. She is being sued for copyright infringement of the concert hall’s design, for producing unlicensed derivative works. “But these are buildings, bridges, and walkways,” she wonders, “they are functional, physical, and purposeful. They are much more than simple paintings or poems!” But here, one man’s monopoly on the design has become another’s complete restraint of creative expression. And it is all because lawmakers have let the subject matter of copyright sprawl to the point of choking out its once noble goal: the pursuit of progress in the arts. This (albeit sensationalized) future will not seem so foreign if Congress does not trim back and redefine copyright and patent protections at their roots—their core subject matter. In other words, instead of Congress or the courts continually adjusting the round hole to accommodate the square peg, they should consider, perhaps, introducing a square hole.

The existence of subject matter overgrowth is by no means a novel realization, though it is not often discussed. Andrew Beckerman-Rodau has pointed out in detail the boundary bleeding between copyright, trademark, and patent law.8 Though he delves into a discussion of reasons why this expansion may have occurred (a subject beyond the scope of this Note), he concludes that academics have not properly prioritized the balancing of the intellectual property fields.9 In response to scholars like Beckerman-Rodau, this Note goes a step further and seeks to become that balancing force. By creating independent fields to hold the subject matter of copyright and patent law, and applying strict rules as to what

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9. Id. at 88.
matter may reside within the boundaries of those fields, questions of what each law may protect would be resolved by looking at the fields themselves. Unlike prior solutions that may focus on evolving legal tests, this Note looks to set the barest definitions of copyrightable and patentable subject matter. Beginning with properly defined subject matter may secure a leash to the wild dog of expansive intellectual property protections.

This Note further rejects the notion that the law should embrace extensive overlap between copyrights and patents. Some scholars view the expansion as complementary protection, a way of affording an author the full spectrum of legal rights to their work. To the contrary, this Note asserts that embracing the overlap is instead apathy toward poorly defined subject matter. The overlap ought to be minimized, and various components of a creative work should fall into clear-cut bins of separate protection. In doing so, authors and inventors will no longer toe the line between necessary control and needless monopoly over their creations.

This Note proceeds in four parts. Part I explains Pasture Theory as a new approach to subject matter definition. It will go beyond the traditional concepts of “idea” and “expression” through a metaphor of allocating works to discrete fields. Part II discusses the expansion of copyright law and explains its rightful place as nested in Pasture Theory. It discusses how the new theory would resolve practical applications of copyright in architecture and computer programming. Part III similarly discusses the slow creep of patent law protections and how this theory would define and control it. It also addresses patent law’s place in computer interface design, as well as nonphysical creations. Finally, Part IV seeks to address

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11. “Pasture Theory” is this Note’s invented terminology that derives its name from its method of sorting subject matter into metaphorical, isolated fields, like animals set out to pasture. See infra Part I.

some of the major counterarguments to cutting back the intertwining of copyright and patent law. Specifically, it will assert the nuanced legitimacy of design patents, confront the illusion of peaceful overlap in intellectual property law, and draw support for Pasture Theory through constitutional and statutory history.

I. A PASTURE THEORY OF SUBJECT MATTER DEFINITION

The legal rules of copyright and patent law operate on specific subject matter. Subject matter, unlike the rules or laws themselves, answers the question of “What exactly do these rules govern?” Pasture Theory\(^\text{13}\) is designed to address the problem of overlap between copyright and patent at its source—the subject matter itself. Pasture Theory, as a visual metaphor for subject matter definition, begins with a broad view of intellectual property law: a body of law to protect ideas in their various forms. This sets the stage for the universe in which Pasture Theory operates: the subject matter of ideas, or intellectual property. Before any defining or organizing begins, ideas—in any stage of expression, creation, production, or fruition—float freely about, unprotected, without boundaries. It may be helpful to picture Pasture Theory as an imagined landscape, where different kinds of intellectual property are the inhabitants of this new world.\(^\text{14}\) And Pasture Theory’s first step to protecting those inhabitants is placing them in pastures with clearly delineated fencing.

The first pasture is for copyright law. This pasture is defined by “the expression of ideas.”\(^\text{15}\) Out of the wide universe, the only

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13. “Field Theory” is admittedly a more concise and appropriate name, but it is unfortunately already used widely in mathematics, physics, psychology, and sociology. In an effort to avoid adding yet another alternate definition, this Note adopts a synonym.

14. Pasture Theory draws inspiration from prior works which make use of imagined landscapes to make a point about society, science, or an academic theory. For one of the most famous implementations, see generally EDWARD A. ABBOTT, FLATLAND: A ROMANCE OF MANY DIMENSIONS (Dover Thrift ed., 1992) (describing both Victorian society and the multiple spatial dimensions through a satirical adventure of the narrator Square, as he explores the imagined worlds of Spaceland, Lineland, and Pointland).

15. Although “expression” as used here is not synonymous with its use in the “idea-expression” dichotomy, it is helpful to think of it as such. See \textit{Mazer}, 347 U.S. at 217 (“[A] copyright gives no exclusive right to the art disclosed; protection is given only to the expression of the idea—not the idea itself.”).
entrants to this domain are expressions, and expressions alone. Expressions may be physical, like a statue, but their tangible features must act only as a vehicle for their expression. All poems, all songs, all stories, all pictures, and all paintings—however formed and however inspired—romp freely through the field of “expression.” This does not mean, however, that all of these expressions may, in the end, achieve the safeguards of copyright law. They are merely a pool of candidates from which few obtain the prize of copyright protection. It is also important to note that these expressions should not, by themselves, perform a function.

