The Irrelevance of Copyright in Customized Creativity

Kevin Emerson Collins

The dominant, incentive-to-create justification of copyright assumes that works of authorship are commoditized goods. Copyright scholarship has not to date considered the role that copyright can or does play in the production of customized creativity. This Article fills this gap with theoretical and empirical examinations of how the authors of customized creativity use—or, perhaps more pointedly, do not use—copyright to sustain their business models.

The basic insight is a descriptive model of demand for copies of custom works among strangers, who are defined as parties other than the clients to whose tastes and needs authors tailor customized works. As a market comes to be dominated by customized rather than commoditized creativity, demand for copies of custom works among strangers approaches zero. This lack of demand among strangers for copies has significant implications for the normative justification of copyright. Copyright in customized creativity is irrelevant under copyright's dominant incentive-to-create justification, as it is unable to play any role in restricting competition for the sale of copies or enabling supracompetitive profits. However, copyright is relevant under its rarely discussed transactional justification because authors' clients can benefit from misappropriating works without fully compensating authors. In gross, copyright in customized creativity exhibits conditional irrelevance and falls into a zone lodged in between copyright's positive and negative spaces.

This Article also provides evidence of copyright usage in a real-world market for customized creativity that is consistent with the lack of demand for copies among strangers that the descriptive model predicts. An empirical study of infringement litigation under the Architectural Works Copyright Protection Act of 1990 (AWCPA) shows that architects working in markets that are dominated by customized design regularly sue their clients but rarely sue anyone else.

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INTRODUCTION

The incentive-to-create justification that judges and scholars alike invoke to explain copyright's social benefit frames copyright as a solution to a public goods problem that promotes the production of creative works.[1] Authors incur significant costs to produce the first

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[1] WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 37–41 (2003); Shyamkrishna Balganesh, *Foreseeability and*

copies of their works ("first-copy costs"), and many authors will understandably only incur these first-copy costs if they have a reasonable expectation of recouping them. Without copyright, this expectation is tenuous. When competitors and free-riding consumers can reproduce the first copy of a work that an author makes available to the public, free riders create a competitive market for subsequent copies, and price approaches the marginal cost of making a copy. With copyright, authors' expectation of recouping their sunk costs is stronger. Copyright enables authors to tamp down on free riders, restrict market competition, and charge a supracompetitive price. In effect, copyright generates a private tax that forces many of the consumers and users who derive value from copyrighted works to chip in and help to offset authors' first-copy costs.[2]

As this short narrative reveals, there is an unremarked assumption at the conceptual foundation of copyright's incentive-to-create justification: copyright helps authors who expect to recoup their first-copy costs over the sale of multiple copies of their works. For *commoditized* creativity that is created once as a speculative work and sold in multiple copies to anonymous consumers, this assumption is reasonable. Books, music, and movies—as well as many other types of works of authorship at the core of copyright—all fit this mold quite comfortably. However, *customized* creativity that is tailored to the tastes and needs of particular, known individuals does not fit this mold. Authors who generate customized creativity usually collect fees from the individuals to whose tastes and needs the works are tailored, and they often expect to sell only one copy of their works.

Commoditized creativity is more pervasive in the market because of its economies of scale, but many creative professionals—including architects, computer programmers, and event photographers, among others—make a living by participating in robust markets for customized creativity. Perhaps because it does not fit the dominant paradigm established by the incentive-to-create justification, copyright

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Copyright Incentives, 122 HARV. L. REV. 1569, 1577–81 (2009); Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 Tex. L. Rev. 1031 (2005); Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 492–99 (1996).

[2] This Article does not consider copyright as an incentive to commercialize already created works. Golan v. Holder, 565 U.S. 302 (2012); Eldred v. Ashcroft, 537 U.S. 186 (2003). *But cf. infra* notes __ and accompanying text (noting that, in many contexts other than the author–client agreements that generate customized creativity, copyright's transactional justification is subsumed within the incentive to commercialize existing information). Nor does it consider copyright as a means of either defending moral concerns about fairness or controlling the flow of information. Christopher Buccafusco & David Fagundes, *The Moral Psychology of Copyright Infringement*, 100 MINN. L. REV. 2433 (2016).

scholarship has not to date considered the role that copyright can or does play in the production of customized creativity.[3] Puzzlingly, this gap in copyright scholarship has persisted even though the service sciences have been highlighting the increasing economic importance of customization for decades.[4] This Article fills the gap, adopting a two-part structure that reflects a can–does sequence: it develops a theoretical model of how the authors of customized creativity can use their copyrights, and it reports an empirical study of how architects actually do use their copyrights in infringement litigation. The theme that runs through both parts is the *conditional irrelevance* of copyright: when markets tilt strongly away from commoditized creativity and toward customization, copyright is irrelevant under its dominant incentive-to-create justification.

Initially, a bit of terminological precision is needed to facilitate the copyright theory (or "can") discussion. The consumers of customized creativity fall into either one of two groups. There are the *clients* who hire authors *ex ante* to perform customization services and create works tailored their tastes and needs. Everyone else is a *stranger* who, acting *ex post*, considers reproducing a work that has already been tailored to someone else's tastes and needs and that is now available as off-the-shelf work (even if the author has not actively put copies on store shelves). The category of strangers casts a broad net; it includes both authors' competitor producers and consumers other than clients.[5] Commoditized works are not tailored to the tastes and needs of known individuals, so there are no clients for commoditized works, turning all potential consumers of commoditized works into strangers. In

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[3] Professor Aaron Perzanowski has cited the customization of the service experience or "atmosphere" in a tattoo parlor as one reason why creativity persists in tattoo artistry in the face of copyright irrelevance. Aaron Perzanowski, *Tattoos & IP Norms*, 98 MINN. L. REV. 511, 586 (2013). However, the service customization that Prof. Perzanowski discusses involves customizing the service offered by each tattooer to the personality of that tattooer, not to the tastes and needs of the tattooers' individual clients. *Id.* This type of customization may make copying more difficult and costly, but it does not customize the output.

[4] *See, e.g.,* Joseph Lampel & Henry Mintzberg, *Customizing Customization*, 38 SLOAN MGMT. REV., Fall 1996, at 21, 21 ("Numerous books and articles have posited that we are witnessing the dawn of a new age of customization, an age in which new technologies, increased competition, and more assertive consumers are leading toward customization of their products and services.").

[5] Because this Article defines the term "strangers" in opposition to clients, it uses the term in a narrower sense than the term is used in contract law. In contract law, strangers are defined in opposition to contractual partners as people who are not in privity. Dunlop Pneumatic Tyre Co. v. Selfridge & Co., [1915] AC 847 (Eng.). Because some clients are not authors' contractual partners, there are some contractual strangers with respect to authors who are not strangers in the sense that this Article uses the term. *See infra* notes __ and accompanying text (including parties who are not in privity with an author as the author's clients).

principle, both clients and strangers may be interested in copying customized works, and, again in principle, copyright can curtail copying by both groups. However, copying by each group is relevant to a different normative justification for copyright.

The story concerning clients and client copying of customized creativity is relatively simple. Clients clearly desire one or more copies of the custom works that have been tailored to their tastes and needs. They also have an incentive to make or cause others to make unauthorized copies. For example, they may appropriate works created by an author during the early stages of the customization process and take those proto-works to the author's competitors for refinement and execution without fully compensating the author. Copyright can thus play an important role in the production of customized creativity by curbing unauthorized client copying. However, when it plays this role, copyright is not following the script established by its incentive-to-create justification. It is not preventing copying by free-riding strangers, restraining competition among author–producers, or enabling supracompetitive prices for multiple copies of a work. Rather, copyright is playing the role scripted by its rarely discussed transactional justification.[6] It is facilitating information disclosure when information is being exchanged between transactional partners in market transactions by overcoming Arrow's information paradox.[7]

The story concerning strangers and stranger copying of customized creativity—and thus copyright's ability to play the role scripted by the incentive-to-create justification—is more complex. There are two interdependent, unknown variables. First, do clients compensate authors' for the full first-copy costs through their

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[6] When transactional justifications of intellectual property are discussed, it is almost always in the context of technological innovation and patents rather than creative works and copyright. *See infra* note __. [*But see* …]

[7] For general discussions of intellectual property's ability to facilitate inter-firm transactions premised on the sale of information by resolving Arrow's information paradox, see James J. Anton & Dennis A. Yao, *The Sale of Ideas: Strategic Disclosure, Property Rights, and Contracting*, 69 REV. ECON. STUD. 513, 514 (2002); Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609 (Nat'l Bureau of Econ. Research, ed., 1962); Michael J. Burstein, *Exchanging Information Without Intellectual Property*, 91 TEXAS L. REV. 227 (2012); Paul J. Heald, *A Transaction Costs Theory of Patent Law*, 66 OHIO. L.J. 473 (2005); F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697 (2001); Edmund W. Kitch, *The Nature and Function of the Patent System,* 20 J.L. & ECON. 265, 277–78 (1977); Robert P. Merges, *A Transactional View of Property Rights*, 20 BERKELEY TECH. L.J. 1477 (2005); Stephen Yelderman, *Coordination-Focused Patent Policy*, 96 B.U. L. REV. 1565 (2016). In addition, copyright can facilitate the transfer of information between employees within a firm. *See infra* notes __ and accompanying text.

customization-service fees? If they do, then authors do not need to enforce their copyrights against strangers to have sufficient private incentives to create, and there is no public goods problem for copyright to solve. However, if they do not, then authors must enforce their copyrights against stranger copying to recoup the remainder of their first-copy costs, and copyright can perform socially beneficial work under the incentive-to-create justification. Second, do authors actually enforce their copyrights against strangers who reproduce their works? If authors' customization fees do not cover the full first-copy costs, then, as noted above, authors must enforce their copyrights against stranger copiers to at least break even. However, if authors' customization fees do cover the full first-copy costs, there is nothing that prohibits authors from enforcing their copyrights against stranger copiers even if the enforcement is not socially optimal because it over-rewards authors. In sum, the magnitude of client fees, the usage of copyright to curb stranger copying, and the impact of copyright on social welfare are all unknowns in customized creativity.

This Article reduces this uncertainty with a descriptive model of how authors use copyright in customized creativity called the *inverse demand correlation*: when markets tilt more heavily toward customization because demand for customization services is strong and widespread, demand for copies of custom works among strangers approaches zero.[8] The driving force behind this model is that the same set of consumer preferences—namely intense and diverse preferences—both drives markets away from commoditized works (and thus toward customization services), on the one hand, and drives down strangers' willingness to pay for copies of custom works that have, by definition, been tailored to someone else's tastes and needs. Simply put, strangers are unlikely to want a copy of someone else's customized creativity as an off-the-shelf work if they have already demonstrated that they do not want a copy of a commoditized work as an off-the-shelf work. Museum owners don't want a copy of someone else's museum rather than one customized to their tastes and needs; a business with a unique business model and legacy infrastructure does not want a copy of another business's software; newlyweds don't want pictures of someone else's wedding, regardless of how artfully they are composed.[9]

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[8] The model does not speak to mixed markets in which commoditized and customized creativity compete. *See infra* notes __ and accompanying text.

[9] All of these markets tilt strongly toward customization, and there is thus little demand for copies of custom works among strangers. One of the reasons why they tilt strongly toward

This minimal demand for copies among strangers cuts through the uncertainty concerning the business model of authors who produce customized works. Strangers do not copy, so authors must charge customization fees that cover their full first-copy costs. In terms of its implications for copyright, the inverse demand correlation reveals that copyright in customized creativity is irrelevant—that is, although creative works are protected, authors do not use their exclusive rights—at least given the important conditions that, factually, the market tilts strongly toward customization and, conceptually, irrelevance is measured only by copyright's incentive-to-create justification, not its transactional justification. This latter point means that copyright in customized creativity may have social value when markets tilt strongly toward customization, but, if it does, the value is not the value that we often reflexively assume copyright to have under the dominant paradigm that structures how we think about the work that copyright does.[10]

Conditional copyright irrelevance is a theory of copyright non-use. As such, there are interesting parallels to be made with the burgeoning literature on copyright's "negative spaces."[11] The principal lesson of copyright-negative spaces is that creativity can sometimes flourish without the incentives promised by copyright's incentive-to-create justification, and the conditional irrelevance of copyright in customized creativity offers precisely this same lesson. Yet, this Article's examination of customized creativity also pushes the scholarship on copyright-negative spaces in two new directions.

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customization is that the works of authorship at issue are functional, in a broad sense of the term. *See infra* Part I.C.

[10] The conditional irrelevance of copyright does not prove that copyright in customized creativity generates a net social cost or benefit. Operating at one level of remove, it identifies the justifications that can or cannot be deployed to identify copyright's costs and benefits.

[11] KATE DARLING & AARON PERZANOWSKI, CREATIVITY WITHOUT LAW: CHALLENGING THE ASSUMPTIONS OF INTELLECTUAL PROPERTY (2017); KAL RAUSTIALA & CHRISTOPHER SPRIGMAN, THE KNOCKOFF ECONOMY: HOW IMITATION SPARKS INNOVATION (2012); Perzanowski, *supra* note 3; Jacob Loshin, *Secrets Revealed: How Magicians Protect Intellectual Property without Law*, *in* LAW & MAGIC: A COLLECTION OF ESSAYS 123 (Christine A. Corcos, ed., 2010); Emmanuelle Fauchart & Eric Von Hippel, *Norms-Based Intellectual Property Systems: The Case of French Chefs*, 19 ORGANIZATION SCI. 187 (2008); Dotan Oliar & Christopher Sprigman, *There's No Free Laugh (Anymore): The Emergence of Intellectual Property Norms and the Transformation of Stand-Up Comedy*, 94 VA. L. REV. 1787 (2008); Kal Raustiala & Christopher Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 VA. L. REV. 1687 (2006). The term "copyright-negative space" is derived from Oliar & Sprigman, *supra*, at 1764. However, this Article uses the term in an expansive manner to encompass not only spaces in which copyright protection is absent as a legal matter but also spaces in which copyright is irrelevant because copyright owners do not exercise their rights. *See infra* note __ and accompanying text.

First, in conventional copyright-negative spaces, either copyright is absent because there are no effective rights as a legal matter, or copyright is not used, and is thus irrelevant, because professional norms curtail either the supply of copies or the enforcement of rights. In contrast, the non-use of copyright in customized creativity arises from a lack of demand for copies among consumers. A focus on a lack of demand as the reason for a copyright-negative space upends conventional thinking about demand in copyright theory. As far as commoditized creativity and copyright's incentive-to-create justification are concerned, strangers not wanting copies is a sign of an unsuccessful work that lacks social value, and there is no concern about making sure there are incentives to produce unsuccessful works.[12] This litmus test of an unsuccessful work does not carry over to customized creativity. Customized works can be highly successful, in that they are valued by the client to whose tastes and needs they are tailored, and yet strangers may not want copies.

Second, whereas copyright is entirely absent or irrelevant in conventional copyright-negative spaces, copyright in customized creativity is irrelevant under some conditions (when markets tilt toward customization) but not others (when commoditized and customized creativity compete), with respect to copying some parties (strangers) but not others (clients), and under the dominant copyright justification (the incentive-to-create theory) but not a less commonly discussed one (the transactional theory). This conditional nature of the copyright irrelevance at issue nestles customized creativity into an intriguing and unexplored space in between copyright's positive and negative spaces.

In its "does" discussion, this Article reports an empirical study of how architects use the copyrights granted by the Architectural Works Copyright Protection Act of 1990 ("AWCPA") in infringement actions.[13] The study's goal is to demonstrate that the way in which at least some

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[12] Daniel J. Hemel & Lisa Larrimore Ouellette, *Beyond the Patents-Prizes Debate*, 92 Tex. L. Rev. 303, 327–28 (2013) (noting that copyright sums individual demand functions in the market to determine author profits ex post and thus incentives ex ante).

[13] Architectural Works Copyright Protection Act, Pub. L. No. 101-650, 104 Stat. 5089, 5133 (1990). The AWCPA litigation study adds to small number of empirical analyses of copyright litigation that identify the circumstances under which litigants exercise their rights. *See* Christopher A. Cotropia & James Gibson, *Copyright's Topography: An Empirical Study of Copyright Litigation*, 92 TEX. L. REV. 1981, 1993–96, 2016–17 (2014); Matthew Sag, *Copyright Trolling, An Empirical Study*, 100 IOWA L. REV. 1105 (2015); Matthew Sag, *IP Litigation in U.S. District Courts: 1994 to 2014*, 101 IOWA L. REV. 1065 (2016); Matthew Sag, *Empirical Studies of Copyright Litigation*, *in* RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY LAW (VOL. II – ANALYTICAL METHODS) (2017).

authors of customized creativity exercise their rights is consistent with the descriptive model developed in the "can" discussion. To identify markets that tilt toward and away from customization, the study codes for the type of programmatic building that constitutes the copyrighted work. Single-family homes are frequently constructed from stock plans, but nonresidential projects are usually designed as customized works.[14] The inverse demand correlation leads to two testable predictions. First, the percentage of suits that are stranger rather than client suits should be low as an absolute matter in infringement cases involving custom, nonresidential works because the market for nonresidential works tilts strongly toward customization. Inversely stated, the authors of custom, nonresidential works should almost exclusively sue their clients. Second, among cases involving custom works, the percentage of suits against strangers should be smaller in cases involving nonresidential works and larger cases involving single-family homes. That is, the authors of customized works sue should strangers less frequently in markets that tilt more toward customization. The study proves both of these predictions to be correct. The study therefore bolsters the descriptive argument that the inverse demand correlation and the resultant conditional irrelevance of copyright accurately model the role that copyright plays in the production of customized creativity in at least some real-world contexts.[15]

This Article explores copyright and customized creativity in two parts. Part I explains the inverse demand correlation and the conditional irrelevance of copyright. Part II presents the empirical study of AWCPA litigation.

I. THE "CAN" QUESTION: A DESCRIPTIVE MODEL

This Part develops a descriptive model of demand for customized works, and it clarifies copyright's role in the production of customized creativity. Part I.A charts the range of business models that authors who generate copyrightable, customized works of authorship might use to cover their first-copy costs. Part I.B introduces the inverse demand correlation: widely felt, strong demand among clients for the

[14] *See infra* Part II.A. The category of nonresidential works is defined to exclude retail and restaurant trade dress for chains and franchises because trade dress is the exception to the rule that nonresidential works are custom works. *See infra* notes __ and accompanying text.

[15] The study's results are consistent with the inverse demand correlation, but they cannot prove causality. In limited contexts, sharing and anti-copying norms also offer plausible explanations for the study's results. *See infra* Part II.C.

customization services that generate new custom works correlates with widely felt, weak demand for copies of already-existing custom works among strangers. Part I.C highlights the role that the functionality of a work, broadly construed, plays in generating strong demand for customization services. Part I.D explores the import of the inverse demand correlation for copyright's normative justification. Copyright in customized creativity exhibits conditional irrelevance: it is irrelevant when markets tilt strongly toward customization and if relevance is defined solely in terms of copyright's incentive-to-create justification.

A. Paying For Copyrightable, Customized Creativity

In the service-sciences literature, customized and commoditized production lie at opposite ends of a spectrum.[16] Two variables distinguish these poles: the extent to which a producer tailors a work to an individual consumer and the extent of the consumer's interactivity with the producer.[17] These variables were not formulated specifically with copyrightable works of authorship in mind,[18] but they can be readily applied to distinguish customized and commoditized works. Customized works are tailored to individuals' tastes and needs,[19] whereas commodified works are ether targeted to an average consumer in a mass or niche market or intended to express the author's own sensibility and worldview. The author of a customized work interacts extensively with the consumer to whose tastes and needs the work is tailored.[20] He must learn—and sometimes shape—the consumer's preferences; he must iteratively verify that the envisioned creative output is in fact tailored to the consumer's needs and tastes as the

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[16] *See, e.g.*, Deborah L. Kellogg & Winter Nie, *A Framework for Strategic Service Management*, 13 J. OPERATIONS MGMT. 323, 324–27 (1995) (developing a "service process/service package matrix"); Lampel & Mintzberg, *supra* note 3, at 24–26 (offering a five-category typology running from standardization to customization); Roger W. Schmenner, *How Can Service Businesses Survive and Prosper?*, 27 SLOAN MGMT. REV., Spring 1986, at 21, 25 (illustrating a service process matrix).

[17] In his seminal classification of service businesses, Prof. Roger Schmenner developed a two-by-two matrix with labor intensity on the *y* axis and the degree of interaction and customization lumped together on the *x* axis. Schmenner, *supra* note 16, at 24–25. Others conceptualize customization and interactivity as separate dimensions. Kellogg & Nie, *supra* note 16, at 324–27.

[18] 17 U.S.C. § 102(a) (2018) (defining the categories of the works of authorship that copyright protects).

[19] Kellogg & Nie, *supra* note 16, at 326–27; Schmenner, *supra* note 16, at 22–23; *see also* CHARLES W. LAMB ET AL., MARKETING 423 (2012) ("Customized services are more flexible and respond to individual consumers' needs.").

