Can We Have a Psychedelic Patent System?

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As the psychedelics space continues its faster-than-light expansion, controversies have exploded over the types of patents being filed and the roles they may play (e.g., Gerber et al., 2021; Leite, 2021; Love, 2021). Are patents fundamentally at odds with a psychedelic ethos, or can they find a healthy role in the ecosystem?

As Rick Doblin explains, "psychedelics are tools; they're not good or bad in and of themselves. It's how they are used. It's the relationship you have with them" (Doblin, 2020). The same can be said of patents. Patents can be tools of profit maximization, resource extraction, and bitter competition. Or they can be tools of outcome optimization, resource allocation, and careful cooperation. While generally wielded as the former, we have the opportunity to reimagine our relationship with them—and choose to use them as tools to facilitate and support ethical ways of doing business. Our choice will shape how the psychedelics ecosystem develops, with potentially profound economic, social, and cultural implications.

Patents are "the creation of society—at odds with the inherent free nature of disclosed ideas," but provided to "inventions and discoveries which further[] human knowledge" and "justif[y] the special inducement of a limited private monopoly" (Graham v. John Deere, 1966). Property rights like patents were used as early as 500 BCE, where in the ancient Greek city of Sybaris creators of "any peculiar and excellent" culinary dish or "any new refinement in luxury" were entitled to all the profit for a year, "in order that others might be induced to labour at excelling in such pursuits" (Atheneaus of Naucratis, 1854).

The same objective undergirds patents today. To "promote the progress of science and the useful arts" (U.S. Const. Art. I, § 8), the first U.S. patent laws were enacted in 1790, shortly after George Washington used his first State of the Union address to urge for protection of "new and useful inventions" to give "effectual encouragement" to "the exertions of skill and genius in producing them" (Washington, 1790).

But how does the government determine which "inventions and discoveries" are worthy of a patent? How does one—as Thomas Jefferson, the first U.S. patent examiner, struggled to do himself—"draw[] a line between the things which are worth to the public the embarrassment of an exclusive patent, and those which are not" (Jefferson, 1813)?

What should be entitled to a patent, and what should not, has always caused trouble. In 1883, calling an inappropriately granted patent "unjust in principle and injurious in its consequences," the Supreme Court explained:

"[I]ndiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a class of speculative schemers who make it their business to watch the advancing wave of improvement, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the arts" (Atlantic Works v. Brady, 1883).

The current controversy over patenting psychedelics is therefore nothing new. "Attempts to patent therapeutic methods invented by others" may be "capitalism gone rogue" (Doblin, 2021), but they're from the same rogues' gallery we've had since the start—what are euphemistically called "low quality" patents, overbroad and claiming ownership of what is properly in the public domain. The dangers are proven. Conferring market power without public benefit, such patents chill healthy competition and can increase prices and reduce access, lead to rent-seeking infringement disputes, and deter further research and development.

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One root of this problem, too, is perennial. "Patent examiners are burdened with many applications and are encouraged to move quickly on each one of them. And as they do their work, they are isolated from an important source of highly relevant information… That information we call 'prior art'" (Boucher, 2007). Prior art is all of the information that should be used to decide whether an invention is novel and non-obvious—but which is often overlooked. There are ways to educate examiners about prior art (e.g., Hausfeld & Nickles, 2021), and submit it into a pending patent file (e.g., 35 U.S.C. § 122), as well as to challenge a patent that nonetheless issues (e.g., Kohn v. Compass Pathways, 2020). Yet these processes are uncertain to succeed. Even if they are successful—producing only "high quality" and appropriately narrow patents on truly novel inventions—will controversies over psychedelic patents disappear?

History suggests otherwise. Some of the most groundbreaking inventions offer case studies in how patents—of whatever quality—can be employed to stifle innovation and suffocate the same creative spirit that earned them.

For instance, James Watt, a key inventor of the steam engine, famously used his 1769 patent to fight all attempts at competition, suppressing advancement in the field for 31 years—as his engine improved little, and its use remained limited to pumping water out of mines (Boldrin et al., 2008).

Elias Howe Jr., inventor of the lockstitch sewing machine, was so fixated on litigation that his "main occupation" has been called "suing the infringers of his patent for royalties"—so that rivals were "burning up their resources, fighting each other rather than developing the machine itself" in the 1850s "Sewing Machine Patent Wars" (Mossoff, 2013).

