PLEASURE PATENTS

ANDREW GILDEN
SARAH R. WASSERMAN RAJEC

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Abstract: The United States Patent and Trademark Office has granted thousands of patents for inventions whose purpose is to facilitate the sexual pleasure of their users. These "pleasure patents" raise a range of novel questions about both patent theory and the relationship between law and sexuality more broadly. Given that "immoral" inventions were long excluded from the patent system, and that sexual devices were widely criminalized for much of the past 150 years, how have patentees successfully framed the contributions of their sexual inventions? If a patentable invention must be both new and useful, how have patentees described the utility of sexual pleasure? This Article identifies several hundred patents that the USPTO has formally classified as improving sexual stimulation and intercourse, and it closely examines how patentees have described the utility of sexual pleasure over time. In describing the utility of technologies such as phalluses, vibrators, and virtual reality systems, patentees employ a diverse and rich set of themes about the purposes and social values of sexual pleasure. By facilitating sexual pleasure, these patented technologies can, according to their inventors: improve marital harmony, overcome female frigidity, calm fears of HIV transmission, reduce sexual assault, suppress demand for sex work, minimize the loneliness of single people, facilitate LGBTQIA relationships, and promote the emotional well-being of people with disabilities. As social and sexual norms have changed over time, so too have the various explanations for the social value of pleasure patents. This Article shows that the patent system is an underappreciated, and perhaps unexpected, archive of historical and contemporary sexual norms.

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* Associate Professor, Willamette University College of Law.

** Professor of Law, William & Mary Law School.

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INTRODUCTION

When lawyers and scholars think about sex, patents likely do not spring to mind. This Article challenges that intuition. Since the early-twentieth century, the United States Patent and Trademark Office ("USPTO" or "Patent Office") has issued hundreds of patents that are classified as "massage for the genitals" or "devices for improving sexual intercourse,"[1] notwithstanding a background culture and legal system that has been largely hostile to sexual innovation. Patents in this classification disclose a wide range of technologies which include: phalluses of all different shapes, sizes, and materials; clitoral stimulators;[2] pelvic harnesses to be worn during intercourse;[3] mouthguards to be worn during oral sex;[4] and masturbatory jacuzzis.[5] These diverse patents—which we call "pleasure patents"—in turn describe a wide range of socially useful functions served by these technologies: promoting marital accord; overcoming sexual dysfunction; reducing loneliness in single people; preventing the spread of sexually transmitted diseases; facilitating the sex lives of LGBTQIA[6] and people with disabilities; and empowering women to take charge of their own sexual happiness.

The existence of these patents is surprising—doctrinally, theoretically, and historically. First, for over 180 years, patent doctrine professed to exclude from protection inventions that were "injurious to the . . . sound morals of society."[7] Under this doctrine of moral utility, the Patent Office rejected applications for "immoral" inventions such as gambling machines and deceptive goods. For example, the immorality bar invalidated patents on lottery devices,[8] gambling machines,[9] and a variety of "deceptive" inventions.[10] The requirement became less stringent over the years,[11] and in 1999, in *Juicy Whip, Inc. v.*

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[1] *See Cooperative Patent Classification: A61H19/00*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A61H.html#A61H19/00 [https://perma.cc/ZBP9-PMBZ].

[2] U.S. Patent No. 2,024,983 (filed Sept. 10, 1934) (issued Dec. 17, 1935).

[3] U.S. Patent No. 2,594,097 (filed Nov. 15, 1949) (issued Apr. 22, 1952); U.S. Patent No. 6,604,526 B1 (filed Feb. 1, 2002) (issued Aug. 12, 2003).

[4] U.S. Patent No. 5,970,981 (filed Aug. 27, 1998) (issued Oct. 26, 1999).

[5] U.S. Patent No. 5,920,923 (filed Jan. 9, 1998) (issued July 13, 1999).

[6] We use LGBTQIA as a universal term to represent people that associate with myriad gender- and sexual orientation-defined identities.

[7] Lowell v. Lewis, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (No. 8,568).

[8] Schultze v. Holtz, 82 F. 448, 449 (C.C.N.D. Cal. 1897).

[9] Brewer v. Lichtenstein, 278 F. 512, 513 (7th Cir. 1922) (invalidating an invention that had "a concealing means . . . to enable the gambling instinct of purchasers to be appealed to in promoting the sale of merchandise").

[10] *See infra* Part III.

[11] For example, courts allowed patents on gambling devices based on theoretical acceptable uses. *See Ex parte* Murphy, 200 U.S.P.Q. (BNA) 801, 802 (B.P.A.I. Apr. 29, 1977) (noting that gambling had become legal in various states and adopting the idea that as long as an invention was "susceptible of good uses," utility could be found).

Orange Bang, Inc., the U.S. Court of Appeals for the Federal Circuit held that deception can itself be useful and is not a reason to deny a patent.[12] This history suggests that it would have been difficult to obtain patents on sex toys and that the availability of such patents would likely have followed the general trends in patent utility doctrine. The suppression of sex toys was, after all, the subject of state and federal legislative efforts.[13] Surprisingly, however, pleasure patents were issued steadily throughout the time that courts were cracking down on gambling and deception.

Second, from the perspective of patent theory, patents are thought to serve both notice and disclosure functions, defining the scope of the claimed invention[14] and enabling others to make and use it.[15] Nevertheless, patents can disclose more than the traditional story suggests. The patent application is a persuasive document, drafted to convince patent examiners, judges, and potential infringers of the disclosed invention's merits.[16] To be persuasive, patent applicants must pull from the social norms and values of their audiences. For example, patents on inventions tailored to women will likely tap into the societal norms and expectations of women's interests and needs.[17] Similarly, where a claimed invention touches upon issues of sexuality, the applicant's efforts to explain the utility, novelty, and non-obviousness of their invention can provide useful insights into dominant perceptions of sex in that moment in time. Pleasure patents demonstrate that patent law can provide an important lens to examine the evolving relationship between innovation and social change.

Third, the USPTO's issuance of pleasure patents stands in stark contrast with the historical legal treatment of sexual technologies more broadly. Since the nineteenth century, the USPTO was granting pleasure patents at the same

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[12] 185 F.3d 1364, 1367 (Fed. Cir. 1999) ("The fact that one product can be altered to make it look like another is in itself a specific benefit sufficient to satisfy the statutory requirement of utility.").

[13] *See infra* Part III.

[14] Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 731 (2002) ("A patent holder should know what he owns, and the public should know what he does not.").

[15] Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 541 (2009) (stressing the "cumulative" nature of patent law and the importance of publicizing inventions "so that science can progress by building on the divulged knowledge"); Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621, 622–23 (2010) (stating the three functions of a patent: (1) reveal the invention publicly; (2) assert the "scope of the exclusory right" and offer notice to third parties of potential infringements; and (3) offer the basis for future patent litigation and judicial assessment of the patent's credibility or any alleged violations).

[16] Dan L. Burk & Jessica Reyman, *Patents as Genre: A Prospectus*, 26 LAW & LITERATURE 163, 172–73 (2014) (explaining the process of patent creation versus patent prosecution to note that "patent drafters are keenly aware that they are addressing multiple audiences" over the life of the patent, depending on its stage).

[17] *See, e.g.*, Kara W. Swanson, *Getting a Grip on the Corset: Gender, Sexuality, and Patent Law*, 23 YALE J.L. & FEMINISM 57, 57, 61 (2011) ("As American women donned their corsets [at the turn of the twentieth century], they had a daily intimate relationship with a heavily patent-protected technology.").

time local, state, and federal law enforcement attempted to suppress the manufacture and sale of sexual devices.[18] Federal law banned the mailing of immoral devices in 1873;[19] obscenity laws justified the seizure of sex toys for much of the twentieth century;[20] and several states passed criminal laws that expressly prohibited the sale of sex toys in the 1970s, '80s, and '90s.[21] Moreover, throughout these various time periods, nearly all forms of nonprocreative sex were criminalized.[22] Against this hostile legal backdrop, the federal government granted valuable property rights to large numbers of sexual technologies that were ultimately unlawful to use, sell, or manufacture.

This Article is the first legal scholarship to describe the phenomenon of pleasure patents[23] by (1) reviewing over four hundred patents issued between 1935 and 2019, (2) showing how patentees have described the utility of sexual technologies, and (3) demonstrating how these descriptions have changed over time. It reveals that the changing narratives used to justify granting patents on dildos, vibrators, and other sexual devices often closely parallel the evolving

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[18] *See infra* Part II. *See generally* HALLIE LIEBERMAN, BUZZ: A STIMULATING HISTORY OF THE SEX TOY (2017) (detailing the history of the patenting and regulation of the sex toy).

[19] *See* Comstock Act, ch. 258, 17 Stat. 598 (1873) (comprising part of the Comstock laws, which criminalized the use of the Post Office to send any obscene materials that were sexual in nature).

[20] *See, e.g.*, United States v. Gentile, 211 F. Supp. 383, 386 (D. Md. 1962) (sustaining an obscenity conviction for the sale of rubber penile extenders found to be "patently offensive").

[21] *See* Richard Glover, Comment, *Can't Buy a Thrill: Substantive Due Process, Equal Protection, and Criminalizing Sex Toys*, 100 J. CRIM. L. & CRIMINOLOGY 555, 561–62 (2010) (caveating that states with such bans against sex toys tended to repeal those statutes over time due to "constitutional technicalities").

[22] *See generally* JOHN D'EMILIO & ESTELLE B. FREEDMAN, INTIMATE MATTERS: A HISTORY OF SEXUALITY IN AMERICA (2d ed. 1997) (detailing the history of sexuality in the United States). In the nineteenth century, sexual behavior without the intent of producing children was illegal. *See* Richard Weinmeyer, *The Decriminalization of Sodomy in the United States*, 16 AM. MED. ASS'N J. ETHICS 916, 916 (2014) (discussing the various conduct that fell under nineteenth century "sodomy laws"). These laws encompassed both heterosexual and homosexual nonprocreative sex, despite their primary function in the twenty-first century as weapons against the LGBTQIA community. *See id.* (explaining how laws against nonprocreative sex evolved over time to focus more on same-sex relationships); *see also Why Sodomy Laws Matter*, ACLU, https://www.aclu.org/other/why-sodomy-laws-matter [https://perma.cc/PFR2-ECNQ] (pinpointing the 1960s and '70s as the era when sodomy laws narrowed from "a larger body of law . . . designed to prevent nonprocreative sexuality anywhere" to a surgical strike against homosexual sex).

[23] The most extensive treatment of sexual technologies in the patent system is "American Sex Machines," a book published in the mid-1990s and aimed at educating a general audience. HOAG LEVINS, AMERICAN SEX MACHINES: THE HIDDEN HISTORY OF SEX AT THE U.S. PATENT OFFICE (1996). No law review article has previously discussed sex toy patents in more than passing mention. *See, e.g.*, Jennifer E. Rothman, *Sex Exceptionalism in Intellectual Property*, 23 STAN. L. & POL'Y REV. 119, 151 (2012) ("In the context of IP, even though patent, copyright, and trademark laws have all moved away from the days of denying wholesale protection for objects like sex toys and works and marks that address sexual matter, underlying anti-sex or sex-normative judgments continue to percolate up, particularly in copyright and trademark laws.").

norms of American sexual culture writ large.[24] For example, as marriage rates declined and nonmarital sex became less stigmatized since the 1960s, utility narratives in patent applications connecting sexual technologies and happy marriages also declined. Similarly, as the HIV/AIDS crisis emerged in the 1980s, a significant percentage of pleasure patents emphasized that sexual technologies could be enjoyable components of safer sex practices. And as LGBTQIA communities became increasingly socially accepted in the 1990s, queer sexuality emerged as a frequent theme in pleasure patents.

