

THE EUREKA  
MYTH

CREATORS, INNOVATORS, AND  
EVERYDAY INTELLECTUAL PROPERTY

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## Introduction

I wanted to make paintings. I wanted to publish them. But  
I didn't want to own them. . . . It's like having a litter of  
puppies and you [find] a good home for each one of them.

*Joan, an internationally known public artist*

WHAT COULD IT MEAN for this artist, Joan, to compare her paintings to cuddly canines? In what plausible way is an artist's creative process like the daily labor and intensive care that is required to nurture a pregnant bitch and whelp her puppies? Is the professional satisfaction in building an appreciative audience and receiving feedback from the art world like the satisfaction received from children's joy when they take a puppy home? What does it mean to own a painting (or a puppy) when the purpose of making it is to give it away? Does one author puppies the way one authors a painting, hoping to retain some subsequent control over attribution and integrity?

The epigraph to this chapter is from an interview I conducted with an internationally renowned sculptor about her creative process, professional development, and studio business. She took and loved studio art classes in college, but she loved English, history, political science, and psychology as well. She graduated college unsure of her career path. As a graduation gift, her mother gave her a set of beautiful and expensive paints, with which she began her career as a painter. From there, this artist made her way around the world to find space, people, and creative inspiration. She has worked full-time as an artist her entire professional life, producing giant sculptures and wall-size watercolors. Twenty years later, she lives on the East Coast of the United States with her husband and two school-age children. She could support the family with her public art commissions, but her husband works as well (and as hard) as she does.

When I asked Joan about some of the difficulties she experienced being a painter, I was surprised that she responded by talking about the burden of storing all her finished work. My questions were driving at the relationships among making a living as an artist, intellectual property, copying, the digital age, and creative influences. But she seemed puzzled by my persistent questions regarding her business strategies, her tolerance for unauthorized copying and misattribution, and her desire for widespread distribution. Instead, she told me that she didn't think or care that much about others copying her work. Nor was she very concerned about the contours of ownership and control she had over her paintings. Indeed, the very fact that she had to maintain the paintings or sculpture—archive them, store them, protect them—was a burden. This turned out to be a common concern among the many artists I subsequently interviewed. Being worried about space and storage was not how she wanted to spend her time as an artist. She just wanted to “make paintings.” She wanted to “publish” them by sharing them with the world. But she didn't want to “own” them. And then she compared her magnificent, colorful, slightly erotic, feminine paintings to puppies. What in the world did this have to do with intellectual property, the legal regime that ostensibly regulates, facilitates, and progresses creative art?

\* \* \*

Steve Jobs and Wozniak created the personal computer, all right? . . .

Cohen and Boyer created biotechnology, the concept of moving genes around through man's intervention. OK? But most of the rest of us mere mortals just—you know, you learn from other people, and then . . . you know, the frontiers of science are pushed back . . . gradually through similar antlike persistence by scientists.

*Dennis, in-house patent lawyer for a pharmaceutical company*

The myth of the inventor hero is deep and strong. It is common to hear that a world-class scientist was a child math prodigy, to explain how his mind sees the physical world in unique and distinct ways. His aha moment transforms our understanding of outer space or molecular biology.

And yet this quote from a patent lawyer with more than twenty-five years working alongside groundbreaking scientists in the pharmaceutical industry compares most of the important work in medical science to antlike drudgery. This IP lawyer suggests that the inventor heroes he names (Jobs and Wozniak) are hardly human. Instead, he says we should recognize and revere the labor of everyday scientists; they work in droves and teams to transform the frontiers of our physical experience bit by bit, like colonies of ants building and supporting a hill of dirt.

Is it degrading to compare scientists to ants? Is the exalted work of the medical technology that has drastically improved human life over the course of the twentieth century anything like the transport of dirt grains and leaf scraps over insignificant distances in a suburban backyard?<sup>1</sup> In what way does hard work and “persistence” correspond to rights in inventions and competitive advantages that might attach thereto? Why is this patent lawyer talking about trivial everyday work and manual labor when inventions (and patents in particular) are made by novel and non-obvious ideas that spring from the mind? In calling antlike persistence heroic, even as he downgrades himself and his collaborators as “mere mortals,” he seems to suggest that hard work and targeted investment will and should reap well-deserved rewards.

I interviewed this patent lawyer over nearly two hours. His office, cluttered with piles of papers, was at the center of a building complex that housed many similar pharmaceutical companies. He has been an intellectual property lawyer for many leading pharmaceutical companies since the mid-1980s, which marked the beginning of the modern biotechnology movement, the rise of the pharmaceutical giants, and the centralization of patent law in the US Court of Appeals for the Federal Circuit. He spoke quickly and passionately about the importance of patents to his industry and the missteps of so many of his former employers in undervaluing even the “smallest” of inventions. But in the next breath, he lamented the development of patent law to include broad subject matter that championed trivial and undemanding developments in financial services and electronics manufacturing, echoing the sentiments of many other lawyers and businesspeople. He seemed to be saying that these patent-rich fields were truly the anthills of invention: ubiquitous and

unoriginal. And yet, hadn't the ants been venerated as frontier explorers a moment before?