The method of selection from this pasture is then governed by a set of rules. The history of applicable copyright law is extensive and occasionally contradictory, but at a minimum, it may be summed up as this: any expression that is original to the author is worthy of protection. So, from the field of all expressions, ignore any that take directly from another expression. All expressions that are copies of the ones before and all derivative works are overlooked. The victors are a subset from this field of expression—the authors to which are granted special authority over how others may use their works. To be sure, it may be tempting to apply this body of copyright rules to another pasture; it may be convenient or seemingly intuitive to do so. However, it is important that copyright law begins with its own pasture and applies its own rules to determine those worthy of protection.

Of course, the rules of copyright law themselves are rife with nuance: publication, licensing, fair use, and parody have their own applicable elements and are all proper subjects of their own scholarly

16. Such a distinction draws support from numerous other fields of law, such as the difference between First Amendment “coverage” and “protection.” See Frederick Schauer, The Boundaries of the First Amendment: A Preliminary Exploration of Constitutional Salience, 117 HARV. L. REV. 1765, 1769 (2004) (“Even before we see what a rule does, we must make the initial determination of whether it applies at all.”).

17. Function, rather than expression, as a primary embodiment would suggest the field of “fruitition,” or the subject matter of patents. See infra note 20 and accompanying text.

18. See 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.01 (Matthew Bender rev. ed. 2014).

19. That is, excluding derivative works by another, which are not originally inspired. One’s own derivative works are the result of continuing to develop an originally inspired idea. This Note views the latter as intended by “the Progress of Science and useful Arts.” U.S. CONST. art I, § 8, cl. 8.
discussions. Pasture Theory is simply a framework upon which these rules act and select the victors.

Neighboring the pasture of “expression” is a pasture of “fruition.”

Here one will find no mere descriptions, no simple suggestions of ideas. Only concrete creations exist in this pasture. Any object that exists in the world, that itself has mass and weight, exists in this field. Also grazing here are the offspring of the concrete: any processes that are themselves acted upon by physical objects. Physicality is a key criterion for the “fruition” creatures of this pasture.

Like the pasture of expression that exists for the whims of copyright law, this pasture is subject to the application of its own rules, the rules governing patent law. And these rules are much more rigid. From this pasture of all manifest ideas, one cuts away any thing that is itself not the first of its kind—which, admittedly, is a laborious task of judging similarity to other related objects. Of those creations that remain, one only permits “novel, useful, and nonobvious” creations to receive protection. The inventors of the creations that survive this strict set of rules are afforded the full power and protections of patent law.

As intellectual property is not limited to copyright and patent law, it would stand to reason that separate pastures would exist for the application of trademark and other forms of intellectual property. However, imagining how to define these fields must be saved for another day; this Note concerns itself primarily with the two aforementioned titans of intellectual property.


21. It is necessary to draw a distinction beyond the traditional “idea-expression dichotomy” of copyright law. Pasture Theory applies a set of characteristics to the subject matter itself, leaving a field of candidates. Thereupon a set of rules is applied, which are the rules of copyright or patent law. Pasture Theory separates out the test for infringement into two questions: Would this subject matter qualify for protection on a basic level? And, if so, would the applied law grant that subject matter protection? For a fuller discussion on the idea-expression dichotomy, see Samuels, supra note 12, at 322-24.

22. Because patent and copyright subject matter are to be meaningfully separated, Pasture Theory calls for a “machine-or-transformation test” with “teeth.” See infra Part III.B.

23. These are familiar rules applied in the American patent system. See 1 Donald S. Chisum, Chisum on Patents §§ 3.01, 4.01, 5.01 (2014).
Legislators and adjudicators are very much the masters of this universe. As masters, they would realize that, as the various forms of ideas are herded into their respective pens, the forms cannot be in two places—or two pastures—at once. A beautiful new poem, once confined to the pasture of expression, cannot simultaneously inhabit the pasture of fruition, let alone even qualify to enter. A kitchen device for cooking food, once happily placed in the pasture of fruition, can be nowhere else, and likely belongs nowhere else. Of course, at some point, the masters will encounter some new creative form, something that may belong in one pasture or another. But, when the masters finally do decide where it will roam, it proceeds into only one pasture.24 In this way, the masters will never hesitate to apply the appropriate and independent body of intellectual property law; for when a form of idea exists only in one pasture, there can be only one set of rules to apply to that pasture.

II. THE AGGRESSIVE EXPANSION OF COPYRIGHT LAW

To understand copyright law’s future under Pasture Theory, understanding its history first may be helpful. This Part outlines the rapid expansion of copyright over time and how Pasture Theory would inject itself into the timeline today, preventing unchecked growth in this new technological age.

A. The Rightful Place of Copyright Law

Since the Framers penned the Copyright and Patent Clause into the Constitution,25 copyright law has undergone several legislative revisions.26 These revisions sought to expand copyright’s purview, in regard to term and nature of protection, and qualifications for

24. It is true that legislators or adjudicators may not be properly educated enough to make an informed decision on where to fence new subject matter. See infra note 106 and accompanying text. Though this Note alludes to this problem in Part III.C, it does not discuss the necessary ways to assign expert judgments to new subject matter.


In the 1790 version of the Copyright Act, legislators offered protection only for maps, charts, and books, and gave authors a limited monopoly for a term of fourteen years, which authors could renew only once. Today, an author may acquire copyright protection for a laundry list of creative works and is entitled to a monopoly of those expressions for up to seventy years after the author’s death.

These protections come with a disclaimer: “In no case does copyright protection for an original work of authorship extend to any idea, procedure, process ... regardless of the form in which it is described.” This appears to try to create a wall between copyright and patent protection. However, this wall is a mirage, effectively empty in light of controlling judicial opinions. Ever since Mazer v. Stein, the courts have allowed creative works to be protected under both copyright and patent law. In that case, the U.S. Supreme Court ruled that a lamp, with a statuette of a dancer as its base, could qualify for both copyright and design patents, and that the courts ought not delineate. Further, in a landmark decision in 1974, the U.S. Court of Customs and Patent Appeals expanded prior rulings so that authors of creative works with ambiguous protection rights did not even have to choose between copyright and patent applicability. Essentially, certain creative expressions associated

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27. What once was a maximum protection period of twenty-eight years circa 1790 became a maximum protection period of well over a hundred years circa 1990. Id.