This Article has important ramifications for the study of both intellectual property and sexuality law. Patents too rarely have been approached through a cultural or sociological lens—in other words, conceived as living texts that embody and feed into the norms of particular social and historical contexts.[25] The pleasure patents that this Article examines provide a diverse and evolving archive of sexual norms that raise numerous questions about the role of patent law and patented technologies within broader ecosystems of gender and sexuality. Moreover, patents—and intellectual property generally—have rarely been the focus of scholars writing about law and sexuality.[26] Several gender and sexuality scholars have indeed critiqued the overall sex negativity of U.S.

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[24] We use "narrative" to describe the themes that emerge from these patent applications, en masse, within and reflective of the legal atmosphere in a given time period. While each patent can be said to contain its own narrative describing the state of the art prior to the invention and the problem the invention solves, this study looks for themes in aggregate, drawing narrative from repetition.

[25] *See* Burk & Reyman, *supra* note 16, at 164 ("[W]e want to consider how the language of patent documents shapes meaning, not simply in the process of technological innovation, but as an artifact of a society that values technological innovation."); Kara W. Swanson, *Patents, Politics and Abortion* 20 (Ne. Univ. Sch. of L., Rsch. Paper 161-2013, 2017), https://ssrn.com/abstract=2337062 [https://perma.cc/9MP5-YEAS] ("[I]ntellectual property law has been resistant to law and society scholarship, and the patent system, perhaps most of all. It is simply assumed to exist in a world apart . . . ." (footnote omitted)). For scholarship that has approached patent law in this manner, see generally MADHAVI SUNDER, FROM GOODS TO A GOOD LIFE: INTELLECTUAL PROPERTY AND GLOBAL JUSTICE (2012); Brian L. Frye, *Invention of a Slave*, 68 SYRACUSE L. REV. 181 (2018); Swanson, *supra* note 17.

[26] The most prominent scholarship focused on the relationship between patent law and sexuality is Kara Swanson's historical excavation of corset patents. *See generally* Swanson, *supra* note 17. Copyright, trademark, and publicity rights have received greater attention for their intersection with questions of sexuality. *See, e.g.*, Ann Bartow, *Copyright Law and the Commoditization of Sex*, *in* DIVERSITY IN INTELLECTUAL PROPERTY: IDENTITIES, INTERESTS, AND INTERSECTIONS 339, 339 (Irene Calboli & Srividhya Ragavan eds., 2015) (discussing the intersection of "copyright law and pornography"); Andrew Gilden, *Sex, Death, and Intellectual Property*, 32 HARV. J.L. & TECH. 67, 81 (2018) (unpacking questions of "public" versus "private" content in the context of sexually explicit content-sharing); Sonia K. Katyal, *Trademark Intersectionality*, 57 UCLA L. REV. 1601, 1621 (2010) (using "Aunt Jemima" maple syrup as an example of the complex blend in trademark law between cultural iconography, social appetite, and corporate value); Rothman, *supra* note 23, at 119 (focusing on "sex exceptionalism" in legal contexts of copyright and trademark); Rebecca Tushnet, *My Fair Ladies: Sex, Gender, and Fair Use in Copyright*, 15 AM. U. J. GENDER SOC. POL'Y & LAW 273, 294 (2007) (noting the Eleventh Circuit Court of Appeals's critical interpretation of a sexually and racially progressive reimagination of the novel *Gone With the Wind* as "attack[ing]" the original book (quoting Suntrust Bank v. Houghton Mifflin Co., 268 F.3d 1257, 1270–71 (11th Cir. 2001))).

law, and have pushed the legal system to more openly embrace the value of sexual pleasure.[27] And although pleasure patents are certainly subject to various forms of feminist critique—a critique we hope this Article spurs—patent law nonetheless remains an area of law that openly and unapologetically confronts the potential social value of sexual pleasure. Sexuality and technology have long been intertwined, and this Article is intended to bring legal scholars in these fields closer together.

Part I sets forth the methodology for our study as well as the results of our close examination of over four hundred pleasure patents.[28] It reveals several themes patentees use to explain the value of their inventions, and it shows how the use of these themes has changed in frequency over time. Parts II and III place our study into a broader legal context. Part II situates pleasure patents within the law of the sex toy, which—unlike patent law—is notable for its long history of prohibition and punishment.[29] Part III situates pleasure patents within the relevant patent doctrines, in particular the rise and fall of the moral utility bar to patentability,[30] a bar remarkably less prohibitory than the laws discussed in Part II. Finally, Part IV provides a series of potential takeaways for intellectual property scholars and for scholars of law and sexuality.[31]

I. PLEASURE AT THE PATENT OFFICE

Notwithstanding a background culture that often vacillates between discomfort and outright hostility to frank discussions of sexuality, the USPTO has issued hundreds of patents for devices and processes designed to bring about sexual pleasure in their users. Our study asks, accordingly, how hundreds of patentees were able to obtain the exclusive rights to make, use, and sell innovations in sexual pleasure-seeking. It closely examines over four hundred pleasure patents and asks how so many patentees have successfully established the utility of sexual technologies and convinced the USPTO that they have made a novel and non-obvious contribution to their fields. This Part first explains how pleasure patents are classified and then describes our study and findings of the pleasure patent class of inventions.

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[27] *See, e.g.*, Susan Frelich Appleton, *Toward a "Culturally Cliterate" Family Law?*, 23 BERKELEY J. GENDER L. & JUST. 267, 328 (2008); Katherine M. Franke, Essay, *Theorizing Yes: An Essay on Feminism, Law, and Desire*, 101 COLUM. L. REV. 181, 205 (2001); Margo Kaplan, *Sex-Positive Law*, 89 N.Y.U. L. REV. 89, 159 (2014). Professors Appleton, Franke, and Kaplan each adopt a fresh perspective within the realm of sex positive legal analysis, to examine and challenge the repercussions of laws and social values that denigrate sexual pleasure. *See infra* notes 231–235.

[28] *See infra* notes 32–119 and accompanying text.

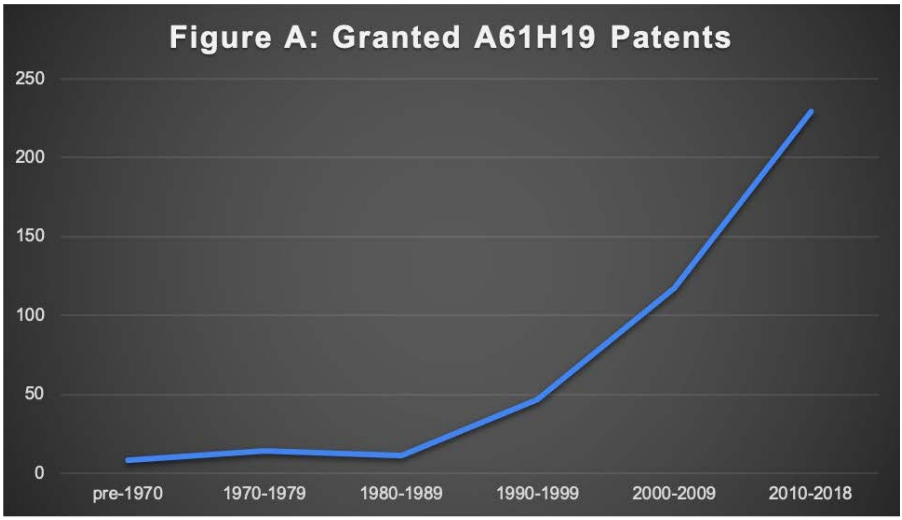
[29] *See infra* notes 120–175 and accompanying text.

[30] *See infra* notes 176–212 and accompanying text.

[31] *See infra* notes 213–245 and accompanying text.

A. Classifying Pleasure

To begin answering these questions, we collected and analyzed 426 granted patents in a specific technology class. The relevant classification for our purposes is "A61H19/00 – Massage for the genitals; Devices for improving sexual intercourse" under the Cooperative Patent Classification System.[32] The dataset includes all patents issued between June 14, 1932—the earliest issue date of any pleasure patent—and December 31, 2018. Although granted patents in this category span nearly ninety years, their quantity has increased substantially in recent decades. As shown in Figure A, below, 8 patents were granted prior to 1970, 14 between 1970–1979, 11 between 1980–1989, 47 between 1990–1999, 117 between 2000–2009, and 229 between 2010–2018.[33]



B. The Study

As the goal of this study was to assess how patentees were able to establish the utility, novelty, and non-obviousness of often-taboo inventions, we focused our attention on the specification portion of the patents. Typically, this portion of the patent application provides a summary of the invention, contextualizes the invention in a relevant field, and poses extant problems within the field that the invention is meant to address. In compiling this dataset, the goal was not to review every patent that might conceivably relate to sexual pleas-

[32] For an overview of the various patent classification systems and the relationship between them, see generally Saurabh Vishnubhakat, *The Field of Invention*, 45 HOFSTRA L. REV. 899 (2017).

[33] *See* Dataset, Andrew Gilden, Assoc. Professor of L., Willamette Univ., Sarah R. Wasserman Rajec, Professor of L., William & Mary L. Sch., Pleasure Patents & Related Historical Data (2021) (on file with the authors) (amassing data on over four hundred sex device patents from 1935 to 2019 as well as demographical data on related topics, such as marriage rates).

ure. Instead the goal was to get a sense of how patentees have described sexual technologies and how those descriptions have changed over time. A dataset comprised of solely A61H19/00-classified patents effectively achieves these goals by only including technologies that are explicitly sexual in purpose and by allowing observation of how patentees describe a relatively circumscribed set of technologies over time. Accordingly, this dataset excludes pharmaceutical and device patents for treating erectile dysfunction (to the extent not also classified as A61H19/00),[34] as well as patents that are classified for a nonsexual purpose, but that might nonetheless be repurposed in sexual ways.[35]

After initially reviewing a sample of approximately fifty patents classified under A61H19/00, we observed several different narratives that applicants used to prove the utility, novelty, and non-obviousness of their inventions—divided according to the Subsections, below. Numerous patentees emphasized that their sexual devices—such as vibrators or dildos—could be used to facilitate happy marriages.[36] Others emphasized therapeutic effects, such as overcoming sexual dysfunction, loneliness, or depression.[37] Still others framed their pleasure devices in terms of promoting sexual abstinence and reducing the spread of Sexually Transmitted Infections ("STIs").[38] More recent patents

[34] *See, e.g.*, *Cooperative Patent Classification: A61F5/41*, U.S. PAT. & TRADEMARK OFF. (Aug. 2021), https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A61F.html#A61F5/41 [https://perma.cc/3CZP-63VY] ("Devices for promoting penis erection."); *Cooperative Patent Classification: A61P15/00*, U.S. PAT. & TRADEMARK OFF. (Aug. 2021), https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A61P.html#A61P15/00 [https://perma.cc/7WNW-738U] ("Drugs for genital or sexual disorders . . . ; Contraceptives."); *Cooperative Patent Classification: A47C15/008*, U.S. PAT. & TRADEMARK OFF. (Aug. 2021), https://www.uspto.gov/web/patents/classification/cpc/html/cpc-A47C.html#A47C15/008 [https://perma.cc/4T8A-2XR7] ("[S]eating furniture . . . for sexual intercourse."); *Cooperative Patent Classification: Y10S5/929*, U.S. PAT. & TRADEMARK OFF. (Aug. 2021), https://www.uspto.gov/web/patents/classification/cpc/html/cpc-Y10S.html#Y10S5/929 [https://perma.cc/T3D9-UUGS] ("Beds . . . [f]acilitating sexual relations."). For a discussion of some of the notable patents excluded from our study, see LEVINS, *supra* note 23, at 117–30.

[35] The most notable technologies excluded from this dataset are the earliest commercial vibrators, which were officially marketed as a treatment for a range of medical needs, even if their sexual potential was an open secret. *See infra* Part III. Although some of the earliest vibrators did receive patent protection, and were upheld in litigation, they are classified as "A61H21/00 Massage devices for cavities of the body, e.g. nose, ears and anus" and are silent as to their commonly sexual purpose. *See, e.g.*, U.S. Patent No. 773,234 (filed Aug. 27, 1903) (issued Oct. 25, 1904); Lambert Snyder Vibrator Co. v. Marvel Vibrator Co., 138 F. 82, 82–83 (C.C.S.D.N.Y. 1905) (upholding the issuance of a vibrator patent).