Given the complexity of his experiences, what is the relationship between patent law and lawyers, pharmaceutical breakthroughs, and anonymous daily drudgery? When does it make sense to assert patents against other pharmaceutical companies, and when are affordability, access, and collaboration more important? Skilled in technical legal doctrine and passionate about patent policy from years working alongside bench scientists in highly profitable companies, this lawyer had a lot to say about when the intellectual property system resonated well with its underlying principles and when it required retrofitting to the industry's practices and public need.

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This book is full of quotes such as the two that have been presented so far, excerpted from fifty face-to-face interviews that I conducted with a wide range of scientists, engineers, musicians and artists, their business associates, and intellectual property lawyers over the course of four years. The interviews were part of an effort to learn more about the intersection of intellectual property law on the one hand, and creative and innovative work on the other. At the most fundamental level, this book is devoted to understanding statements like those from the artist and lawyer on their own terms. I sought to learn how creative and innovative work occurs from the ground up, from individuals to loose organizations of people to large and small institutions. My goal was to discern whether and how intellectual property laws that purport to “promote the progress of science and the useful arts” play a role in the making, claiming, and disseminating of art and science. What effect, if any, do our intellectual property laws have in facilitating innovation and creativity in the United States?

The US Constitution speaks of “promot[ing] the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.” To this end, incentivizing the creation and dissemination of art and science by granting rights that resemble property rights to creators and inventors has been the stated goal of intellectual property law since the United States’

founding. But more than two hundred years later, we remain unsure—indeed, we are deeply conflicted—about whether the laws that protect intellectual property work as intended. Does preventing anyone but the patent owner from making, using, or selling an invention without payment or permission promote progress? Does granting a copyright that endures for the life of the author plus seventy years promote more learning and more creativity? How can we gauge the success of laws designed to promote science and art for the public good?

Innovation and creativity are buzzwords of the twenty-first century. The United States asserts its dominance at the cutting edge of both technology and culture, whether in medicine, computer design, film, or music production. Today, copying and disseminating art and science are easier than they ever were, but earning and profiting from exclusive rights appear to be harder. In a world in which global wealth is determined in part by who benefits from innovation and creative output, discerning how art and science are made, by whom and why, and how they benefit the communities in which they circulate are enormously important questions. This book does not aim to address all of these questions. But it begins with the question of how intellectual property law in the United States promotes science and art, assuming as I do that the United States remains one of the global leaders in IP policy and in the production and dissemination of creative and innovative work.

This book describes how intellectual property intervenes, if at all, in the professional lives of artists and scientists and the companies for which they work. Interpreting the descriptive accounts these artists and scientists provide, the book traces the professional development of chemical engineers, classical composers, Internet architects, sculptors, filmmakers, and genetic biologists, to name just a few, in a wide range of formal and informal organizations. In doing so, and in conversation also with IP lawyers, business managers, and employers, the book delineates the presence and absence of intellectual property, as well as the shapes and roles it takes. As a qualitative study of intellectual property that investigates the mechanisms and motives of a range of creators and innovators and their professional managers and organizations, the book aims to chart new terrain for our understanding of and future in scientific and artistic

innovation and the intellectual property that purports to sustain them. Although the focus of the book is on the interviews, and their common themes and critical distinctions, the empirical and theoretical analyses framing the discussion of the interviews may inform present innovative and creative communities and companies as well as law reform efforts aimed to support them.

Psychologists and social scientists have long studied innovative and creative communities to discern their contours and their contexts. Those scholarly projects tend to study creative personalities and the evaluative standards for creativity or innovation.<sup>2</sup> This book focuses less on the kinds of people who produce creative and innovative work and the values society ascribes to them. Instead, it focuses on the motives and behaviors of the creators and innovators and their professional organizations. How and why do they do what they do? What are the mechanisms that help or hinder their continual engagement in creative or innovative endeavors? How does intellectual property play a role in their aspirations and well-being as professionals in IP-rich fields? In other words, this book makes sense of the intersections between creative and innovative activity and intellectual property law using the experiences and explanations of those engaging with both.

#### THE ARTISTS, SCIENTISTS, AND ENGINEERS

Contrary to the dominant stories of monetary incentives and wealth maximization, the interviews in this book elaborate intellectual property's *diverse* functions and *sporadic* manifestations in the lives and work of artists, scientists, and their business partners and managers. Filled with stories from, for example, sculptors, bioengineers, filmmakers, chemists, novelists, software engineers, business attorneys, publishing executives, venture capitalists, and music agents, this book reveals assorted (instead of singular) ways of achieving a flourishing livelihood in science and art.

Interviews followed a standard protocol, asking the same questions of each interviewee despite the diversity of their careers and situations. (Appendix A describes the data collection and analysis in more detail; Appendix B describes the interviewees in more detail.) When warranted, however, conversations wandered in order to follow and pursue whatever



was important to each interviewee and to clarify or connect earlier statements. Statements like that of the artist Joan, comparing paintings to puppies, invariably provoked a more in-depth conversation.