28. Act of May 31, 1790, ch. 15, 1 Stat. 124 (repealed 1831) (protecting any “map, chart, book or books ... for the term of fourteen years” to be optionally renewed “for the further term of fourteen years”).

29. Works protected by copyright include, but are not limited to: "(1) literary works; (2) musical works, including any accompanying words; (3) dramatic works, including any accompanying music; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works." 17 U.S.C. § 102(a)(1)-(8) (2012). For a critique of copyrighting architectural works, see infra Part II.B.


31. Id. § 102(b) (codifying the Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541).


33. Id.

34. See In re Yardley, 493 F.2d 1389, 1395 (C.C.P.A. 1974) (“Neither the copyright statute nor the patent statute says that because a thing is copyrighted it may not be patented as a design. We should not so hold.”).
with functional components may receive dual protection. Such a decision condones leaving protectable subject matter undefined.

Under Pasture Theory, those with the power to grant copyright protection must also be the ones to define and categorize the underlying subject matter. Authors should not be put in a limbo of undetermined protection. Admittedly, even with a proactive subject matter definition, there are bound to be new works that have yet to be categorized, and new types of creative works may exist in temporary uncertainty. In these situations, authors ought to choose their preferred method of protection. This “election of protection” doctrine must reign, a conclusion opposite of the landmark ruling in *In re Yardley*. One argument for this is that if no election occurs, authors who broadly define their creative work are rewarded with double protection; it is an incentive for laziness to reward indecision with monopoly by both copyright and patent protections. Secondly, requiring authors to choose between one mode of protection and another would provide practical insight on both the protected object and chosen form of protection. This would aid decision makers in setting subject matter boundaries for that new form of creative work.

**B. Copyright in Architecture**

One area in which copyright law has expanded to questionable subject matter is that of architecture. Architecture’s protection under copyright law is a recent development. Congress did not even extend copyright protection to “all the writings of an author” until the 1909 Copyright Act. Although not explicitly enumerated, architectural drawings found their protection couched in the language of section 5: “[d]rawings or plastic works of a scientific or technical

35. *Id.* at 1395-96 (“The Congress, through its legislation under the authority of the Constitution, has interpreted the Constitution as authorizing an area of overlap.”).
36. See Beckerman-Rodau, *supra* note 5, at 73-74 (discussing how Yardley’s dual protection has sometimes led to overprotection of intellectual property).
37. This doctrine reflects the notion that “an author-inventor must elect between securing a copyright or securing a design patent.” *In re Yardley*, 493 F.2d at 1394.
38. *Id.*
character.” 41 At that time, the wording of the Copyright Act would have happily coincided with Pasture Theory. Even the major 1976 rewrite of the Copyright Act, which specifically included “technical drawings, diagrams, and models,” 42 would have comported with keeping expression separate from function. After all, an author did not have protection for—and could not prevent the construction of—a designed building itself.

The situation changed in 1989 when the United States joined the Berne Convention, 43 which specifically addressed and protected “works of architecture erected” 44 in participating countries. 45 To adhere to the international pact, Congress passed the Architectural Works Copyright Protection Act of 1990 (AWCPA). 46 For the first time in U.S. history, a designer of architectural blueprints had the ability to control the building’s construction. For the first time in American intellectual property history, copyright protections took a wild leap to the fruition of the idea itself. 47 From then on, the timeline of copyright in architecture departed sharply from satisfying Pasture Theory, as the AWCPA seeks to protect not only the expression of the building’s design, but also the final functional, physical form expressed within the blueprints.

This shift raises several policy concerns. First, allowing an author to extend his control to the functional idea itself forced Congress to sandbag the flood of copyright concerns with a slew of disclaimers

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41. § 5, 35 Stat. at 1077.
45. Currently, compliance with the Berne Convention is codified in the U.S. Code under “architectural work,” which describes a “design of a building as embodied in any tangible medium of expression, including a building, architectural plans, or drawings. The work includes the overall form as well as the arrangement and composition of spaces.” 17 U.S.C. § 101 (2012).
and restrictions. There came a chorus of questions: If architects can copyright buildings, can I take a picture of one? If the building’s owner wants to alter it, does he need the architect’s permission? Any new work within copyright drags behind it a long chain of questions about author control. Second, this legislative move may have opened the door for future copyright extensions to other engineering-related or technical drawings. Can concept drawings of a car extend the author’s rights to the car itself? What about mobile homes, which are arguably a hybrid between vehicle and architecture? The decision to wholly envelop architecture nudged copyright toward the edge of a slippery slope. Finally, Congress’s actions were the result of an international pact, which does not account for two centuries of balancing the various forms of intellectual property in the American view of natural rights. In this instance, opening a new door at the behest of a global community flies in the face of decades of careful rights balancing among copyright, patent, and trademark law. As a policy matter, Congress should consider its own legislative and judicial history first.