[36] *See infra* notes 40–65 and accompanying text (discussing sexual devices as a solution to supposed "female frigidity" and facilitating satisfying sex as a means to preserve lasting marriages).

[37] *See infra* notes 66–77 and accompanying text (explaining the health and wellness benefits pleasure devices provide in non-partner sex or self-pleasure activities).

[38] *See infra* notes 78–83 and accompanying text (introducing sex technology as a vehicle for safe sex practices).

focused on the potential to use new technologies to empower historically marginalized groups: women, LGBTQIA people, and people with disabilities.[39]

Following this initial review, we then reviewed the specifications of all 426 patents in the dataset and coded them on the basis of their statements explaining the importance of their inventions—and sexual pleasure more broadly. The authors coded for the following narratives, explained more fully in the Subsections below: marriage; sexual frigidity; unmarried women; STIs; LGBTQIA sexuality; women's empowerment; people with disabilities; nonsexual medical needs; reduction in crime/social ills; and histories of sexual technologies. The authors also coded for the type of technology (dildo, vibrator, suction, artificial intelligence, virtual reality) and date of issuance. What emerged from the review of these patents is a dynamic story about the evolution of sexual norms over the past century. As cultural conversations around sex have shifted, so too have the explicit justifications for granting patents for sexual technologies. The following subsections examine the diverse sexual narratives marshalled by patentees and show how these narratives have ebbed and flowed over time.

1. Frigid Females and Dutiful Wives

In the earliest pleasure patents included in the dataset, patentees often framed their sexual technologies as a means of overcoming a wife's "frigidity" and facilitating sexual intercourse between heterosexual married couples. The term "frigidity" historically has been associated with a broad range of women's aversions to heterosexual, vaginal intercourse—including a perceived lack of emotional warmth, experiences of physical pain, and difficulty or failure to reach orgasm.[40] Throughout the twentieth century, women's frigidity was identified as a major contribution to unhappy marriages.[41] In response, feminist

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[39] *See infra* notes 84–119 and accompanying text (validating pleasure as a worthy justification for sex-related inventions and elevating the importance of pleasure-seeking for all people, including those of underrepresented groups).

[40] *See* Suzanne Laba Cataldi, *Sexuality Situated: Beauvoir on "Frigidity,"* 14 HYPATIA 70, 70 (1999) (using portraits of frigidity as illustrated in the fictional works of Simone de Beauvoir as an avenue to explore frigidity as more than just a physical recoil, but an embodiment of the individual, gender, and social dynamics at play during heterosexual sex).

[41] *See* Katherine Angel, *The History of 'Female Sexual Dysfunction' as a Mental Disorder in the 20th Century*, 23 CURRENT OP. PSYCHIATRY 536, 537 (2010) (describing the rampant misunderstanding during the early-twentieth century surrounding the female sexual experience and its subsequent impact on marital relationships). Since the days of the Napoleonic Code, notions of "impotence, sterility, and frigidity" existed in the penumbra of scientific and medical study. *See* PETER CRYLE & ALISON MOORE, FRIGIDITY: AN INTELLECTUAL HISTORY 40 (2011) (exploring nineteenth-century theories of female and male sexuality). Social and political norms incorporated these conceptions of sexual capacity; for example, the Napoleonic Code expressly permitted annulment for reasons of "impotence," while medical experts understood that "frigidity" in women was a completely different, more amorphous sort of incapacity unrelated to physical abnormality. *Id.* at 40–41.

scholars critiqued efforts to identify, treat, and educate about frigidity for policing women's gender roles and sexual desires.[42]

The pathologization of frigidity, and its connection with heteronormative marriage, appear in numerous patent specifications. For example, U.S. Patent No. 2,024,983 claims a ring-like device that helps stimulate a woman's clitoris during intercourse. The disclosed purpose of the device was "for promoting marital accord between married couples, the object . . . being to provide means for stimulating certain nerves of the female during intercourse, thus tending to overcome frigidity in the wife."[43] The patentee further explained:

> As is well known to the legal and medical professions a considerable number of divorces are caused by alleged frigidity of the wife and many married couples are not in marital accord due to this fact but by the use of this device for stimulating the nerves of and surrounding the clitoris the libido of the wife is increased and thus she is in full marital accord with her husband.[44]

The device heightened sexual pleasure for women during intercourse, but this was not seemingly a sufficient end in and of itself. Instead, clitoral stimulation was framed as a remedy for a woman's medical anomaly and as a means for supporting a key cultural institution.

Other patents repeat this theme. U.S. Patent No. 2,559,059 disclosed a "device[] for promoting marital felicity, and more particularly a device for stimulating the wife during intercourse to overcome shyness and frigidity."[45] By arousing a woman during sexual intercourse, the ring-like rubber device would help her "to overcome her frigidity and to assist her in performing with pleasure her share of this essential marital act."[46] The patent registry discloses a diverse range of technologies that could be used to combat frigidity and promote essential marital acts, including clitoral stimulation rings,[47] vibrating devices,[48] mechanized dildos,[49] and a water-dispensing "relaxation device."[50]

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[42] *See* Carolyn Herbst Lewis, *Waking Sleeping Beauty: The Premarital Pelvic Exam and Heterosexuality During the Cold War*, 17 J. WOMEN'S HIST. 86, 90 (2005) (noting the misguided factors, such as "a mother who was too doting, a father who was too distant, . . . a wedding night that was less than tender," that physicians in the 1950s would associate with female sexual wellness).

[43] U.S. Patent No. 2,024,983 col. 1 ll. 1–6 (filed Sept. 10, 1934) (issued Dec. 17, 1935).

[44] *Id.* at col. 2 ll. 3–10.

[45] U.S. Patent No. 2,559,059 col. 1 ll. 1–4 (filed Oct. 24, 1949) (issued July 3, 1951).

[46] *Id.* at col. 1 ll. 15–18.

[47] *See id.* at col. 1 ll. 53–55 (describing the "ring" shape of the device).

[48] *See, e.g.*, U.S. Patent No. 3,978,851 col. 1 ll. 15–17, 28–29, 31–32 (filed Mar. 31, 1975) (issued Sept. 7, 1976) ("[M]any causes of incompatibility between married couples can be traced directly to apparent sexual deficiencies . . . . [D]octors and other experts have employed various forms of genital stimulation . . . . Such treatments . . . 'train' the sex organs of so called frigid females to function properly.").

Frigidity narratives were highly prevalent among the earliest issued patents in the dataset and became relatively less common as competing sexual narratives emerged and as gender norms evolved. Nonetheless, express references to "frigidity" appear in patents issued within the past decade,[51] and echoes of frigidity narratives have continued even after the term itself has gone out of fashion. For example, U.S. Patent No. 5,620,429 claims a feminine napkin that can be used for "external" sexual encounters for those times, such as during menstruation, when "the wife suffers from the feeling of depression since she cannot satisfy her husband's sexual desire."[52] Additionally, several recent patents refer to treatment of "Female Sexual Dysfunction" or "Female Sexual Arousal Disorders"—conditions included in the Diagnostic and Statistical Manual of Mental Disorders with roots in Freudian concerns with frigidity.[53] As shown in Figure B, below, the rate of frigidity narratives has substantially decreased over time but has not fully disappeared from the discourse of pleasure patents.[54]

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[49] *See, e.g.*, U.S. Patent No. 4,722,327 col. 1 ll. 12–14 (filed May 14, 1987) (issued Feb. 2, 1988) ("There have always been men and women who are or become sexually frigid, impotent, or unable to practice normal sex for one or more reasons.").

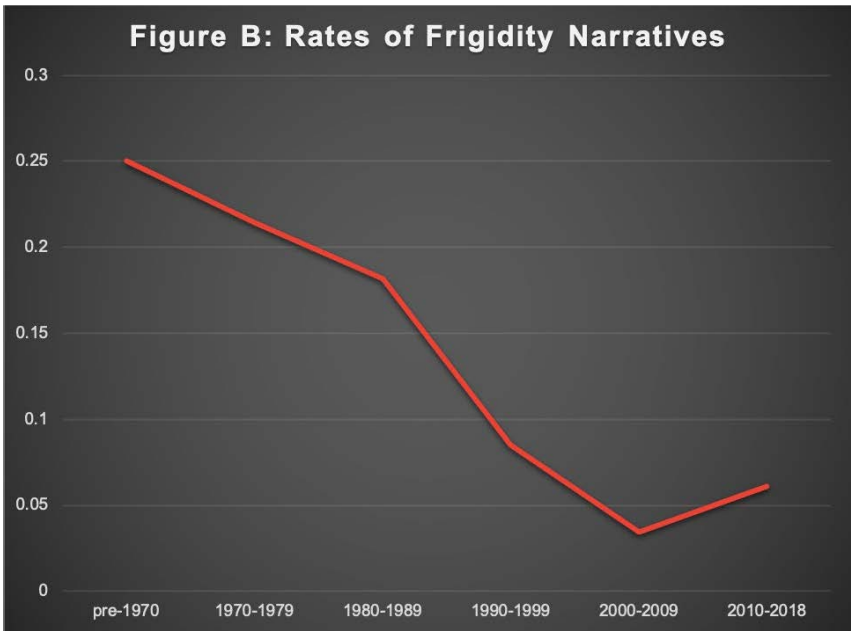
[50] U.S. Patent No. 8,157,724 B2 col. 1 ll. 10–15 (filed May 11, 2007) (issued Apr. 17, 2012) ("Much more, the modern females being independent, the feelings of emptiness and aloneness are formed in the life of the mid-age females as to make the females' emotion bad and worried. Besides, due to the lack of sexual life, the secretion of the female hormone is effected to make the sexual frigidity and the like ascend.").

[51] *See id.*

[52] U.S. Patent No. 5,620,429 col. 1 ll. 28–29 (filed June 22, 1995) (issued Apr. 15, 1997); *see also* U.S. Patent No. 5,067,480 col. 1 ll. 12–14, 16–18 (filed Mar. 8, 1989) (issued Nov 26, 1991) ("[A] large percentage of women do not orgasm regularly during sexual intercourse. . . . For a substantial number of married couples, this can lead to tension and frustration which, in turn, leads to marital discord.").

[53] *See* Angel, *supra* note 41, at 537; *see, e.g.*, U.S. Patent No. 6,741,895 B1 col. 1 ll. 55–59 (filed Oct. 21, 1999) (issued May 25, 2004) ("In a preferred embodiment of the invention, the results of the measurement may be used to diagnose sexual dysfunction, to determine an appropriate pharmaceutical regiment and/or for research into cures for sexual dysfunction."); U.S. Patent No. 7,588,533 B2 col. 1 ll. 29–35 (filed Nov. 23, 2005) (issued Sept. 15, 2009) ("Individuals who have FSAD can include women who are bored of sexual routines, receive inadequate stimulation (because of age or partner), or even have clitoris blood flow or engorgement problems. It is believed that ensuring clitoral tumescence (i.e., engorgement, swelling, and erection) can play an important role in solving FSAD."); U.S. Patent No. 8,715,161 B2 col. 1 ll. 53–57 (filed Jan. 30, 2011) (issued May 6, 2014) ("Further, surveys indicate that ten percent (10%) or more women have never been able to achieve orgasm, either alone, or with a partner. This includes both healthy women, and those with medical conditions, such as Female Sexual Arousal Disorder (FSAD).").

[54] *See* Dataset, *supra* note 33.



2. Happy Marriages

Marriage looms large in pleasure patents. In fifty-two of the patents in the dataset, the patentee expressly linked the disclosed invention with facilitating a successful, happy marriage. Although most of the "frigidity" patents discussed in Subsection 1 emphasize the importance of women's sexual pleasure in fulfilling her expected role within the marital relationship, marriage narratives in the dataset are often far more gender-egalitarian in their emphasis. The institution of marriage is still framed as an unquestionable social good, but pleasurable sex within marriage is framed as both strengthening that institution and improving the happiness of those within it.