[20] Lampel & Mintzberg, *supra* note 3, at 26 (arguing that customization causes "the customer's wishes [to] penetrate deeply into the design process itself").

details are flushed out.[21] In contrast, the author of a commodified work usually has no contact at all with consumers, except perhaps through focus groups.[22]

Together, these two variables highlight additional ways in which the production of customized and commoditized works diverge. First, the authors of customized works have identifiable *clients* who are known to the authors, whereas the authors of commoditized works do not. For convenience, this Article refers to parties who are not clients as *strangers*.[23] Second, the authors of customized creativity cannot proceed without a known client initially seeking out an author. Without a client, the author of a customized work does not know how the work should be customized.[24] In contrast, the authors of commoditized creativity usually do work on a speculative basis, finalizing their works before any consumer actually puts money on the table. Third, whereas the purchase of commoditized creativity is widely viewed as the purchase of a product, the purchase of customized creativity is commonly viewed as the purchase of a *service*. The customization at issue in this Article does eventually produce a product in the form of a creative work at the end of the day, but clients experience it as a service

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[21] Balazs Heidrich & Babor Rethi, *Services and Service Management*, *in* SERVICE SCIENCE RESEARCH, STRATEGY AND INNOVATION: DYNAMIC KNOWLEDGE MANAGEMENT METHODS 1, 6 (N. Delener, ed., 2012); Kellogg & Nie, *supra* note 16, at 325–26; Schmenner, *supra* note 16, at 22. This Article assumes that the consumer's involvement in the design process does not make the consumer a joint-author. 17 U.S.C. § 101 (2012) (defining a "joint work"). This assumption is reasonable, although not inevitable, because joint authors must have mutual intent to be joint authors, Aalmuhammed v. Lee, 202 F.3d 1227 (2000); *cf.* Shyamkrishna Balganesh, *Unplanned Coauthorship*, 100 VA. L. REV. 1683, 1739–50 (2014) (proposing that the mutual intent requirement should reflect the existence of a "collaborative impulse"), and authors who provide customization services usually do not intend to embrace their clients as co-creators. For example, the courts have rejected arguments that architects' clients are joint authors due to their contributions to the customization process. Sari v. America's Home Place, Inc., 129 F. Supp. 3d 317 (E.D. Va. 2015); Watkins v. Chesapeake Custom Homes, LLC, 330 F. Supp. 2d 563 (D. Md. 2004).

[22] The dichotomy between customized and commoditized creativity leaves out a third type of creativity that could be called *auratic* creativity. Auratic creativity is not tailored to the need of any particular individual, but part or all its value lies in there only being one copy of the work in the world—or, at least, one copy that is acknowledged as the original copy. *Cf.* WALTER BENJAMIN, ART IN THE AGE OF MECHANICAL REPRODUCTION (1935) (arguing that the aura of a work of art is devalued through mechanical reproduction). The very concept of an original copy may seem like an oxymoron, but it follows from the fact that "copy" is a term of art in copyright law that refers to a "material object[] … in which a work is fixed … and from which the work can be perceived." 17 U.S.C. § 101 (2018) (defining "copies"). Even "the first material object … in which the work is fixed" counts as a copy. *Id.* The first object created by an author that embodies a work is a copy, and it remains a copy even if no other objects embodying the work are ever created.

[23] The status as a client or stranger is specific to a particular work. Parties can be clients with respect to one work and strangers with respect to another.

[24] *But see infra* note __ (discussing paper projects).

because they are immersed in the back-and-forth process of having a work crafted so that it satisfies their particular tastes and needs.

Examples of authors who produce copyrightable, customized works of authorship are plentiful. Although they do sometimes produce stock plans, architects often labor to design architectural works that accommodate clients' sites, programs, and aesthetic tastes.[25] Software companies often produce commoditized programs like Windows® or Photoshop®, but they also provide the service of customizing code to meet the specifications dictated by their clients' unique specifications and legacy systems.[26] Event photographers, too, provide a customized service to their clients by seeking to capture the events that their clients want documented, often in the way that their clients desire.[27]

Yet, the existence of customized creativity should not be taken to suggest that it is not the default mode of creative production in today's economy. Its cost is usually too much for consumers to bear when they can make do with commoditized creativity.[28] Commoditized creativity spreads the first-copy costs of creativity over the sale of many copies, reducing the fraction of the first-copy costs that each consumer pays. Pure customization has no economies of scale; every new customized work generates new first-copy costs.[29] Even though we may derive considerable enjoyment from the resulting work, we are rarely willing to pay for musicians to learn our tastes and, through iterative refinement and preference education, write songs that satisfy those tastes. Similarly, we read the books available to everyone online and in bookstores, rather than paying authors to formulate and write the books that we believe we would derive the most enjoyment from reading.

Assuming the customization process yields a copyrightable work at its conclusion, its author can, in theory, enjoy two distinct revenue streams. Like the author of a commoditized work, he can exercise his copyright to charge supracompetitive prices to strangers who purchase copies or collect licensing royalties from producers who make copies

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[25] *See infra* Part II.A.

[26] PETER BUXMANN ET AL., THE SOFTWARE INDUSTRY ECONOMIC PRINCIPLES, STRATEGIES, PERSPECTIVES 5 (2013).

[27] GREG ROZA, CAREERS AS A PROFESSIONAL PHOTOGRAPHER 26–28 (2001).

[28] Schmenner, *supra* note 16, at 30–31 (noting the pressure on businesses delivering customized services to reduce costs by increasing commoditization).

[29] *See infra* notes __ and accompanying text (discussing economic models of product differentiation based on a trade-off between economies of scale and value in diversity). In addition, the costs of client interactivity can make the first-copy costs of customized creativity unusually high in comparison to the first-copy costs of commoditized creativity. *See supra* notes __ and accompanying text.

that are eventually sold to strangers. Unlike the author of a commoditized work, he can also collect fees for the customization service provided to clients. These two different revenue streams implicate two different types of copies. Clients pay for customization services that generate new works and that lead to the realization of the first copy or copies of a work. These are *front-end* copies.[30] In contrast, strangers pay for subsequent, off-the-shelf copies of the customized work that has already been tailored to someone else's tastes and needs. These are *back-end* copies.[31]

Given these two possible revenue streams, the authors of customized works can adopt any one of three different business models to recoup their first-copy costs. First, authors could charge their clients customization fees on the front end that fully cover the first-copy costs, and authors could not use their copyrights to obtain any revenue from stranger copying on the back end. Second, authors could "double dip" by both charging those same fees and taxing back-end, stranger copiers. That is, authors could be maximizers rather than sufficers. Here, copyright enforcement over-rewards authors and decreases social welfare.[32] Third, perhaps due to competition on price, authors could charge their clients customization fees that do not fully cover the first-copy costs, and they could make up the deficit by taxing back-end copies. Here, copyright forces both clients and those strangers who derive value from customized works to contribute to offsetting authors' first-copy costs.[33] (Note that the combination of a customization fee that does not fully cover first-copy costs and no enforcement of copyright against

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[30] The notion that the first material instantiation of a work is a "copy" follows from conventional copyright terminology. *See supra* note __.

[31] There is one type of copy that could be classified either as a front-end or back-end copy: an additional copy made by a client after obligations under the service agreement have been completed. As a temporal matter, these copies seem like back-end, off-the-shelf copies. However, this Article treats them as front-end copies on the presumption that they breach the terms of the service agreement. Conversely, there is no type of copy made by a stranger that could be conceived as both a front-end and back-end copy.

[32] Copyright enforcement leads to double dipping and a decrease in social welfare only if the enforcement leads to monetary damages or a licensing arrangement negotiated in the shadow of an injunction. There are limited contexts in which the expectation of injunction is a necessary condition for a client to be willing to pay customization fees that cover the author's full first-copy costs. For example, a client may value customized creativity because of the psychological value of owning a unique copy of a work. *See supra* note __ (discussing auratic creativity); *infra* notes __ and accompanying text (discussing uniqueness theory in social psychology).

[33] This business model, however, is only feasible when authors have a reasonable expectation that there will be demand among strangers for back-end copies of their custom works. This expectation may be shaky because it must exist at the time the price of the customization services is set and thus before the customized work is generated and, furthermore, even before the client's tastes and needs are well understood.

back-end copies by strangers does not produce a viable business model.[34]) Table 1 summarizes these three options.

TABLE 1: MIXED MARKET SCENARIOS

	Not Full First-Cost Fee	Full First-Cost Fee
Stranger Enforcement	3. Clients and strangers contribute	2. Authors "double dip"
No Stranger Enforcement	NULL SET (insufficient incentives)	1. Clients subsidize back-end copies, if any

In sum, both the ways in which the authors of customized creativity may use copyright and the social welfare implications of that copyright usage are indeterminate. The following section develops a descriptive theory to suggest that, when markets tilt strongly toward customization and there is no competition between commoditized and customized creativity in the market, the lower-right box captures the actual practice of the authors of customized creativity. The reason, however, is not that copyright owners elect not to enforce their copyrights against strangers who make back-end copies. Rather, the reason is that strangers do not want, and therefore do not make, back-end copies.

B. The Inverse Demand Correlation

This section identifies the inverse correlation that structures demand for customized works: strong demand for the customization services that lead to new custom works goes hand in hand with weak demand among strangers for copies of already created custom works. In other words, strong demand for the front-end customization services that are required to tailor works to a client's tastes and needs correlates with weak demand for back-end copies of existing custom works that have been tailored to others' tastes and preferences. The key to this correlation is that the same consumer preferences—namely intense and diverse preferences—cause both of the correlated phenomena.

[34] The possibility of foregoing a customization fee and only collecting royalties on the back end is ignored. In that situation, the work is likely to be a commoditized work, not a customized work.

Customized works are generally more expensive than commoditized works,[35] so consumers will pass up commoditized creativity and opt to become clients who pay for front-end copies of customized creativity only if they have a good reason for doing so. The most common reason is intense and diverse preferences. Preference intensity and preference diversity are two distinct phenomena. High preference intensity is a property of an individual consumer, and it means that a consumer experiences a larger welfare loss when she is forced to settle for a good that differs from her ideal good by some fixed amount.[36] High preference diversity is a property of a group of consumers, and it means that preferences are highly varied across the group and that different consumers have different variants of works as their ideal works.[37]

Together, high preference intensity and diversity tilt markets for works of authorship toward customization. That is, they drive markets away from commoditized works and toward customized works. The reason for this effect is that intense and diverse preferences increase the "value in diversity": consumers are more willing to pay for the first-copy costs of customization because the departure from a consumer's ideal good required to make do with commoditized creativity produces a larger welfare loss.[38] Greater preference diversity means that there is a larger divergence between a consumer's ideal good and the good that is available as a commodity. Greater preference intensity means that this divergence creates a larger welfare loss for the consumer. As a consumer's preferences move toward the theoretical pole of infinite intensity in a maximally diverse pool of preferences, there is a point at which authors will not produce commoditized creativity. There are not enough consumers who want any particular consensus, average work to generate the economies of scale needed for commoditized creativity to pay off for the author. At this point, the market has tilted fully toward customized works and away from commoditized works.

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35 *See supra* notes __ and accompanying text.

36 That is, the elasticity of substitution between variants of a good is smaller and a departure from a consumer's ideal work constitutes a less perfect substitute. Kelvin Lancaster, *The Economics of Product Variety: A Survey*, 9 MARKETING SCIENCE, Summer 1990, at 189, 193–95. A consumer's ideal work or most preferred specification is the preferred good if all possible variants are available. *Id.* at 197.

37 *Id.* at 189, 190.

38 Value in diversity is the gain from consumers having their preferences more perfectly satisfied as the range of differentiated products expands. PAUL KRUGMAN ET AL., ESSENTIALS OF ECONOMICS 252–53 (2d 2010).

The notion that a higher diversity and intensity of preferences drives markets away from commoditized works toward customized works is a central thesis of economic models of product differentiation.[39] These models seek insight into either the optimal product diversity to maximize a firm's private gain or, relatedly, the optimal product diversity to maximize social welfare. They highlight the balance between the greater value in diversity produced by a more varied product line on the demand side and the loss of economies of scale attributable to a more varied product line on the production side.[40] Given this balance, the models usually point toward a finite number of distinct variants within a product line as the optimum. Customized creativity is simply a limit condition: when the value in diversity becomes large enough, it trumps the loss of economies of scale.[41] Authors choose not to produce a diversified line of commoditized, creative works before the point of sale but rather to provide a customization service on demand.

Intense and diverse preferences also reduce demand for back-end copies of custom works. They do this for the same reason that they increase demand for front-end customization services or, inversely, for the same reason that they decrease demand for commoditized works.[42] Greater preference intensity means that consumers face a larger welfare loss when they consider making due with a work that has been customized to someone else's tastes and needs (just as they do when they consider making due with a commoditized work). Greater preference diversity means that there is a larger divergence between a consumer's ideal work and the off-the-shelf custom works that have been tailored to others' tastes and needs (just as there is a larger divergence between a consumer's ideal work and a commoditized work).[43]

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[39] This thesis exists in both of the basic approaches to modeling product differentiation, namely Chamberlin's monopolistic competition and Hotelling's locational competition (adapted to accommodate product space rather than geographic space). EDWARD H. CHAMBERLIN, THE THEORY OF MONOPOLISTIC COMPETITION (1933); Harold Hotelling, *Stability in Competition*, 39 ECON. J., March 1929, at 41. For a review of the lineages of both approaches, see Lancaster, *supra* note 36, at 192–201. For a discussion of the two models in the context of the economics of copyright, see Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212, 236–46 (2004).

[40] Lancaster, *supra* note 36, at 192; Kelvin Lancaster, *Socially Optimal Product Differentiation*, 65 AM. ECON. REV. 567, 575 (1975).

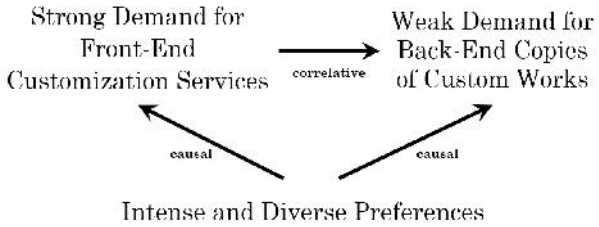
[41] *Lancaster, supra* note 40*,* at 573–74.

[42] *See supra* notes __ and accompanying text.

[43] Greater preference diversity increases the average divergence between a consumer's ideal work and both commoditized works and off-the-shelf customized works. However, whether the increase in the divergence is greater with respect to one or the other is indeterminate. With greater preference diversity, a consumer's ideal work may diverge less from a commoditized work,

Combining these insights, strong demand for new custom works and weak demand for copies of already created custom works should often go hand in hand. Both phenomena have the same joint cause, namely intense and diverse preferences.[44] As a market for customization grows more robust because consumers have high willingness to pay for front-end customization services, back-end demand for copies of already created customized works shrinks.

FIGURE 1: THE INVERSE DEMAND CORRELATION



Although it has never been expressly formulated, the inverse demand correlation aligns with common intuitions. Scholarship addressing copyright protection for computer programs has assumed an absence of demand for custom software among strangers.[45] Nor does unauthorized reproduction of custom wedding photography—which is by far the most common type of custom photography[46]—by strangers leap off the page as a pressing problem that threatens to undermine incentives to create wedding photographs. The reason is a lack of stranger demand for back-end copies. Who wants pictures of a wedding if you do not know the parties getting married, regardless of how

which is designed for a typical consumer, than from any given off-the-shelf customized work, which is idiosyncratic. However, this statement is only relevant when each customized work is considered in isolation. As a greater number of off-the-shelf, customized works becomes available and such works come to blanket a product space, greater preference diversity may mean that a consumer's ideal work diverges less from the particular customized work that is the closest to it than it does from the available commoditized works.

[44] Joint cause is one commonly recognized explanation for correlation. ROBERT M. MARTIN, SCIENTIFIC THINKING 258 (1997).

[45] Steven Breyer, *The Uneasy Case of Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 345 (1970). Professor Pam Samuelson extends this argument to patent law. Pamela Samuelson, *What Effects Do Legal Rules Have on Service Innovation?*, in HANDBOOK OF SERVICE SCIENCE 603, 608 (Paul P. Maglio et al., eds., 2010); Jason Schultz, *"Clues" for Determining Whether Business and Service Innovations Are Unpatentable Abstract Ideas*, 15 LEWIS & CLARK L. REV. 102, 123–124 (2011).

[46] ROZA, *supra* note __, at 27–28.

artfully the picture is staged?[47] As demonstrated below in Part II, architects producing custom works in markets that tilt strongly toward customization rarely sue strangers for making back-end copies, and the most plausible explanation of this fact is that strangers have little motivation to make such back-end copies in the first place.

Additional preferences can amplify the lack of demand among strangers for back-end copies of customized creativity under the inverse demand correlation. For example, consumers may have a preference for owning not merely a copy of a unique work but a unique copy of a work.[48] In social psychology, uniqueness theory posits that most people enjoy believing that they are distinctive in relation to other people. [49] The acquisition of unique material goods, including copies of copyrighted works, is a well-known way for individuals to satisfy this psychological drive for self-differentiation,[50] and customization is one way to acquire unique copies of works.[51] In short, customization can

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[47] Celebrity wedding photography illustrates an exception to the rule that preferences for wedding photographs are diverse. A significant chunk of the public may want to possess, or at least see, the wedding photographs of celebrities. Celebrity wedding photography is an example of a market that tilts strongly toward customization being a false positive for diverse preferences. *See infra* note __ and accompanying text. Celebrities do not need to pay the full first-copy costs of customization in order to get photographs of their weddings. If given the opportunity, paparazzi would gladly produce celebrity wedding photographs as commoditized creativity. However, celebrities hire their own custom wedding photographers nonetheless, and exclude other photographers, in order to use physical possession and copyright to control the dissemination of information. *Cf.* Monge v. Maya Magazines, Inc., 688 F.3d 1164 (9th Cir. 2012) (describing a celebrity couple who acquired the copyright in a set of paparazzi photographs to suppress the photographs' publication).

[48] In other words, creativity can be both customized and auratic. *See supra* note __. A brief note on the nature of the valued uniqueness is worth emphasizing because it runs counter to conventional copyright concepts. In copyright law, the uniqueness of a copyrightable *work* as a conceptual type is widely understood to be a common byproduct of copyright's originality standard. *But cf.* Sheldon v. MGM Pictures Corp., 81 F.2d 49, 54 (2d Cir. 1936) (noting that an independently created work is original even if it is not unique). However, the uniqueness of a *copy* of a work—the uniqueness that exists when a copy is the only realized copy of a work—is the central concept here.

[49] CHARLES R. SNYDER & HAROLD L. FROMKIN, UNIQUENESS: THE HUMAN PURSUIT OF DIFFERENCE 31–38 (1980).

[50] Michael Lynn & Judy Harris, *Individual Differences in the Pursuit of Self-Uniqueness Through Consumption*, 27 J. APPLIED SOCIAL PSYCH. 1861 (1997); Kelly Tepper Tian et al., *Consumers' Need for Uniqueness: Scale Development and Validation*, 28 J. CONSUMER RESEARCH 50, 52 (June 2001). The notion that self-identity can extend to material possessions is well established in both psychology, WILLIAM JAMES, 1 THE PRINCIPLES OF PSYCHOLOGY 291 (1890) (introducing the concept of "the material self"), and property law, Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 957 (1982) ("Most people possess certain objects they feel are almost part of themselves.").

[51] Lynn & Harris, *supra* note __, at 1866–67; Michael Lynn & Charles R. Snyder, *Uniqueness Seeking*, in HANDBOOK OF POSITIVE PSYCHOLOGY 395, 400 (Lopez et al., eds., 2002); Tian et al., *supra* note __, at 63; *cf.* Lynn & Harris, *supra* note __, at 1863–64 (discussing the acquisition of scarce goods produced in limited editions). Absent intellectual property enforcement or some other restriction on copies, the long-term success of the acquisition of material goods as a

generate a unique copy of a creative work that helps me to craft the valuable self-perception that I am different from the Joneses.[52] If some consumers have a strong preference for possessing a unique copy of a work and others do not, then there will be demand for back-end copies of the customized works produced. I will pay for customization services to achieve a work that satisfies my psychological drive to differentiate myself from the Jones, but the Smiths, who do not view the acquisition of a copy of a copyrighted work as a vehicle for self-differentiation and who are indifferent to my desire for self-differentiation, might enjoy owning a copy of the work customized for me.[53] However, if the strong preference for possessing a unique copy saturates the pool of potential consumers of the good, then this preference will further reinforce the lack of demand among strangers for copies of customized creativity under the inverse demand correlation. Strangers will pass up not only commoditized creativity but also back-end copies of customized creativity. If both the Joneses and the Smiths value a unique copy of a customized work as a vehicle for achieving self-differentiation, neither will have an inclination to copy the work that I paid an author to customize for me.

Scholars of consumer behavior have recognized the difference between the demand for customization that follows from intense-and-diverse preferences and the demand that follows from a preference for uniqueness. The former is an "independence" motivation because consumers desire customized works for reasons that are independent of what other consumers' purchasing decisions; the latter is a "counterconformity" motivation because consumers desire copies of customized works precisely because other consumers do not possess copies of those works.[54] Counterconformity motivations will be stronger in some markets for customized creativity than others because social convention views some possessions or attributes as "identity-signaling"

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strategy for achieving self-differentiation is suspect: if many consumers purchase a product in order to differentiate themselves, the product is no longer capable of serving the differentiation function, and the consumer must purchase a new product to serve the differentiation function. Charles R. Snyder, *Product Scarcity by Need for Uniqueness Interaction: A Consumer Catch-22 Carousel?*, 13 BASIC & APPLIED SOCIAL PSYCHOLOGY 9, 20–22 (1992); Tian et al., *supra* note __, at 53; *cf.* Raustiala & Sprigman, *supra* note 11, at 1717–35 (discussing why the "piracy paradox" means that copying can augment rather than reduce authors' incentives for creativity).

[52] The value of a unique copy may reside not only in its psychological value to an individual but also in corporate branding. *See infra* notes __ and accompanying text.

[53] Of course, the Smiths will only desire a copy of the work customized to my tastes and needs if preferences are insufficiently intense and diverse. *See supra* notes __ and accompanying text.

[54] Tian et al., *supra* note __, at 50.

goods and thus as effective vehicles for achieving self-differentiation.[55] That is, consumers are more likely to seek uniqueness on dimensions that society recognizes as relevant to self-identity.[56] For example, the owners of copies of software programs rarely view their programs or others' programs as self-differentiating possessions, but architecture frequently performs this function for building owners.[57]

To be clear, the inverse demand correlation is not a perfect correlation. Three points are important to keep in mind. The first two raise the possibility that a market tipping toward customized creativity is a false positive for the existence of intense and diverse preferences. First, there may be other causes of strong front-end demand for customization services apart from intense and diverse preferences, and those other causes may not also cause weak demand for back-end copies of custom works.[58] However, intense and diverse preferences are the most common cause of a robust market for customization. Second, there may be groups of consumers whose preferences are not diverse or intense, but no potential producer of commoditized creativity recognizes the existence of these groups. The inverse demand correlation assumes that the market will satisfy demand for commoditized creativity, if it exists. Otherwise, a work that is intended as a customized work may, after its creation, turn out to be a viable commodity for a mass or niche market. That is, an author may provide front-end customization services to one client believing the client's needs and tastes to be one of a kind and discover only once the work is complete that the work satisfies others' tastes and needs as well.