Should scholars shift to adopt the premise of Pasture Theory, Congress would be able to afford comparable protections to architecture without violating the notion that copyright law operates solely on the pasture of expressions. One option is through *sui generis* legislation. Clearly, there are policy concerns above and beyond promoting science and awarding an author a monopoly. A new area of protection would better address contract law, economics, and other considerations that inevitably arise with architecture. Perhaps

48. Congress quickly added a section restricting the “[s]cope of exclusive rights in architectural works.” 17 U.S.C. § 120.
49. See id. § 120(a) (“The copyright in an architectural work ... does not include the right to prevent the making, distributing, or public display of pictures, paintings, photographs, or other pictorial representations.”).
50. See id. § 120(b) (“[T]he owners of a building ... may ... make or authorize the making of alterations to such building.”).
53. See Alan Story, *Burn Berne: Why the Leading International Copyright Convention Must Be Repealed*, 40 HOUS. L. REV. 763, 787-91 (2003) (drawing most major conclusions of imbalance toward southern countries, but his premise applies broadly to all participating countries).
architectural design might qualify as the shape or surface ornamentation of a functional object, and thereby fall under the protection of design patents.⁵⁴ Conversely, Congress could spell out the same protections through a right of action under some unfair competition doctrine.⁵⁵ However it chooses to promote copyright standards, Congress could follow the values established in Pasture Theory and avoid many of the policy concerns raised above.

C. Copyright in Computer Programs

If architectural design is a relatively new addition to copyright, then computer programs are comparative infants to the realm of protection. It was not until the late 1970s that Congress seriously considered computer programs for official copyright protection.⁵⁶ At that time, the Commission on New Technological Uses of Copyright Works (CONTU) was still drawing similarities between computer programs and music rolls for player pianos (after all, computer code in that era was most often stored on magnetic strips).⁵⁷ In 1980, faced with a brand new form of expression, Congress followed CONTU’s lead and added computer programs to the copyright statute as “literary works.”⁵⁸ Bolstered by the Copyright Office and Congress’s approval on the matter, the Third Circuit completed the government-branch trifecta with its own stamp of approval through Apple Computer, Inc. v. Franklin Computer Corp. in 1983.⁵⁹ The great legal machine was on its way and picking up steam.

Barely over a decade later, Congress passed the Digital Millennium Copyright Act of 1998 (DMCA),⁶⁰ which made opinions then

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⁵⁴. See infra Part IV.A.
⁵⁵. See Landrau v. Solis-Betancourt, 554 F. Supp. 2d 102, 112 (D.P.R. 2007) (ruling that a federal copyright claim did not preempt supplemental state claims of unfair competition for architectural works).
⁵⁶. NAT'L COMM'N ON ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT (1978) [hereinafter CONTU REPORT], available at http://perma.cc/VT2B-EMKN.
⁵⁷. Id. at 10. Music rolls were not copyrightable, via a landmark Supreme Court ruling that set the stage for music recorded in a non-visible, but tangible medium. See White-Smith Music Pub. Co. v. Apollo Co., 209 U.S. 1, 12 (1908).
⁵⁸. 17 U.S.C. § 101 (2012) (“A 'computer program' is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.”).
⁵⁹. 714 F.2d 1240, 1240-41 (3d Cir. 1983).
favorable to Microsoft, Apple, and other producers of digital content into law. The DMCA, in short, created a host of criminal sanctions and penalties for bypassing access controls on digital information. Never before had any copyright-protected category received such stiff enforcement for circumvention—after all, no one expects severe criminal repercussions for improperly photocopying a textbook that was hidden in an “off-limits” collection. As Pasture Theory would suggest, lawmakers might have noticed that such special favoritism perhaps indicated that digital copyright was a legal oddity, and that the copyright spark in the late 1970s and early 1980s was uninformed rubber-stamping.

Buried after the CONTU’s joyous praise of computer programs as literary works is a dissenting opinion by John Hersey, then President of the Authors League of America, and a hesitant concurring opinion by Melville Nimmer, who—as the author of the leading secondary publication on copyright—literally wrote the book on the matter. These opposing views indicate a serious fault in the CONTU’s discussion of copyright subject matter.

In the first opinion, Commissioner Hersey lays down the foundation for rejecting computer programs from the pasture of expression. He passionately dissented, explaining that “the instructions themselves eventually become an essential part of the machinery that produces the results.” Unlike all other copyrighted works of instruction that are directed to human consumption, these computer programs are instructions to the machine. In essence, the code is a functional configuration of computer resources and actions that

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61. The DMCA gave producers of digital content additional remedies beyond civil action. Id. at 2875-76. (“[I]t creates two new prohibitions ... one on circumvention of technological measures used by copyright owners to protect their works and one on tampering with copyright management information—and adds civil remedies and criminal penalties for violating the prohibitions.”). See H.R. 2281, 105th Cong. (1988).


63. Cf. id.

64. In all, there were fourteen members of the Commission, all from different parts of the copyright process. One member died prematurely (to be replaced), and two commissioners were ex-officio members. Nimmer was the Vice-Chairman of the Commission. See CONTU REPORT, supra note 56, at ix. Nimmer wrote a treatise on copyright that stands as the primary resource for reviews of law. See generally NIMMER & NIMMER, supra note 18.

65. See CONTU REPORT, supra note 56, at 27-37. In all of the report, this is the best and only real rebuttal to the overwhelming majority of approval.

66. Id. at 28.
carry out specific tasks. Congress likely fell into the temptation of taking an off-the-rack set of legal rules (copyright) and applying them to something they thought of as only punch cards and perforated piano rolls.

The concurring opinion by Commissioner Melville Nimmer should make modern scholars even more uneasy about digital copyright’s foundation. Nimmer expressed serious concerns about construing literary works so broadly. Although copyright law protected digital music records at that time, computers and computer programs produced something wholly new and previously unprotected by copyright law. Further, Nimmer worried that lawmakers were straining the original meanings of “author” and “writings” as defined by the Constitution by not examining computer programs as their own category of subject matter. Pasture Theory would require a separate review of computer software as expression or fruition, and as statement or function. When Nimmer, the most quoted name in copyright, wants to slow down and take a harder look at the facts—and lawmakers instead forge ahead with the majority opinion—there is serious cause for concern.

III. THE SLOW CREEP OF PATENT PROTECTIONS

Though its expansion may not be as rapid as that of copyright law, patent law has also ballooned to protect subject matter previously unanticipated by lawmakers. This Part seeks to review the long road of patent law developments and address how Pasture Theory contrasts with the current direction of patent law development.