Throughout the dataset, happy marriages are deeply entwined with pleasurable sex. For example, U.S. Patent No. 6,866,645 B2 discloses a motorized penetrative device that is "capable of flavoring lives of and building happy families for married couples, thereby making the community more peaceful and harmonious."[55] U.S. Patent No. 3,896,787 discloses a stirrup and shoulder support device to reduce the amount of physical exertion during sex; it emphasizes that "[n]ormal sexual activity between husband and wife in a marital union is a very important ingredient for the promotion of marital accord and the maintaining of the desired compatibility between the parties" and notes that sexual activity "is no less important in a marriage where one of the parties is suffering

[55] U.S. Patent No. 6,866,645 B2 col. 1 ll. 8–10 (filed Jan. 24, 2003) (issued Mar. 15, 2005).

from a disease or a physical impairment."[56] U.S. Patent No. 4,488,541 similarly notes that "[s]exual intercourse is generally regarded as being necessary for the normal enjoyment of life and is particularly important in the maintenance of a happy and healthy relationship being married people"; it discloses a "flexible pubic shield" that will facilitate such marital bliss.[57] On the flip side, without an active, pleasurable sex life, several patents warn of the potential breakdown of the marriage. One patentee noted that "[m]any divorce cases and familial disputes occur during the periods when couples are forced to stop love making,"[58] and another observed that "[w]hile there is controversy on whether high divorce rates can be attributed solely or perhaps even principally to failure to reach an adequate adjustment [to sexual relations], nevertheless there is reason to believe that this is a significant factor in many cases."[59]

It is unsurprising that marriage figures so prominently in pleasure patents. Monogamous intercourse between married adults has long been the gold standard for socially acceptable sexual activity—indeed most other forms of sex have been criminalized at some point in history—and emphasizing the link between marriage and the disclosed technologies might reduce the social stigma around patented dildos, vibrators, pubic shields, body harnesses, and electro-stimulation devices.[60] These technologies can just as easily facilitate masturbation, extramarital sex, and nonprocreative sex as they can promote marital intercourse, but patentees may understandably choose to downplay the former effects and emphasize the latter. Fusing together sexuality with marriage or marriage-like relationships has been a winning legal strategy for protecting nontraditional sexual activity in other contexts,[61] and it appears to have been an effective strategy in the procurement of patents.

What is perhaps more surprising than the quantity of marriage narratives in the dataset is the steep decline of these narratives over time. As shown in Figure C, below, marriage narratives appeared in half of patents issued before 1970, then dropped down to roughly one-third of patents issued in the 1970s and '80s before declining to only five percent of patents issued between 2010–

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[56] U.S. Patent No. 3,896,787 col. 1 ll. 11–14, 15–17 (filed Dec. 18, 1973) (issued July 29, 1975).

[57] U.S. Patent No. 4,488,541 col. 1 ll. 11–14, 63 (filed Dec. 9, 1982) (issued Dec. 18, 1984).

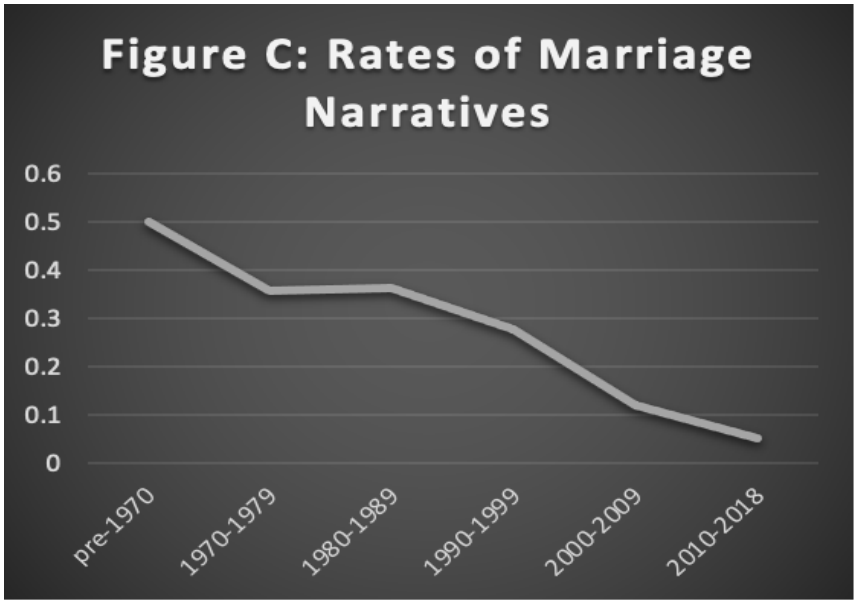
[58] U.S. Patent No. 5,620,429 col. 1 ll. 36–38 (filed June 22, 1995) (issued Apr. 15, 1997).

[59] U.S. Patent No. 3,417,743 col. 1 ll. 34–38 (filed June 23, 1965) (issued Dec. 24, 1968).

[60] *See* LIEBERMAN, *supra* note 18, at 179 ("Doc Johnson marital aids were framed to keep women tightly connected to their male partners. Although it's hard to imagine a nine-inch vibrating dong being bought to improve matrimonial bonds, Doc Johnson's strategy worked.").

[61] *See* Griswold v. Connecticut, 381 U.S. 479, 485 (1965) (holding that Connecticut's ban on contraceptives violated constitutional rights to marital privacy); Dahlia Lithwick, *Extreme Makeover: The Story Behind the Story of* Lawrence v. Texas, NEW YORKER (Mar. 4, 2012), https://www.newyorker.com/magazine/2012/03/12/extreme-makeover-dahlia-lithwick [https://perma.cc/438X-FFJ4] (observing that the decision in *Lawrence v. Texas* "used the word 'relationship' eleven times," even though the individuals prosecuted for sodomy were not actually in a romantic relationship).

2018.[62] Such decline almost certainly reflects changing societal views regarding nonmarital and LGBTQIA sexual activity since the 1970s. But notably, this decrease predates both the demise of the moral utility doctrine[63] in patent law and landmark Supreme Court decisions, such as *Lawrence v. Texas*,[64] involving sexual privacy and same-sex relationships. The patent system certainly contains indicia of traditional sexual morality, but, as discussed further in Part III,[65] it appears to have moved away from such traditional views far more quickly than other areas of law.



3. Living Single

With the gradual decline of marriage in the zeitgeist of patented sex toys, a new problem began to emerge in the 1980s: single people. Whether because of divorce,[66] death, or the unavailability of desirable monogamous partners, thirty-four patents in the dataset observed that the disclosed technologies could

[62] *See* Dataset, *supra* note 33.

[63] *See infra* notes 192–198 and accompanying text (elaborating on the moral utility doctrine's development in U.S. case law); Julien Crockett, Note, *Morality: An Important Consideration at the Patent Office*, 108 CALIF. L. REV. 267, 275 (2020) (defining the moral utility doctrine, rooted in European law, as a criteria for patent approval depending on whether the proposed invention contravened public benefit, law, or accepted morality).

[64] 539 U.S. 558, 558 (2003) (holding that a Texas law criminalizing sex between sex-same couples violated constitutional rights of Due Process under the Fourteenth Amendment).

[65] *See infra* Part III.

[66] Divorce rates in the United States spiked to an all-time high in 1979. *See* Frank Olito, *How the Divorce Rate Has Changed Over the Last 150 Years*, INSIDER (Jan. 30, 2019), https://www.insider.com/divorce-rate-changes-over-time-2019-1 [https://perma.cc/WRJ6-U2F7].

facilitate the sexual pleasure of single people. One patentee noted that "[i]f one is single, the best way to fulfill sexual desire is through various sex toys, which is not only sanitary and convenient, but also results in less complicated sexual issues."[67] Yet another astutely observed, "Dildos enable a person to enjoy penetration without a partner."[68]

Patented sexual devices are presented to both single women and single men as a healthy and satisfying outlet for their sexual desires. For example, U.S. Patent No. 7,513,868 B1 notes that "a great many women simply have no partners and do not wish to subject themselves to potential harm from strangers"; it discloses a U-shaped handle that can be attached "to a variety of intra-vaginal appliances."[69] Another patent discloses a contraption for moving an "artificial penis" along a mechanized rail system; the patentee described the invention as "[a] therapeutic apparatus for relieving sexual frustrations in women without sexual partners" that "simulate[s] the look and feel of an erect human male's penis."[70] U.S. Patent No. 5,725,473 notes, "Women, for one reason or another, are not always successful in finding partners who satisfy their sexual drive."[71] A few issued patents reference the concerns of single men. For example, one patentee noted that its "functional mannequin for use by adult males" could be particularly useful for people who "for whatever reason, do not have access to a human female partner."[72]

Although many patents do carry a message of sexual autonomy and self-gratification, as developed further below, providing sex toys for single people is not entirely divorced from expectations around marriage or compulsory conjugality. Instead of a resource for sexually independent women and men, patented sexual devices are presented as a therapeutic tool for the loneliness and frustration that accompanies being single. One patentee observed, "Much more, the modern females being independent, the feelings of emptiness and aloneness are formed in the life of the mid-age females as to make the females'

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[67] U.S. Patent No. 8,641,599 B2 col. 1 ll. 16–18 (filed Sept. 22, 2010) (issued Feb. 4, 2014).

[68] U.S. Patent No. 7,524,283 B1 col. 1 ll. 32–33 (filed Aug. 30, 2005) (issued Apr. 28, 2009); *see also* U.S. Patent No. 6,592,516 B2 col. 1 ll. 28–30 (filed Oct. 9, 2001) (issued July 15, 2003) ("[A]n unmarried person or a person without any sexual partner can satisfy the personal sexual desire with the sexual delight appliance.").

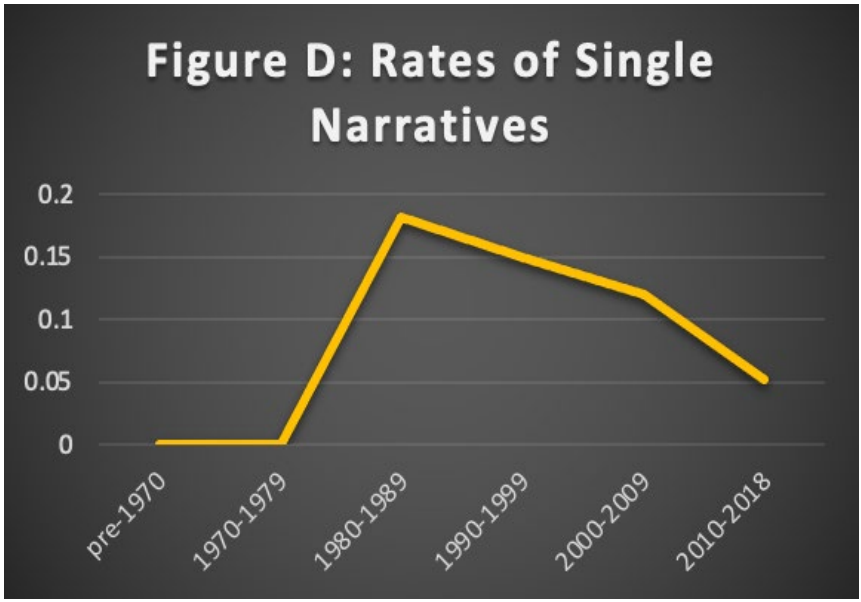
[69] U.S. Patent No. 7,513,868 B1 col. 1 ll. 26–28, 65–67 (filed May 3, 2007) (issued Apr. 7, 2009).

[70] U.S. Patent No. 4,722,327, at [57] (filed May 14, 1987) (issued Feb. 2, 1988).

[71] U.S. Patent No. 5,725,473 col. 1 ll. 37–38 (filed Aug. 28, 1995) (issued Mar. 10, 1998).