Even assuming that the market will always see and act on the opportunity to successfully market commoditized works, the third point highlights the implications of the economies of scale required for the market to produce commoditized creativity. A market will tilt strongly toward customization despite the fact that there are small pockets of consumers who would prefer to settle for commoditized creativity at a lower price, provided that each pocket individually is too small to provide meaningful economies of scale.[59]

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[55] SNYDER & FROMKIN, *supra* note __, at 105–127; Cindy Chan, Jonah Berger & Leaf van Boven, *Identifiable but Not Identical: Combining Social Identity and Uniqueness Motives in Choice*, 39 J. CONSUMER RES. 561, 563, 565–67 (2012).

[56] Lynn & Snyder, *supra* note __, at 402.

[57] *See infra* notes __ and accompanying text.

[58] *See supra* note __ and accompanying text.

[59] The possibility of some demand for back-end copies of customized works even in the absence of commoditized creativity as a market alternative is also increased by the cost of the customers' contribution to the first-copy costs of the commoditized work. When commoditized

To reiterate, the inverse demand correlation is scalar rather than binary. In situations in which preference intensity and diversity are moderate, customized and commoditized works compete with each other in a mixed market, and the decrease in demand for back-end copies of custom works will only be moderate. It may be that preference intensity is only moderate and that the cost premium of front-end customization services becomes too much to bear. Alternatively, it may be that preference diversity is only moderate, and the custom work designed for one client may be exactly what another client desires. Either way, some consumers in mixed markets will value front-end copies of customized works enough to pay the full first-copy costs of customization, and others will prefer either commoditized works or back-end copies of custom works. Here, the uncertainty concerning the business model of customized creativity persists.[60]

However, the scalar nature of the inverse demand correlation does not muddy the conclusions that can be drawn near the pole where consumer preferences approach close enough to infinite intensity and maximum diversity so that the market for commoditized creativity dries up entirely. Beyond this line—wherever it may lie—the implication of the correlation is clear: consumers' willingness to pay for back-end copies of custom works also approaches zero.[61] The very preferences that drive consumers to become authors' clients and bear the fees required to obtain customization services also drive them away from purchasing copies of the custom works that authors have already created for others.

C. Functionality and Preference Intensity

A high preference intensity that saturates a market of potential copiers is one of the key conditions required for the inverse demand correlation to gain traction as a descriptive model of demand for customized creativity.[62] This requirement unquestionably reduces the number of markets that will tilt strongly toward customization. However, an understanding of the connection between preference intensity and functionality—with functionality construed more broadly

works are available, their price factors in a contribution that helps to offset the authors' first copy costs. However, consumers who make infringing, back-end copies of customized works need not contribute to the authors' first copy costs.

60 *See supra* notes __ and accompanying text.

61 *But see supra* notes __ and accompanying text (considering reasons why the inverse demand correlation is imperfect).

62 *See supra* notes __ and accompanying text.

than it is conventionally construed in copyright law—identifies one reason why such works are more common than one might initially imagine.

Preferences for the functional properties of consumer goods are usually more intense than preferences for their aesthetic properties.[63] You may be willing to listen to music that is moodier than your ideal work or hang a painting in your living room that is more figurative than your ideal work, especially when your alternative is to pay for the first-copy costs of customization. However, you are less likely to be willing to live with a flower vase that does not hold water, even if it only leaks a little bit.[64] Works of authorship that have functional tasks to perform, but that perform those tasks poorly or even sub-optimally, often just won't do.

This connection between higher preference intensity and functionality, at least until minimum functional requirements are met, suggests a connection between functionality and markets that tilt strongly toward customization: commoditized creativity is more likely to be good enough for creative works that have only aesthetic or entertainment value, and customized creativity is more likely to be popular for creative works that also have functional properties. Anecdotally speaking, this correlation has a ring of truth. As the remainder of this section illustrates, the markets that tilt toward customization often involve works of authorship that have comingled functional properties. In some instances, the functionality at issue is the familiar kind of functionality in copyright law, namely the kind of functionality that gives rise to utility under patent law. In other

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[63] One way of testing this assertion is to see whether consumers satisfy functional or aesthetic preferences, if forced to choose. Consumers prefer a product whose attributes exceed their functional criteria but not their aesthetic criteria over a product whose attributes exceed their aesthetic criteria but not their functional criteria. Ravindra Chitturi, Rajagopal Raghunathan, & Vijay Mahajan, *Form Versus Function: how the Intensities of Specific Emotions Evoked in Functional Versus Hedonic Trade-Offs Mediate Product Preferences*, 44 J. MARKETING RES. 702, 704–06, 708–710 (2007) (discussing "the principle of precedence … according to which consumers should seek to fulfill functional cutoffs before seeking to fulfill hedonic cutoffs"); *see also* Theodore J. Noseworthty & Remi Trudel, *Looks Interesting, but What Does It Do? Evaluation of Incongruent Product Form Depends on Positioning*, 48 J. MARKETING RES. 1008, 1017 (2011) (citing "existing research that suggests that utilitarianism precedes hedonism until functional expectations are met"). However, once a product satisfies the consumer's functional and aesthetic criteria, then consumers prefer superior aesthetics over superior functionality. Chitturi et al., *supra*, at 710 (discussing "hedonic dominance … when a desired cutoff is met on both [functional and aesthetic] attribute types").

[64] Preferences for non-functional features may be more intense when products serve a communicative, branding role: a pattern on a purse that closely resembles Gucci trade dress, but is visibly not Gucci trade dress, just will not do, either.

instances, however, the functionality at issue extends beyond this patent-centric concept of utility.

Copyright conventionally borrows from patent law to define the concept of functionality. Features of copyrightable works are functional in this patent-centric definition to the extent that they "do" something in a mechanical or computational sense.[65] Software and architecture are both highly functional under this definition.[66] Software is a text that causes a machine to behave in a particular manner.[67] Architecture not only provides shelter by resisting gravity and the elements, but its disposition of spaces facilitates certain behaviors while impeding others.[68]

In theory, works of authorship that have protected attributes that are functional in a patent sense might seem impossible because copyright employs functionality screens to deny protection to the functional attributes of copyrightable works.[69] In practice, however, copyright's functionality screen is not enforced with equal strictness for all types of works of authorship. The useful articles doctrine does the bulk of the work required to enforce copyright's functionality screen, and it has historically done a reasonable job of preventing copyright protection from extending to the functional aspects of a work.[70]

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[65] The definition of patentable functionality is more muddled than one might expect. Kevin Emerson Collins, *Patent Law's Authorship Screen*, 84 U. CHI. L. REV. 1603, 1624–32 (2017) (arguing that patent law's definition of patentable functionality is best defined by the exclusion of authorial innovation, which is composed of both aesthetic and informative innovation).

[66] In fact, concerns over functionality meant that neither software nor architecture initially received full-fledged protection under the 1976 Copyright Act. Computer programs were added as copyrightable works of authorship in 1980 after a commission report on the subject. Pamela Samuelson, *CONTU Revisited: The Case Against Copyright Protection for Computer Programs in Machine-Readable Form*, 1984 DUKE L.J. 663, 699–705 (1984) (discussing the CONTU commission report). Protection for buildings, as opposed to drawings of buildings, was added in 1990 with the enactment of the Architectural Works Copyright Protection Act (AWCPA) to ensure compliance with the Berne Convention that the United States had joined only a couple of years earlier. Kevin Emerson Collins, *The Hidden Wisdom of Pre-AWCPA Copyright* (draft).

[67] Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2316–20 (1994).

[68] Collins, *supra* note __, at 1646–51.

[69] Copyright's functionality screens prevent copyrights from becoming back-door patents that upset the balance of public and private rights established by patent law for functional innovation. Christopher Buccafusco & Mark A. Lemley, *Screening Functionality*, 103 VA. L. REV. 1293 (2017); Mark P. McKenna & Christopher Jon Sprigman, *What's In and What's Out: How IP's Boundary Rules Shape Innovation*, 30 HARV. J. L. & TECH. 491 (2017); Pamela Samuelson, *Strategies for Discerning the Proper Boundaries of Copyright and Patent Protections*, 92 NOTRE DAME L. REV. 1493 (2017).

[70] The useful articles doctrine denies protection to the functional attributes of pictorial, graphic, and sculptural works protected under 17 U.S.C. § 102(a)(5) (2018), even if those attributes are also inseparably expressive. 17 U.S.C. § 101 (2018) (defining a pictorial, graphic, and sculptural works); *id.* (defining a useful article). Whether the Supreme Court's recent opinion in

However, due to the statutory structure of the Copyright Act, the useful articles doctrine does not apply to either software or architecture,[71] and the functionality screens employed for these two types of works of authorship in particular are atypically lax.[72] Given the more-functional-than-average nature of software and copyright in relation to other copyrightable subject matters, the high preference intensity associated with the functional features of a work provides a sound explanation for why software and architecture have unusually robust markets for copyrightable, customized creativity when consumer preferences are also diverse.[73]

The connection between customization and these conventional examples of functionality in the patent-law sense within copyrightable works of authorship, however, fails to capture the full importance of functionality's impact on customization. Copyrighted works also can be functional in ways that heighten preference intensity but that are not encompassed within patent law's conception of functionality. Most importantly, they can have *documentary functionality*: they can codify facts and inform human readers about those facts. Photographs, documentary films, and factual literary works (including nonfictional literature, scientific and newspaper articles, and phone books) all have documentary functionality. They may not do what is needed to be a patentable innovation, but they are functional in that they "do"

Varsity Brands v. Star Athletica, 580 U.S. __ (2017), reduces the efficacy of the useful articles doctrine as a functionality screen is yet to be determined.

[71] Neither architecture nor software is a pictorial, graphic, or sculptural work, so the useful articles doctrine is not relevant as a statutory matter. *See supra* note __. Architectural works are their own category of copyrightable subject matter. 17 U.S.C. § 102(a)(8) (2018). Computer programs are literary works. *Id.* § 102(a)(2); § 101 (defining a literary work).

[72] Concerning software, the principal functionality screen for literary works is the idea/expression dichotomy as articulated in *Baker v. Selden*, 101 U.S. 99 (1879), and codified in 17 U.S.C. § 102(a)(2) (2018). *Cf.* Collins, *supra* note __, at 1617 n.59 (distinguishing the idea/expression dichotomies enforced by *Baker* and *Nichols v. Universal Pictures Corp.*). To apply *Baker* to software, courts usually use the "abstraction-filtration-comparison" test initially developed in *Computer Associates International v. Altai, Inc.*, 982 F.2d 693, 706 (2d Cir. 1992). However, the inherently functional nature of all software means that the copyrightable aspects of software are more functional than the copyrightable aspects of most other works of authorship. Concerning architecture, the functional attributes of a work are denied protection under the AWCPA only if they are "functionally required." H.R. Rep. No. 101-735, at 20–21 (1990), as reprinted in 1990 U.S.C.C.A.N. 6935, 6951–52. Assuming the "functionally required" standard allows the existence of alternative ways of accomplishing a function to weigh in favor of copyright protection for a functional attribute, this standard allows more functional attributes of a work to be protected than the useful articles doctrine does.

[73] Functionality, and thus preference intensity, alone is not enough if there is no preference diversity. Many artifacts of industrial design, such as staplers and blenders, are highly functional, but the markets for these artifacts are dominated by commoditized creativity because preferences are not diverse.

something more than exhibit pleasing aesthetics or artistic mastery.[74] Interestingly, the Copyright Act enforces a constitutionally mandated fact/expression dichotomy that excludes facts from the scope of copyright protection,[75] just as it excludes functionality in the patent sense from its scope of protection. However, it does not expressly label this limitation on copyright as a limitation that is attributable to functionality.

Just like mechanical and computational functionality, documentary functionality increases preference intensity and pushes markets toward customization when consumers also have diverse preferences. For example, consider the work of event photographers and videographers who document weddings. The consumers of wedding photography have preferences that are both diverse—everyone wants pictures of their own wedding as their ideal work—and intense—a picture of someone else's wedding just will not do. The intensity of these preferences flows directly from the documentary functionality of wedding photography. The reason why pictures of someone else's wedding will not do is not because your wedding pictures have the most exquisite staging or lighting but because your wedding pictures document the occurrence of your wedding. With this broader sense of functionality, the existence of a robust market for custom wedding photography further strengthens the correlation between functionality and customization and broadens the set of markets in which it is reasonable to expect the inverse demand correlation to gain descriptive traction.[76]

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[74] *Cf.* Kevin Emerson Collins, *Semiotics 101: Taking the Printed Matter Doctrine Seriously*, 85 IND. L. REV. 1379 (2010) (framing material embodiments of signs that convey informational content to human readers as "manufactures" that perform functional work but that should lie beyond the reach of patentable subject matter).

[75] Facts are unprotectable because they lack originality: they are discovered rather than created by an author. Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 449 U.S. 340 (1990).

[76] The inverse demand correlation does not impact demand for copies of functional works that are valued for solely aesthetic purposes and that are not expected to fulfill any functional needs. Imagine that there were a market for the source code of a program based solely on the code being a good read for a human. *Cf.* Universal City Studios, Inc. v. Corley, 273 F.3d 429, 445–49 (2001) (discussing computer programs as speech). In this world, the intensity of preferences created by the functional nature of software when it is "read" by a machine would not limit demand among strangers for copies. As a practical matter, however, the size of the market for software as speech is small. Samuelson et al., *supra* note __, at 2317 ("No one would want to buy a program that did not behave, i.e., that did nothing, no matter how elegant the source code 'prose' expressing that nothing."). In architecture, photographs of buildings are aestheticized copies that are not expected to perform any functions. To the extent that consumers desire photographs of buildings, architecture's functionality would not intensify preferences or reduce demand among strangers for back-end copies. *Cf. infra* note __ (noting that AWCPA copyright protection does not extend to most photographic reproductions). Wedding photographs could, in theory, be valued as Modernist

D. The Conditional Irrelevance of Copyright

This section explores the implications of the inverse demand correlation for the normative justification of copyright.[77] The big-picture take home is the need for a paradigm shift in the legal academy's understanding of the mechanism through which copyright promotes customized creative production. Part I.D.1 addresses copyright's dominant incentive-to-create justification and argues that copyright in customized creativity is irrelevant when this justification defines relevance as a conceptual matter. Part I.D.2 turns to copyright's rarely discussed transactional justification and argues that this is the only viable justification for copyright in customized creativity. To frame the conditional irrelevance of copyright in a different manner, Part I.D.3 contextualizes customized creativity within the burgeoning literature on copyright-negative spaces. In some ways, customized creativity closely parallels the copyright-negative spaces that other scholars have identified and studied. In other ways, however, it is *sui generis*, and it pushes the literature on copyright-negative spaces in new directions.

1. The Incentive to Create Justification

The incentive-to-create justification positions copyright as a tool for overcoming a public goods problem that inheres in the production of creative works.[78] Authors incur significant first-copy costs. When competitors and anonymous free-riding consumers can freely reproduce the first copy, a competitive market prevents authors from recouping their first-copy costs over the sale of multiple copies. Seeing this problem down the road, authors may elect not to produce the works in the first place. This lack of incentives to create is problematic because consumers may collectively value the creative works that authors produce enough to compensate authors for their first-copy costs, but transaction costs scuttle consensual, market agreements in which each consumer offsets a fraction of those costs.[79] Copyright is engineered to

studies of tonal contrast divorced from any representational or figurative content, but they rarely are so valued.

[77] This section only addresses markets that tilt strongly toward customization and that are therefore governed by the inverse demand correlation. It does not address mixed markets in which customized and commoditized creativity compete.

[78] *See supra* notes __ and accompanying text.

[79] Copyright is commonly described as a solution to a collective action problem. *See, e.g.*, JAMES BOYLE, THE PUBLIC DOMAIN 48 (2008); CHARLOTTE HESS & ELINOR OSTROM,

correct this market failure. It enables authors to restrict market competition for copies of their works and charge supracompetitive prices. The anticipation of this private tax on copies gives authors hope that, if their works are valued by consumers, they can recoup their first-copy costs.

The absence of demand for back-end copies of customized works renders copyright irrelevant under the incentive-to-create justification. Strangers have no incentive to make copies, so the right to control reproduction by strangers is meaningless. Copyright in customized works is a legal right to prevent others from engaging in conduct in a world where there is no incentive to perform that conduct, even without any consideration of a legal sanction. That is, it is much like a right to prevent someone from walking down a hot road for a mile on his hands. It is "real" as a legal matter. However, there is no opportunity to exercise it because the factual predicate for exercising it does not exist.

The difficulty of copying services, and customization services in particular, is sometimes invoked as a reason why services do not need extensive intellectual property protection under the incentive-to-create justification.[80] The inverse demand correlation makes an entirely different point. The focus is not on whether the service can be copied but on whether there is demand for copies of the copyrightable work that the service generates. Copyright can be superfluous because there is no value for strangers in copies of the creative works produced as the end products of customization services.

The irrelevance of copyright does not mean that there is an unsolved public goods or collective action problem that leads to insufficient incentives for creativity. To the contrary, it means that there is no public goods problem in the first place, before copyright comes on the scene.[81] It is true that authors cannot expect to spread their first-copy costs out over the sale of copies to multiple parties. However, given the lack of stranger demand for back-end copies, this mechanism for recouping first-copy costs makes no sense. No one apart from the client for whom the work was tailored wants copies, so there

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UNDERSTANDING KNOWLEDGE AS A COMMONS: FROM THEORY TO PRACTICE (2007). The collective action and public goods problems are one and the same.

[80] Samuelson & Schultz, *supra* note __, at 124 ("[T]he provision of services cannot be duplicated in the same way that a product or device can be copied; thus, the classic free-riding problem in patent-intensive industries is avoided."); *cf.* MICHAEL POLANYI, THE TACIT DIMENSION 72–89 (noting that doing a job well frequently involves context-specific knowledge that is difficult to codify in text or copy from goods marketed to the public).

[81] Nor does the irrelevance of copyright in customized creativity mean that copyright is inflicting a net social cost. It rather means that copyright not generating either costs or benefits.

is no group of uncoordinated consumers who value the work to tax in order to offset the author's first-copy costs. Authors' clients internalize the bulk of the value of customized creativity, and they must pay for customization services in full, including the author's first-copy costs, if they desire creativity tailored to their tastes and needs.[82]

In one sense, the authors of customized creativity are like government workers and authors who have patrons: if a single party promises to pay the first-copy costs up front, then supracompetitive pricing in an anonymous market for copies on the back end is not needed to offset those costs under the incentive-to-create theory.[83] However, in another sense, the authors of customized creativity are in a different position. If copyright law permitted it, the other authors could double-dip when there is demand for multiple copies. They could take in not only taxpayer dollars or commissions to cover the first-copy costs but also royalties in a market for copies.[84] In contrast, the authors of customized creativity have no market for copies on the back end, meaning that they must subsist on clients' customization fees alone.

One important caveat on the link between the inverse demand correlation and copyright's conditional irrelevance is important to note: it is contingent on the scope of a copyright. Copyright grants authors rights to control not only identical copies but also looser copies that are "substantially similar" to protected expression in the copyrighted work.[85] For copyright to be irrelevant, demand among strangers must decrease for not only the identical copies at copyright's core but also the looser, yet still actionable, copies on its periphery. If a first customized work is tailored to the tastes and needs of a first client and it is used as inspiration for another author who tailors a second work to the distinct

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[82] Copyright helps to ensure that authors' clients pay in full for the customization services, but copyright is operating under a transactional justification when it does so. *See infra* notes __ and accompanying text.

[83] Copyright is not needed under the incentive-to-create theory when "state subsidy" or "elite patronage" funds works, although these funding mechanisms create structural problems if they become the norm. Neil Weinstock Netanel, *Copyright in a Democratic Civil Society*, 106 YALE L.J. 283, 352–62 (1996). More broadly, copyright is not needed under the incentive-to-create theory when the author's first-copy costs will be fully recouped upon the sale of the first copy of a work, even if the work is not a customized work and there is no up-front payment at all. LANDES & POSNER, *supra* note 1, at 245–57 (arguing that "[t]he overall case for copyright protection of works of art is weaker than that for copyright protection of most other expressive works" because "[t]he main source of the artist's income … typically comes from the sale of the [first copy of] the work … rather than from the sale of [successive] copies"). *But see supra* note __ (noting that, for auratic creativity, copyright is needed for purchasers to place enough value on a work to fully offset authors' first-copy costs).

[84] The lack of copyright protection for government works prevents double dipping with government works, 17 U.S.C. § 105 (2018), but artists with patrons can pursue this strategy.

[85] *See* 13 NIMMER ON COPYRIGHT § 13.03[A][1] (2018).

tastes and needs of a second author, a broad copyright in the first work could make the second work a loose, yet still infringing, copy. In other words, copyright irrelevance requires an absence of demand for *actionable* copies, and excessively broad copyrights can undermine copyright' irrelevance by radically increasing the looseness of the copies that are actionable.

While broad copyright scope can limit the irrelevance of copyright in customized creativity in theory, a correlation between narrow copyright scope and the works of authorship for which markets are likely to tilt toward customization bolsters it. Copyright scope is narrower when there is more unprotectable material in the work, and it is broader when there is less unprotectable material in the work.[86] Functional works—in the broad sense of functionality adopted in Part I.C—are not only works that are more likely to produce robust markets for creativity, but they are also works that contain significant amounts of unprotected material and that are protected by narrow copyrights. Attributes that are functional in the patent sense are unprotectable material because of copyright's functionality screens[87]; the facts depicted in photographs and other works that have documentary functionality are unprotectable because of copyright's fact/expression dichotomy.[88] The functional and factual attributes that render copyright thin are also works that constitute fertile ground for markets that tip toward customization and that are subject to the inverse demand correlation.