A. The Rightful Place of Patent Law

Like copyright, patent law has come a long way since its humble beginnings in the Constitution. The Patent Act of 1793 gave patent law its first real footing in protection, providing it to “any new and

67. Id.
68. Id. at 26.
69. Id. at 27.
70. Id. at 26.
71. Id.
useful art, machine, manufacture or composition of matter or any new and useful improvement” thereof.\textsuperscript{72} The statute defined subject matter rather simply. Yet Thomas Jefferson noticed that applying the rules was much harder: when determining what actually qualifies for protection, the “subjects are such as would require a great deal of time to understand and do justice by them.”\textsuperscript{73}

The next major revision came in 1836, which affected not the subject matter, but the process of applying rules.\textsuperscript{74} Congress founded the Patent Office, along with a system of reviewing, numbering, and issuing patents.\textsuperscript{75} From there, the Patent Office has proceeded to expand, perfect, and increase its range of patentable objects. Oddly, the original phrasing of the subject matter\textsuperscript{76} has not really changed, yet new technologies have constantly challenged adjudicators to interpret grounds for protection.\textsuperscript{77} The Plant Patent Act of 1930 provided for patenting plant varieties.\textsuperscript{78} In 1980, the Supreme Court allowed patents for genetically engineered bacteria.\textsuperscript{79} Accordingly, patent law seems to be constantly on the edge of both creative production and mere scientific discovery.

Pasture Theory comes with a predetermined space for patent protection candidates. Those candidates include any physical object that performs a function and satisfies the requirements of novelty, usefulness, and nonobviousness. Also, they may include any process or byproduct that is directly performed or produced by physical, functioning objects, certain computer codes, steel-making processes, chemicals, and the like. Clearly, physicality is key to being a candidate for patent protection. With such an emphasis, the theory’s pasture of fruition would rule out mere abstract processes or naturally occurring things.

\textsuperscript{72} Patent Act of 1793, § 1, 1 Stat. 318, 319 (repealed 1836).
\textsuperscript{74} See Patent Act of 1836, ch. 312, 5 Stat. 117.
\textsuperscript{75} Id.
\textsuperscript{77} Id.
B. Patent Law in Business Methods

Contained in the Patent Office’s criteria of a “new and useful process, machine, manufacture” is uncertainty in the definition of “process,” specifically with regard to business methods. Taken in its broadest sense, a business method involves procedural steps, often leading from input to output—the essence of a useful process. Yet, establishing whether business methods qualify as subject matter for patents has been a decades-long administrative and judicial tennis match. Moreover, the Supreme Court only quite recently established any satisfying test for qualifying business methods—and even then this test is still under review. By adhering to Pasture Theory’s mandate of the physical nature of patents, and therefore processes, lawmakers might loose themselves from the mire.

It is important to discuss some of the fleeting sentiments of what makes business methods qualify as patents. Early on, there was no distinction; business methods were reviewed under the same standards as new technologies. Then for a time, business methods were not patentable at all. Computer processing changed that opinion in the 1980s and 1990s. In the early 2000s, the U.S. Patent Office

84. See Hotel Sec. Checking Co. v. Lorraine Co., 160 F. 467, 472 (2d Cir. 1908).
thought those methods must involve the “technological arts” but internally reversed its position a few years later. The Supreme Court, meanwhile, operated on a “machine-or-transformation test,” which it could not agree on how to apply, or even if it was the sole test to apply. In general, there has been a hazy nagging feeling that somehow those business methods must connect back to technology—that is, the “useful arts” mentioned over two centuries ago.

To explain the application of Pasture Theory with regard to business methods, it is necessary to flesh out one of the Supreme Court’s more recent decisions. Bilski v. Kappos, decided in 2010, clarifies one good, but not exclusive, test for business methods, the “machine-or-transformation test.” As the Court of Appeals used it below, this test approves a business method if: “(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” To be clear, the Supreme Court explicitly rejected this test as a controlling test, for fear of restricting what it saw to be a necessarily expansive Patent Clause. The Court was not, however, afraid to leave the door open for future, better-worded, restrictive tests.

Pasture Theory’s take on patents, like the machine-or-transformation test, requires an element of physicality. In this Note’s response to Bilski, a better-worded test might be: “a process is patentable subject matter if it is carried out by machines, is constituted by other technologies, or directly acts upon an article.” Cabining the language in physicality accomplishes two main goals. First, it recognizes and conforms to a growing global sentiment that business schemes are inherently nonpatentable. In free economies,

87. See Bilski, 130 S. Ct. at 3221.
89. See Bilski, 130 S. Ct. at 3224.
90. Id.
91. Id. at 3258 (“[W]hile the machine-or-transformation test has always been a ‘useful and important clue,’ it has never been the ‘sole test’ for determining patentability.”) (Breyer, J., concurring).
92. Id. at 3259.
business should be allowed to freely compete. Second, physicality maintains the separation from copyright’s pasture of expression. If the prospective patent is solely an expression of an idea, with no tangible substance behind it, then the patent protects little besides a litigant’s right to bring suit over the intangible. Finally, if a physical business method is largely computational, then the accompanying requirements of novelty and nonobviousness should themselves sift out physical processes that are merely manifestations of natural laws or abstract, mathematical concepts, which have been long held to be nonpatentable.

C. Patent Law in Quasi-Natural Discoveries

It is well established that patent law will not protect the discovery of mere facts. However, patent law will protect the invention of a device or process that facilitates or makes use of such discovery. In essence, until better processes are developed, an inventor can temporarily guard the narrow path to a discovery with a relatively small patent roadblock. Pasture Theory, however, begins to take offense when the patented process is itself too close to something naturally occurring and nonpatentable.