[72] U.S. Patent No. 6,179,795 B1 col. 1 ll. 7–8, 18–19 (filed Apr. 26, 1999) (issued Jan. 30, 2001); *see also* U.S. Patent No. 5,466,235 col. 1 ll. 24–29 (filed Mar. 27, 1995) (issued Nov. 14, 1995) ("Such mannequins could also be used by people that are incarcerated within jails. Also, such mannequins could be used by certain individuals within the public such as individuals with certain disabilities or other individuals that, for whatever reason, do not have access to a human female."); U.S. Patent No. 9,492,345 B2 col. 1 ll. 14–17 (filed July 23, 2013) (issued Nov. 15, 2016) ("Prior to the disclosed invention sexual novelties were expensive, not disposable, and heavy, this made sexual pleasure for single men and soldiers challenging. The present invention solves these problems.").

emotion bad and worried."[73] Solitary use of sex toys is rarely framed as a preference, but instead as compensation for the inability to find the ideal, compatible, long-term relationship. As framed by one patentee, "In terms of sexual desire, if one has a stable relationship with another person, he/she can relieve his/her sexual desire and achieve effects of physical and mental health. If one is single, the best way to fulfill sexual desire is through various sex toys . . . ."[74] Solitary, masturbatory uses of sex toys are framed as "a deficiency in sexual life,"[75] suggesting that the utility of the patented devices is to help address the frustration of relying on self-pleasure and the unavailability of a sexual partner.[76] As shown in Figure D, below, narratives surrounding single people and sex toys emerged for the first time in the 1980s, but have gradually decreased ever since.[77]



[73] U.S. Patent No. 8,157,724 B2 col. 1 ll. 10–13 (filed May 11, 2007) (issued Apr. 17, 2012).

[74] U.S. Patent No. 8,641,599 B2 col. 1 ll. 13–17 (filed Sept. 22, 2010) (issued Feb. 4, 2014).

[75] U.S. Patent No. 4,854,303 col. 1 ll. 14–20 (filed Oct. 21, 1987) (issued Aug. 8, 1989) ("According to the investigative report in 'Redbook' three fourths of the 100,000 women interviewed admitted that they had experienced comfort in masturbation. Based upon this it can be concluded that women today are attempting to enjoy such self comfort games. According to a psychologist's study such behavior is due to a kind of compensation for a deficiency in sexual life.").

[76] *See* U.S. Patent No. 6,142,929 col. 1 ll. 7–12 (filed Sept. 10, 1999) (issued Nov. 7, 2000) ("Many women have tried to masturbate and failed because of the same reason that one cannot tickle oneself [sic] This leaves a woman without a partner frustrated and can cause her to seek satisfaction that is not safe, disease free, non impregnating, or is immoral."); U.S. Patent No. 7,166,072 B2 col. 1 ll. 54–56 (filed Aug. 12, 2004) (issued Jan. 23, 2007) ("A vibrator can be used to assist the disabled or elderly to induce orgasms after the death, desertion or lack of capacity or availability of a spouse.").

[77] *See* Dataset, *supra* note 33.

4. Safe Sex Toys

In the 1980s, when the travails of single people emerged in pleasure patents, so did a frequent concern for safe sex practices and avoiding STIs. Part of this concern was likely interrelated with the concerns of unmarried people's sex lives—indeed, nearly half (sixteen) of the patents containing narratives about single people also contained narratives about STIs. Another major impetus for safe sex narratives was almost certainly the HIV/AIDS epidemic and the newly heightened risk of sexual activity. By making available new technologies that facilitated sexual pleasure without the exchange of bodily fluids, patentees were able to respond to changing sexual attitudes and pressing new social anxieties.[78] The AIDS crisis and broader concerns about STI transmission that emerged in the 1980s accordingly provided a new dimension of utility for sexual technologies.

The dataset contained thirty-four patents that expressly reference a concern with STI transmission and/or the AIDS crisis. As US Patent No. 6,142,929 explains, "With A.I.D.S. (Acquired Immune Deficiency Syndrome) and numerous other sexually transmitted venereal diseases so prevalent in today's society, there are considerable risks involved in extramarital sex."[79] With the increased health risks associated with sexual activity—combined with the continued moral stigma around extramarital sex—the sexual ecosystems of the 1980s and '90s were fertile grounds for inventing and selling new sexual technologies. According to one patentee:

> Although condoms have been promoted as one method for protecting oneself against exposure to the A.I.D.S. virus, intercourse utilizing condoms is not 100% safe, even when properly used. The fear of contracting the A.I.D.S. virus, coupled with the inhibiting and perhaps demeaning prospect of asking prospective sex partners about his or her latest sexual contacts, is changing the way many people view their own human sexuality and their relationships with others.[80]

In this view, patented sex toys accordingly could supplant the need for condoms and open communication. As stated by another patentee, "With the onslaught of venereal diseases such as herpes and AIDS, phalluses substitute for

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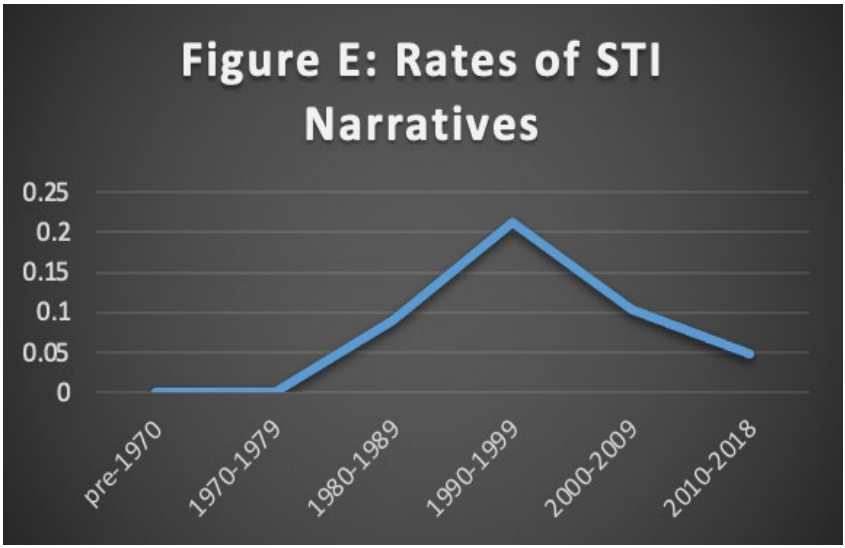
[78] *See* U.S. Patent No. 7,056,281 B2 col. 1 ll. 27–35 (filed May 19, 2004) (issued June 6, 2006) ("The use of phallic devices for obtaining sexual pleasure is gaining popularity along with social acceptance. This increased popularity is due to a number of social and environmental factors including: 1) an increase in sexually transmitted diseases such as AIDS and the like; 2) an increasingly open attitude towards human sexuality within our society; and 3) a desire for couples and people who do not have a sex partner to privately and safely explore a wide variety of sexual experiences.").

[79] '929 Patent col. 1 ll. 16–19.

[80] U.S. Patent No. 4,790,296 col. 1 ll. 28–36 (filed Apr. 10, 1987) (issued Dec. 13, 1988) (disclosing a mechanized penetration device for use with a dildo).

the male reproductive organ as part of safe sex practices."[81] Although a combination of frank communication, condoms, regular testing, and prescription drugs can substantially, if not entirely, reduce the risk of STI transmission, numerous patentees emphasized that their inventions could offer an alternative route to safer sex.[82]

As shown in Figure E, below, the frequency of STI narratives shot up in the 1980s and '90s—reaching 20% of the patents issued in that time period—before declining to roughly 5% in the most recent decade.[83] This may be attributable at least in part to the substantial reduction in HIV/AIDS-related deaths and widespread availability of effective retroviral treatments.



5. Patently Queer

Although many pleasure patents undeniably reinforce traditional sex and gender norms (as well as emphasize the risks of extramarital sex), patentees are increasingly framing sexual technologies in terms of facilitating nontraditional forms of sexual and gender expression. Several patents cite to growing acceptance around non-heterosexual sex, and even expressly place their invention in the context of landmark LGBTQIA rights victories, such as the Su-

[81] U.S. Patent No. 5,127,396 col. 1 ll. 37–39 (filed May 30, 1991) (issued July 7, 1992); *see also* U.S. Patent No. 5,690,604 col. 1 ll. 15–18 (filed Mar. 22, 1996) (issued Nov. 25, 1997) ("Recently, the increase in serious sexually transmitted diseases such as AIDS has made the use of phallic devices even more common because they may be used as a penis substitute in safe sex practices.").

[82] *See, e.g.*, U.S. Patent No. 6,203,491 B1 col. 1 ll. 10–13 (filed May 6, 1999) (issued Mar. 20, 2001) ("The awareness of pervasive sexually transmitted diseases such as AIDS have made the use of adult sex toys more common because they may be used as a sex substitute in safe sex practices.").

[83] *See* Dataset, *supra* note 33.

preme Court's same-sex marriage cases.[84] As shown below in Figure F, although LGBTQIA people were not mentioned in the dataset before the 1990s, narratives around LGBTQIA sex have come to occupy a small but significant portion (seven percent) of the most recently issued pleasure patents.[85]

Several patentees expressly mention that the claimed inventions could improve the sex lives of same-sex couples or facilitate nontraditional gender identities and expression. For example, a patented "machine for achieving sexual satisfaction" was designed for use by "a woman alone; a woman with a male partner; a woman with a female partner; a man alone; or a man with a male partner."[86] Another invention, a novel harness to be worn around the pelvis, was meant to respond to potential "difficulties . . . within female same-sex couples related to difficulty achieving orgasm. . . . For example, during face to face positions . . . ."[87] Some patents expressly mention that they could facilitate the sexual pleasure of transgender people,[88] and others disclose the use of the technologies in gender-nonconforming ways. For example, some patents discuss opportunities for heterosexual men to enjoy the experience of submission

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[84] *See* U.S. Patent No. 9,510,995 B1 (filed Jan. 20, 2016) (issued Dec. 6, 2016) ("Perhaps our [Supreme Court]'s 2015 marriage ruling was a societal milestone regarding prudish 1950s sexual bigotries . . . .") (referring to Obergefell v. Hodges, 576 U.S. 644 (2015)); *see also* U.S. Patent No. 10,206,849 B2 col. 1 ll. 31–34 (filed July 10, 2015) (issued Feb. 19, 2019) (observing that "[s]exual liberation included increased acceptance of sex outside of traditional heterosexual, monogamous relationships (primarily marriage)").

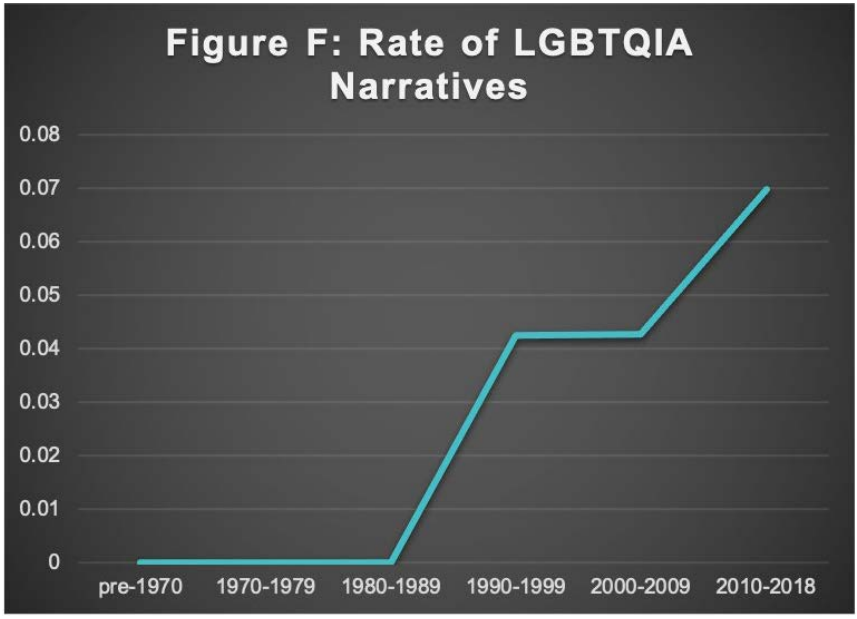
[85] *See* Dataset, *supra* note 33.