2. The Transactional Justification

Unlike with strangers, clients clearly experience demand for copies of custom works. The custom works have, after all, been tailored to their tastes and needs. This demand means that copyright impacts the production of customized works. However, it does so by playing the role scripted by the transactional justification of copyright, not the incentive-to-create justification.

Most commonly invoked in connection with patents and technological innovation, the transactional justification of intellectual property focuses on the ability of copyright to facilitate consensual,

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86 *Id*. at [4].

87 *See supra* note __ and accompanying text.

88 *See supra* note __ and accompanying text.

market transactions involving the transfer of information.[89] Intellectual property can achieve this goal by overcoming Arrow's information paradox.[90] Information purchasers do not want to agree to pay for information until they have enough access to the information to assess its value. Yet, information possessors do not want to disclose information to purchasers until after the purchasers have agreed to pay them in full because, once the information is disclosed, the purchasers possess the information and have no reason to pay for it.[91] With intellectual property protection, information possessors are comfortable disclosing their information because the purchaser cannot appropriate it without the possessor's consent.[92]

Copyright in customized creativity can help authors to overcome an unusually severe variant of Arrow's information paradox.[93] The authors who provide customization services are the information possessors, and their clients are the information purchasers. The interactivity of the customization process often requires authors to disclose early-stage versions of works in order to integrate clients into the interactive customization process.[94] This disclosure increases the risk that clients will appropriate authors' early-stage works without full payment and take them to the authors' competitors for further development and realization.[95] In addition, the stakes of appropriation are high in the context of customized creativity. Authors of customized works must often rely on a single client's fees to recoup all of their sunk

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89 *See supra* note 7. More broadly, scholarship on intellectual property's ability to facilitate the market exchange of information focuses on how intellectual property reduces the pressure to bring more information production within the boundary of the firm. ALFRED D. CHANDLER, JR., THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS 1, 6–7 (1977); Dan L. Burk & Brett H. McDonnell, *The Goldilocks Hypothesis: Balancing Intellectual Property Rights at the Boundary of the Firm* 2007 U. ILL L. REV. 575, 579, 587–88.

90 Arrow, *supra* note 7, at 615.

91 *Id*.

92 *But cf.* Burstein, *supra* note 7, at 247–58 (explaining that Arrow's information paradox does not arise in all commercial transactions in which information is the exchanged commodity). Copyright also facilitates information disclosure in market transactions by augmenting the remedies that are available for information appropriation after contracts have been signed. Merges, *supra* note 7, at 1504–10.

93 For a more in-depth treatment of the variant of Arrow's information paradox that custom architects face in their dealings with clients, see Kevin Emerson Collins, *The Hidden Wisdom of Architectural Copyright before the AWCPA* (draft).

94 *See supra* notes __ and accompanying text.

95 Nondisclosure agreements and other contractual arrangements may reduce the risk of information disclosure, but intellectual property protection is usually needed to fill the gaps. Barnett, *supra* note 7, at 798; Burstein, *supra* note 7, at 263; Merges, *supra* note 7, at 1489–95; Yelderman, *supra* note 7, at 16.

costs.[96] If a client appropriates a work without full payment, the author cannot sell additional copies to strangers to make up for the shortfall.

While the argument explaining the conditional irrelevance of copyright in customized creativity draws a line between the incentive-to-create and transactional justifications of copyright—with the former being irrelevant and the latter being relevant—it is important to note one way in which the two justifications are not as categorically distinct as is often assumed. The incentive-to-create theory is commonly viewed as providing *ex ante* incentives to incur the first-copy costs of creation, and the transactional theory is commonly viewed as facilitating disclosure *ex post* after works have already been generated.[97] However, the role that copyright plays in facilitating the transfer of information during the development of customized works muddies this clean ex-ante/ex-post distinction. The authors of customized creativity are more likely to create works when they have greater confidence that their clients will pay for their first-copy costs in full.[98] Copyright in customized creativity thus does provide incentives for creativity, albeit through the mechanism identified in the transactional justification rather than through the mechanism identified in the incentive-to-create justification.

In addition to facilitating the information disclosure required for market transactions, copyright can also facilitate information transfer in non-market exchanges between the employees of a firm.[99] The theory of the firm holds that transaction costs leads firms to hire employees and perform some production tasks in house under a hierarchical management structure rather than contract for the performance of those tasks in a market.[100] One way to reduce the transaction costs of in-house production is for a firm to use copyright, and its work-for-hire doctrine in particular, to secure rights in the creative output of its

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96 *See supra* notes __ and accompanying text.

97 Mark A. Lemley, *Ex Ante versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 130 (2004).

98 More generally, facilitation of information transfer under the transactional justification increases ex ante incentives for creative production when the transaction at issue is an agreement that involves the generation of new information.

99 For general discussion of intellectual property's ability to facilitate the intra-firm dissemination of information, see Dan Burk, *Intellectual Property and the Firm*, 71 U. CHI. L. REV. 3, 11–15 (2004). The transactional justification of intellectual property thus has two distinct strains that focus on information exchange in two different contexts: market transactions between firms and non-market transactions within firms. Burk & McDonnell, *supra* note __, at 576–77 (discussing how the distinct inter-firm and intra-firm strains of the transactional justification of intellectual property converge at the boundary of the firm).

100 Ronald H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937); ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 91–95 (4th ed. 2004).

employees acting within the scope of their employment. [101] By decreasing the probability that employees can misappropriate or otherwise engage in holdup with respect to the firm's intellectual assets, copyright reduces the need for wasteful expenditures on compartmentalizing information among different teams within a firm.[102]

Following this template, copyright can serve a valuable function that aids the production of customized creativity by helping authors who provide customization services to operate efficiently as firms. This help is particularly important because the labor-intensive nature of the interactivity required for customization is often best accomplished by teams and thus firms.[103] Firm ownership of copyright under the work-for-hire doctrine makes it more difficult for employees to leave a firm, take copies of early- or late-stage custom works with them, and attempt to "steal" clients by out-competing the authors' firms for the clients' future business.

In sum, the arguments presented in this section and the previous section highlight the need for a paradigm shift in the normative justification of copyright in customized creativity. We must revise our understanding of the mechanism through which copyright promotes customized creativity. Copyright does not promote creativity by enabling an author to profit from the sale of multiple copies of a work to strangers (because there is no demand for such copies), but it may help authors to obtain full payment from their clients. Copyright in customized creativity may well be socially beneficial, but the benefit provided is not the benefit that we most commonly associate with copyright.

3. Copyright's Positive and Negative Spaces

Another way to understand copyright in customized creativity is to situate it within the conceptual framework developed in the burgeoning scholarship on copyright's negative spaces. Copyright scholarship traditionally focused on copyright's positive spaces—that is, spaces in which copyright is relevant because it impacts creative production, whether for better or worse. More recent scholarship expands the scholarly focus to examine copyright's negative spaces—

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101 17 USC § 201(b) (2000); *see also id.* § 101 (defining "work made for hire").

102 Burk, *supra* note 99, at 8–9; Heald, *supra* note 7, at 487–89; Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J.L. & TECH. 1, 2–3 (1999).

103 *See supra* notes __ and accompanying text.

that is, spaces in which copyright is irrelevant because it does not impact creative protection.[104] One theme running through this scholarship is the identification of context-specific mechanisms, other than copyright, that allow authors to overcome the public goods problem that inheres in creative production and recoup their first-copy costs.[105] In turn, the existence of these non-copyright incentives for creativity helps to counter the argument that ubiquitous, strong copyright is the best policy to ensure that creativity proceeds apace.[106]

The inverse demand correlation echoes this theme. It reveals yet another context-specific mechanism that enables authors to stave off the public goods problem. The lack of stranger demand for back-end copies when markets have tipped toward customization forces clients to pay the full first-copy costs of customized creativity. However, the conditional copyright irrelevance that arises in robust markets for customized creativity is unlike any copyright-negative space that has previously been studied. The remainder of this section highlights three differences between the conditional irrelevance of copyright with respect to the production of customized creativity and copyright's lack of impact on creative production in the copyright-negative spaces that have previously been studied.

First, the conditional irrelevance of copyright in customized creativity is part of a leading edge in scholarship on copyright-negative spaces that broadens the definition of a copyright-negative space. In most copyright-negative spaces, copyright does not impact creative protection because it is legally absent: there is no effective protection for the creative output as a doctrinal matter.[107] For example, recipes, jokes, and magic tricks are unprotectable ideas under copyright's idea/expression dichotomy.[108] Similarly, the cut of clothing and the

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104 *See supra* note 11.

105 Aaron Perzanowski & Kate Darling, *Introduction*, in PERZANOWSKI & DARLING, *supra* note 11, at 2. In addition, some creative production persists without copyright because authors do not create for money or care about recouping their sunk costs. Rebecca Tushnet, *Economies of Desire: Fair Use and Marketplace Assumptions*, 51 WM. & MARY L. REV. 513, 522–27 (2009) (exploring compulsion and love as sources of creativity).

106 Perzanowski & Darling, *supra* note 105, at 2.

107 Copyright absence is not a black-or-white issue. The point at which copyright protection transitions from present but ineffective to present and effective is difficult to pinpoint with certainty. In addition, creative production in a field in which copyright is absent may be aided by the existence of other types of non-copyright (e.g., trademark) protection or copyright protection for related goods. Rochelle Cooper Dreyfuss, *Does IP Need IP? Accommodating Intellectual Production Outside the Intellectual Property Paradigm*, 31 CARDOZO L. REV. 1437 (2010).

108 Whatever protection exists for the literary expression in which a recipe or joke is cast, or the on-stage theatrics that accompany a magic trick, is not enough to prevent the recipe, joke, or trick itself from being copied. Publications Int'l, Ltd. V. Meredith Corp., 88 F.3d 473, 476 (7th Cir.

plated food presented to restaurant patrons are unprotected useful articles because their aesthetic and functional features cannot be separated.[109] However, copyright can also fail to impact creative production if it provides effective protection as a legal matter but authors do not exercise those rights as a practical matter.[110] Prof. Aaron Perzanowski's work on copyright and copying norms in custom tattoo artistry is the leading example of a study of copyright non-use/irrelevance rather than copyright absence.[111] The examination of the conditional irrelevance of copyright in customized creativity follows in its wake

Second, the inverse demand correlation identifies a novel cause for copyright non-use/irrelevance. Most studies of copyright-negative spaces have focused on anti-copying norms that create a supply-side restriction on producers' incentives to provide copies to consumers.[112] For example, the fear of shaming and loss of status among accomplished French chefs tamps down on recipe copying, even though diners may desire more widely available recipes at lower prices.[113] Similarly, comedians, magicians, and Prof. Perzanowski's tattoo artists all employ social norms against literal appropriation as an alternative to copyright for quelling rampant free-riding behavior.[114] In contrast, the inverse demand correlation posits a demand-side restriction on consumers' willingness to pay for copies. The focus on consumer preferences and

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1996) (recipes); F. Jay Dougherty, *Now You Own It, Now You Don't: Copyright and Related Rights in Magic Productions and Performances*, *in* LAW & MAGIC: A COLLECTION OF ESSAYS, *supra* note 11, at 103–119 (magic tricks); Oliar & Sprigman, *supra* note 11, at 1072–1103 (jokes). *But cf.* Chrisotpher J. Buccafusco, *On the Legal Consequences of Sauces: Should Thomas Keller's Recipes Be per se Copyrightable?*, 24 CARDOZO ARTS & ENT. L.J. 1121 (2007) (arguing that recipes should be copyrightable).

109 Star Athletica, LLC v. Varsity Brands, Inc., 137 S.Ct. 1002 (2017) (protecting the surface decorations but not the cut of cheerleader uniforms); RAUSTIALA & SPRIGMAN, *supra* note 11, at 67–68 (built food).

110 Copyright non-use is rarely as categorical as copyright absence. It is best measured as a matter of degree—How close to fully irrelevant is copyright?—and the most forceful claim that can usually be made is that copyright has only a minor impact, rather than no impact at all, on copying behavior. *But cf. supra* note __ (suggesting that copyright absence is not categorical, either).

111 The historically countercultural status of tattoos has led tattooers to celebrate their status as outsiders and harbor a deep mistrust of the legal establishment as a means of resolving disputes. Perzanowski, *supra* note 3, at 567–75. As a result, custom tattooers developed a set of professional norms that frown on close copies, and these norms render copyright irrelevant. *Id.*

112 For a pioneering foray into regulation through social norms, see ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES (1991).

113 Fauchart & Von Hippel, *supra* note 11, at 192–96.

114 *See supra* note __ (tattoo artists); Loshin, *supra* note 11, at 134–39 (magicians); Oliar & Sprigman, *supra* note 11, at 1812–25, 1831–34 (comedians). The dynamic in fashion is different in that rampant free riding speeds up the fashion cycle. Raustiala & Sprigman, *supra* note 11, at 1717–35.

demand as restraints on copying opens up a new direction for scholarship on copyright's negative spaces.[115]

Identifying a lack of demand as the reason for a copyright-negative space in which creativity persists upends conventional copyright thinking. Given the presumption of commoditized creativity, a lack of demand among strangers means that a work is unsuccessful, and copyright is understandably unconcerned with ensuring that there are incentives to produce works for which there is no willingness to pay (except, of course, when willingness to pay is not a valid indicator of social value). However, with respect to customized creativity, a lack of demand means no such thing. The inverse demand correlation reveals that customized works can be highly valued by the clients to whose tastes and needs they are tailored, and yet strangers may not want copies. Therefore, it is important to come to understand how creative production can persist in a space in which there is no demand among

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[115] More fundamentally, the effort to slot the conditional irrelevance of copyright in customized creativity into the scholarship on copyright's negative spaces reveals a need for a hierarchical taxonomy of different types of copyright non-use/irrelevance. One possible hierarchy starts with a first-order distinction between copyright forbearance and copyright redundancy. Copyright forbearance occurs when there is actionable copying and copyright owners elect not to enforce their rights. *See, e.g.*, *infra* Part II.C.2 (discussing the possibility of a sharing norm among custom architects). Copyright redundancy occurs when a behavioral regulator or "modality of constraint" other than copyright law disciplines copying behavior and renders copyright's exclusive rights to control copying superfluous. *See* Lawrence Lessig, *The New Chicago School*, 27 J. LEG. STUD. 661, 662–64 (1998) (arguing that law, norms, the market, and architecture are "modalities of regulation" on human behavior). Both anti-copying norms, *see, e.g.*, *infra* part II.C.3 (discussing the possibility of an anti-copying norm among architects), and the lack of stranger demand for copies that result from the inverse demand correlation lead to copyright redundancy, although they do so for different reasons. Moving to second-order distinctions between these reasons for copyright redundancy, Table 2 classifies four possibilities. The columns distinguish supply-side and demand-side mechanisms, and the rows distinguish culture-based and market-based mechanisms. Anti-copying norms and the inverse demand correlation theory occupy the boxes on one diagonal, moving from the upper left to the lower right. (Market regulation is conventionally conceived as a reduction in demand due an increase in price. *Id.* at 663. The inverse demand correlation implicates market regulation because of the decrease in purchasers' willingness to pay that occurs when a market tilts toward customization.) The box on the lower left identifies situations in which the monetary cost of copying is higher than the monetary cost of independent creation. For example, tacit knowledge may figure prominently here. POLANYI, *supra* note __, at 72–89 (noting that doing a job well frequently involves context-specific knowledge that is difficult to codify in text or copy from goods marketed to the public). Or, technological protection measures may make copying difficult. The box on the upper right raises the novel idea of a norm-based boycott on buying unauthorized copies.

TABLE 2: REASONS FOR COPYRIGHT REDUNDANCY

	Supply	Demand
Culture	Anti-Copying Norm	Copy Boycott
Market	Costly Copying	Low Demand

strangers for copies and copyright fails to generate incentives through the mechanism that animates its incentive-to-create justification.

Third, the conditional nature of the copyright irrelevance created by the inverse demand correlation opens up a new interstitial space for study. The labels "positive" and "negative" suggest a dichotomous distinction: copyright either impacts creative production in a field or it does not.[116] To understand copyright irrelevance in customized creativity, questions about whether copyright is influencing creative production and, if it isn't, why creative production persists are important, but not sufficient. Questions about the conditions under which copyright is irrelevant also become important. Copyright in customized creativity is a copyright-negative space in some markets (when markets tilt toward customization) but a copyright-positive space in other markets (when commoditized and customized creativity compete). It is a copyright-negative space with respect to copying some parties (strangers) but a copyright-positive space with respect to copying by other parties (clients). Relatedly, it is a copyright-negative space when the impact that copyright is supposed to have on creative production is defined by the dominant copyright theory (the incentive-to-create justification) but it is a copyright-positive space when viewed through the lens of a less commonly discussed theory (the transactional justification). In sum, the conditional nature of its copyright irrelevance places customized creativity in an unexplored space in between copyright's positive and negative spaces.

II. THE "DOES" QUESTION: AN EMPIRICAL STUDY

This Part reports an empirical study of architectural copyright litigation under the AWCPA. The study's goal is to demonstrate that the way in which some authors of customized creativity exercise their rights is consistent with the descriptive model developed in Part I.[117] The argument proceeds in three sections. Part II.A provides some factual background on markets for architectural works: the architectural profession is structured around the delivery of customized works, but single family homes are a segment of construction industry

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116 *But cf. supra* notes 107, 110.

117 Even if the model provided by the inverse demand correlation internally coherent, there is no guarantee that it accurately reflects demand in any real-world markets. The conditions required for it to gain traction could be too stringent. Markets could never tilt far enough toward customization. *See supra* note __ and accompanying text. Unusual motivations could drive demand for customization services. *See supra* note __ and accompanying text. Copyright scope could always be too expansive. *See supra* notes __ and accompanying text.

in which commoditized works dominate.[118] Part II.B presents the study. The study's results show that architects who produce custom, nonresidential projects sue their clients, but that they rarely sue strangers. It also shows that the percentage of the infringement cases involving nonresidential, custom works that is brought against strangers is smaller than the percentage of the infringement cases involving residential, custom works that is brought against strangers. These are both the results predicted by the inverse demand correlation and the conditional irrelevance of copyright in customized creativity. Because the study cannot prove causality, Part II.C considers norm-based theories that might also help to explain the study's results.

A. Customization and Commoditization in Architecture

In the United States, the architectural profession centers on the delivery of customization services. The handbook produced by the American Institute of Architects (AIA)—the influential professional organization for architects—describes the profession as a service industry in which architects interact with their clients and develop architectural works that are tailored to their clients' tastes and needs.[119] However, this procedure for designing the built environment does not extend to single family homes. Dominated by developers and merchant builders, the market for single family homes centers on the production of commoditized works based on stock plans.[120] Customized and commoditized creativity thus both hold sway for architectural works that accommodate different programs.[121]

Architects normally deliver design services to clients through a three-phase process: schematic design, design development, and construction drawings.[122] Through these phases, architects initially develop a *parti* or the general concept that motivates the design, and they then layer details into the parti in each successive phase,

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[118] The distinction between custom and stock architectural works tracks the distinction in tattoo artistry between custom designs and "flash". Perzanowski, *supra* note __ at 521–24. However, while flash is so unoriginal that it is entirely unprotected, *id.* at 557–60, stock architectural works are often original enough to be protected by thin copyrights.

[119] *See infra* notes __ and accompanying text.

[120] *See infra* notes __ and accompanying text.

[121] The program of an architectural work is the set of behaviors or activities that the work is designed to accommodate. JAMES F. O'GORMAN, ABC OF ARCHITECTURE 1 (1998).

[122] THE AMERICAN INSTITUTE OF ARCHITECTS, THE ARCHITECT'S HANDBOOK OF PROFESSIONAL PRACTICE 495–96 (14th ed. 2008) [hereinafter AIA HANDBOOK]. After the design phases, architects help clients to select contractors and oversee construction in two additional phases. *Id. See also infra* note __ (discussing a pre-design, programming phase).

sometimes modifying the parti if it turns out to be unable to accommodate the needed details.[123] As is typical of a customization service, this process requires extensive interaction and communication with clients.[124] Architects present their projects as works-in-progress for client input, revision, and approval at least at the end of each phase, if not more often.[125] The importance of clients not only as the purchasers of a building but also as the party to whose tastes and needs architecture is tailored means that architects are more dependent than most other artists on clients to produce their creative works.[126] As one architectural commentator noted in the late nineteenth century, "Fancy a painter unable to make pictures except when someone says to him: Paint now, paint this or that, and paint it thus and so …. Imagine this, and you will realize the architect's actual position and the contrast between his life and that of other artists."[127] This dependence on clients means that architects who produce custom works are like other authors of customized creativity in that they rarely design on a speculative basis.[128]

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[123] MATTHEW FREDERICK, 101 THINGS I LEARNED IN ARCHITECTURE SCHOOL, 15–16, 25–26, 28 (2007).

[124] Nima Norouzi et al., *The Architect, the Client and Effective Communication in Architectural Design Practice*, 271 SOC. & BEHAVIORAL SCI. 635 (2015) (reviewing experimental literature on the owner–architect interaction); Royal British Institute of Architects, *Client & Architect: Developing the Essential Relationship* 16–19 (2015). *Cf. supra* notes __ and accompanying text.

[125] AIA HANDBOOK, *supra* note __, at 526. Architects also offer pre-design or programming services to some clients to help them identify their needs and tastes. *Id.* at 463, 506–19. Programming services significantly increase the interactivity of the architect's customization services as architects elicit and shape their clients' preferences. However, "[e]ven when the owner has prepared a program, it is useful to spend time confirming the program" with the client. *Id.* at 523.