The Wright Brothers, similarly, turned their 1906 patent on a "flying machine" into eight years of litigation against competitors (Trainor, 2015). Distracted by expensive litigation, innovation languished, and the industry developed outside their patent's range in Europe. By World War I, U.S. aviation lagged so far behind that American pilots initially flew European planes (Nocera, 2014).

Time and again, scorched-earth battles consumed entire emerging industries. Alexander Graham Bell's company filed 587 patent suits against telephone competitors; more than 600 patent suits were filed over the incandescent light bulb; and two early radio pioneers had in 1896 over 300 patent suits pending just between them (Scott, 2001). Three decades later, litigation over broadcasting patents still occupied the whole industry to distraction, slowing innovation to a crawl in the 1920s "Radio Patent Snarl" (Ladwig, 2018).

Despite this historical repetition, examples continue to the present day. Most recently, in the "Smartphone Patent War" of the 2010s, Steve Jobs promised he would spend his "last dying breath" and "every penny of Apple's $40 billion in the bank" pursuing patent infringement claims against Android (BBC News, 2011). Soon after, Apple and Google were spending more on their patent war than they were on R&D (Duhigg & Lohr, 2012).

Are these all failures of the patent system? Or are they simply the unfolding of its inexorable logic? If Steve Jobs spent his last breath and penny destroying Android, isn't he just doing what the patent system supports? As Christian Angermeyer asserted about the psychedelics space:

"If a monopoly/duopoly emerged, it suggests that all the other would-be competitors had failed with their own creative and entrepreneurial endeavours. Then it would be a sign of quality and constitutional reward. In that case, you should not blame them, but blame the rest, who then clearly would have not done a good job" (Angermeyer, 2021).

Thus, when Wilbur Wright says in 1907, at the start of the Wright Brothers' protracted patent war: "I want the business built up so as to get the greatest amount of money with as little work. Sell few machines at a big profit" (Hise, 2003)—isn't he just seeking the fruit of his "constitutional reward"? And to claim it, why would one do anything but sue one's would-be competitors?

History again offers us a lesson: while competitors drain their coffers on court battles, innovation—and the entire community that should be served by it—suffers. And while industry titans may have the means to fight it out, smaller players often leave the field entirely (Duhigg & Lohr, 2012 ("We were on the brink of changing the world before we got stuck in this legal muck")). Indeed, for each of these examples, it was only after the wars ended that creative economies emerged and science progressed.

After Watt's steam engine patent expired, a period of collaborative innovation bloomed, and engineers shifted to a "professional ethos favoring sharing and publication" of technical information, resulting in more powerful and fuel-efficient engines, and leading to steam trains, steam boats, and the world's first "road locomotive" (Boldrin, 2008; Alpkunt, 2020).

In 1856, a truce was called in the Sewing Machine Wars, and competitors created the world's first "patent pool" (Mossoff, 2009). Only then did "the concept of the sewing machine move forward," as "dozens of new manufacturers entered the industry," creating a "crowdsourced sewing machine" that was distributed widely (Palmer, 2015).

After the start of World War I, the government forced the creation of a patent pool to prevent the Wright Brothers from continuing to block the building of new airplanes (Dykman, 1964; Surowiecki, 2008 ("Had Congress not stepped in, we might still be flying around in blimps")).

And in 1924, an organization brought the interests of competitors together to end the "Radio Patent Snarl," leading to the standardization of radio parts and transmission rules (and paving the way for development of modern technology standards such as DVD, MPEG, USB, Wi-Fi, and 5G) (Ladwig, 2018).

At times, patent holders have also acted alone for public benefit. One of the most successful patent licensing programs of all time was on recombinant DNA technology owned by Stanford and the University of California. Over 25 years, the program brought in $255 million from 468 companies, and caused at least 2,442 products to be developed. But despite the economic success, profit was never the primary motive; rather, the program was designed to encourage broad adoption of the technology for public benefit. A focus on purely financial considerations might have led to higher royalty rates and increased total revenues, but could have delayed the rise of a biotechnology industry by decades (Feldman et al., 2007).

What should we expect in the psychedelics space? With sentiments on record like "[m]any psychedelic companies out there will never be able to bring a product to market" because of patents, and if any "violate existing patents, my portfolio companies would have to protect their rights" (quoted in Love, 2021), should we expect psychedelic patent wars and snarls? And if an aggressive monopoly or duopoly does emerge, where should we direct the blame?