[86] U.S. Patent No. 6,142,929 col. 1 ll. 38–41 (filed Sept. 10, 1999) (issued Nov. 7, 2000); *see also* U.S. Patent No. 7,530,944 B1 col. 1 ll. 48–50 (filed Mar. 14, 2008) (issued May 12, 2009) ("A further object of this invention is to provide a device that is capable of being used by partners of the same sex or of the opposite sex.").

[87] U.S. Patent No. 8,109,869 B2 col. 1 ll. 19–23 (filed May 12, 2009) (issued Feb. 7, 2012); *see also* U.S. Patent No. 8,371,999 B2 col 1. ll. 26–34 (filed Sept. 21, 2009) (issued Feb. 12, 2013) ("Modernly, sexual aids have been developed which may be employed by one user or two parties during sexual intercourse between them. . . . Such devices however employ straps and belts and other inconvenient components to remain mounted on the one female while being employed upon the other. They are as such, uncomfortable and inconvenient."); U.S. Patent No. 8,876,695 B2 col. 3. ll. 44–49 (filed Oct. 1, 2010) (issued Nov. 4, 2014) ("The invention can also be used simultaneously by two women sitting across from each other and sliding the dildo to the bottom of the foot-sleeve dildo harness where they can insert the dildo into each other's vaginas, while using their toes for further clitoral stimulation."); '995 B1 Patent col. 3 ll. 47–50 ("And if Jean were, for example, in a lesbian relationship with a girlfriend named Charlene, the present inventions provide a rabbit so Jean will feel (more) pleasure while banging Charlene with the dildo.").

[88] *See, e.g.*, U.S. Patent No. 5,853,362 col. 1 ll. 39–43 (filed June 28, 1997) (issued Dec. 29, 1998) ("Dildos and the related items described above are used by individuals of either sex, by transgendered (sex-changed) persons, and by couples (both heterosexual and homosexual) to give sexual pleasure to each other, either in lieu of or in addition to vaginal/penile or other modes of sexual congress."); U.S. Patent No. 9,101,497 B2 col. 2 ll. 45–50 (filed Apr. 16, 2012) (issued Aug. 11, 2015) ("[A]nother group of individuals who are also reliant on artificial penises are transsexuals or transgendered persons . . . who are unable, either due to medical or financial reasons, to undergo a complete or successful sex reassignment procedure that includes phalloplasty.").

and/or penetration.[89] Another patent, which discloses a pair of pants with an attachment point for a dildo, asserts that the invention might "appeal to a lady who fancies her clitoris and also having a penis."[90] Accordingly, for several patentees, the utility of their claimed inventions is directly tied to changing sex and gender norms and the new opportunities that such societal changes have opened up for queer play, experimentation, and pleasure.



6. Pleasure for Pleasure's Sake

Many of the earliest pleasure patents emphasize that the utility of sexual pleasure lies in its furtherance of socially-valuable activities like successful marriages, reproduction, or public health. In more recent years, however, patentees have increasingly moved away from instrumental understandings of sexual pleasure. Rather than framing sexual pleasure in terms of preventing

[89] *See, e.g.*, U.S. Patent No. 5,993,377 col. 1 ll. 5–8 (filed Jan. 23, 1998) (issued Nov. 30, 1999) ("The present invention is directed toward a sexual aid for increasing the sexual pleasure of both men and women during orgasm and more particularly toward a sexual aid in the form of anal beads . . . ."); U.S. Patent No. 7,056,281 B2 col. 1 ll. 19–21 (filed May 19, 2004) (issued June 6, 2006) ("The phallic device is an elongate object sized and shaped to be inserted into the vagina of a woman and/or the anus of a person.").

[90] U.S. Patent No. 10,123,571 B2 col. 14 ll. 56–57 (filed Apr. 5, 2017) (issued Nov. 13, 2018).

divorces or STIs, patentees tend to gravitate toward presenting sexual pleasure, particularly women's sexual pleasure, as intrinsically valuable.[91]

Numerous patentees have emphasized a growing societal embrace of women's sexual empowerment. As succinctly stated in a patent granted in 2001, "Addressing women's sexuality concerns is no longer taboo."[92] And as women's sexuality becomes less of a taboo topic, the opportunity arises to correct misunderstandings about women's pleasure.[93] For example, one patent introduces its innovation by stating: "A percentage of females are stimulated by vaginal stimulation and others by clitoral stimulation. Presently there are no known devices or male organs that can stimulate both simultaneously and conveniently."[94] Indeed, many patents frankly and explicitly discuss topics such as increasing women's pleasure during masturbation or sexual pleasure after menopause. One patent proposes a "prosthetic device [that] enables women in experimenting and becoming much more open and conversant with midlife mental, physical and sexual sensations and changes in sexual response, allowing certain users to get the most out of 'postmenopausal zest.'"[95] These patents not only cite to these themes of sexual empowerment, but they also explain in a straightforward and thorough manner how the claimed invention interacts with a woman's anatomy.[96] Some adopt a more jocular tone, such as one that

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[91] *See* U.S. Patent No. 6,997,888 B2 col. 1 ll. 15–18 (filed July 8, 2002) (issued Feb. 14, 2006) ("Satisfactory sexual relations are now recognized as a very important part of a healthy lifestyle both with respect to social interactions and with respect to physical well being.").

[92] U.S. Patent No. 6,224,541 B1 col 1 ll. 18–19 (filed Oct. 7, 1999) (issued May 1, 2001); *see also* U.S. Patent No. 6,863,649 B2 col. 5 ll. 23–24 (filed Apr. 25, 2001) (issued Mar. 8, 2005) ("In addition, an object is to improve a feeling of sexual pleasure given to a female.").

[93] *See* U.S. Patent No. 7,166,072 B2 col. 1 ll. 60–65 (filed Aug. 12, 2004) (issued Jan. 23, 2007) ("In the past, vibrators were frequently phallic-shaped to simulate the movement of the husband's sexual organ. This kind of vibrator is possibly the result of male misunderstanding of the process of the female orgasm since direct clitoral pressure is the method of choice for marital orgasmic therapy.").

[94] U.S. Patent No. 8,419,611 B1 col. 1 ll. 30–33 (filed Sept. 24, 2009) (issued Apr. 16, 2013).

[95] U.S. Patent No. 7,527,589 B2 col. 1 ll. 29–33 (filed Nov. 12, 2007) (issued May 5, 2009); *see also* U.S. Patent No. 6,749,557 B2 col. 2 ll. 10–15 (filed Sept. 30, 2002) (issued June 15, 2004) ("[T]he present invention essentially comprises modifications to sex aid systems to provide new and improved systems for use in avoiding irritation or pain during sexual activities or during self stimulated sex activities, while concomitantly increasing the pleasure of the users or user."); U.S. Patent No. 8,033,985 B2 col. 1. ll. 12–16 (filed Sept. 12, 2007) (issued Oct. 11, 2011) ("The present invention relates to a sexual stimulation apparatus . . . designed for use by women to increase their personal comfort when using the sexual stimulation apparatus during masturbation."); U.S. Patent No. 8,512,226 B2 col. 1 ll. 16–19 (filed Dec. 20, 2007) (issued Aug. 20, 2013) ("As the muscles of the vaginal wall lose their tautness and as the vagina enlarges so that vaginal tightness decreases, the female may experience a decrease in sexual satisfaction and sensation.").

[96] *See, e.g.*, U.S. Patent No. 7,081,087 B2 col. 2 ll. 26–29, 33–37 (filed Feb. 5, 2004) (issued July 25, 2006) ("It is further an object of the present invention to provide an improved sexual aid device that can be easily inserted into a selected body cavity and manually self-manipulated when in supine position. . . . The curved portion and the substantially straight portion are structured and arranged such that when the curved portion is inserted within the vagina the straight portion extends in direction towards the user's torso."); U.S. Patent No. 7,335,175 B2, at [57] (filed Dec. 18, 2004) (issued Feb.

claims "there are very few natural penises so talented as to alternatively grow and shrink in length to any substantive degree while inserted in a vagina."[97] But overall, what emerges from the patent database is not just a set of narratives about the intrinsic importance of women's pleasure, but also a fairly detailed education about, potentially, how to bring about such pleasure within women's bodies.[98]

As shown in Figure G, below, sexual empowerment narratives have increased dramatically over the past two decades, appearing in approximately one-third of recently granted patents in the dataset.[99] Sexual empowerment has accordingly emerged as the most prevalent theme around sexual pleasure. This presents a remarkable shift in the narrative emphasis of pleasure patents. The majority of pleasure patents granted before 1980 presented sexual pleasure as solving the societal problems of fragile marriages and/or a women's inability to perform their marital duties. By contrast, pleasure patents granted in the past decade frame sexual pleasure as the goal in and of itself. As the total number of pleasure patents issued per year has skyrocketed since the 1970s (see Figure A), so too has both the number and frequency of patents that emphasize the intrinsic importance of sexual pleasure. As summarized by one patentee, "People are continually striving to devise more creative activities for deriving pleasure. The sexual device industry is fast becoming a significant market

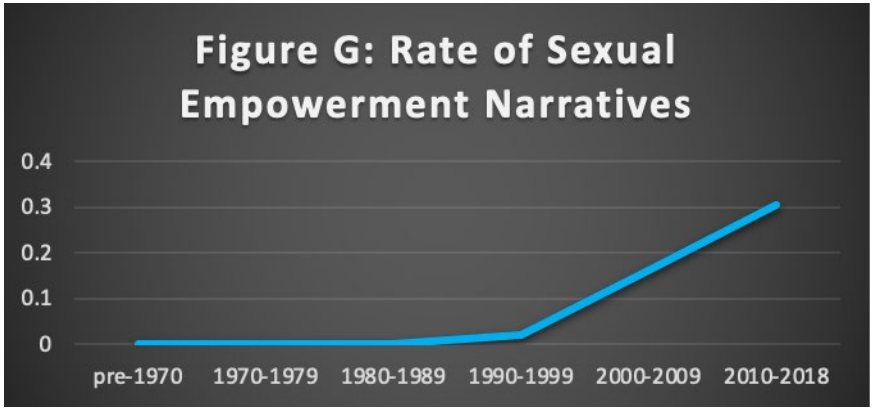
26, 2008) ("A portable hydro massage device for submersion in a body of water containing a female user, i.e. a bathtub, provides a local massage to the labium region and a focused stimulant to the female user's clitoris thereby resulting in a superior sensation to the entire body promoting an overall euphoric state and calming effect.").

[97] U.S. Patent No. 6,902,525 B1 col. 2 ll. 19–21, col. 4 ll. 15–21 (filed Dec. 30, 2003) (issued June 7, 2005) ("For all these reasons there exists a need for a device that provides both rotary and linear reciprocating activation of sexual devices used by both males and females for the purpose of sexual stimulation. Such a device would be desirable only if it could be convenient, simple and safe, easy to handle, light and small, yet powerful and still be modestly priced, rugged, reliable and satisfying.").

[98] *See, e.g.*, U.S. Patent No. 6,179,775 B1 col. 1 ll. 14–20 (filed July 1, 1999) (issued Jan. 30, 2001) ("The clitoris is the female structure analogous to the male penis and is primarily responsible for the female sexual response and her excitation. As with the male penis, the clitoris contains both sensory nerves and erectile tissue. The erectile tissue is responsible for the enlargement of the clitoris, two to four-fold as the clitoris engorges with blood during the arousal phase of female sexual stimulation."); U.S. Patent No. 7,998,056 B2 col. 1 ll. 10–14 (filed Jan. 20, 2005) (issued Aug. 16, 2011) ("It is well known that for women sexual fulfillment in coitus is largely dependent on the state and control of the muscles of the pelvic floor. Various attempts have been made to train these muscles by means of devices which are introduced into the vagina."); U.S. Patent No. 8,579,837 B1 col. 1 ll. 30–35 (filed Apr. 30, 2013) (issued Nov. 12, 2013) ("Clitoral vascular engorgement plays an important role in female sexual desire, arousal and satisfaction. Sexual arousal results in smooth muscle relaxation and arterial vasodilation within the clitoris. The resultant increase in blood flow leads to tumescence of the glans clitoris and increased sexual arousal.").