[126] DANA CUFF, ARCHITECTURE: THE STORY OF PRACTICE 33 (1991); RICHARD GUTMAN, ARCHITECTURAL PRACTICE: A CRITICAL VIEW 71 (1988); Magli Sarfatti Larson, *Emblem and Exception: The Historical Definition of the Architect's Professional Role*, *in* PROFESSIONALS AND URBAN FORM 49–50, 76 (Judith R. Blau et al., eds., 1984). *But cf.* CUFF, *supra*, at 56 (arguing that architects sometimes deny the role that their clients play in design because their professional identity is wound up with being the font of creativity).

[127] Mariana Van Rensselaer, *Client and Architect*, 151 NORTH AMERICAN REVIEW 319–28 (July–Dec. 1890), *reprinted in* LEWIS MUMFORD, ROOTS OF CONTEMPORARY AMERICAN ARCHITECTURE 260–68 (9th ed. 1959).

[128] *See supra* notes __ and accompanying text. Architects can design paper projects for fictional clients if they are not looking to have their costs paid and they value the publicity or marketing value. They frequently defend these paper projects as real architecture on the basis that they are important for the discipline because they allow architects to address interesting conceptual problems that they cannot easily address when working for real clients. *What is Architecture Without Clients and Money?*, ARCHDAILY (Feb. 23, 2018), https://www.archdaily.com/888997/what-is-architecture-without-clients-and-money-archdaily-editors-talk.

Much of architects' creative labor is tied up with satisfying their clients' unique functional requirements, including requirements related to site, program, and budget.[129] All clients have different sites. The particularities of the site include the shape of a parcel of land, its points of access, its vistas, its topographic and soil conditions, its climate, and the zoning requirements and building codes of its local jurisdiction.[130] A building designed for one site often cannot be constructed on another site without significant changes to the parti. Different sites also have different aesthetic and cultural contexts that sometimes require different designs, even if they are topographically identical.[131] Different clients also have different programmatic requirements. Not only can a work designed to function as one type of institution, say a museum, rarely be repurposed in a functionally acceptable manner for another type of institution, say a theater, but even buildings of the same institutional type are rarely interchangeable. Different museums have different collections to house and anticipate different daily traffic from visitors, so they require different gallery spaces. Clients' needs often extend beyond the program to include preferences on issues such as building technology, sustainability, and construction schedule that demand further customization.[132] Finally, clients' budgets differ significantly, and an increase or decrease in a budget requires significant redesign.[133] In sum, clients' diverse, functional requirements increase preference intensity and diversity, explaining why the market for architectural services usually tilts toward customization.[134]

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[129] *Cf.* AIA HANDBOOK, *supra* note __, at 522 ("Almost every project has a unique set of factors that combine to make each problem different.").

[130] AIA HANDBOOK, *supra* note __, at 520–22 (listing design factors).

[131] *Id.* at 520–21 (noting community desires and building context as design factors); *cf.* FREDERICK, *supra* note 123, at 92 ("Always design a thing by considering it in its next larger context—a chair in a room, a room in a house, a house in an environment, an environment in a city plan." (quoting Eliel Saarinen)).

[132] AIA HANDBOOK, *supra* note __, at 521–22.

[133] *Id.* Clients' soft, aesthetic preferences also deepen the required customization in architectural design. Clients that come to architects with pre-formed aesthetic preferences can have a strong impact on the custom designs produced. A preference for the dynamic, cutting-edge geometries enabled by the computational power of contemporary computer-assisted-design software will generate a radically different work than, say, a preference for the familiarity of neoclassical buildings that have traditionally functioned as signs of privilege and power. However, architects also find room to assert their own artistic vision in two ways. First, clients often select architects on the basis of the architects' past works, meaning that architects can satisfy their clients' preferences indirectly by designing to their own preferences. Second, architects can attempt to educate or persuade clients that they really want a project that is in line with the architects' vision.

[134] *See supra* Part I.C. *But see infra* notes __ and accompanying text (noting that preference diversity is limited in the market for single family homes).

It is, however, reductive to envision architecture solely as a client service. To a much greater extent than custom computer programmers or event photographers, the architects at the upper echelon of the profession are expected to conceptualize new approaches to formal and cultural problems, expressing themselves as artists in the process.[135] Robert Gutman has captured duality of an architect as both service provider and artist by shifting the duality to the party who hires the architect. Some parties who hire architects act as clients (making the architect a service provider) and others are patrons (making the architect an artist).[136]

The artistic aspects of a work which do not derive from clients' tastes and needs might seem to suggest that there could be demand among strangers for copies of some aspects of custom works. However, even when architects operate in part as artists, demand for back-end copies of custom architectural works may be limited because of a widespread preference among the patrons who are willing to fund architects' artistry for a unique copy of a work.[137] This preference among patrons may exist for two reasons. First, if the patron is a supporter of the arts, she is unlikely to view a copy of another architect's work as artistry, and she is likely to value owning the original, first copy of a work.[138] That is, there will be little demand among patrons for back-end copies of customized works.[139] Second, commercial and corporate enterprises place a branding value on owning unique copies of architectural works.[140] Developers believe that residential projects

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[135] The trope of the architect as both an artist and a problem solver is well known. *See, e.g.*, ROGER K. LEWIS, ARCHITECT?: A CANDID GUIDE TO THE PROFESSION 198 (2013).

[136] Robert Gutman, *Patrons or Clients?*, 6 HARV. ARCHITECTURAL REV. 148 (1987).

[137] *See supra* notes __ and accompanying text (noting that a widespread preference for owning a unique copy of a work can accentuate the weak demand among strangers for copies that results from intense and diverse preferences).

[138] *See supra* note __ (discussing auratic works).

[139] Weak demand for a back-end copy of customized creativity is dependent on the value of a unique copy of a work being widely held by the future building owners. *Cf. infra* note __ and accompanying text (discussing the AWCPA study's results in the market for single family homes and suggesting that some future homeowners may value uniqueness but that others may not). In situations in which patronage mixes with clientage, future building owners who are not themselves interested in being patrons will have little demand for back-end copies of customized works that were designed for patrons because of the marginal cost of making a constructed-building copy. Not only is the fee of a custom architect who produces a building that aspires to artistry higher on average, but the cost of constructing the building is higher due to, for example, more demanding structural systems and higher-cost materials. A future building owner who considers making a back-end copy need not pay the higher customization fee to the architect, but he must still pay the higher marginal cost of the second constructed-building copy.

[140] Whether corporations who use architectural works to promote brands are patrons is questionable. Gutman, *supra* note __ [patrons], at 156 (discussing "the mock patronage

"with a distinctive or unusual appearance will excite public attention, thus attracting a larger number of affluent tenants."[141] For company headquarters, a custom design functions as "a giant corporate logo," making the company "conspicuous in the landscape" and increasing the company's visibility.[142] Led by the pioneering example of Frank Gehry's Guggenheim Museum in Bilbao, municipalities, too, have begun to use unique copies of "signature" architectural works as a branding tool to draw more tourism and economic development.[143] In sum, even when architects' obligations to simply fulfill their clients' needs are reduced and patrons give architects given greater freedom to express their own visions, the demand for back-end copies among stranger patrons is likely to remain weak.

While the focus of the architectural profession on customized projects predominates in the construction of most programmatic building types, housing is the exception to the rule. Yet more specifically, developers and merchant builders dominate production in the market for single family homes—and especially the middle of the market between government-subsidized low-income housing and the high-end market of custom homes for the very wealthy.[144] Eighty to ninety percent of all new housing units, including both single-family homes and multifamily residences, are not created by architects providing customization services and instead employ stock plans.[145] Here, the process of design "differ[s] very much from the idealized description of the architect's role that is common in professional circles" in that single family homes are usually commoditized rather than customized works.[146] Although the market for stock plans may be limited in programmatic breadth—it is limited to housing and single-

represented by the commissions given by developers to fashionable architects"). Nonetheless, corporations with branding aspirations do not desire copies of already-constructed projects.

141 GUTMAN, *supra* note __ [critical], at 13–14.

142 Joseph Giovannini, *The Grand Reach of Corporate Architecture*, NEW YORK TIMES, Jan. 20, 1985, section 3. The wave of new Silicon Valley corporate campuses provides a contemporary example. Rowan Moore, *The Billion-Dollar Palaces of Apple, Facebook and Google*, THE GUARDIAN, July 23, 2017 (discussing the "spectacular symbols of … immense global power").

143 Donald McNeill, *Office Buildings and the Signature Architect: Piano and Foster in Sydney*, 39 ENVIRONMENT & PLANNING 487 (2007); Gjoki Muratovski, *The Role of Architecture and Integrated Design in City Branding*, 8 PLACE BRANDING AND PUBLIC DIPLOMACY 195 (2012).

144 Richard Gutman, *Two Questions for Architecture*, *in* OUTSIDE IN, *supra* note __, at 242.

145 EDWARD ALLEN & ROB THALLON, FUNDAMENTALS OF RESIDENTIAL CONSTRUCTION 54 (3d ed. 2011) (80%); ROBERT A. GUTMAN, THE DESIGN OF AMERICAN HOUSING: A REAPPRAISAL OF THE ARCHITECT'S ROLE 2 (1985); Robert Gutman, *Architects in the Home-Building Industry*, *in* PROFESSIONALS AND URBAN FORM , *supra* note __, at 209–10 (90% to 95%). It is often unlicensed designers, rather than architects, who produce stock plans for single-family homes. ALLEN & THALLON, *supra*, at 54.

146 GUTMAN, *supra* note __ [American housing], preface.

family homes in particular[147]—its economic significance cannot be denied.[148]

Stock-plan house designs are distributed through three different channels, all of which lie outside the ideal of the professional practice envisioned by architects that centers on the delivery of customization services. First, stock-plan services market a broad array of home designs directly to homebuilders and future homeowners.[149] In the not-too-distant past, stock plans were usually advertised in books published by the stock-plan services, general-interest newspapers, and trade magazines,[150] but today the internet is also an important means of distribution.[151] Second, plan shops add a bit more personal service.[152] Often set up as adjunct services in small architectural offices in suburban areas, they either create their own stock house plans or act as middlemen between stock-plan services and local builders, redrawing the stock plans to customize them for local building codes or zoning ordinances.[153] Third, large merchant builders that construct production housing and manufacturers of pre-manufactured housing frequently develop and use their own stock plans.[154] The merchant builders engage in the now-infamous practice of "repeating the same design and achieving variety with mirror-image right- and left-hand versions of the same design and minor modifications to the facades" throughout large subdivisions.[155]

Stock-plan home designs are usually created on a speculative basis. The goal of the designer of a stock home design is not to

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147 Certain programmatic niches outside of housing, such as commercial trade dress, also employ stock plans. *See infra* note __.

148 In 2016, the value of construction put in place in the United States was more than 1.18 trillion dollars, with roughly 473 billion dollars in residential construction. U.S. Census Bureau, Monthly Construction Spending Report for December 2016 (Feb. 1, 2017), https://www.census.gov/construction/c30/pdf/pr201612.pdf. Nearly 70% of housing units completed in 2016 were single family homes, Characteristics of New Housing, Highlights, https://www.census.gov/construction/chars/highlights.html, suggesting approximately 330 billion dollars in single family home construction.

149 Gutman, *supra* note __ [urban form], at 210–16; Gutman, *supra* note __ [5 relationships], at 230–31.

150 Gutman, *supra* note __ [urban form], at 214–15; Gutman, *supra* note __ [5 relationships], at 230.

151 Many copyright infringement cases involving stock plans allege copying via a catalog available on the internet. *See, e.g.*, Home Design Servs., Inc. v. Starwood Construction, Inc., 801 F. Supp. 2d 1111, 1114 (2011); Design Basics, L.L.C. v. Strawn, 271 F.R.D. 513, 516 (2010).

152 Gutman, *supra* note __ [urban form], at 216–19; Gutman, *supra* note 160, at 231–32.

153 Gutman, *supra* note __ [5 relationships], at 231.

154 *Id.* at 235–36; GUTMAN, *supra* note __ [American housing], at 45–50. Merchant builders and manufacturers dominate the market for single family homes, producing 80% of units sold. *Id.* at 6.

155 ALLEN & THALLON, *supra* note __, at 43.

accommodate a particular client's needs and tastes but to craft a work that speaks to the popular taste of some segment of anonymous home-buying consumers, whether in a mass market or a niche market.[156] Market research drives the stock designs produced for the mass market, putting the architectural intelligence required to perform the customization services emphasized in the AIA handbook in a subservient role.[157]

The basic tradeoff between the monetary costs of customization and the increased utility of customized designs has long been recognized as the principal concern for individuals weighing the options of custom and stock designs for their homes.[158] Stock designs are feasible in the market for single-family homes because the sites, programs, and budgets for single-family homes are relatively homogeneous and preferences are thus not as diverse,[159] and they are desirable because of the economies of scale that inhere in a design-once-build-many-times approach.[160] In addition, the pure size of the market means that there are greater economies of scale to be realized from commoditization.

B. The AWCPA Litigation Study

This section reports the AWCPA litigation study. Part II.B.1 presents the study's design, Part II.B.2 reviews its methodology, and Part II.B.3 presents its results.

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156 GUTMAN, *supra* note __ [American housing], at 6 (commoditized single-family home "is not designed for an individual client or purchaser but in order to appeal to a class of potential owner-occupiers defined according to income level, preferred life style, and the décor popular in different geographical regions."). To produce mass-market homes, architects "must begin to appreciate those features of housing aesthetics that appeal to the average consumer and incorporate these features in their designs. This implies that the architect . . . must to some extent internalize the values and perceptions of the marketplace and cater to them." *Id.* at 23. This look-to-the-market approach is often viewed as anathema to good architectural design. *Id.*

157 Gutman, *supra* note __ [two questions], at 241–42; GUTMAN, *supra* note __ [American housing], at, at 8, 14, 18–19, 56. Modern architects have from time to time created stock plans for houses that did not reflect popular taste, but they were rarely commercially successful. *Id.* at 21. *But cf. id.* at 20–21 (discussing the Eichler Homes atrium houses designed by Anshen and Allen).

158 *House Plans, Ready-Made*, KIPLINGER'S PERSONAL FINANCE, August 1961, 31–33, vol. 15, no. 8.

159 In other words, the diversity of preferences among future homeowners is not as high as the diversity of the preferences among the future owners of other building-types. *Cf. supra* notes __ and accompanying text.

160 Today, the price for the first full set of construction documents for a stock design is around 250–450 dollars, with a lower price for the additional copies needed for the builders and the local building office. ALLEN & THALLON, *supra* note __, at 58. In contrast, an architect's services run somewhere between 10–15% of the construction cost of the house. ALLEN & THALLON, *supra* note __, at 59–60.

1. Design

The inverse demand correlation posits that demand for actionable copies of custom works among strangers is low in markets that tilt strongly toward customization.[161] The lack of stranger demand for back-end copies of custom works cannot easily be measured directly. However, its effects on copyright litigation can: a lack of stranger demand for copying yields a lack of stranger copying and, in turn, a lack of infringement suits against strangers. The study thus sets up a lack of litigation suits against strangers as an imperfect proxy for a lack of actionable copying by strangers.[162] Given this basic premise, the most forceful conclusion that the study permits is that architects' use of copyright in litigation is consistent with the usage to be expected if the inverse demand correlation accurately reflects demand for copies of customized creativity. The study, standing alone, cannot prove causality.[163]

There are a number of reasons why architectural copyright under the AWCPA offers a promising work of authorship for the study. Most basically, the AWCPA provides effective protection to architecture,[164] so architecture is not a copyright-negative space in the sense that copyright is absent.[165] In addition, architecture is today among the most frequently litigated works of authorship,[166] so

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161 *See supra* Part I.B.

162 The use of a lack of infringement suits against strangers as a proxy for a lack of copying by strangers is not appropriate for one type of copy in particular, namely pictorial representations (including photographs) of architectural works. The AWCPA does not grant architects an exclusive right to make pictorial representations of architectural works "if the building in which the work is embodied is located in or ordinarily visible from a public place." 35 U.S.C. § 120(a) (2018). This limitation means that merchandisers can sell posters, mugs, postcards, and t-shirts depicting architectural works without the permission of the owner of the architectural-work copyright. Because this copying is freely permitted under the AWCPA, it is not reasonable to observe a lack of infringement suits and infer an absence of copying. *Cf. supra* note __ (suggesting that the inverse demand correlation may not apply to nonfunctional copies of functional works).

163 Section II.C *infra* considers causal explanations for the study's results other than the inverse demand correlation that focus on professional norms. The more implausible these other explanations, the stronger the argument that the inverse demand correlation is causing the study's results.

164 The AWCPA significantly strengthened architectural copyright, placing it roughly on par with the copyright protection afforded to other works of authorship. MARSHALL LEAFFER, UNDERSTANDING COPYRIGHT LAW 130 (5th ed. 2010) (describing the AWCPA as enacting "full" copyright protection for architecture). There are, however, a handful of architecture-specific limitations codified in the AWCPA. *See, e.g.*, *supra* note __ (noting that AWCPA copyright does not extend to many photographic representations of buildings); 17 U.S.C. § 120(b) (2018) (creating an exemption from the derivative-work right that allows building owners to alter or destroy a constructed-building copy of an architectural work).

165 *See supra* notes __ and accompanying text.

166 Cotropia & Gibson, *supra* note 13, at 1993–96, 2016–17.

architecture is not a copyright-negative space in the sense that copyright is completely irrelevant, either.[167]

Yet, the feature of architectural works that distinguishes them from other most works of authorship and commends them for an empirical study designed to produce results consistent with the inverse demand correlation is the clear demarcation between two markets in which customized and commoditized creativity have different relationships. The market for nonresidential projects (apart from commercial trade dress[168]) tilts strongly toward customization.[169] It is the market that is envisioned when the architectural design is cited as a classic example of a customized service.[170] In contrast, the market for single-family homes is dominated by commoditized creativity in the form of stock-plan home designs.[171] Custom single-family home designs certainly exist, but, setting aside the highest of high-end homes, they often compete with commoditized creativity in a mixed market. The difference between nonresidential projects and single-family homes thus provides a tool for measuring the frequency of suits against strangers involving custom works in markets that do and do not tilt toward customization, respectively.[172]

The AWCPA litigation study tests two hypotheses derived from the inverse demand correlation. The first is that copying by strangers, and therefore infringement suits against strangers, should be rare as an absolute matter for custom works in a market that tilts strongly

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167 *See supra* notes __ and accompanying text. The large number of infringement suits also increases the study's sample size.

168 *See infra* note __.

169 *See supra* notes __ and accompanying text.

170 In their categorization of degrees of customization in service delivery, Profs. Joseph Lampel and Henry Minzberg use "a residential architect who designs to customer specifications" as an example of pure customization. Lampel & Mintzberg, *supra* note 3, at 26.

171 *See supra* notes __ and accompanying text.

172 The study also collects data to confirm the factual assumptions that nonresidential projects are mostly custom works and that single family homes are mostly stock works. The confirmation, however, is open to significant selection effects. *See infra* note __.

Two additional programmatic categories of architectural works do not fall into either of the categories that the study examines: multifamily residential projects and commercial trade dress. Multifamily residential projects are excluded from the study because there is no good data on the mixture of custom and stock designs used to construct them. Designs for commercial trade dress are excluded from the nonresidential project category because they are usually commoditized works and the purpose of the nonresidential project category is to examine the types of infringement suits brought in a market that tilts strongly toward customization. *See infra* [Methodological Appendix B] (discussing the definition of commercial trade dress at greater length). In theory, commercial trade dress could serve as a second market that tilts strongly toward commoditization, in addition to single family homes, in which to gather data. However, the study's universe only includes five cases involving commercial trade dress, so the study ignores them due to the small sample size.

toward customization. Couched in terms of the AWCPA study, this prediction yields Hypothesis 1:

> HYPOTHESIS 1: Within cases involving custom, nonresidential works, the percentage of suits against strangers, as opposed to clients, should be low as an absolute matter.

One difficulty with determining whether Hypothesis 1 is proven to be true or false is that the threshold for determining what constitutes low cannot be precisely defined. The second hypothesis therefore builds in a comparative analysis. The inverse demand correlation predicts that, in markets that tilt further toward customization, there will be less demand for copies of custom works among strangers and therefore fewer infringement suits involving custom works brought against strangers. Couched in terms of the AWCPA study, this prediction yields Hypothesis 2:

> HYPOTHESIS 2: Within cases involving custom works, the percentage of stranger suits in the nonresidential cases should be lower than the percentage of stranger suits in the single-family-home cases.

One limitation on the study's design is that a low percentage of stranger suits in nonresidential, custom-work cases could be an artifact of settlement bias. In most litigation studies, the observed disputes are only the tip of the dispute iceberg, so settlement may select for certain kinds of cases and make the observed disputes unrepresentative of the unobserved disputes.[173] Given its hypotheses, the specific concern in the AWCPA study is that the settlement rate in stranger suits in custom-work cases involving nonresidential projects could be high relative to the settlement rate in other types of disputes, generating a selective dearth of observed infringement cases without a corresponding dearth of actual infringement disputes.[174]

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[173] Robert D. Cooter & Daniel L. Rubinfeld, *Economic Analysis of Legal Disputes and Their Resolution*, 27 J. ECON. LIT. 1067, 1082 (1989); Theodore Eisenberg, *Litigation Models and Trial Outcomes in Civil Rights Prisoner Cases*, 77 GEO. L.J. 1567, 1568 (1989); Marc S. Galanter, *Reading the Landscape of Disputes: What We Know and Don't Know (and Think We Know) About Our Allegedly Contentious and Litigious Society*, 31 UCLA L. REV. 4, 11 (1983); George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEG. STUD. 1, 2 (1984). In the context of the AWCPA study, the problematic settlement can occur either before or after the filing of a complaint. In addition, bias in a copyright owner's decision to commence a dispute after having noticed the copying could undermine the study's ability to speak to the inverse demand correlation.