And Joan was far from unique; I was constantly challenged by statements packed with deeper assumptions about the boundaries of ownership claims, the nature and characteristics of personal investment in creative and innovative work, and the diverse desires for how a professional life in such fields optimally proceeds. During an earlier interview, a photographic journalist described his relationship to his photographs: “At the time, I understood that they, the organizations I worked for, owned the photographs, and I think I fully thought of them as mine.” One of my goals in writing this book is to understand contradictions such as this one. How can art belong to its maker and to a company at once? In what way is the art one makes like a beloved pet (or, more commonly throughout the interviews, like a child)? What are the implications for the analogy of work to family relationships or animate beings? How do these feelings and explanations about the relationship among art, scientific discovery, employment, and ownership affect the manner and circumstances of innovating alone or within an organization and controlling work through intellectual property law?

Interviewees demonstrate diverse ways in which IP law helps and hinders artistic and scientific productivity. In this way, the book begins to dismantle the stunningly persistent and monolithic explanation for intellectual property protection in the United States: that IP is necessary to facilitate robust production and dissemination of art and science. For example, some musicians lament the copyright royalty system, wishing instead for a consistent salary to make music on a regular basis. They need to earn money to live, but they are ambivalent about whether they earn money from royalties or from a salary paid by a standing organization. Many want regularity in their revenue stream so they can compose and play without worry. Some of these same musicians, however, wish for control that would prevent other people from misusing their work. In copyright parlance, these musicians value the derivative work right (protected through copyright law) and also moral rights (which are largely unprotected under US copyright law). Copyright law thus does not ably

protect musicians' interests or incentivize their work, as IP law claims; musicians write and play music because it is what they do and will do, with or without US copyright. The stories these musicians tell about how and why they became musicians; their interactions with agents and music publishing companies; the challenges and joys of being a musician; and what, if anything, they would change about their lives professionally, provide a window into the intersection of creative work and copyright law in the music business.

I was surprised to learn that engineers and scientists often sound like artists, musicians, writers, and filmmakers in their ambivalence toward the full panoply of rights intellectual property law provides. They too value hard work, professional autonomy, intellectual challenge, and professional and personal relationships. Indeed, entrepreneurs in the high-technology space directly resemble some of the artists and scientists in their drive to create something: an object, a network, or a marketplace that benefits a larger community. As Andrew, a successful entrepreneur with a computer software background, said, he came from a "culture of entrepreneurs," and most of his life he "just wanted to build something." When asked about how patents, trademarks, and copyrights might function in his successful companies (and in his failed ones), he talked about how his large patent portfolio was just "detail and documentation":

I would . . . make time for the engineers to meet with the lawyer and patent different things. Like, I . . . would talk to people and say, "What do you have that you think we can patent?" And then they would tell me, and then we would go in and patent those things. But you know, for any one of these companies, there is typically one or two ideas that are really valuable, and that are the patent. And then the company ends up getting a dozen or two dozen patents. The rest of them are just the blocking stuff that—or not even that: . . . I think they're just something you build to look very attractive to a potential buyer. But they're not real—they're like detail and documentation.

Andrew's fairly dismissive attitude toward patents contrasts with the intensity and pride with which he describes the excellence of his team of engineers. The engineers, not intellectual property, are what drove him to negotiate a multimillion-dollar offer for his company because he

wanted the price to reflect the benefits he and his team bring to the digital marketplace:

We were like a military—you know, my engineering group was unbelievably predictable. . . . And we had done work for [a large public company] that was really highly regarded as a very high-quality job on a [similar product] that worked. So the [giant media corporation looking to buy us] knew they were getting a very good technical group.

This entrepreneur confirms that the value of the company was as much in the people as it was in its inventions.

Parsing the stories of these musicians, visual artists, biologists, and engineers, and comparing them with the stories from their managers and lawyers, provides a layered account of the multidimensionality of US intellectual property law in action. The interviews demonstrate in the aggregate how motives and mechanisms of creativity and innovation are multifaceted and interconnected. And yet intellectual property law, as we have come to implement it in the United States, is a one-size-fits-all model. Statutory regimes governing trademark, copyright, and patent law were drafted and continue to be interpreted to protect particular economic interests based on incomplete and sometimes inaccurate assumptions about cultural and scientific production and the people engaging in it. The accounts in this book provide empirical evidence that these legal frameworks and policy-driven foundations are mistaken. In doing so, the book describes the profound mismatch between motives and mechanisms of art and science and the structure of US intellectual property law.<sup>3</sup>

#### THE BUSINESS PROFESSIONALS

I expected to hear a different perspective from business and intellectual property attorneys. I thought they would rehearse the unbending position that intellectual property is necessary for making and commercializing art and science, but the lawyers in this study had a lot to say about the ways intellectual property fails and succeeds for their clients. They did not uniformly—or even consistently—support the incentive theory of intellectual property. Instead, because of the perceived mismatch between IP and clients' professional goals, attorneys develop a range of strategies for

encouraging their clients to participate in an intellectual property system of which even the lawyers seemed somewhat skeptical:

[T]he way I try to describe it to [the company's engineers and scientists] is that it's the way . . . we represent value. I mean, to be perfectly callous about it, I've used this approach a number of times: "Look: we're a start-up company. All these venture capitalists who are going to be investing in us, they are going to look for IP. They don't know what it is any more than you or I know what it is, right? But they are going to look for something that says 'it's IP,' so it's the way to show them what the really amorphous stuff you're doing in the research lab, how that translates into something that they can put their hands on." . . . And the more of it we have—and it's fuzzy what the "it" is, but the more of "it" we have, then the more successful we're going to be.