In Association for Molecular Pathology v. Myriad Genetics, Inc., a recent landmark Supreme Court decision, the Court settled that DNA sequences could not be patented: “a naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated.” When the decision diverted from the ideals of Pasture Theory in holding that complementary DNA (cDNA), a synthetic string of organic code used to replicate a specific, corresponding DNA sequence, could be patented. At first blush, it seems to comport with the prior notion of protecting the

96. 133 S. Ct. 2107, 2111 (2013).
97. Complementary DNA is both natural and synthetic. Though it is a product of a laboratory, it is used to replicate naturally occurring DNA. Id. at 212. The Supreme Court’s decision was akin to refusing to patent a house key, but finding that the key’s impression in a clay mold—the best way to replicate a key—was perfectly fine to patent. In this case, if one wanted to make an unprotected key, they would want to use, but could be kept from using, protected key molds. Not exactly a win for progress in the sciences.
“mechanical” processes behind the discovery. However, cDNA has an extremely close relationship to the nonpatentable discovery—it is an important and often necessary step in replicating its sister-DNA sequence.98 By allowing patents on cDNA, the Supreme Court permitted scientists to effectively control the corresponding DNA sequence as well. Quasi-natural processes like this should be kept outside the fences of the pasture of fruition, for they inherently attempts to draw in matter that does not qualify.

Computer programs have been a touchy subject of quasi-natural patents as well, especially when boiled down to basic mathematical algorithms. The process of addition is obviously not patentable, despite its many applications and uses in patentable machines. But when a mathematic process becomes increasingly complex, the case against patent protection begins to weaken.

In the 1972 Supreme Court decision in *Gottschalk v. Benson*, the Court implied that computer algorithms might be foreclosed from patents altogether.99 Although the Court remained open to future fact-finding, it explicitly disapproved, saying that “the patent would wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself.”100 But the Court left the door ajar, and technological progress began to wedge the gap open.101 In 2010, the Supreme Court ruled in *Bilski v. Kappos* that if a machine acts upon or transforms the state of some article, then it may qualify for a patent.102 In 2014, *Alice* kept the door propped open for computer-implemented methods that effectively transform the nonpatentable, abstract subparts.103 Using this language as support, inventors of financial algorithms can sometimes couch their more abstract discoveries in terms of a computer-operated business

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100. *Id.* at 72.
101. See *Diamond v. Diehr*, 450 U.S. 175, 187 (1981) (“[A] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer.”).
method and backdoor their mathematical patents. The machine-or-transformation test as previously discussed is a thin veil separating complex algorithms from mass patent protection—the test requires teeth to be truly effective. Likewise, the test required by Mayo and Alice leaves much to be desired in describing exactly how transformed abstract ideas must be.

Pasture Theory demands a greater distance from protecting machine-operated processes. Just as the process of addition is not protected simply because patentable cash registers make use of it, so should the Court prohibit patenting more complex algorithms despite their use in computers. Quasi-natural processes and materials fly in the face of the pasture of fruition and should be treated with special care. Only when computer code transcends complex mathematics and accomplishes some greater purpose should it be eligible for patents. When one considers that even the Supreme Court Justices hesitate to rule a specific subject matter in or out, the case for special expert evaluation is made, perhaps even to the point of carving out a new pasture.

IV. DEBUNKING COMMON COUNTERARGUMENTS

Not everyone sees the overlap of copyright and patent protections as a problem, let alone a problem requiring a solution. This Part seeks to clarify the purpose of intellectual property protections and rebut what amounts to complacency in subject-matter overgrowth.


105. Alice Corp., 134 S. Ct. at 2357 ("At Mayo step two, we must examine the elements of the claim to determine whether it contains an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application." (internal quotations and citations omitted)); Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1297-98 (2012).

106. Scalia admitted hesitation in ruling one way or another on highly technical matters, stating, "I am unable to affirm those details on my own knowledge or even my own belief." Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2120 (2013) (Scalia, J., concurring in part and concurring in judgment).
A. The Legitimacy of Design Patents

As noted, copyright and patent law have both enjoyed considerable expansion in the last two centuries. However, one area of patent law has not only suffered stunted growth, but has also occupied the position of the tagalong little brother: design patents. Design patents are a form of intellectual property that protect the design of a functional article, such as an article’s shape, surface ornamentation, or artful configuration. Far fewer commentators are properly acquainted with design patent history, and for the most part, they pay unjustly little attention. Many would rather have copyright and/or trademark law take over this area, to allow design patents to die a quiet death. Pasture Theory, in separating out the fencing for expression or fruition, requires design patents to occupy the field of patent law. Without it, administrators of the fields will continue to expand the boundaries of copyright protection, beyond its intended territory.

Despite one popular theory that design patents were a historical accident of patent law, they were actually created to satisfy a specific need. Design patents were introduced in 1842 to fill a gap in protection—manufacturers were tired of competitors stealing their product designs and demanded recourse. When advocating the need for design patents, Patent Commissioner Henry Ellsworth borrowed heavily from the language of British copyright law, in undertones that understandably led design patents to fall behind less-strict copyright and trademark regulations in terms of popularity. When patent law underwent several revisions over the years, the statutory language behind design patents has gone largely

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107. See supra Parts II-III.
109. CHISUM, supra note 23, § 23.03[1]. A good example of a prospective design patent is the distinctive shape of a Coca-Cola bottle.
110. See Du Mont & Janis, supra note 108, at 841-42.
111. See id. at 843-44.
112. Id. at 847.
113. Id. at 864.
114. Id.
unchanged. Briefly put, “whoever invents any new, original and ornamental design” for a manufactured product may obtain protection under the same criteria as utility patents.