[174] Because the study only observes litigated cases with published opinions, *see infra* notes __ and accompanying text, another possible selection effect is that judges may decide to write published opinions rather than unpublished orders more frequently in certain types of cases. *See* David A. Hoffman et al., *Docketology, District Courts, and Doctrine*, 85 WASH. U. L. REV. 681, 691–93 (2007) (distinguishing published opinions from unpublished orders). However, there is no

While the possibility of settlement bias cannot be eliminated, there are two reasons to suspect that this particular settlement bias is not an unusually significant concern. First, the AWCPA study observes cases much earlier in the litigation process than most other litigation studies, mitigating the impact of any settlement bias that does exist.[175] The study is able to do this because it only examines the factual situations in which the owners of AWCPA copyrights file infringement actions. It does not observe outcomes. Second, the criteria on which settlement is known to select do not suggest an unusually high settlement rate for stranger suits in custom-work cases involving nonresidential projects.[176]

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reason to believe that the particular biases that exist in opinion-writing lead to an unusually low number of opinions being written in stranger suits in the treatment groups. *Id.* at 688, 694 (arguing that opinions are more likely to be written when case outcomes are politically significant, legal issues are novel, and judges seek promotions).

[175] Many litigation studies only observe cases that reach final verdicts or get appealed. *See, e.g.*, Priest & Kline, *supra* note __, at 6–7 (observing disputes only after a trial verdict). The AWCPA study observes disputes upon the publication of a first opinion. *See infra* notes __ and accompanying text.

[176] Some known settlement biases do not seem likely to have different impacts on the study's different categories of cases. For example, settlement is more likely when the parties are risk averse, Robert D. Cooter & Daniel L. Rubinfeld, *Economic Analysis of Legal Disputes and their Resolution*, 27 J. ECON. LIT. 1067, 1076 (1989), overly optimistic about the likely outcome at trial, John P. Gould, *The Economics of Legal Conflicts*, 2 J. LEGAL STUD. 279 (1973); William M. Landes, *An Economic Analysis of the Courts*, 14 J.L. & ECON. 61 (1971); Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J.L. STUD. 399 (1973), or endowed with asymmetric information about the facts of the case, Ivan P'ng, *Strategic Behavior in Suit, Settlement, and Trial*, 24 BELL J. ECON. 539 (1983). Other known settlement biases cut against the problematic bias, suggesting that non-client suits in nonresidential cases may be unusually rare. For example, the presence of repeat plaintiffs on only one side of the case decreases the likelihood of settlement because repeat plaintiffs may adopt a strategic, hard-bargaining strategy in one suit in order to influence the expectations of future opponents. Robert Cooter et al., *Bargaining in the Shadow of the Law: A Testable Model of Strategic Behavior*, 11 J. LEGAL STUD. 225, 241 (1982). This bias cuts against the problematic bias because nonresidential cases have far fewer repeat plaintiffs than the single family-home cases do. *See infra* notes __ and accompanying text (discussing copyright trolls in stock, single family-home cases). Similarly, the existence of contractual mediation or arbitration provisions may reduce the percentage of disputes that become litigated copyright infringement actions. Many industry-standard AIA contracts contain mediation and arbitration provisions, cutting down on the percentage of observed client suits, AIA HANDBOOK, *supra* note __, at 974–75, but such contractual provisions cannot exist in non-client suits. Client suits may also be underrepresented in the study's dataset for another reason that is distinct from settlement: the study does not include state-court cases within its universe. *See infra* note __ and accompanying text.

2. Methodology[177]

The study's universe encompasses all federal cases referencing allegations of infringement of a work of authorship protected by the AWCPA in which there is a published opinion in either Lexis or Westlaw during the twenty-six-year time window immediately after the enactment of the AWCPA.[178] Initially, automated text searches identified all opinions containing both the root term "copyright" and either the root term "architect" or one of twelve two-word phrases that an opinion might alternatively use to refer to an architectural work. These searches yielded 2,763 unique opinions. The author then excluded cases that did not reference an allegation of infringement of a work protected by the AWCPA by manually examining the content of each opinion. This process produced the study's universe of 345 unique cases.[179]

In addition to basic case data, the coding instrument called for information on three variables. The first variable distinguishes client suits and stranger suits. The second variable identifies four programmatic categories of the allegedly infringed works: nonresidential projects, commercial trade dress, multifamily residences, and single-family-homes. The third variable tracks the difference between custom-work cases and stock-work cases.

3. Results

Within the 345 cases in the study's universe, 137 are custom-work cases, and 208 are stock-work cases. With respect to the programmatic categories, the study's universe includes 76 nonresidential cases and 221 single-family-home cases.[180]

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177 This section offers a brief overview of the methodology. For a more detailed discussion of both the identification of the study's universe of cases and its coding of the variables used to sort the cases, see [Methodological Appendix].

178 The time window ran from December 1, 1990, the date on which the AWCPA became effective, to November 30, 2016.

179 Many cases in this universe are marked only by opinions resolving issues such as personal jurisdiction or discovery disputes. There is no requirement that the opinions reach the merits of the infringement cause of action, let alone a final judgment on the merits.

180 The universe also includes forty multifamily-residence cases and five trade-dress cases, bringing the total to 342. The program of the copyrighted work could not be determined in three cases due to a lack of information.

Crossing the process-of-creation and programmatic categories provides a highly imperfect confirmation of the study's assumption that most nonresidential projects are custom works and most single family homes are stock works: 91% of the nonresidential cases (69 of 76) involve copyright disputes over custom works, and 82% of the single family-home cases (181 of 221) involve

Table 3 presents the data relevant to the two hypotheses. Of the 74 nonresidential cases, there 69 cases that involve custom-work copyrights.[181] Only one of these nonresidential, custom-work cases is a suit against a stranger. Thus, one percent of cases involving custom, nonresidential works is a suit against a stranger, proving hypothesis 1 to be correct (assuming that one percent is accepted as a low percentage). Turning to the single-family-home cases, there forty cases that involve custom-work copyrights, and seven of them are stranger suits, amounting to nineteen percent of all of the single-family-home, custom-work cases suits against strangers. Hypothesis 2 also proves to be correct: within custom-work cases, the percentage of stranger suits in the nonresidential cases is lower than the percentage of stranger suits in the single-family-home cases.[182]

TABLE 3: CUSTOM-WORK CASES IN THE PROGRAMMATIC CATEGORIES

	Nonresidential Custom-Work Cases		Single Family Home Custom-Work Cases	
Stranger Suits	1	1%	7	18%
Client Suits	68	99%	33	82%

disputes over stock works. This test is only valuable as a confirmation of the extent to which a market tilts toward or away from customization if the percentage of litigated suits involving custom (or stock) works in a programmatic category reflects the percentage of custom (or stock) works actually realized in the world in that category. Clearly, there are selection effects afoot. *Cf. supra* notes __ and accompanying text (discussing selection effects in the context of settlement).

[181] Because they are the exception to the rule that nonresidential projects are almost always designed as custom works, the seven cases involving nonresidential projects that the study coded as stock works merit further note. Two of these seven cases involve classic products of industrial design—a gazebo and a storm shelter—that are manufactured in factories and shipped to customers upon purchase. A to Z Machining Servs., LLC v. National Storm Shelter, LLC, 2011 WL 6888543 (W.D. Ok. Dec. 29, 2011) (storm shelter); W.H. Porter, Inc. v. Kline Multiproducts, 2001 WL 35729576 (W.D. Mich. Dec. 12, 2001) (gazebo). These works are nonetheless classified as architectural works under the AWCPA because they are "structures that are habitable by humans and intended to be both permanent and stationary." 57 Fed. Reg. 45310, Oct. 1, 1992; 68 Fed. Reg. 38,630, June 30, 2003 (defining a "building" that is protected by the AWCPA). The remaining five nonresidential, stock cases involve a bank branch, Sheeley v. Colonial Bank, 2005 WL 1429892 (M.D. Fla. June 17, 2005), a small office building, HRH Architects, Inc. v. Lansing, 2009 WL 1421217 (N.D. Ga. Apr. 22, 2009), engineered aluminum structures, Bennett Eng'g Grp., 2011 WL 3516133 (M.D. Fla. Aug. 11, 2011), modular relocatable classrooms, Modtech Inc. v. Designed Facilities Constr. Inc., 1998 WL 718299 (C.D. Cal. Aug. 5, 1998), and a prototype small, acute care hospital, Leland Med. Ctrs., Inc. v. Weiss, 2007 WL 1341995 (E.D. Tex. May 7, 2007).

[182] The difference is statistically significant. Because of the small number of stranger suits in nonresidential cases, significance is best measured using the Fisher's exact probability test. *See* http://www.biostathandbook.com/fishers.html. The two-tailed *P* value using this test is less than 0.0036, using the calculator available at http://vassarstats.net/tab2x2.html.

An examination of the facts of the cases involving nonresidential, custom works further supports the existence of conditional copyright irrelevance that the inverse demand correlation generates. In these cases, architects use their copyrights almost exclusively in the ways anticipated by copyright's transactional justifications.[183] Architects who produce custom, nonresidential works most commonly sue to prevent clients or clients' successors-in-interest from appropriating design information without providing full compensation for the customization services already rendered.[184] In these suits, the architect-plaintiffs complain that they revealed design information, often at an early stage of the customization process, and that their clients took this information to other architects for design refinement and building realization.[185] These are precisely the cases to be expected when copyright is tasked with resolving Arrow's information paradox and facilitating the exchange of information as a market commodity.[186] In a smaller number of cases, architecture firms that produce custom, nonresidential works sue departing employees who take copies of the firm's drawings when they leave to compete with the firm for its clients' future business.[187] These are precisely the cases to be expected under the intra-firm variant of copyright's transactional justification.[188]

The fact patterns that are notably absent from the nonresidential, custom-work cases are those in which architects sue competitors to restrict competition in the market for copies of a work or

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183 *See supra* Part I.D.2.

184 Of the 69 client suits in custom, nonresidential cases, 63 cases, or 91%, involve suits that the study labels as contractual-client, pre-client, and client successor-in-interest suits. *See* [Methodological Appendix B]. *Cf. infra* notes __ and accompanying text (discussing the remaining departing-employee cases).

185 *See, e.g.*, I.A.E., Inc. v. Shaver, 74 F.3d 768 (7th Cir. 1995) ; Tiseo Architects, Inc. v. B&B Pools Serv. & Supply Co., 495 F.3d 344 (6th Cir. 2007); John Gianacopoulos v. Glen Oak Country Club, No. 3:05-CV-2417, 2007 WL 405945 (M.D. Pa. Feb. 2, 2007); Greenberg v. Town of Falmouth, No. Civ.A.04-11934-GAO, 2006 WL 297225 (D. Mass. Feb. 8, 2006). A small number of suits did not involve clients who appropriated early-stage design information but rather clients who used already-finished technical drawings to build additional copies of buildings. *See, e.g.*, Bonner v. Dawson, 404 F.3d 290, 292 (4th Cir. 2005).

186 *See supra* notes __ and accompanying text.

187 *See, e.g.*, NTD Architects v. Baker, 950 F. Supp. 2d 1151 (S.D. Cal. 2013); Kluber Skahan & Assoc., Inc. v. Cordogan, Clark & Assoc., Inc., No. 08-cv-1529, 2009 WL 466812 (N.D. Ill. Feb. 25, 2009); Innovative Networks, Inc. v. Satellite Airlines Ticketing Ctrs, Inc., 871 F. Supp. 709 (S.D.N.Y. 1995). Of the 69 client suits in cases involving custom, nonresidential works, six cases, or 9%, are departing-employee cases of this ilk. *See* [Methodological Appendix B] (defining departing-employee cases).

188 *See supra* notes __ and accompanying text.

stranger, free-riding consumers to collect royalties. This absence strongly suggests that copyright is not resolving a public-good/collective-action problem through the mechanism that animates copyright's incentive-to-create justification.[189] The lone exception to the rule that architects working on custom, nonresidential projects do not sue strangers is *Shine v. Childs*.[190] In *Shine*, a student at the Yale School of Architecture alleged that the architect who designed the Freedom Tower on the 9/11 site in New York City copied a skyscraper project that he created a number of years earlier as a studio project in architecture school.[191] Because of the high-profile nature of the project at issue, *Shine* received a significant amount of attention in the popular press, and it has become something of a poster child for AWCPA litigation.[192] However, holding out *Shine* as an exemplar of AWCPA litigation leads to an understanding of the conditions under which custom architects exercise their copyrights that mistakes the exception for the rule.[193]

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[189] *See supra* Part I.D.1. In contrast, cases involving copyrights in stock home plans regularly have all the trappings of the disputes anticipated by copyright's incentive-to-create justification. Subdivision developers sue their competitors to maintain a competitive advantage in their portfolio of home designs, *see, e.g.*, Lennar Homes, LTD v. Perry Homes, LLC, 117 F. Supp. 3d 913, 919–20 (S.D. Tex. 2015), and they sue individual homeowners who copy their model-home designs, instruct architects to draw plans, and hire builders to construct the homes, *see, e.g.*, Cornerstone Home Builders, Inc. v. McAllister, 303 F. Supp. 2d 1317 (M.D. Fla. 2004). Homebuilders sue other builders for copying the technical drawings filed with the local building department. *See, e.g.*, David & Goliath Builders, Inc. v. Kramer, No. 09-CV-0621, 2010 WL 145849 (E.D. Wisc. Jan. 8, 2010). Stock-plan licensors sue homebuilders for making unlicensed, constructed-building copies, *see, e.g.*, Danze & Davis Architects, Inc. v. Legend Classic Homes, 2011 WL 2940671 (S.D. Tex. 2011), and they sue future homeowners for facilitating the homebuilders' infringement by copying publicly available plans and providing them to builders, *see, e.g.*, Plan Pros, Inc. v. Zych, 2009 WL 5213997, at *1–*3 (D. Neb. Dec. 22, 2009). No commentary is intended on whether copyright is creating a net social benefit in these cases. The only point is that these are the types of suits against competitors and free-riding strangers that one should expect if copyright is restricting competition and enabling supra-competitive prices over the sale of multiple copies. Whether the costs of the restriction on competition are offset by benefits in the form of more abundant creative works is beyond the scope of this Article. *See* Collins, *The Hidden Wisdom of Pre-AWCPA Architecture* (draft).

[190] Shine v. Childs, 382 F. Supp. 2d 602 (S.D.N.Y. 2005).

[191] The alleged infringer was a member of the jury that commented on the student's project at the end of the semester. *Id.* at 605–06.

[192] For popular-press articles on *Shine*, see Fred A. Bernstein, *Hi Gorgeous. Haven't I Seen You Somewhere?*, N.Y. TIMES, Aug. 29, 2005, at 27; Jeffrey Brown, *Too Close for Comfort*, ARCHITECT, Nov. 2, 2007; Witold Rybczynski, *When Architects Plagiarize: It's Not Always Bad*, Slate, Sept. 14, 2005, http://www.slate.com/id/2126270/.

[193] A quick look at the seven stranger suits in cases involving custom single family homes also proves interesting. Four of these seven cases are unusual in that they are brought or motivated by the owner of the house that embodies the allegedly infringing architectural work. Miley v. Stone, 74 Fed. Appx. 375 (5th Cir. Aug. 27, 2003); Associated Residential Design, LLC v. Molotky, 226 F. Supp. 2d 1251 (D. Nev. 2016); Woolcott v. Baratta, 2014 WL 1814130 (E.D.N.Y. 2014); Trueblood v. Davis, 1997 WL 34611647 (M.D.N.C. June 12, 1997). The injury alleged in

In addition, *Shine* has been widely noted in copyright scholarship as a case that adopts a broad definition of copyright scope by relying heavily on a "total concept and feel" test for substantial similarity.[194] Such a broad conception of copyright scope is one condition that, if present, can undermine the irrelevance of copyright in customized creativity and lead to actionable back-end copies of custom works, not because more or closer copying occurs but because more of the loose copying that does occur constitutes copyright infringement.[195]

C. Alternative, Norm-Based Explanations

The inverse demand correlation is one possible cause of the study's results, but it is not the only possible cause. This section considers three alternative explanations for a dearth of infringement suits against strangers in custom-work, nonresidential cases, all of which are based on professional norms among architects.[196] Section

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these cases, at least in part, is that the plaintiff's copy of the allegedly infringing work has lost its uniqueness value. *See supra* notes __ and accompanying text (discussing the value of unique copies). The symbolic importance of home and homeownership in American culture creates a strong connection between homes and self-identity and makes a house an identity-signaling good. JOAN KRON, HOME-PSYCH: THE SOCIAL PSYCHOLOGY OF HOME AND DECORATION 66–81 (1983) (discussing the "creativity imperative" in home design and furnishings); CLARE COOPER MARCUS, HOUSE AS A MIRROR OF SELF 47–74, 107–28 (1995) (discussing the house as an embodiment of self-image). In brief, owning a unique home within a subdivision has the same value as being the only person wearing a dress of a certain style to the prom. This psychological value is easily monetized: a unique, custom-home design can not only help to satisfy homeowners' need for uniqueness but also increase market value. The homeowner–copyright-owner cases reinforce both that the psychological value of uniqueness does provide a motivation for clients to pay customization fees and that strangers are motivated to make back-end copies if the preference for uniqueness does not saturate the market. *See supra* notes __ and accompanying text.

194 *Shine*, 382 F. Supp. 2d at 612–16. For copyright scholarship addressing the breadth of architectural copyright that results from the "total concept and feel" test, see Jonathan Seil Kim, *"Filtering" Copyright Infringement Analysis in Architectural Works*, 2018 U. ILL. L. REV. 281, 292–94; Daniel Su, *Substantial Similarity and Architectural Works: Filtering Out "Total Concept and Feel"*, 101 Nw. U.L. Rev. 1851, 1868–70 (2007); Xiyin Tang, *Narrativizing the Architectural Copyright Act*, 21 TEX, INTELL. PROP. L.J. 33, 45–46 (2013).

195 *See supra* notes __ and accompanying text.

196 Yet another possible explanation for an absence of litigated cases puts culture to one side and focuses on enforcement costs: the candle (the cost of litigation) might not be worth the game (the value of the remedies available multiplied by the likelihood of success on the merits). One difficulty that the enforcement-cost explanation must surmount is the selectivity of the enforcement costs needed to explain the study's results. Within custom-work cases, costs would have to be higher in non-client suits than client suits. Within client suits, costs would have to be higher in cases involving nonresidential projects than in cases involving single family homes. While the need for this selectivity complicates the enforcement-cost explanation, it is possible that number of theories, each specific to a single distinction, could be layered one on top of the other to explain the selectivity. For example, the client/non-client distinction could be traced to infringement being easier to detect and copying-in-fact being easier to prove in client suits. In the same vein, the nonresidential-project/single family-home difference could be traced to the greater

II.C.1 addresses a norm of respect for copyright which could either cause architects not to reproduce copyrighted material or to obtain a license before copying. Section II.C.2 considers a sharing norm which could pressure architects to not enforce their rights against actionable copying. Section II.C.3 considers an anti-copying norm that could reduce architects' willingness to supply copies.[197] The more plausible these alternative explanations seem to be, the weaker the case that the inverse demand correlation is driving the study's results.

One argument supporting plausibility of all three norm-based theories (and thus undermining the study's ability to support the inverse demand correlation) is that the community-dependent nature of norms can help to explain the study's results.[198] Concerning custom, nonresidential works, Hypothesis 1 posits a difference in the frequency of actionable copying among clients (more frequent) and strangers (less frequent). This distinction could be explained by norms that reduce actionable copying within the community of professional architects that does not extend to the consumers of custom designs, i.e., future building owners.[199] Hypothesis 2 layers on another difference in the frequency of actionable, stranger copying of custom works between architects who design nonresidential works (less frequent) and architects who design single-family homes (more frequent). This distinction could be explained by norms that reduce actionable copying within the core of the architectural profession (who produce most all nonresidential designs) but that do not extend to the licensed and unlicensed building designers operating at or beyond the outer edge of the architectural profession (who produce many single-family homes).[200]

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availability of statutory damages and attorney's fees in cases involving single family homes if the designers of single family homes are more likely than the architects of nonresidential projects to register their copyrights before infringement occurs. *See* 17 U.S.C. § 412 (2018).

197 The anti-copying norm resembles the branch of the norm of respect for copyright that also reduces architects' willingness to supply copies. The anti-copying norm is, however, broader: the norm against copying may not derive from respect for copyright. The sharing and anti-copying norms lead to different species of copyright non-use: the sharing norm leads to copyright forbearance, and the anti-copying norm leads to copyright redundancy. *See supra* note __.

198 ELLICKSON, *supra* note 11, at 177–82 (noting that norms are specific to a community).

199 This argument assumes that copying by strangers is either copying by competitor architects or at least mediated by competitor architects.

200 Licensed architects produce custom works, but unlicensed building designers produce most stock plans for single family homes. *See supra* note __ and accompanying text. The architectural profession does not value the work of stock-home plan designers who work in the developer-driven market for single family homes. As a noted sociologist of the architectural profession has opined:

> Both the stock plan services and the plan shops are embarrassing and offensive to the mainstream of the architectural profession.... [T]hese architects occupy the same status

Yet, while the community-specific nature of the norms could explain the study's results if they were to exist, whether there is evidence that they actually do exist is a distinct question to which the remainder of this section turns. The case for a norm of extreme respect for copyright is weak, and the case for the remaining two norms makes sense only in limited contexts—the sharing norm for loose copies near copyright's outer limits of substantial similarity and the anti-copying norm among the upper echelon of architects whose reputation turns on their creativity rather than the efficiency of their service delivery. Thus, even though sharing and anti-copying norms likely do help to shape the study's results to some indeterminable extent, only the inverse demand correlation can account for the full pattern of copyright usage that the study reveals.

1. Norm of Respect for Copyright

A high level of respect for copyright among architects who design nonresidential projects could, in theory, lead to a low percentage of stranger suits that is specific to infringement cases involving custom, nonresidential works.[201] This respect could eliminate infringement suits by either deterring actionable copying or prompting strangers who do copy to obtain licenses. However, this explanation of the study's results is tenuous for three reasons.