Admitting that intellectual property may largely be for show but that it is critical to funding ventures, lawyers turn intellectual property and the regime that regulates it into a kind of shell accounting game. Attorneys do not intend to mislead or misinform (although many talk about their strategies as "tricks"), and they do not describe their behavior as an ethical challenge to or against the public interest. Instead, they say they adhere to the "rules of the game" in counseling their clients. Throughout my conversations with intellectual property and business attorneys and with company representatives in IP-rich industries, respondents describe IP as just another legal regime or organizational maze through which they guide their clients in order for them to reach professional or personal goals. To lawyers and firm agents (such as CEOs and vice presidents), IP is a pliable legal fiction—as is the notion of the corporation itself—that can be molded and exploited for particular purposes.

Whether through intellectual property law, employee relations, real estate, or securities law, lawyers keep their clients' interests in mind, and the interests of creative and innovative clients are rarely to maximize wealth or a financial return on investment. Instead, lawyers shape and reify the perceived importance of intellectual property law by molding it to correspond with other values about which their artistic and scientific clients care deeply: their professional reputation, their community's enhancement, and consistency and control over their everyday labor. In

this way, even for the IP lawyers and the business folks, intellectual property law does not function as an investment vehicle that incentivizes the production of art and science. Instead, when able, it gives a name to the ephemeral nature of what scientists and engineers do, and it concretizes the value they create. An in-house attorney describes this process of correspondence in terms of coaxing software engineers in her company to participate in the patenting process:

It was just hard for them because there was a struggle philosophically around all of this, and a real skepticism—the concept of law, legal, and compliance was 180 degrees away from this very fluid, creative, libertarian open environment. . . . The concept of people wearing jeans and Hawaiian shirts, the concept of people having these open cubes and working until two o'clock in the morning, and having a corporate ethos that basically embraced flexibility and dialogue and consensus building, and to a certain extent rebellion and questioning authority—that was anathema to the corporate cultures that had preceded them. So just getting a law department in a company like that where they would even trust what “the lawyers” would say required an awful lot of effort on our part, and a completely different perspective on how we approached our internal clients. You could not come top-down as authoritarians. You basically had to come bottom-up, as having gained their respect through your relationship, your appreciation for what they did, and their true belief that you just have to instill that you really believed in the company and its proposition. . . . In terms of software [patents], that became actually something developers really understood. They personally benefited from it, but there was a long, long history of invention in this country. Patent invention goes [way] back. . . . So you become part of a storied legacy of the great inventors. So patents were, in a way, a much easier sell. And you have to get the developer involved. I mean, they write the invention statement, and they work all the way through, and their name is on that in the Patent Office. So there's real ownership and pride and [a] coolness factor to being an inventor, and being part of the company, an IBM or an HP and Microsoft, and some of these others companies that own thousands of patents.

This attorney emphasizes a mutuality of interests between the individual employees and the company when she encourages participation by firm employees in a patent system of which they originally were skeptical.

Reputation, ego, and being part of something much bigger than oneself are all personal and professional interests of the employee-innovator. When lawyers describe intellectual property as affecting these outcomes instead of others, the justification for intellectual property and its mechanisms shift and diversify beyond the function of financial incentives.

I also expected to hear a different perspective on behalf of corporate interests. Corporations are not really people, after all.<sup>4</sup> Whereas individuals might prioritize autonomy, optimal work conditions, reputation, and relationships over maximizing wealth, companies are said to exist to make money.<sup>5</sup> Thus, I thought that when I asked CEOs, vice presidents, and other corporate agents to describe their firm's business strategies and goals, they would provide accounts of behaviors and experiences in which the right of exclusion in intellectual property does incentivize more production.<sup>6</sup> And indeed, the corporate agents' understandings of intellectual property's benefits and limitations more faithfully aligned with the traditional IP incentive story than lawyers' or artists' accounts.

Swapping the corporation for the individual in the IP story of creative and innovative progress jettisons a long-standing IP myth: that copyright and patent rights exist to benefit "authors" and "inventors."<sup>7</sup> And yet connecting strong IP rights with financial incentives may confirm the percolating fear among those witnessing the growing dominance of corporate interests in both national and international politics that threaten distributive justice, political accountability, governmental transparency, and democratic engagement. Because, celebrating the alignment of IP's financial investment function at the corporate level minimizes, if not largely abandons, the reigning and original importance of the public interest in intellectual property law. An alignment between firm incentives and IP policy is therefore worthy of critique and concern. Moreover, there is evidence in the interviews that alignment is partial, missing important features about which key employees and corporate principles in creative and innovative fields care.