In recent years, design patents gained a spurt of much needed attention. In 2008, the Federal Circuit made it substantially easier to prove infringement in design patent litigation, enforcing the “ordinary observer” test as the sole determinant. Essentially, under this test, an infringer is liable if an ordinary observer, paying only the attention usually given when making a purchase, would find substantial similarity between two products. Apple used this new rule to particular effect four years later, winning several counts of cell phone design patent infringement against Samsung. With such a clear victory in the public eye, it would be unsurprising if other product manufacturing companies begin to follow suit.

Some see design patents as yet another blanket of protection to wrap their creations in the full force of the law. However, Pasture Theory would assert that it is merely one way to keep copyright out of patent law’s territory. Design patents must act as a wall, not a bridge, and alone guard the ornamentation of physical, functioning objects. When copyright law plays the same game, the courts run into problems, like in Mazer v. Stein, with duplicative protection. Moreover, overlap leads courts to implement complicated tests to see if the copyrighted aesthetic features could stand alone without the physical, functioning object. Copyright requires complicated aerobatics to accomplish the same job that design patents already do—protecting the physical form of the functional object. If design patent law were allowed to expand and evolve as copyright or utility patents have over the years, then it might properly protect object

116. Id.
117. See Egyptian Goddess, Inc. v. Swisa, Inc., 543 F.3d 665, 678 (Fed. Cir. 2008) (holding that the ordinary observer test must be conducted in the light of prior art).
118. Id. at 670.
120. See Moffat, supra note 39, at 1512-13.
122. Id. at 204-05.
123. See Du Mont & Janis, supra note 108, at 874.
ornamentation without any confusing intrusions from the pasture of expression.

B. The Illusion of Peaceful Overlap

As much as intellectual property rights have undeniably seen huge subject matter expansion, more and more the reality is that the various fields may afford simultaneous protection. Software, for example, may be protected by copyright or patent law. Clothing, as well, may be afforded dual protection if the creator knows how to effectively describe her designs. It is very difficult to see any issue with overlapping subject matter when looking through the eyes of a humble inventor protecting her creative works.

More so, a handful of modern landmark court cases perpetuate this happy illusion. Mazer established that having one form of intellectual property protection should not foreclose another. In re Yardley went even farther to say that a creator did not even have to elect between his available protective options. Although the courts have come up with doctrines that may tend to channel a work toward one form of protection or another, they have left the door open for overlap. Inevitably, a new type of creation comes along, blurs the old line-drawing test, and falls into the gap that courts intentionally created.

Following the tenets of Pasture Theory, apathy may lead to as much intellectual property overgrowth as deliberate encouragement. Apathy has led copyright, patent, and trademark law to all grow much larger than their original boundaries. Thankfully, policy concerns and countervailing incentive structures have tempered and balanced that growth through their respective objectives. But when the fields start to overlap, they interact with each other's careful balancing act of policy, incentives, and legislative history.

124. See Beckerman-Rodau, supra note 5, at 39.
125. Id. at 74-75.
126. Id. at 76-77.
129. See Moffat, supra note 39, at 1475.
130. See Beckerman-Rodau, supra note 5, at 39.
131. Id.
Each form of protection, building its tower of oversight higher and wider, has begun to encroach, shove, and topple the others.

The story becomes even more concerning when examining the harm that befalls the public.\textsuperscript{132} Take, for example, a creator with dual patent and copyright protection for a widget. For a time, the creator enjoys near-absolute monopoly on producing the widget. As a compromise for the patent monopoly, the creator was instructed to disclose his new idea, so that others may soon improve and make advancements. But even after the patent period runs dry, copyright protection lingers long after, threatening to invalidate any improvements to that dead patent.\textsuperscript{133} What once was a fair trade between the public and the monopolist is no longer fair nor a trade.\textsuperscript{134}

Consider also the patent trolls (otherwise known as nonpracticing entities) already present in the manipulation of intellectual property law.\textsuperscript{135} Patent trolls use their rights in broad patents to intimidate practicing businesses into settling a potentially protracted and painful infringement suit.\textsuperscript{136} This behavior dampens innovation and tarnishes the societal agreement patent law creates.\textsuperscript{137} Imagine how much worse these trolls may become with ever-expanding and overlapping rights. Settlements for one cause of action may not eliminate another threat. Copyright longevity may perpetuate a troll’s stranglehold for much longer. When we consider subject matter and protection overlap, we must look beyond the intended users and consider the unintended abusers as well.

Finally, at their origin, Congress wrote patent and copyright law to award monopolies for “limited times,” to promote the progress of science and the arts.\textsuperscript{138} How can science and the arts progress if that limited time may be combined and expanded, and that monopoly becomes a vice grip of protective overlap? Perhaps Congress inten-

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{132} See Moffat, \textit{supra} note 39, at 1512-13.
\item \textsuperscript{133} See id.
\item \textsuperscript{134} \textit{Id.; see also id. at 1480 (discussing the various cost-balancing considerations that go into granting personal monopolies).}
\item \textsuperscript{136} See \textit{id. at 299-301}.
\item \textsuperscript{137} See \textit{id}.
\item \textsuperscript{138} U.S. \textsc{Const}, art. I, \S 8, cl. 8.
\end{enumerate}
\end{footnotesize}
ded permanent separation from the very start; for that, one must look to legislative history.