The patent system is "the creation of society"—an ongoing product of lobbying, law-making, litigation, and the values that underlie them. It is designed for, and is a reflection of, the society it is in (or at least, those with political power). But while a winner-take-all and competition-at-all-costs patent system might represent the values of our society-at-large, does it embody a psychedelic ethos? If it does not, can we learn from history and rethink how we use patents?

Beforehand, let's pause to answer a question that may be on many minds, which is why use patents at all? Why not, in the spirit of open science, simply put everything in the public domain? While worthy of its own article, in outline the answer is twofold: First, patents can be versatilely used: cooperatively and defensively as well as offensively, creating new ways for entities to work together, ensure adherence to ethical norms, and fend off predatory actors. Second, patenting certain inventions may be the best way to clarify the prior art and prevent others from claiming it as their own. Whether patent laws are actually necessary to incentivize innovation is up for dispute. But the fact is, we have them—and many will continue to use them—so merely "opting out" does not solve all our problems, and it becomes necessary to find a middle way (Belcher & Casey, 2016; Sampat, 2018). That said, the ethical use of patents can work alongside and help protect those following open science principles, which can still serve as the ideal—and with the cry of "Cooperation over Competition!" as crucial as ever (Jesse, 2018).

If we are to reimagine our relationship with patents, one way is through an intellectual property (IP) commons, broadly defined as a set of IP-related resources shared for the benefit of a community (Lessig, 2001). An IP commons sits between complete enclosure (separate individual rights to exclude) and public domain (everything freely accessible to all), and allows members to decide what resources to contribute and share, and under what rules and limits. While the ultimate structure of a psychedelic IP commons must evolve based on input from all stakeholders—and should take inspiration and guidance from the many existing blueprints for an ethical psychedelics ecosystem (e.g., Jesse, 2018; Gillooly & Conour, 2020; Zelner, 2020; Baggott, 2020; Howell, 2020; Journey Colab, 2020; Zurrer, 2021; Knox, 2021; McGaughey, 2021; Tremblay, 2021)—it is possible to sketch out some dimensions. (And in many ways, the ultimate "commons" is subsidiary in importance to "commoning," the community process and practice of establishing and managing it.) The contours of an IP commons are flexible, with opportunities for:

Protection: At its most basic level, a commons can decrease the costs of doing business for each member (including when balanced against the costs of its administration). For example, a commons can act as a defensive coalition, where members share costs to identify and challenge problematic patent applications and collectively bargain for discounted patent risk management solutions (e.g., infringement insurance). Members can adopt a non-aggression pact, or agree to refrain from abusive litigation tactics. A commons can also network member patents defensively, enabling them to be used as mutually-beneficial shields against outside aggressors, or encumbering them to prevent use by patent trolls.

Cooperation: A commons can generate frameworks to cross-license rights, such as patent pools and other forms of IP assembly, reducing transaction costs and fostering technology diffusion and follow-on innovation. Standard public licenses and digital contracting can further streamline collaboration. Pooled patents can be efficiently licensed to non-members, and can be securitized or used as collateral (e.g., to offer microloans). Although patents are generally filed by larger entities, a commons can uncover and attribute value to IP created by all involved stakeholders, and provide pathways for individuals to better manage and protect their own (e.g., therapy practices, research data, patient data, user data).

Support: A commons can create legally binding mechanisms to support ethical imperatives, for instance pledging patents to improve access to medicines (e.g., WHO C-TAP, 2020). Ethical principles can be incorporated directly into licenses and other technology transfer agreements through morals clauses. These can condition the right to use IP on commitments to take certain actions (e.g., promote diversity, equity, and inclusion; meet conservation and sustainability goals) and honor certain practices (e.g., provide meaningful reciprocity; ensure consent from and benefit sharing with indigenous stewards). This enables enforceable transmission of ethical norms to everyone using member IP.

As the psychedelics ecosystem continues to emerge, there is a unique and powerful opportunity to shape the role that patents play. By using them as tools within an IP commons, patents can be positive for the psychedelics ecosystem and work in harmony with a psychedelic ethos. Can we place cooperation over competition, and reimagine—and psychedelicize—the patent system itself? Much of what ails us as individuals results from our isolation, as well as the loss of connection to and support from our community—and one path to healing starts by rebuilding and strengthening these relationships. The same can be said for psychedelic patent holders too.

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