Corporate agents agree that IP facilitates some development and distribution of creative or innovative work *but rarely the initiation of that work*. Initiation—beginnings and persistent effort to achieve innovative or creative breakthroughs—is almost always intrinsically motivated. In other

words, even for the companies that may exist to make money (although as I will discuss, even that characterization is debatable), the progress of science and art requires passion for the work, which does not appear to be incentivized by IP's investment function. Thus, it may be more accurate to say that IP functions subsequently as a form of postindustrial corporate capital, to borrow Julie Cohen's insight.<sup>8</sup> Like bank loans, real estate agreements, and employment relations, IP law intervenes later in the corporate "life" of creative or innovative work. Only haphazardly does it serve as a mechanism to recuperate sunk investment costs, and oftentimes it serves goals relating instead to relationship building and business flexibility.

Intellectual property law in the United States has been shaped and reformed to address interests of *both* individuals and businesses, assuming that they are one and the same in terms of behavior, motives, and aggregate benefit to community welfare. We may believe that they are not the same, and yet it is difficult to identify or isolate a corporate motive or business interest to study when companies cannot and do not speak the way individuals can and do. To be sure, many of the individuals I interviewed worked for or were members of firms. And their interests often aligned with those of the firm. The company's "interests," therefore, may be discerned by looking to the interests of the individuals who direct or shape the company's actions. Indeed, companies can speak only through their representatives. But truer to the point, corporations cannot hold attitudes or beliefs of their own: "If [the company] possesses anything, it is because of the legal theory that endows it with fictive personality. . . . Just because it is legally constituted, a group cannot be said to 'behave'—still less to think or feel."<sup>9</sup> This mistake of ascribing "motives" or "desires" to corporations specifically or institutions more generally—be those motives pecuniary or otherwise—is widespread in scholarly literature and contemporary politics.<sup>10</sup> The data grounding this study, as well as data from other studies, alongside prominent theoretical literature about institutions, demonstrate how the "thinking" and "desiring" that are said to occur in and through institutions are mutually constitutive of the individuals who form the collective.<sup>11</sup> Not only do institutional acts depend on individual choices; those choices are rendered meaningful and available because of the institutions themselves.<sup>12</sup> It is therefore not worth distinguishing

between organizational and individual motives in terms of whether or how each may harness and harvest intellectual property. The question—and its underlying assumption—is based on false premises. And so this book proceeds to identify a range of motives and mechanisms for making and disseminating creative and innovative work both independent of and through corporate structures in the hopes that further research can evaluate how such motivations cluster. Throughout the book, I highlight instances when industry-specific differences arise in the interviews. Given the sample size, it is not possible to generalize from these observations and instances.<sup>13</sup> But when my observations and analyses correlate with existing quantitative data studies, I note the relevance of peculiar institutional structures and organizational prerogatives.<sup>14</sup>

#### WHAT THE INTERVIEWS SHOW

Given that corporate behavior channels individual motivations, and that corporations are said to chase financial gain, it is perhaps surprising that both individuals and corporate agents identify motives other than money for pursuing creative and innovative work and for protecting it through intellectual property. The empirical data in this book show how the classic justification for property rights of “reaping what you sow” is grossly overstated. Interviewees in this study, through their accounts of their involvement in creative and innovative professions, illustrate a diversity and balance of values to achieve professional well-being, including professional autonomy, control over time and space, relationships with others (community building and sustaining personal ties), challenging oneself and others, and earning a living. Their descriptions of corporate culture and management choices reject the monolithic identity of the corporation whose only goal is to make money, denying that the company “is a kind of shark that lives off the community rather than . . . a member of a community with important agency in the construction, maintenance, and transformation of our shared lives.”<sup>15</sup> Privileging monetary objects invites the claim that nonmonetary objects are subordinate to pecuniary interests.<sup>16</sup> The data do not support this claim. To be sure, pecuniary interests and an appreciation of market dynamics are not irrelevant to professional well-being, but the interviews indicate that the market “requires for its operation the



existence of conditions that cannot be accounted for, or maintained, on its [own] terms.”<sup>17</sup>

Taking the data from these fifty interviews as a starting point, we begin to understand that the long-standing and resilient incentive story of IP—that strong property rights are necessary to promote science and the arts—is false. There is a range of interests and values that motivate and sustain creative and innovative work. What good, then, does the incentive story achieve? What explains its durability and believability? I have two tentative answers, which justify this book’s qualitative and interpretive approach to analyzing and relating accounts of lived experiences to intellectual property law. First, the incentive story is a shorthand for something much more complex. When we let the shorthand take over, it slowly reifies the more multifaceted experience into a singular account about monetary gain. *Incentive* originally meant much more than “incentivized by money” but its variations have been lost in the drive toward an uncomplicated and presumably objectively measurable standard. Although such simplification is a common mechanism both socially and organizationally (it is, after all, how myths are made and ideological discourses sustained), the simple story has negative consequences. When the story of monetary gain becomes a refrain, it has a tendency to be self-fulfilling. Law is habitually made and remade by courts and legislatures that rely on the common stories being told.<sup>18</sup>