C. Legislative & Historical Interpretation

When determining legislative intent, there are few places more authoritative than the actual text of the Constitution. Many scholars draw particular consternation with adhering strictly to the parallel structure of the Copyright and Patent Clause: “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”139 But the framers themselves were well aware of the distinctions they were drawing between (1) authors and their writings and (2) inventors and their discoveries.140 The acts that circulated just prior to 1787 indicate that the categories were factually distinct.141

The British Statute of Anne had been promulgated through the colonies since 1710.142 The similarities between this text and that of the Constitution make it clear that the Framers drew their inspiration for copyright law from this source.143 Further, though copyright and patent were constitutionally declared as one, colonial state laws do much to clarify the Founders’ intent to separate the two. Three states had passed private copyright acts prior to the Articles of Confederation in 1783,144 and by then, though the Continental Congress had no power to create federal copyright law, it heavily encouraged states to provide for it.145 These laws were wholly independent of patent laws, which were state-level and often case-

139. Id. (emphasis added).
140. See Alfred Bell & Co. v. Catalda Fine Arts, 191 F.2d 99, 100 (2d Cir. 1951).
141. 1709, 8 Ann., c. 19 (Eng.) (“An Act for the Encouragement of Learning, by Vesting of the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned.”).
143. Id.
145. See Bracha, supra note 142, at 887.
specific commercial rights to product manufacturing.\textsuperscript{146} After the Articles, some states, such as South Carolina, passed individual patent laws.\textsuperscript{147} The Constitution, in a tidy sentence with parallel structure, made these two realms a federal issue in one fell swoop, to be properly expanded later and separately.

Just three years after 1787, Congress passed two discrete acts, one each for copyright and patent.\textsuperscript{148} From the very start, the two acts exacted very different standards on authors and inventors, expecting much more from inventors.\textsuperscript{149} Further, copyright and patents, from nearly the start, had very different concepts of “originality.”\textsuperscript{150} Copyright was designed for expressions that were original to the author.\textsuperscript{151} Congress designed patent law for creations that were original to the nation.\textsuperscript{152}

If the two protections were intended to overlap, arguably there would have been some overlap in administration, recording, or issuing of the two fields. But here too copyright and patent differed. Originally, copyright claims were recorded by clerks of U.S. district courts.\textsuperscript{153} Those efforts were later consolidated in 1870 into a central office overseen by the Library of Congress.\textsuperscript{154} Conversely, solely the Secretary of State, Secretary of War, or the Attorney General originally issued patents.\textsuperscript{155} A separate office did not form until 1836 when it was clear that funneling all patents through three men was unmanageable.\textsuperscript{156} Today, the U.S. Patent and Trademark Office is

\textsuperscript{147} Henry A. M. Smith, \textit{The Baronies of South Carolina}, 13 S.C. HIST. & GENEALOGICAL MAG. 4 (1912).
\textsuperscript{148} See supra Parts II-III.
\textsuperscript{149} See, e.g., Sheldon v. Metro-Goldwyn Pictures Corp., 81 F.2d 49, 54 (2d Cir. 1936) (highlighting the differences between copyright and patent in both protections and qualifications).
\textsuperscript{151} \textit{See Feist Publ'ns}, 499 U.S. at 346.
\textsuperscript{152} 35 U.S.C. § 102(a) (1952).
\textsuperscript{154} Id.
governed by the U.S. Department of Commerce.\footnote{Department Organization Chart, U.S. DEPARTMENT COMM., http://www.commerce.gov/sites/commerce.gov/files/media/files/2014/department_organization_chart.pdf [http://perma.cc/V96U-4TKY] (last visited Apr. 3, 2015).} The only common historical link between copyright and patent administration was the Secretary of State, whose probable limited interest in the matter was staying apprised of both scientific developments and the latest maps and charts. With no meaningful link in administration, it is less likely the original intent was to overlap the distinct fields.

Some scholars may argue that original intent is meaningless in light of two centuries of technological progress, and that intellectual property law should live to adapt to the changing times.\footnote{See, e.g., Dotan Oliar, Making Sense of the Intellectual Property Clause: Promotion of Progress as a Limitation on Congress’s Intellectual Property Power, 94 GEO. L.J. 1771, 1819 (2006).} However, when intellectual property depends on balancing incentives and social policy concerns, so too does it depend on every year and act in that historic foundation.\footnote{See Beckerman-Rodau, supra note 5, at 44-46.} Consistency in patent grants or copyright protection cannot be realized if the decades of prior grants and protections are ignored. One cannot build a strong tower by starting with the roof.

**CONCLUSION: REDEFINING FROM THE START**

In the garden of intellectual property, copyright and patent law have grown wildly over the years. Unattended by gardeners who might properly fence them in, copyright and patent law have become entangled by the roots and fight for room in the light. Some scholars have begun to realize that with all the overgrowth, society cannot come and reap the fruits of its labor. For these reasons, it is time to properly sequester copyright and patent law to their own fields, starting from the ground up.

Pasture Theory seeks to do just that, by restraining the rules of copyright law and patent law to operate on independent subject matter. For copyright law, there is the pasture of expression. Here, all writings and all creative works that express an idea—and not the idea itself—are kept to be selected out by the rules of copyright. Neighboring this field is another, the pasture of fruition. There,
anchored by elements of tangibility and function, are all physical creations and the processes operated upon by machines. The rules of patent law award a select few from this field the gift of protection. When someone produces a new creation of a type yet unallocated to either pasture, it is up to the masters of this universe to choose a field, or a new field, and to decide early. Creations must not be left to wander outside the gates if their creators seek to protect them for themselves.

Part of this process also involves cutting back the overgrowth. Copyright, for one, has extended into architecture and computer programs. Neither of these fit comfortably in the intended subject matter of copyright law. Patent law has also crept beyond its bounds, protecting business methods with weak physical ties, and quasi-natural discoveries that the courts do not completely comprehend. Perhaps it is time that these areas be given their own pastures with *sui generis* legislation, not instead forced into categories defined long ago at the birth of the nation.

Finally, scholars must not accept this overlap in protection lightly. These intellectual property protections were created expressly to promote the sciences and useful arts, but when monopolies are compounded, the delicate societal compromises are destroyed. Existing policy and incentive structures are upset when those protections persist beyond their intended lifetime. These fields were never intended to overlap, and the best way to stop and even reverse the overgrowth is by putting up the proper fencing now, through Pasture Theory.

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