First, the trade literature does not suggest that custom architects think about copyright when they decide how and whether to copy from other architects who are working on other projects for other clients. To the contrary, it portrays copyright almost exclusively as a tool for allowing architects to increase their bargaining power in negotiations with clients over fees, and it mentions copyright's impact

within the profession that 'ambulance chasers' occupy in the legal profession or that 'abortionists' once held in the medical profession.

Gutman, *supra* note 160, at 232; *see also id.* at 44; Gutman, *supra* note **Error! Bookmark not defined.**, at 210. Some architects have even argued that stock-plan production compromises professional ethics standards, although this argument is not supported by the AIA code of ethics. GUTMAN, *supra* note 156, at 44.

[201] *But see infra* notes __ and accompanying text.

on stranger copying only in passing, if at all.[202] Nor is there any evidence of a culture of copyright licensing among custom architects.[203]

Second, the history of architectural copyright undercuts the extreme-respect explanation. Under the rules of the pre-AWCPA copyright that existed until 1990 and that continue to govern copying from buildings constructed before 1990, architectural copyright was not strong enough to reach most copying by strangers.[204] The notion that copyright transitioned from legally irrelevant in regards to stranger copying to extremely relevant without any intervening period of copyright enforcement (which, if it had existed, would be observed in the study) is difficult to fathom.[205]

Third, it is not even clear that the extreme-respect explanation would actually produce an absence of stranger suits in custom-work cases. Parties with extreme respect for copyright would still disagree about the legitimate scope of copyright in architectural works, especially given the uncertainty involved in attempting to specify copyright's outer limits in close cases before a court rules on the matter.[206] Even if strangers had extreme respect for copyright in custom works, there would likely be a number of cases in which the parties ended up in court because of a disagreement over copyright scope.

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[202] For example, the Architect's Handbook of Professional Practice published by the AIA emphasizes at length the protection that copyright provides for "instruments of service" (that is, the drawings conveying an architectural design that are handed over to clients) and makes only brief mention of copyright's import in suits against stranger architects. AIA HANDBOOK, *supra* note __, at 43–47. The focus on architect–client disputes also extends to legal literature on architectural copyright. *See, e.g.*, Amy Goldsmith et al., *Whose Line, Drawing, or Plan Is It Anyway?*, LAW360, September 19, 2016, https://www.law360.com/articles/836936.

[203] To be clear, respect for copyright undoubtedly reduces stranger infringement to some degree. Architects likely understand that copyright liability is one reason why they should not trace other architects' drawings or oversee construction of a building after having substituted their own title block for that of another architect on a drawing. This consciousness of copyright's rudiments is precisely why copyright irrelevance is an inherently relative concept, suggesting not that copyright is categorically immaterial to copying behavior but only that it is not an important factor in curbing copying behavior. *See supra* notes __ and accompanying text.

[204] *See infra* notes __ and accompanying text (arguing that the pre-AWCPA distinction between protected drawings and unprotected buildings functions as a rough proxy for a prohibition on client copying but not non-client copying).

[205] *Cf.* Greg Hancks, *Copyright or Copywrong?*, AIARCHITECT, Vol. 16, Sept. 25, 2009 (noting that, even in 2009, the small number of cases involving building copying make it too early to understand the AWCPA's impact on stranger copying).

[206] *See infra* note __ and accompanying text (discussing the uncertainty of copyright scope in cases involving custom architectural works).

2. Sharing Norm

The plausibility of a sharing norm, and thus enforcement forbearance, among the architects who design custom, nonresidential projects finds some support in architectural discourse. However, this support is ambivalent. Architects are often described as more candid than other creative professionals about the debt that they owe to earlier architects' works.[207] They routinely discuss concepts like "precedent" and "typology" that highlight a tradition of building on what other architects have already created. [208] Architects with established reputations sometimes describe copying as a form of praise, framing imitation as the sincerest form of flattery.[209] However, this talk among architects is not informed by any notion of what constitutes actionable copying under copyright law. The design features covered by the sharing norm could be a subset of the design features that copyright does not protect, and the resulting sharing might not reflect enforcement forbearance at all. In addition, some commentators suggest that copyright law is eroding the historical sharing norm.[210]

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[207] Elizabeth A. Brainard, *Innovation and Imitation: Artistic Advance and the Legal Protection of Architectural Works*, 70 CORNELL L. REV. 81, 92 (1984); Rybczynski, *supra* note __. Some commentators suggest that copying in contemporary architectural culture has grown yet more important because the age of electronic communication presents a new paradigm of pervasive influence:

> Contemporary design does not happen in a vacuum, but rather in a dense atmosphere of reference…. [T]he age is awash in images of different temporalities, some historical, some contemporary, and some anticipating possible futures. This is the vapor of the contemporary, a dense cloud of references where historical, canonical, and trendy merge in equivalence.

Eric Höweler, *Vapor*, in UNDER THE INFLUENCE 164, 165–66 (Ana Miljački, ed.. 2014). *But cf.* Urtzi Grau, *Discussion 02*, *in* UNDER THE INFLUENCE, *supra*, at 125 ("[A]rchitecture has a troubled relationship with [remakes]. Copying is one of the biggest taboos in architecture schools, in competitions, with clients, and within discourse."); Ana Miljački, *id.* at 126 (noting "the taboos of influence" in contemporary architecture culture).

[208] ROGER H. CLARK & MICHAEL PAUSE, PRECEDENTS IN ARCHITECTURE: ANALYTIC DIAGRAMS, FORMATIVE IDEAS, AND PARTIS (4th ed. 2012); Alan Colquhoun, *Typology and Design Method* (1967), *in* THEORIZING A NEW AGENDA FOR ARCHITECTURE: AN ANTHOLOGY OF ARCHITECTURAL THEORY 1965–1995 248 (Kate Nesbitt, ed., 1996). As the AIA Handbook states in its discussion of design precedents, "[i]t is common for architects to familiarize themselves with the design of buildings that deal with similar issues," including "program, site, context, [and] cost," "to stimulate solutions for their own design problems." AIA HANDBOOK, *supra* note __, at 523.

[209] Rybczynski, *supra* note __; Bernstein, *supra* note __, at 27. When the alleged copier is famous and the allegedly copied architect is less well known, copying may be more difficult to frame as a career-boosting homage, and law suits may be more common. *See supra* notes __ and accompanying text (discussing *Shine v. Childs*).

[210] Rybczynski, *supra* note __ (arguing that times are changing and that today, in part because of the effect of copyright law on the norms of the architectural profession, the "architectural auteur is expected to be self-contained, untainted, sui generis").

The strength of the case for a sharing norm as a causal contributor to the AWCPA study's results ultimately hinges on the existence of widespread, actionable copying among the architects who produce custom works as a factual matter. If no actionable copies are being made, a sharing norm cannot be doing much work. The absence of this factual predicate in architecture rules out a sharing norm for close copies that lie near the core of copyright protection, but not for loose copies that lie near its periphery.[211]

Close copying of custom architecture among architects is not common as a factual matter, at least in the United States.[212] A series of articles over the last ten to fifteen years attempts to play up the pervasiveness of look-alike projects in contemporary architecture and imply rampant copying among contemporary architects by presenting pairs of "dopplegänger" projects.[213] If examples of close copying at copyright's core were to be found anywhere, these articles should have brought them to light. However, the paired projects are borderline cases of actionable substantial similarity that lie at copyright's periphery, at best.[214] The similarities at issue could easily be labeled as similarities of unprotected ideas or scenes-a-faire.[215] These articles on copying may

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[211] *See supra* notes __ and accompanying text (noting that loose copies at copyright's periphery are actionable copies).

[212] The situation is arguably different in China. A number of new towns and landmarks built in China over the last decade have striking resemblances to European and American models. BIANCA BOSKER, ORIGINAL COPIES: ARCHITECTURAL MIMICRY IN CONTEMPORARY CHINA (2013) (documenting and analyzing a specifically Chinese culture of architecture "duplicature"). While most of this copying replicates historical architecture that is no longer protected by copyright, some involves Modern and contemporary architecture. *See, e.g.*, Oliver Wainwright, *Seeing Double: What China's Copycat Culture Means for Architecture*, THE GUARDIAN (Jan. 7, 2013), https://www.theguardian.com/artanddesign/architecture-design-blog/2013/jan/07/china-copycat-architecture-seeing-double (discussing a close-to-exact duplicate of Le Corbusier's Ronchamp chapel); Kevin Holden Platt, *Copycat Architects in China Take Aim at the Stars*, SPIEGEL ONLINE (Dec. 28, 2012), http://www.spiegel.de/international/zeitgeist/pirated-copy-of-design-by-star-architect-hadid-being-built-in-china-a-874390.html (noting striking similarities between the Wangjing SOHO project by the Pritzker Prize winner Zaha Hadid and another Chinese project).

[213] Margaret Rhodes, *Architecture's Fine Line Between Stealing and Inspiration*, WIRED (Oct. 2, 2015), https://www.wired.com/2015/10/architectures-fine-line-stealing-inspiration/; S.A. Rogers, *Copycats & Clones: 24 Near-Identical Architectural Designs*, The Web Urbanist (Dec. 23, 2011), https://weburbanist.com/2011/12/23/copycats-clones-24-near-identical-architectural-designs/; Rybczynski, *supra* note __; *Copycat Architecture: 10 Look-Alike Buildings*, ARCHITIZER, https://architizer.com/blog/inspiration/industry/copycat-architecture-10-look-alike-buildings/. The "dopplegänger" label comes from an essay in architectural theory that seeks to problematize authorship and originality in a culture of increasingly pervasive copies. Ines Weiszman, *Architectural Dopplegängers*, 65 AA FILES 19 (2012).

[214] A copy of Zaha Hadid's Wangjing SOHO project in China is an exception to this rule. Platt, *supra* note __.

[215] *See, e.g.*, Humphreys & Partners Architects v. Lessard Design, Inc., 43 F. Supp. 3d 744 (E.D. Va. 2014) (holding two apartment buildings similar only with respect to unprotected ideas); Trek Leasing, Inc. v. United States, 66 Fed. Cl. 8, 12–16 (2005) (holding various features of an

have been intended to shock by pulling back the curtain to reveal numerous striking similarities in contemporary architectural practice, but they do precisely the opposite for a legally informed reader.[216]

However, the jury is still out on the extent of looser, yet still actionable, copying that does not give rise to copyright suits due to copyright forbearance, leaving open the possibility that a sharing norm helps to shape the AWCPA study's results at copyright's periphery when looser copies are at issue.[217] Both architectural and legal uncertainties contribute to the lack of certainty. Neither architectural critics nor architectural historians have systematically classified the nature of the every-day copying among contemporary architects who produce custom works,[218] and the thickness of copyright scope in custom architecture has rarely been addressed.[219]

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architectural work to be scenes-a-faire). The substantial similarity analysis reflects the author's informed opinion. For a nuanced analysis from an architectural perspective suggesting that the similarities are not substantial, see Alison Laas, *Copycat Architecture*, http://www.payette.com/post/1954796-copycat-architecture. An exhibition at the Center for Architecture in New York entitled *Un/Fair Use*, curated by architectural historians Ana Miljački and Sarah Hirschman, made a similar point. It presented abstract models of fifty-one "common and therefore uncopyrightable architectural tropes and formal themes" that run through contemporary architecture projects. Amanda Kolson Hurley, *The Unexpected History Behind "Un/Fair Use"*, ARCHITECT (Oct. 16, 2105), http://www.architectmagazine.com/design/the-unexpected-history-behind-un-fair-use_o.

216 If the analysis were limited to historical architectural styles such as Classicism or Neoclassicism, widespread, close coping would not be difficult to prove. These styles were explicitly premised on literal copying directly from antiquity and historical precedent. JOHN SUMMERSON, THE CLASSICAL LANGUAGE OF ARCHITECTURE (1964). Starting with architectural Modernism in the early twentieth century, however, notions of architectural excellence shifted to privilege creativity and originality. MARTIN A. BERGER, SIGHT UNSEEN: WHITENESS AND AMERICAN VISUAL CULTURE 108 (2005) ("[W]e live today in a world still haunted by modernist concepts of originality ….").

217 Copies can be loose in two different ways. Comprehensive nonliteral similarity raises the tricky question of when a work's structure becomes too general to be protected expression and transitions from an unprotected idea under the idea-expression dichotomy. NIMMER, *supra* note __, at [A][1]. Fragmented literal similarity raises the tricky question of quantity and quality copying needed to establish infringement. *Id.* [A][2].

218 A forthcoming book plows new ground on the subject of "appropriation as a vital and progressive aspect of architectural discourse." AMANDA REESER LAWRENCE & ANA MILJAČKI, EDS., TERMS OF APPROPRIATION: MODERN ARCHITECTURE AND GLOBAL EXCHANGE (2018). However, this book details a series of vignettes on appropriation. It does not develop an overarching taxonomy or undertake an empirical survey.

219 There are a growing number of cases that clarify that copyright scope for stock-plan, single family homes is very thin. *See, e.g.*, Design Basics, LLC v. Lexington Homes, Inc., 858 F.3d 1093, 1100–01 (7th Cir. 2107) ("The market for affordable home designs is crowded because opportunities for originality are tightly constrained by functional requirements, consumer demands, and the vast body of similar designs already available."); Zalewski v. Cicero Builder Dev., Inc., 754 F.3d 95, 102 (2d Cir. 2014) (finding a lack of substantial similarity because the copyrighted home designs "are replete with uncoyprightable elements"). But, there are few cases addressing how much thicker that protection becomes for more creative, custom architectural works.

3. Anti-Copying Norm

As was true for sharing norms, anti-copying norms provide a plausible explanation for the results of the AWCPA study in some factual contexts but not others.[220] However, rather than hinging on the distinction between close and loose copying, the plausibility of anti-copying norms hinges on the distinction between the high-design ethos at the upper echelons of the profession and the efficiency-oriented service provided by many custom firms.[221]

There is strong support in architectural discourse and practice for an anti-copying norm. Creativity lies at the heart of the profession's own conception of architectural excellence; exercising creativity[222] and

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[220] The history of architectural copyright boosts the plausibility of the anti-copying norm theory, helping to answer an otherwise puzzling question about why architects would develop an anti-copying norm in the first place. In copyright-negative spaces where there is no effective protection, the development of anti-copying norms has a strong economic motivation. These norms are a form of anti-competitive collusion that function as a rough substitute for copyright law and allow authors to charge higher prices. *See supra* notes __ and accompanying text. If there were no effective protection for custom architecture, then a similar story could explain the genesis of anti-copying norms among architects, too. However, given that there is effective copyright protection available for architecture, why would custom architects invest in developing strong anti-copying norms when reliance on copyright could accomplish much of the same work? In his study of copyright non-use in the custom tattoo industry, Prof. Perzanowski answered this question by citing the historical outsider status of the tattoo industry and its distrust of the establishment, including the courts in which copyrights must be enforced. *See supra* notes __ and accompanying text. This explanation does not transfer to custom architecture. Custom architects show no hesitation to use the courts to sue transactional partners. Furthermore, architecture is part of the establishment: it is a professional discipline, complete with state-mandated educational, experience, and licensure requirements. *Getting Licensed*, AMERICAN INSTITUTE OF ARCHITECTS, https://www.aia.org/pages/2651-getting-licensed. Rather, the answer in custom architecture lies in the historical absence of effective protection against non-client copying for architectural works under pre-AWCPA copyright. Collins, *supra* note __ (arguing that the lack of protection for constructed buildings under pre-AWCPA copyright made it difficult for copyright owners to prevail in infringement suits against non-clients). Architects could have been motivated by their self-interest to develop the anti-copying norm when there was no effective protection, and the norm could have persisted until today as an artifact of sticky culture.

[221] The anti-copying norm is nonetheless likely to be stronger for close copies. A sharing norm is plausible for loose copies. *See supra* notes __ and accompanying text. A sharing norm and an anti-copying norm cannot coexist within the same community for the same type of copies, but they can coexist if the anti-copying norm covers close copies and the sharing norm covers loose copies. *Cf.* Wainwright, *supra* note 212 ("It is fine to take from the same well—but not from the same bucket."). A similar resolution of these opposing norms has been noted in copyright-negative spaces in which norms function as a rough substitute for copyright. Oliar & Sprigman, *supra* note __, at 1822–23.

[222] In one survey, 98% of architects identified art and creativity as the distinctive features of architects in comparison to other professions. JUDITH R. BLAU, ARCHITECTS AND FIRMS: A SOCIOLOGICAL PERSPECTIVE ON ARCHITECTURAL PRACTICE 46 (1984); *see also id.* at 28 ("The essence of architecture is that it centers on creativity.").

having a voice in design[223] are central to architects' understandings of what it means to be an architect. Architects "are socialized to understand what constitutes a creative act, when creativity is appropriate, what the types of creativity are, the degrees thereof, who should have it, and what can be done with it."[224] Given the centrality of creativity in professional identity, creativity is an important component of a positive reputation within the architectural community. Architects value good reputations not only for intrinsic reasons (they are an egotistical bunch[225]) but also for extrinsic reasons (good reputations help them to secure challenging, high-profile projects[226]). In order to develop a reputation as a "starchitect" and be considered for the most prestigious international projects, a firm's reputation for creativity must be strong.[227] Close copying is antithetical to the exercise of creativity, and architects who fail to exercise creativity by replicating others' work too closely or too often are shunned by other architects, undermining their economic and cultural standing.[228]

However, by definition, the vast majority of architects do not occupy the profession's uppermost strata. Most custom architecture involves the far more mundane, although still creative, exercise of designing new assisted-living facilities, speculative commercial office buildings, and apartment complexes. In this larger slice of the market, a reputation as a "strong delivery" firm that delivers design services in an efficient, rapid manner is what is important.[229] There would seem to

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223 CUFF, *supra* note __, at 18 (discussing "the tremendous importance placed on design" in architecture and architects' "desire for voice and authority to control it"); *id.* 21 ("Architects are trained to assume responsibility for design; their professional identity depends on it."); BLAU, *supra* note 222, at 59 (assigning "design creativity" as "the singular master value" in the architectural profession).

224 CUFF, *supra* note __, at 254.

225 John Cullen, *Structural Aspects of the Architectural Profession*, 31 RES. ON THE PROFESSION 18 (1977); *cf.* Cuff, *supra* note __, at 151–53 (discussing the "sphere of influence for their works and ideas" that is "a means of achieving some fame, living beyond one's years"). It is also possible that exercising creativity generates intrinsic value simply because it is fun.

226 Cuff, *supra* note __, at 150–51.

227 The term "starchitect" accurately captures the importance of fame and reputation in being considered for important projects, but it has also developed a negative connotation. OXFORD ENGLISH DICTIONARY (defining "starchitect" as "[a] famous architect, *esp.* (*depreciative*) one whose designs are considered extravagant, outlandish, or incompatible with their existing surroundings").

228 Giovannini, *supra* note __, at C1.

229 Weld Coxe et al., *Charting Your Course: Master Strategies for Organizing and Managing Architecture Firms*, 4 ARCHITECTURAL TECHNOLOGY 52, 53 (May/June 1986). [Cox et al book] The separation of "commercial practices" from "cultural practices" makes the same point. Richard Gutman, *U.S. Architects and Housing: 5 Relationships*, *in* ARCHITECTURE FROM THE OUTSIDE IN: SELECTED ESSAYS BY RICHARD GUTMAN 227, 232–35 (Dana Cuff & John Wriedt, eds., 2010) [hereinafter OUTSIDE IN].

be a market niche for copied designs in this efficiency-oriented segment of the market in which shunned copiers could thrive as an economic matter. Architecture firms could perhaps enhance their reputation among clients, if not as excellent designers among other architects, by providing close copies if, contrary to the inverse demand correlation, close copies were what clients desired. Although it does gain traction in the most glamorous segment at the top of the profession, the anti-copying norm theory cannot explain the absence of stranger suits throughout the entire profession of custom design.

CONCLUSION

This Article fills a gap in copyright scholarship by examining the role that copyright can and does play in the production of customized creativity. The inverse demand correlation provides a descriptive model of the conditions under which strangers do—and, perhaps more pointedly, do not—experience any demand for back-end copies of already-created custom works. When markets tilt toward customization, this demand dissipates, and copyright's dominant, incentive-to-create justification loses its relevance. If strangers are not copying works, there is no role for copyright to play in restricting competition or enabling supracompetitive profits from the sale of multiple copies of a work. The authors of customized creativity must recoup their first-copy costs entirely through the fees charged to clients for customization services.

This does not mean, however, that copyright in customized creativity is completely irrelevant. Rather, copyright in customized creativity is lodged in a space in between copyright's positive and negative spaces. Copyright may influence creative production in mixed markets where commoditized and customized creativity compete (although it may not always improve social welfare). In addition, even in markets that tilt strongly toward customization, copyright can help to promote creative production by serving the disclosure-facilitating role scripted by copyright's less-frequently discussed transactional justification. Here, copyright in customized creativity may be doing valuable work, but it is not the work that we usually and reflexively understand copyright to be doing.

The empirical study of AWCPA infringement litigation strengthens the case that the inverse demand correlation provides an accurate model of how at least some real-world markets for customized creativity operate. In the market for nonresidential projects, which tilts

strongly toward customization, the architects who produce custom works rarely sue strangers and thus almost exclusively sue their clients. In the market for single-family homes, which is a mixed market in which commoditized, stock-plan designs are commonplace, the architects who produce custom works sue strangers more frequently than their counterparts who produce nonresidential projects. This pattern of litigation is entirely consistent with the inverse demand correlation: weak demand for actionable copies among strangers should lead to a lack of a factual predicate for bringing suit against strangers (and, accordingly a lack of infringement suits against strangers). However, professional norms governing architects' copying and copyright-enforcement behavior also likely help to shape the study's results, at least in limited contexts.