Second, no one really believes the incentive story in its pure form. We forgive the shortcomings of shorthand because it is a useful heuristic for those who must explain their professional choices despite their nuanced experiences. “Working for money” (and protecting work through durable property interests to recoup one’s investment of money and time) is perceived to be a common denominator. But it is not remotely the whole story. While justifying work with the need for money is reasonable, money is also a means to achieve ends that we all have in common but that are often left unarticulated because the incentive story is so trenchant, and because these other ends are felt to be idiosyncratic, private, or subjective. This second answer has some traction in the interview data, especially among respondents who work in industries that rely heavily on intellectual property, such as pharmaceutical and medical device companies,

novelists, photographers, and some text publishing companies. People in these industries first explain how IP is required to start a company, collect investments, and jump-start research and development. After further conversation, they explain how starting in the business or continuing in the business also satisfies their individual interests and the collective interests of their institutions. Diverse goals—such as maintaining professional and personal autonomy, developing and sustaining relationships with others, and advancing social welfare—demonstrate the multiple bases and explanations for pursuing creative and innovative work, as well as the need to excavate alternative stories from beneath a dominant narrative of wealth maximization.

The interviewees' accounts are narrative in form: temporal, emergent, multiple, and moral.<sup>19</sup> The diverse narrative explanations undermine the one-dimensional IP incentive story and belie the categorical principles of a legal approach that masks more complex realities. For example, the rule that rights of exclusion will apply to certain creative and innovative work is often explained by the principle that these rights incentivize investment in creative and innovative work because people worry about the risk of underpriced copies. This uncomplicated explanation obscures ill-fitting and unsatisfying applications of the law, which misfit reflects textured and differentiated experiences, situations, and desires that produce creativity and innovation. Creators' and innovators' own reasons for when to make claims over their work, when and how to distribute their work, and when to relinquish control emerge in the interviews as stories with strong and consistent morals that emphasize hard work, adequate ownership and remuneration, self-direction, intellectual challenge, and sustainable but evolving professions and communities.

#### THE INVESTIGATIVE METHOD

The stories collected here comprise informal and cultural arrangements within creative and innovative fields of production, some of which diverge from IP's formal legal rules, revealing that intellectual property law is less relevant than previously assumed. Through a narrative approach to law, I attempt to unearth the personal dimensions of progress and the contours of the IP law and to connect both to larger frames of reference, such as cre-

ative communities, professional associations, and legal regulations. Indeed, the stories told are themselves the frameworks through which individuals situate themselves within larger social structures.<sup>20</sup> Because situational accounts both interpret and constitute one's relationship with the law, they are not to be dismissed as anecdotes or caricatures. The qualitative analysis of these accounts that forms the basis of this book is strongly rooted in rigorous social science methods and duplicates well-regarded studies in psychology, sociology, and anthropology.<sup>21</sup>

Instead of conducting and analyzing interviews, I could study outcomes. Do pharmaceutical companies with more patents make more socially beneficial medicines? Do filmmakers and production companies who exploit the full range of their copyrights remain viable for longer? Measuring outcomes would be easier—there is a tangible dependent variable to count. But such quantifiable outcomes can use ambiguous metrics.<sup>22</sup> Which things or events should we measure or compare? Which patented medicines fulfill the constitutional “progress” rationale—those that save the most lives or those that generate the most revenue? And, importantly, how do we know whether intellectual property law that protects the patented invention is the mechanism that is causally responsible for its development? Instead of focusing on outcomes, this book focuses on processes and investigates the initial and ongoing dynamics of originating, producing, and distributing creative and innovative work. It asks those who are creating and innovating (or their business associates) how intellectual property law has enabled or constrained their output. Qualitative research collects and analyzes lived experience from the ground up and on the terms set by the people and organizations being studied, thereby providing an inroad into the understanding of lived experience and situational complexities that other kinds of analysis (theoretical and quantitative) cannot. Quantitative research is not truly meaningful without a qualitative component. And yet despite a growing body of quantitative research on IP law and policy, we rarely see qualitative research to complement, enrich, and challenge the conclusions of that research.

Language—words and stories—makes sense of the world. Close attention to language can tell us things that surveys and quantitative research do not. Whether called narrative, rhetoric, or interpretation, stories explain

and justify the situation in which we find ourselves and that frames, enables, and constrains creativity and innovation. At the same time, stories are inherently political. They can justify the status quo or affect change. The repeated use of words and phrases reifies categories and expectations, and in turn structures relationships in our communities. This has certainly been the case with the incentive story, but this book discerns other narratives that dispute it. They should be added to the anthology of stories that lawyers and lawmakers use to apply and reform intellectual property law in the future. The factual accounts of creative and innovative production in this book provide the groundwork for intellectual property retrofitting. In the ongoing legislative reform debate, we should pay attention.

The fifty interviews at the foundation of this book create a database of language—cultural tropes and meanings—that are the accounts of people’s engagement with creative and inventive processes and intellectual property regimes. This book’s contribution will be to supply a thick description of the varieties of intellectual property’s interventions in the lives of artists, writers, scientists, and engineers. When the data in this book confirm the traditional IP incentive story, I highlight this consistency. But the accounts often diverge from IP law’s long-standing and unbending rationales. With substantial narrative detail in the interviewees’ own words, I hope the book will be both enjoyable and informative. It will also add much-needed diversity to the stubbornly one-dimensional explanation for intellectual property protection in the United States.