[99] *See* Dataset, *supra* note 33.

force, and the styles and varieties of sexual aids is limited only by the imagination."[100]



7. Other Notable Narratives (Disability, Medicine, Crime, History)

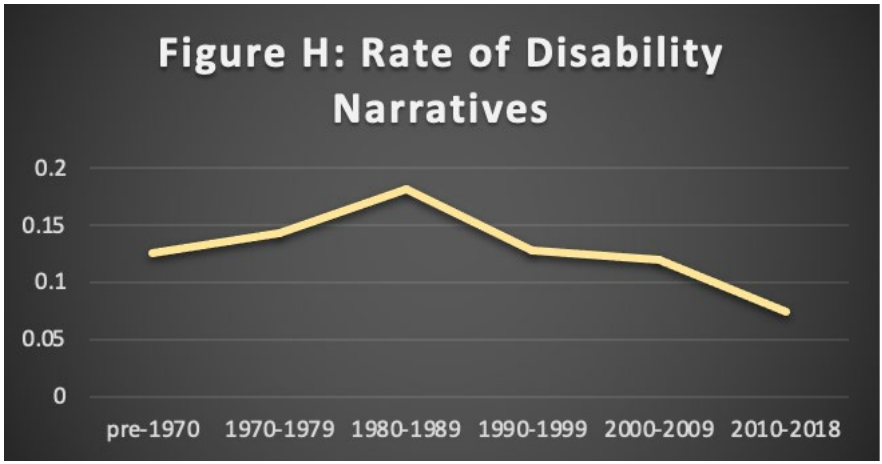
The previous Subsections closely examined prominent sexual narratives that emerged in the dataset as well as their shifting prevalence over time. There are some additional sexual narratives worth noting, but that don't appear to follow any particular changes in social norms over time.

One prominent narrative that surfaced in the dataset concerned the relationship between sexual pleasure and disability. Numerous patents state that they would be useful for improving the sexual pleasure of people with disabilities, in particular where a given physical condition might make it difficult to engage in sexual intercourse or masturbation.[101] U.S. Patent No. 7,452,326 B2 observes that "persons with physical disabilities . . . retain their needs and desires to experience and respond to such non-tactile stimuli in a physical manner. Examples of such experiences and responses include sexual pleasure and

[100] U.S. Patent No. 7,246,781 B2 col. 1 ll. 9–13 (filed Aug. 29, 2003) (issued July 24, 2007); *see also* U.S. Patent No. 9,510,995 B1 col. 1 l. 25 (filed Jan. 20, 2016) (issued Dec. 6, 2016) (asserting in the Field of Art description for "dildo-rabbutt gear for lesbians, pegging and masturbation" that, "[s]ocietal-wise, the Field of Art has become less 'taboo'").

[101] *See, e.g.*, U.S. Patent No. 4,430,990 col. 1 ll. 14–17 (filed May 27, 1982) (issued Feb. 14, 1984) ("Such devices find particular application where one of the partners suffers a physical impairment or limitation which might otherwise inhibit conjugal relations."); U.S. Patent No. 5,538,011 col. 1 ll. 20–23 (filed Jan. 13, 1995) (issued July 23, 1996) ("[L]ittle if any furniture is available to be used by individuals suffering from medical conditions which renders it difficult or impossible to engage in sexual relations in conventional ways."); U.S. Patent No. 5,782,243 col. 1 ll. 17–20 (filed July 25, 1997) (issued July 21, 1998) ("It is also well known that many handicapped individuals desire to be sexually active. Unfortunately, their physical handicaps often limit their sexual activity and the number of positions that may used during sexual intercourse."); U.S. Patent No. 6,691,709 B2 col. 1 ll. 12–15 (filed Dec. 19, 2001) (issued Feb. 17, 2004) (noting that some disabled people may "find difficulty in conjugality at normal physical posture, for example, due to physical defects including armless or legless disability").

gratification."[102] As shown in Figure H, below, such narratives appear relatively constant throughout the time period covered by the dataset, compared with other frequent sexual narratives.[103]



The consistent appearance of disability narratives throughout the dataset might seem surprising. Disability scholars critique the frequent portraits of disabled people as asexual,[104] or incapable of desiring sex;[105] and yet the sexual needs and wants of disabled people appear in seven to eighteen percent of pleasure patents. Nonetheless, such prevalence has a few potential explanations. First, as illustrated in Halle Lieberman's history of the sex toy, disabled people in the 1970s were instrumental in the commercialization of sexual technologies.[106] Second, disability narratives can serve to reinforce other narratives in the dataset. To the extent that disabled individuals are married heterosexuals, the patented inventions can help those disabled individuals meet heter-

[102] U.S. Patent No. 7,452,326 B2 col. 2 ll. 12–18 (filed Oct. 13, 2006) (issued Nov. 18, 2008).

[103] *See* Dataset, *supra* note 33.

[104] *See, e.g.*, Russell Shuttleworth, *Introduction to Special Issue: Critical Research and Policy Debates in Disability and Sexuality Studies*, 4 SEXUALITY RSCH. & SOC. POL'Y 1, 4 (2007) ("[Disabled people] are often infantilized and accorded the same sexual status reserved for children—that is, an asexual one." (citations omitted)); TOM SHAKESPEARE, KATH GILLESPIE-SELLS & DOMINIC DAVIES, THE SEXUAL POLITICS OF DISABILITY: UNTOLD DESIRES 9 (1996) ("The neglect of sexual politics within the disability movement, and its absence within disability literature, mirrors the wider attitudes of society to disabled people's sexuality.").

[105] *See, e.g.*, Alexander A. Boni-Saenz, *Sexuality and Incapacity*, 76 OHIO ST. L.J. 1201, 1220 (2015) (exploring notions of incapacity and sexual consent, and noting that some believe certain "classes[es] of individuals [can be] deemed to lack sexual consent capacity" based on mental health or other disability).

[106] *See* LIEBERMAN, *supra* note 18, at 93 (telling the origin story of Gosnell Duncan, a young man disabled in an accident, spurring inspiration for the unique role of sexual devices for the disabled community).

onormative standards.[107] To the extent that sex toys are framed as medical or therapeutic, disabled people can stand in as individuals who can benefit especially from these innovations.[108] And finally, to the extent that disabled people are using sexual technologies as means of asserting their own sexual agency, these stories dovetail with the empowerment narratives deployed on behalf of women and LGBTQIA people.[109]

Another recurrent narrative involves the history of sex toys. Several patentees place their invention in a long historical line of products used by individuals to bring about sexual pleasure. One patentee emphasizes, "Various types of sexual aids for use in sexual stimulation have been in use since the dawn of man."[110] Another patentee traced sex toys back to ancient Greece and the Upper Paleolithic period.[111] As noted in a patent issued in 1992, "Phalluses (or phalli) have been used as penis substitutes from time immemorial"; for example, "[i]n cultures where hymenal blood was considered evil or dangerous," a young bride's hymen would be "pierced by a substitute for the husband, often a phallus made of stone, metal, ivory or even wood."[112] Although such documentation of the long history of phalluses and other sexual technologies might seem to diminish the novelty and non-obviousness of the claimed invention, these narratives might serve some countervailing functions. First, they might legitimize the field of invention—the relevant art—in the eyes of the USPTO. As some patentees note, this field has been taboo in the United States, but a wider historical lens might make the inventive activity in question seem a little less strange and/or immoral. Second, by providing some historical con-

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[107] *See* Shuttleworth, *supra* note 104, at 2 ("[U]ntil about 20 years ago, disability and sexuality research was focused primarily on the loss of sexual function by White heterosexual men who became impaired in early to middle adulthood . . . . Obscured behind the aura of science were racist, masculinist, and heterosexist biases that reflected an obsession with recuperating the lost phallic power of the majority.").

[108] *See* Carol Gill, Commentary, *Disability and Sexuality Research: Suffering from a Case of the Medical Model*, DISABILITY STUD. Q., Summer 1989, at 12, 14 (directing inquiries for future research on how to improve "sexual fulfillment and minimize barriers to intimacy" for disabled people during sex).

[109] *See* Russell P. Shuttleworth, *Disability and Sexuality*, *in* SEXUAL INEQUALITIES AND SOCIAL JUSTICE 174, 192 (Niels Teunis & Gilbert H. Herdt eds., 2007) (suggesting "a strong coalition between feminists, the gay, lesbian, bisexual, and transgender movement, and disabled people—a coalition that contests narrow and binary constructions of sexual and gender identity").

[110] U.S. Patent No. 7,513,868 B1 col. 1 ll. 13–14 (filed May 3, 2007) (issued Apr. 7, 2009); *see also* U.S. Patent No. 8,371,999 B2 col. 1 ll. 21–23 (filed Sept. 21, 2009) (issued Feb. 12, 2013) ("Sexual aids for increasing and inducing sexual pleasure have been known and employed in different cultures for hundreds of years.").

[111] U.S. Patent No. 9,498,404 B2 col. 1 ll. 42–44 (filed Sept. 26, 2013) (issued Nov. 22, 2016).

[112] U.S. Patent No. 5,127,396 col. 1 ll. 9–15 (filed May 30, 1991) (issued July 7, 1992); *see also* U.S. Patent No. 5,993,377 col. 1 ll. 10–13 (filed Jan. 23, 1998) (issued Nov. 30, 1999) ("Anal beads, per se, have been known and used for many centuries as a sex aid to increase sexual pleasure. While no one, of course, knows for certainty, the common belief is that such devices originated with the ancient Chinese.").

text, patentees can emphasize that there really is a problem to be solved; for centuries, inventors have tried to improve sexual pleasure (for a variety of reasons), yet there remain significant barriers to sexual pleasure for many people.[113]

A third narrative connects sexual pleasure to a range of seemingly disconnected social activities—most notably: crime. Several patents argue that through the use of sex toys, individuals can obtain a safe and lawful sexual release, leading to a reduction in sexual assault and prostitution.[114] Through increasing sexual pleasure, patentees accordingly improve the emotional well-being of individuals who might otherwise engage in a range of socially reprehensible or criminal activities. This narrative therefore presents a highly instrumental approach to sexual pleasure.

Finally, numerous patents subsume sexual pleasure within medical narratives. Rather than place sexuality front and center with respect to a device that massages the genital area, patentees present their inventions primarily as a way of addressing nonsexual medical needs, such as urinary incontinence.[115] Although it is likely that many of these patentees really are primarily concerned with alleviating incontinence, it is also highly likely that the patentee is trying to bury the sexual possibilities of the vibrator or phallus in question. This medical subterfuge might be deemed a "Sharper Image" approach to sexual technologies—obviously sexual vibrators are marketed as "personal massagers"

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[113] *See* LIEBERMAN, *supra* note 18, at 124 (describing how sex toy sellers in the 1970s included "a concise history of sex toys" in product catalogs).

[114] *See, e.g.*, U.S. Patent No. 6,592,516 B2 col. 1 ll. 30–38 (filed Oct. 9, 2001) (issued July 15, 2003) ("If it is viewed from the positive significance, the sexual delight appliance can eliminate the sex drive of the youngster and decrease the occurrence of sexual crime . . . . Thus, the police departments in each country have not looked up the sexual delight appliance as a salacious article gradually."); U.S. Patent No. 7,753,895 B2 col. 1 ll. 22–27 (filed Aug. 6, 2007) (issued July 13, 2010) ("Simple sperm collecting apparatuses . . . can satisfy various social needs, such as prevention of sex-related crimes [and] antiprostitution activities . . . ."); U.S. Patent No. 6,179,774 B1 col. 1 ll. 22–25 (filed Apr. 20, 1999) (issued Jan. 30, 2001) ("Such individuals need a convenient, portable, easy to use means of partnerless sexual release, thereby preventing the urges to engage in unsafe or even possibly illegal sexual activity.").