METHODOLOGICAL APPENDIX A: IDENTIFYING THE UNIVERSE

The study's universe was crafted to encompass cases arising from complaints referencing an allegation of infringement of a copyright protected by the AWCPA. This goal, combined with practical concerns related to the datasets from which the cases were pulled, resulted in a number of requirements that cases had to satisfy to be included in the study's universe of cases. The identification of the universe proceeded in three steps. First, the set of opinions to be searched was established. Second, an automated text search identified a smaller set of plausible opinions. Third, manual examination of the opinions within that smaller set of plausible opinions identified the 345 cases within the study's universe.

The definition of set of opinions searched. The study identified opinions by searching in Lexis and Westlaw. Starting with opinions was convenient due to the availability of the commercial databases, but it has implications for the universe of cases eventually created. Because these databases only contain opinions, the study cannot observe cases that settle before a first opinion is written. However, the opinion in Lexis or Westlaw need not address the merits to be eligible. An opinion addressing procedural, jurisdictional, or discovery-related issues qualifies a case for inclusion in the study.

Two requirements limited the cases in Lexis and Westlaw that were searched. First, only databases of federal cases were searched because federal courts have exclusive jurisdiction over copyright infringement.[230] Second, a time window was established running from December 1, 1990, the date on which the AWCPA became effective, to November 30, 2016. This is the window for the publication of an opinion, not the window for the filing of a complaint.

The automated search to identify plausible opinions. To identify an over-inclusive set of plausible opinions, separate automated, Boolean text searches in Westlaw and Lexis identified all opinions containing two terms. First, the opinion had to contain the root term "copyright." Second, it had to contain either the root term "architect" or one of twelve two-word phrases selected on the basis that an opinion might alternatively use them, instead of a term like "architecture" or "architectural" to refer to an architectural work: "building plan," "building design," "structure plan," "structure design," "home plan,"

[230] 28 U.S.C. § 1338(a) (2018).

"home design," "house plan," "house design," "apartment plan," "apartment design," "residential plan," and "residential design."

These searches yielded 2,471 opinions in a first database and 2,641 opinions in a second database.[231] The searches yielded many duplicate opinions that were present in both databases. To eliminate the need for manual identification of all of the duplicate opinions, a fuzzy matching program was written to identify duplicate opinions. The program determined that 292 of the opinions identified in the second database were not present in the results of the first database searched. The sum of the cases from the first database plus the non-duplicate cases from the second database yielded 2,763 unique opinions.

The manual search for cases that reference an allegation of infringement of a work protected by the AWCPA. The author then personally examined the content of the 2,763 opinions and excluded opinions that did not reference an allegation of infringement of a work protected by the AWCPA. This process produced the study's universe of 345 unique cases. The final unit of analysis is a case, not an opinion. The set of plausible opinions frequently contains many opinions corresponding to the same underlying case.

The identification of cases referencing an allegation of infringement of a work protected by the AWCPA required a two-step analysis. First, the case had to reference an allegation of copyright infringement. Second, the infringement allegation had to pertain to a work protected by the AWCPA.

The requirement of an infringement allegation excluded some cases addressing AWCPA copyrights. For example, cases addressing copyright ownership[232] and preemption of state-law causes of action by federal copyright law [233] without an accompanying copyright infringement action were excluded. Cases with both primary and secondary allegations of infringement were included. A primary allegation exists if the complaint pleads copyright infringement as a cause of action. A secondary allegation exists if the complaint pleads a cause of action that alleged copyright infringement as a factual premise, such as insurance indemnification. For example, an insurance company may sue to be absolved of responsibility for a judgment of copyright

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[231] In order to obtain permission to perform the required scraping, the author agreed not to name the Westlaw and Lexis databases in this paragraph.

[232] *See, e.g.*, *In re Northwest 15th St. Associates*, 435 B.R. 288 (E.D. Pa. Bankruptcy 2010); *In re* Townhomes at Hill Top, LLC, 2008 WL 2078109 (D. Colo. 2008).

[233] *See, e.g.*, Weller Constr., Inc. v. Memorial Healthcare Servs., 2014 WL 5089422 (C.D. Cal. Oct. 8, 2014).

infringement entered against an insured architect.[234] Primary and secondary cases involving the same underlying act of infringement were merged into a single case to avoid double counting.[235]

The requirement for infringement of a work protected by the AWCPA involved both a subject-matter inquiry and a timing inquiry. The subject-matter inquiry is driven by the fact that they AWCPA only governs an architectural work.[236] The AWCPA defines an architectural work as the design of a "building,"[237] and the copyright office defines buildings as:

> structures that are habitable by humans and intended to be both permanent and stationary, such as houses and office buildings and other permanent and stationary structures designed for human occupancy including, but not limited to, churches, museums, gazebos, and garden pavilions.[238]

Following judicial precedent, interior designs that do not alter the building's fixed spatial configuration are not architectural works.[239] Whether the author registered the work as an architectural work, a technical drawing, or both was irrelevant to the classification of the work as the design of a building.[240] In addition, the copyright had to cover the architectural work as a work of authorship. A copyright in a pictorial or photographic representation of an architectural work that was authored by someone else did not quality as a work protected by the AWCPA.[241]

Under the timing inquiry, the AWCPA governs if a work was created on or after December 1, 1990 or if it was created before this date

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234 *See, e.g.*, Builders Mutual Ins. Co. v. Donald A. Gardner Architects, Inc., 856 F. Supp. 2d 773 (D.S.C. 20120).

235 There were eight cases represented solely by opinions raising a secondary allegation of infringement in the study's final universe of 345 cases.

236 17 U.S.C. § 102(a)(8) (2018).

237 *Id.* § 101.

238 57 Fed. Reg. 45310, Oct. 1, 1992; 68 Fed. Reg. 38,630, June 30, 2003.

239 *See, e.g.,* North Forest Development, LLC v. Walden Ave. Realty Assoc., LLC, 2007 WL 2295808 (W.D.N.Y. Aug. 9, 2007) (interior office layouts); Yankee Candle Co., Inc. v. New England Candle Co., Inc., 14 F. Supp. 2d 154 (D. Mass. 1998) (design for a store within a mall).

240 *Cf.* 17 U.S.C. § 101 (2018) (defining a pictorial, graphical, or sculptural work to include architectural plans).

241 *Compare* Stross v. Redfin, 2016 WL 4718197 (W.D. Tex. Sept. 2, 2016) (copyright in a photograph of architecture); Karson v. Red Door Homes, LLC, 18 F. Supp. 3d 1301 (N.D. Ala. 2014) (copyright in a rendering of architecture), *with* Corwin v. Walt Disney Co., 475 F.3d 1239 (11th Cir. 2007) (copyright in an architectural work depicted in a painting); Landrau v. Solis-Betancourt, 554 F. Supp. 2d 102 (D. Puerto Rico 2007) (copyright in an architectural work depicted in a photograph). One *pro se* case was excluded from the study's universe because of insufficient information to determine whether the copyright protected an architectural work or a rendering of an architectural work. Ferguson v. Mabry, 2010 WL 5336532 (D.S.C. Nov. 23, 2010) (involving a "scale graphic architectural rendering").

and it was both (1) not published or constructed before December 1, 1990 and (2) constructed on or before December 31, 2002.[242] If a case involved more than one architectural work, it was classified as an AWCPA case whenever at least one of the allegedly infringed works was protected by the AWCPA. When the opinions and litigation documents did not provide sufficient information to determine a work's eligibility for AWCPA protection under the timing requirement, the Copyright Office's registration database usually did.[243]

METHODOLOGICAL APPENDIX B: CODING THE VARIABLES

With the universe identified, the author and research assistants collectively coded all of the cases using an electronic coding instrument.[244] Beyond basic case data, the study coded for three variables: custom works versus stock works; the program housed by the work; and, within custom-work cases, suits against clients versus suits against strangers. All of the questions in the coding instrument provided an "unclear" option with a requirement for further explanation. The author personally reviewed all the unclear responses, leaving some responses as unclear when insufficient information was available for an informed answer and providing the correct answer when sufficient information could be found.[245]

Custom versus stock architectural works. The definition of a custom architectural work is a work designed for one or more known clients and that is tailored to the client's tastes and needs. In close cases where it is difficult to tell if a building was tailored to a known client's tastes and needs, the following facts weigh in favor of classifying a work as a custom work: the work was designed for a specific site, the work is

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242 Pub. L. No. 101-650, tit. 7, 104 Stat. 5133 §706 (1990).

243 Six cases were excluded from the study's universe due to insufficient information concerning the AWCPA's timing requirement. One additional case was excluded because the court held that whether the AWCPA's timing requirement was satisfied presented a genuine issue of material fact. Bryce & Palazzola Architects v. A.M.E. Group, Inc., 865 F. Supp. 401 (E.D. Mich. 1994).

244 Five people shared the coding duties. One research assistant coded approximately 180 cases, three additional research assistants coded more than 60 cases each, and the author coded approximately 180 cases. The total number of cases coded is larger than the number of cases in the final dataset because some of the answers on the questionnaire were used to exclude cases from the over-inclusive initial dataset produced by the automated text searches.

245 The non-author coders were only asked to look at the content of the published opinions; the author frequently provided the correct answer to an "unclear" response by examining additional sources of information, including complaints, other litigation documents, and copyright registration data. The additional material was pulled largely from Lexis, Westlaw, Lex Machina, and the Copyright Office's registration database, but there were no limits on permissible sources.

referred to by the name of a client or the site for which it was designed,[246] and the word "custom" is often explicitly used to describe the design.[247]

Inversely, a stock architectural works is not designed for known clients and, by definition, is not tailored to the tastes and needs of any particular clients. Homes designed and constructed on a speculative basis without a particular client in mind are not custom homes under the study's definition.[248] The following fact patterns weigh in favor of concluding that a work is a stock work rather than a custom work: there are multiple copies constructed[249] or the work has been licensed to multiple builders at the time of infringement ,[250] there is a model building opened to the public with the hope that visitors will purchase another constructed-building copy of the same work,[251] the work is a pre-manufactured building,[252] the opinion uses words like "prototype" to describe the finished work,[253] and the work is referred by model names such as the "Bordeaux" or "Kensington" that do not refer to a

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[246] *See, e.g.*, Blanas v. Alwan, 1995 WL 398850 (N.D. Ill. July 3, 1995) ("[Plaintiff] built a custom made home at Two Vernon Trail, Riverwoods, Illinois (the 'Riverwoods Home')."); Van Brouck & Assoc., Inc. v. Darmik, Inc., 329 F. Supp. 2d 924 (E.D. Mich. 2004) ("Plaintiff created architectural plans for a single family house known as the 'Rana Residence' for a family known as the Rana family.").

[247] *See, e.g.*, Fairview Dev. Corp. v. Aztex Custom Homebuilders, LLC, 2008 WL 2113492 (D. Ariz. May 16, 2008) ("custom home building plans"). However, the word custom is not a magic word. An alternative definition of "custom" turns on the designer's intent at the time of creation of the work that only one constructed-building copy of the work would be realized. Under this definition, buildings that are both speculative and custom would be possible. *But see infra* notes __ and accompanying text (noting that, under the study's definition of custom, a home built on a speculative basis is not a custom home). This definition that focuses on the intent to realize only one constructed-building copy is not the definition used in the study. In addition, a home constructed in accordance with a stock play may also be labeled as a custom-built home if the homebuilder is a small outfit that builds each house independently rather than a merchant builder that prefabricates portions of its homes.

[248] *See, e.g.*, Craig v. Dabrowski, 1999 WL 412581 (N.D. Ill. June 9, 1999); O.T. Pickell Builders, Inc. v. Witowski, 1998 WL 664949 (N.D. Ill. Sept. 16, 1998). *Cf. supra* notes __ and accompanying text (noting that customized creativity cannot be created on a speculative basis).

[249] *See, e.g.*, Rhein Building Co. v. Gehrt, 21 F. Supp. 2d 896 (E.D. Wis. 1998) ("HGM drafted the plans with input from RBC and the first building was completed in October of 1994. A second building was completed in 1995."). In theory, a design could be created as a custom design and, due to its success, constructed multiple times. *Cf. supra* notes __ and accompanying text. However, no evidence of this pattern exists in any of cases in the study's universe of cases.

[250] Home Design Servs. v. Chris Kendrick, 2009 WL 1973503 (D. Colo. July 7, 2009).

[251] *See, e.g.*, Imperial Homes Corp. v. Lamont, 458 F.2d 895 (5th Cir. 1972).

[252] *See, e.g.*, Cottage Advisors, LLC v. KBS Building Systems, Inc., 2012 WL 5864033 (D. Maine Nov. 16, 2012).

[253] *See, e.g.*, Sheeley v. Colonial Bank, 2004 WL 2598397 (M.D. Fla. June 17, 2005) (complaint) ("Colonial Bank Branch prototype").

place or a client.[254] In some cases, information about a copyright owner was used to classify the design. If the copyright owner is described as a franchisor or as a service that sells drawings to licensed builders, the design at issue was labeled as a stock design.[255]

The distinction between custom works and stock works was clear-cut in most cases, but one recurring issue created close cases: the customization of stock designs. There is increasingly room for customization in the market for stock home designs by the future homeowners for whom a home is built.[256] Especially when plan shops and merchant builders are involved, stock designs may be personalized in small ways for individual clients. The contractor may allow the future homeowner to add minor redlines to a stock plan, moving a window or fireplace over a couple of feet, bumping out a wall, or, at most, adding another bedroom. [257] Whether cases involving the customization of stock plans are stock or custom cases depends on whether the allegedly copied, protected expression is the stock plan or the modifications thereto. If the allegedly infringed copyright is the generic stock plan, then the case is a stock case despite the modifications in the allegedly infringing design. [258] However, if the allegedly infringed copyright is a derivative work in which only the modifications to a stock plan are original, then the case is a custom case.[259]

The programmatic categories. The study classified the program of the copyrighted work into four categories: single family homes, multifamily residences, nonresidential projects other than commercial trade dress (called "nonresidential projects" for short), and commercial

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254 *See, e.g.*, David & Goliath Builders, Inc. v. Kramer, 2010 WL 145849 (E.D. Wis. Jan 8, 2010) ("Bordeaux"); Schumacher Homes Operations, Inc. v. Reserve Builders, LLC, 2006 U.S. Dist. LEXIS 102115 (N.D. Ohio 2006) ("Kensington").

255 *See, e.g.*, Miller's Ale House, Inc. v. Boynton Carolina Ale House, LLC, 2009 WL 6812111 (S.D. Fla. Oct. 13, 2009) (franchisor); Scholz Design, Inc. v. Custom Homes of Great Bay, Inc., 2009 WL 5547683 (D.N.H. Nov. 25, 2009) ("Scholz has developed a network of licensed or registered builders for Scholz's designs."). Once a copyright owner is established as franchisor or a stock service in one case, that label carried over into other cases brought by the same copyright owner.

256 *See supra* notes __ and accompanying text. If the customization of a stock plan occurs before the customer is identified, such as when the same design is tweaked in different parts of the country to reflect the regional vernacular, the work is a stock work. GUTMAN, *supra* note 156, at 10–11 (discussing "large merchant-builders with operations in different regions that constructs single family houses using the same floor plans but varying the façade to correspond with the vernacular domestic architecture in the area").

257 ALLEN & THALLON, *supra* note __, at 62.

258 *See, e.g.*, Schumacher Homes, Inc. v. R.E. Washington Construction LLC, 2016 WL 5415083 (W.D. La. September 27, 2016).

259 *See, e.g.*, Sari v. America's Home Place, Inc., 129 F. Supp. 3d 317 (E.D. Va. 2015); Doyle Homes, Inc. v. Signature Group of Livingston, Inc., 69 F. Supp. 3d 674 (E.D. Mich. 2014).

trade dress. When programs mix multifamily residential functions and nonresidential functions, the building is classified based on whether its residential function is its most important function.[260] Works that are components of larger works are classified as the larger works.[261]

Single family homes included both detached houses and townhomes. Although rare, free-standing duplex, triplex, and quad residences were included in the single family home category because they share more similarity with single family homes than with large, multi-family residences.

Commercial trade dress must be the interior or exterior design of a retail store or a restaurant building—a building where customers come to purchase goods or services and can, over time, come to associate the design the source of the goods or services. Works are classified as trade dress only if two conditions are satisfied: first, the copyright owner must own a constructed building embodying the work and, second, the infringement case in the dataset must be brought against a competitor of the building owner.[262] In other words, works are classified as commercial trade dress when a Lanham Act infringement claim would be a viable cause of action in addition to copyright infringement, regardless of whether the copyright owner actually files the Lanham Act claim.[263]

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[260] Thus, college dormitories and senior living facilities are classified multifamily residential buildings, but detention centers and storm shelters are classified as nonresidential.

[261] Thus, a design for a master suite in a single family home is classified as a single family home and a design for a unit in a condominium building is a multifamily residence.

[262] This definition is unusual because it defines the programmatic category of a work (commercial trade dress) in part by how the copyright in the work is exercised in an infringement suit (a suit against a competitor). This definition is necessary because the purpose of the commercial trade dress category is strategic and purely exclusionary. *See supra* note __ (explaining why commercial trade dress should not be included in the category of nonresidential projects).

[263] 15 U.S.C. § 1114(a) (2018) (registered trade dress); *id.* § 1125(a) (unregistered trade dress). The study's definition of commercial trade dress only encompasses what the Supreme Court has called "*tertium quid*" trade dress. Wal-Mart Stores Inc. v. Samara Bros., Inc., 529 U.S. 205, 215 (2000). That is, it only includes architectural works that could serve as indicators of source for the goods and services provided by businesses housed within buildings that embody the architectural works. *See, e.g.*, Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763 (1992) (holding that the architectural design of a restaurant could be an inherently distinctive indicator of source for the restaurant housed in the building embodying the design). Four of the five cases within the study's universe identified as commercial trade dress actually included Lanham Act causes of action based on *terium quid* trade dress in addition to copyright infringement. Miller's Ale House, Inc. v. Boynton Carolina Ale House, LLC, 702 F.3d 1312 (11th Cir. 2012); Amazing Spaces, Inc. v. Metro Mini Storage, 608 F.3d 225 (5th Cir. 2010); Ale House Mgmt., Inc. v. Raleigh Ale House, Inc., 205 F.3d 137 (4th Cir. 2000); Llavayol v. Coca-Cola Co., 207 WL 2220982 (S.D. Tex. Aug. 1, 2007). The fifth did not, perhaps because there was no indication that the Japanese restaurant embodying the architectural work was a chain or franchise. Tayama v. Riom Corp., 2012 WL 556007 (N.D. Tex. Feb. 21, 2012).) Importantly, the study's definition of commercial trade dress does not encompass what the Supreme Court has called "product-design trade dress." *WalMart*

Client versus stranger suits. Client suits are suits in which the allegedly infringing copy is made in order to satisfy the demand of a client, i.e., the person or firm to whose tastes and needs the allegedly infringed work is tailored. Stranger suits is a catch-all category consisting of all suits that are not client suits. For example, one architect could take a design shortcut and copy protected expression from the copyrighted work of a competitor architect into a substantially similar design for a different client. Or, a client could be an infringement catalyst, asking one architect for a project that looks like another architect's work. The client/stranger distinction is only applicable to custom-work cases because there are no clients in stock-work cases.[264]

To aid the identification of client suits, the coding instrument identified five distinct sub-categories of client suits and queried whether each case fell within any one of the sub-categories. The coding instrument asked about the five sub-categories in the order in which they are presented below.[265] As soon as a case was determined to fall within one sub-category of client suits, the questions about the remaining categories, if any, were skipped. The sub-categories further up on the list therefore trumped when the suit belonged in more than one sub-category.

1. Departing-employee suit. A suit against a departing employee occurs when employees, independent contractors, or partners leave a firm and take copies of copyrighted drawings with them. Departing-employee suits are a sub-category of client suits because the goal of taking the copies is to "steal" their former firms' clients.[266]

2. Contractual-client suit. A suit against a contractual client occurs when an architect provides a copyrighted design to a client who has signed a services agreement. The client either infringes or

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Stores, 529 U.S. at 213–15. That is, it does not encompass cases in which an architect, developer, or merchant builder could claim that the public has come to recognize the design of a building as an indicator that the architect, developer, or merchant builder is the source of the building. *See., e.g.*, Demetriades v. Kaufmann, 680 F. Supp. 658, 666–70 (S.D.N.Y. 1988) (considering an argument that the design of a house was protectable trade dress for the homebuilder). A large number—if not all—of cases in the study's universe could conceivably include allegations of infringement of product-design trade dress along these lines.

[264] *See supra* notes __ and accompanying text (noting that there are no clients for commoditized works).

[265] If any one defendant fell into a sub-category, the suit as a whole was classified as a suit against a client.

[266] *See supra* notes __ and accompanying text (discussing the intra-firm variant of the transactional justification of copyright).

encourages a third party, such as another architect or a contractor, to infringe.

3. Pre-client suit. A suit against a pre-client occurs when an architect provides copyrighted design information to a client with the expectation or hope that the client will eventually sign a services agreement and become a contractual client, but the client never does.[267] The "pre-client" either infringes or encourages a third party to infringe.

4. Client successor-in-interest suit. A suit against a client's successor-in-interest occurs when an architect provides a contractual or pre-contractual client with a copyrighted design and the parcel of land on which the work is sited changes ownership, either through a sale or through bankruptcy. The new owner of the parcel either infringes or encourages a third party to infringe.

5. Architect–infringer suit. A suit against an architect–infringer occurs when a client makes a contribution to a work during the customization process and the architect employs that contribution in a future project for a different client. An architect–infringer suit reverses the direction of information flow found in the contractual-client, pre-client, and client successor-in-interest cases. Rather than the client appropriating a work authored by the architect, the architect appropriates a work authored by the client.

[267] Perhaps surprisingly to lawyers, many architects perform extensive design services without ever having a contract for services in place. Suits are classified as pre-client suits rather than client suits if there is there was not enough information to determine whether a contract had been executed. Nothing in the study's analysis turns on the distinction between client and pre-client suits.