The book’s chapters trace the development and dissemination of creative and innovative work, weaving into it the various roles of legal protection in the professional goals of the creators or innovators and their businesses. Chapter 1 details the beginnings of creative and innovative work—how people got started and why. Chapter 2 explores everyday work, how beyond the inspired beginning people continue working (and working hard!) at a professional endeavor that may never pay off. Chapter 3 describes the various ways interviewees misconceive or even fail to consider intellectual property. It then describes how, despite those misconceptions, omissions, or an otherwise ill-fitting IP regime, creative and innovative endeavors may form sustainable businesses. Chapter 4

focuses on the importance of reputation to the professional well-being of creators, innovators, and their businesses. This chapter also discusses how intellectual property doesn't protect reputation, except narrowly through trademark law, and the implications of this particular misfit. Chapter 5 explores the roles of lawyers in the creative and innovative process, describing how intellectual property usually emerges from legal counsel. Lawyers are described (and describe themselves) as coaches or instructors and are not always welcome interveners in creative and innovative processes. The friction between lawyers and their clients has implications for the experience of and attitudes toward intellectual property as a legal regime that is intended to promote progress. The last chapter, Chapter 6, describes the myriad ways creative and innovative work is distributed, given that dissemination to the public is the ultimate goal of intellectual property law. This chapter builds directly on Chapters 3 and 4 by highlighting an ill-fitting intellectual property regime whose creation of exclusivity often frustrates the interests of pursuing intellectual challenge, the presentation of work to audiences, and the public good of sustaining and development communities.

The book concludes with several thoughts on the theoretical and practical implications of the IP mismatch with hopes for ongoing law reform and client counseling. The diversity of motives and mechanisms by which creative and innovative work proceeds, and the absence or only partial presence of IP as a critical mechanism, suggests that our IP system is misaligned with the requirements and desires of creators and innovators. My conclusions, though less specific than the compelling accounts in the interviews, hopefully provide sufficient detail to prompt robust conversation and further investigation into the needs of individual industries as regards intellectual property. Critically, my conclusions do not advocate for a more comprehensive and better-fitting IP regime. Some misalignment is a good thing.<sup>23</sup> But better attention to why and how creative and innovative work is produced by people who are willing to devote their life to its laborious endeavor will lead to evidence-based lawmaking and effective law enforcement. Hopefully, such attention will also have the salutary effect of enhancing distributive justice regarding the benefits and pleasures of science and art.

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Although this book is about intellectual property law, the following chapters focus on the practice of creativity and invention and not on the language of the federal statutes that aim to promote both. Nonetheless, I provide here a brief explanation of copyright, patent, and trademark law to help orient the discussion that follows.

The Copyright Act and the Patent Act, both federal statutes, are nearly as old as the US Constitution. Both were passed in 1790. The Copyright Act protects original expression for the benefit of authors. In 1790, the stated purpose of the Copyright Act was the “encouragement of learning,” and yet its scope was quite narrow, protecting only “maps, charts and books” for a term of fourteen years. Over time, the Copyright Act’s exclusivity has broadened in scope and duration, so that it now protects, for example, architectural works, pantomimes, sound recordings, photography, and film for the life of the author plus an additional seventy years. (If the work was a work for hire, then copyright persists for 120 years after creation or 95 years after publication, whichever is shorter.) The enumerated list of subject-matter categories covered by the Copyright Act is nonexhaustive and deliberately meant to be flexible and inclusive. The touchstone of copyright protection is originality, and starting in 1976, the work also has to be fixed in a tangible medium of expression to be covered by the act. Prior to 1976, original works had to be published to be protected. Although copyright does not extend to facts or ideas, the originality standard is otherwise broad and generally understood to be a very low bar. And copyright registration is not necessary for ownership, although it is a prerequisite for a lawsuit. The combination of a low originality standard and the lack of “copyright formalities” (e.g., copyright registration, the requirement of the copyright notice © for protection) creates a culture in which almost anything that is fixed on paper or screen or is otherwise tangible is protected by copyright law.

Copyright law grants to authors six exclusive rights: the rights of reproduction (the “copy” right), distribution, public performance, public display, preparation of derivative works, and public performance of

sound recordings by a digital transmission. Notably, copyright law does not require attribution, nor does liability attach for misattribution. Copyright law contains important limitations and exemptions to liability for infringement. The three most deeply entrenched limitations are the right to make “fair use” of the copyrighted work; the exemption of facts and ideas from copyright protection; and the first-sale doctrine, which exhausts the right of distribution and public display upon the first sale of the copy of the work. For example, the fair-use doctrine is what allows users to transform preexisting works into new expressive works; to write book reviews and quote the underlying work; to parody a novel and transpose character, setting, and dialogue into the parody. The exemption of facts from protection allows writers to rewrite history and repeatedly report on current events without infringing one another’s writing. And the first-sale doctrine authorizes the used-book market and the secondary art market. It also (though not without controversy) allows owners of books and paintings to alter their tangible property—to write in the margins of books and paint a mustache on their purchased portrait. By common-law extension, secondary liability exists in copyright law, usually described as “contributory” or “vicarious” liability. Internet web hosts, digital intermediaries and content distributors of all kinds may also be subject to secondary liability if they materially contribute or otherwise facilitate the violation of copyright owner’s exclusive rights.

The Patent Act protects novel, nonobvious, and useful inventions, but only once the Patent and Trademark Office (the PTO) examines the patent application and determines that the invention fulfills these three requirements. Patents are therefore harder than copyrights to acquire, although the amount of patents issued every year continues to grow. Patentable subject matter is limited by the Patent Act and by federal law to “anything under the sun that is made by man.”<sup>24</sup> Courts and practitioners have interpreted this quote from the 1980 case of *Diamond v. Chakrabarty* to mean that both “laws of nature” and naturally occurring things are not patentable.<sup>25</sup> Abstract ideas and mental processes are also not patentable, but the transformation of an object into a different state or thing using abstract ideas or processes may be patentable. Since 1980,

the scope of patentable subject matter has expanded to include business methods, laboratory-isolated genomes, and software.

The inventor discloses the invention to the public through the patent application, describing with specificity the invention so that an “ordinary person skilled in the art” could understand, replicate, and improve upon the invention if desired. This disclosure is intended to foster learning and progress. In exchange, patent law grants to the inventor the right to exclude others from making, using, selling, or offering to sell the invention for a period of twenty years without permission from the patent holder. There are very few exceptions to patent exclusivity. One, which has been limited over time and subject to ongoing debate and controversy, is the experimental-use exception. This exception is based in common law (i.e., it is not in the Patent Act explicitly) and permits the use of another’s patented invention when such use is for research, philosophical inquiry, or curiosity. It is a very narrow exception and has been further limited over time, even denying immunity to research universities when its researchers engage in research or conduct experiments using patented inventions. Indeed, the experimental-use exception is considered so narrow as to be unavailable in most practical circumstances. The accumulation of patents since the 1980s and the consolidation of patents in firms (in “patent portfolios”) has led to reasonable complaints about “patent thickets” and hold-up problems that some say significantly reduce the value of patents to foster further invention and commercialization.

The Lanham Act, which governs federal trademark law, describes a trademark as “any symbol or device that is capable of identifying the source of goods.”<sup>26</sup> Trademarks function in two ways: to identify the origin of a good or service in the marketplace and to distinguish a good or service from others. Trademark law is not an anti-copying regime in the way patent and copyright law are. Trademark law primarily protects against use that confuses consumers as to the source of the good or service. There can be multiple owners of the mark “Delta,” for example (e.g., Delta Dental, Delta Airlines, Delta Faucets), as long as each other’s use of the word or symbol that includes the mark “Delta” does not confuse market participants as to the source of the good or service branded with it. Preventing source confusion helps consumers: we can shop efficiently and with



precision. Preventing marketplace confusion also assists manufacturers and service providers in developing their company's goodwill as embodied in their trademark, which associates them with their commercial product.

There are few limitations on trademark subject matter. Words that are generic for the good or service are barred from trademark protection. And trade dress (product packaging or design that indicates source) that also serves a useful function cannot be protected as a trademark. These limitations promote the principles of fair competition. Trademark law is supposed to facilitate markets, not hinder them. Because trademark law is a restraint on both speech and marketplace behavior (e.g., it limits the use of symbols, words, or designs by market actors), it excludes from trademark protection uses that hinder descriptive marketplace speech and functional product design. It protects only against trademark uses that confuse consumers and threaten the goodwill of the mark holders. Trademarks endure in perpetuity insofar as they remain distinctive of the source of the product or service. And trademarks need not be registered with the PTO to be federally protected, although registration has significant benefits. Trademark rights arise out of use, not registration.

Trademark dilution and cybersquatting (i.e., contests over domain names) are also part of the Lanham Act. Dilution concerns only the most famous of trademarks, but it is a very broad cause of action because source confusion is not a prerequisite harm. Dilution occurs when another's use of a famous mark impairs the mark's distinctiveness. It can also arise from the similarity between a mark or trade name and a famous mark that harms the reputation of the famous mark. This latter harm is dilution "by tarnishment." Dilution would be a substantial restriction on speech without the existence of strong defenses in the statute: of fair use, noncommercial use, comparative advertising, parody, criticism, and commentary. Cybersquatting prevents the bad faith intent to profit from another's trademark in a domain name. Enacted in the 1990s, both of these claims are indicative of the broadening of trademark rights over the past several decades.

The strength of these federal intellectual property rights is indifferent both to the amount of time spent to create or invent and to the difficulty of the creative or inventive task. Labor does not matter to the strength or

scope of the intellectual property right. Only the patent regime applies a novelty standard. Originality under copyright law and distinctiveness under trademark law are quite low hurdles. And although the three regimes are supposed to be distinct, evolving practice and case law has led to troubling overlaps between copyright and trademark, copyright and patent, and design patents and trade dress.<sup>27</sup> Overlapping regimes allow IP owners to elect the regime that is most protective (e.g., stronger, broader, longer) despite long-standing policy to the contrary. Overlapping protection interferes with carefully crafted IP doctrines that balance private rights in intellectual creations against public access to such creations and future progress.<sup>28</sup> And yet, overlap seems inevitable given the interview data's illumination of persistent misalignment between creative and innovative work and statutory IP regimes.