[115] *See, e.g.*, U.S. Patent No. 4,881,526 col. 1 ll. 8–10 (filed May 27, 1988) (issued Nov. 21, 1989) ("The present invention relates generally to apparatus for intravaginal stimulation for use in the therapy of female urinary incontinence."); U.S. Patent No. 6,030,338 col. 2 ll. 61–66 (filed May 14, 1998) (issued Feb. 29, 2000) ("In accordance with the present invention, there is provided an external exercising device which is positionable upon the crotch of a patient to identify target muscle groups responsible for fecal and/or urinary continence and provide a signal to the patient to perform the appropriate muscle strengthening exercises therefor."); *see also* U.S. Patent No. 3,547,102 col. 1 ll. 9–13 (filed Oct. 28, 1968) (issued Dec. 15, 1970) ("In many branches of scientific research, including veterinary medicine, and clinical medicine, it is necessary to collect and diagnose sperm and post-ejaculatory urine. Recent medical research has shown the use of sperm to have therapeutic properties in the treatment of cancer."); U.S. Patent No. 4,033,338 col. 1 ll. 19–23 (filed June 4, 1976) (issued July 5, 1977) ("It is an object of the present invention to provide a vacuum cleaning device having an intake portion proportioned for insertion into the vaginal tract and configured for removing debris from the walls of the vagina.").

with potential to reduce tension in any part of the body.[116] As discussed below, the Sharper Image approach was dominant in both the patenting and marketing practices of the earliest vibrators released at the turn of the twentieth century,[117] and medicalization narratives have been central to constitutional challenges to sex toy prohibitions.[118] Given how strategically useful these medicalization narratives have been in other areas,[119] it is unsurprising to see such narratives deployed in favor of patenting. What is perhaps more surprising is just how many patents do *not* rely on the medical or therapeutic potential of sexual technologies, but instead place these technologies into a broad, diverse ecosystem of sexual possibilities.

II. PLEASURE PATENTS AND THE LAW OF THE SEX TOY

Outside of patent law, much of the legal system has been overtly hostile toward technologies that facilitated nonprocreative, nonmarital sex. Since at least the mid-1800s, such devices—now colloquially referred to as "sex toys"—were treated harshly by the federal, state, and local legal systems. Sex outside of marriage—including masturbation—was frequently unlawful in this period, and sex toys were often intricately linked with such illegal sex acts. This Part provides an overview of the laws governing sex toys from the mid-1800s until the present day. In doing so, it highlights how historically anomalous pleasure patents are, not just within the field of patent law, but within the U.S. legal system more broadly.

The first prominent legal battles over sex toys emerged following the discovery of vulcanized rubber in the mid-1800s and the proliferation of rubber goods that followed in the late-nineteenth century. Vulcanized rubber permitted the first commercially viable condoms and pessaries, and lent itself well to sex toys like dildos and clitoral stimulators.[120] This era also saw the emergence of an anti-vice movement within the United States, and the enactment of so-called Comstock laws—obscenity statutes named for anti-vice crusader and U.S.

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[116] *See* LIEBERMAN, *supra* note 18, at 273 (recounting a scene in the television show *Sex and the City* where Samantha tries to return her vibrator to Sharper Image, but is informed by the manager that Sharper Image doesn't sell "sex toys").

[117] *See id.* at 178 ("[G]iving sex toys a medical sheen is an old American tradition dating back to the 19th and early 20th centuries when butt plugs, vaginal dilators, and vibrators had been sold as medical devices as a way to get around obscenity prosecutions.").

[118] *See infra* Part III.

[119] *See* Susan Reid, *Sex, Drugs, and American Jurisprudence: The Medicalization of Pleasure*, 37 VT. L. REV. 47, 49, 51 (2012) (endorsing an individual rights-based legal strategy rooted in the "health-related" aspects of pleasure-seeking to overcome the recognized state interest in advancing public morality).

[120] *See* LEVINS, *supra* note 23, at 69–74; LIEBERMAN, *supra* note 18, at 28; AMY WERBEL, LUST ON TRIAL: CENSORSHIP AND THE RISE OF AMERICAN OBSCENITY IN THE AGE OF ANTHONY COMSTOCK 78 (2018).

Postal Inspector Anthony Comstock.[121] Although the primary focus of the anti-vice crusade was pornographic books, photographs, and illustrations, suppressing sex toys was also an integral part of the Comstock agenda. In 1868, New York enacted an obscenity statute that prohibited a litany of "obscene and indecent" materials, including "Articles of Indecent or Immoral Use" as well as the advertisements that facilitated their sale.[122] In 1873, Congress enacted the Comstock Act, a similar law that prohibited the mailing of these indecent and immoral articles.[123] In a speech on the floor of the U.S. House of Representatives, Representative Clinton Merriam observed that "wherever these books go . . . there you will ever find, as almost indispensable, a complete list of rubber articles for masturbation or for the professed prevention of conception."[124] Indeed, by the time Congress passed the Comstock Act, Comstock himself had seized a large number of rubber dildos, including twelve molds from a single individual "whose principal business was the manufacture of the articles for self-pollution, for use by females."[125] Comstock observed, "The extent to which articles for self-pollution are proved to be manufactured suggests a phase of depravity heretofore little suspected."[126] By 1874, Comstock had already seized "60,300 articles made of rubber for immoral purposes."[127] Comstock laws were enforced against the interstate distribution of sex toys until the late-twentieth century and remain on the books to this day.[128]

Against the backdrop of the Comstock laws, it may seem surprising that the turn of the twentieth century saw the proliferation and widespread promotion of

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[121] *See* WERBEL, *supra* note 120, at 51–52 ("Since childhood, Comstock had seen himself as a "Soldier of the Cross" . . . . [His] first foray into cleaning up [New York]'s gargantuan vice industry occurred as early as 1868 . . . ."); *see also* Anthony Comstock, *Vampire Literature*, 153 N. AM. REV. 160, 167 (1891) ("It seems exceedingly fitting just at this time, when there are so many of these cheap novels . . . that we should consider not only the effects of this sensual matter upon the twenty millions of youth in this country, but also the legal principles which govern this very important subject.").

[122] WERBEL, *supra* note 120, at 54–55, 67–68 (prohibiting "any obscene and indecent book, pamphlet, paper, drawing, painting, lithograph, engraving, daguerreotype, photograph, stereoscopic picture, model, cast, instrument or article of indecent use, or articles of medicines for the prevention of conception or procuring of abortion" (quoting Act of Apr. 28, 1868, ch. 430, 1868 N.Y. Laws 856)).

[123] Comstock Act, ch. 258, 17 Stat. 598 (1873); WERBEL, *supra* note 120, at 67–68.

[124] Cong. Globe, 42d Cong., 3d Sess. 168 (1973); *see* WERBEL, *supra* note 120, at 68 (discussing the significance of the law as the first to explicitly prohibit "lustful arousal outside of marriage").

[125] WERBEL, *supra* note 120, at 77 (quoting Private and Confidential Report, Bd. of Dirs., YMCA (Nov. 21, 1872) (on file with YMCA Greater N.Y., Kautz Fam. archive)).

[126] *Id.* at 78 (quoting Private and Confidential Report, *supra* note 125).

[127] *Id.* at 90 (internal quotations omitted) (citation omitted); *see also* LEVINS, *supra* note 23, at 74–77.

[128] *See* 18 U.S.C. § 1461 ("Every article or thing designed, adapted, or intended for producing abortion, or for any indecent or immoral use . . . [i]s declared to be nonmailable matter and shall not be conveyed in the mails or delivered from any post office or by any letter carrier."); *id.* § 1465 (Whoever knowingly produces with the intent to transport, distribute, or transmit in interstate or foreign commerce . . . any other matter of indecent or immoral character, shall be fined under this title or imprisoned not more than five years, or both.").

another device that is now closely associated with so-called self-pollution: the vibrator. Following advances in electrical engineering and increased deployment of home electricity, electric vibrators were advertised in a variety of mainstream commercial offerings, including the Sears & Roebuck Catalog.[129] Although the sexual possibilities of the vibrator were perhaps an open secret, vibrators evaded the scorn of law enforcement because providers presented them to the public as a potential treatment for a wide range of ailments.[130] In other words, the Sharper Image strategy deployed in some pleasure patents long predates the Sharper Image catalog itself. For example, one vibrator advertisement touted "Vibratory Massage for every Member of the Family," and recommended the vibrator "to beautify the complexion, remove wrinkles, develop and strengthen the tissues, and by naturally stimulating the circulation invigorate the system, quicken the pulse, tone the muscles, stimulate the brain and bring about that delightful sensation of renewed energy that is necessary for an active, useful, happy life."[131] Vibrators were marketed as "Aids That Every Woman Appreciates," alongside sewing machines and meat grinders.[132] As to more explicit sexual use, some researchers argue that doctors during the early-twentieth century commonly used electric vibrators to treat "hysteria"—a condition closely historically connected to women's supposed "frigidity"[133]—by stimulating orgasms in female patients; other researchers, however, question the prevalence of this practice.[134] Yet by the 1930s, the appearance of vibrators in pornographic films cemented their association with sex, causing the commercial sales and advertising of vibrators to dissipate, at least until the 1960s. Even today, the most mainstream electronics companies, like Hitachi and Sharper Image, market popular vibrators as all-purpose "personal massage[]" devices, rather than embrace the obvious connection to sex.[135]

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[129] *Vibrators Were Sold in the Sears & Roebuck Catalogue*, FORGOTTEN HIST. BLOG, https://forgottenhistoryblog.com/vibrators-were-sold-in-the-sears-roebuck-catalogue/ [https://perma.cc/35AH-UH2P] (displaying images of old vibrator advertisements).

[130] *See* LIEBERMAN, *supra* note 18, at 32 (confirming that in the nineteenth century "companies marketed [vibrators] as medical and household appliances").

[131] *Vibrators Were Sold in the Sears & Roebuck Catalogue*, *supra* note 129.

[132] *See 11 Vintage Vibrator Ads to Make You Glad You Didn't Live Back Then*, VINTAGE EVERYDAY (Apr. 27, 2017), https://www.vintag.es/2017/04/11-vintage-vibrator-ads-to-make-you.html [https://perma.cc/5PBV-SMSV] (advertising one vibrator saying, "[w]hen you're fatigued, 'out of sort,' have a nervous headache or a touch of rheumatism, you will find electric massage a wonderful help").

[133] *See, e.g.*, Cecily Devereux, *Hysteria, Feminism, and Gender Revisited: The Case of the Second Wave*, ENG. STUD. CAN., Mar. 2014, at 19, 19–20 (noting that these female-specific conditions were often cited as "'evidence' of both the instability of the female mind and the social function of women defined in relation to their reproductive capacity").

[134] *See* Hallie Lieberman & Eric Schatzberg, *A Failure of Academic Quality Control:* The Technology of Orgasm, 4 J. POSITIVE SEXUALITY 24, 25 (2018) (asserting that there is "no evidence" of doctors employing electric vibrators to incite female orgasm as a valid medical technique).

[135] *See, e.g.*, *Our Story . . .*, MAGIC WAND, https://magicwandoriginal.com/ [https://perma.cc/MCE2-Z2WD] (displaying a vibrator advertisement); *Personal Massagers*, SHARPER IMAGE, https://

In the 1960s and '70s, advances in latex production and an emergent sexual revolution created an atmosphere ripe for the production and sale of dildos, vibrators, and a wide range of other sexual apparatuses—a cultural and commercial environment reflected in our study of pleasure patents. The broader legal landscape, however, remained an obstacle for the growing sex toy market.[136] Obscenity laws from the Comstock era remained on the books and enabled seizure of these allegedly obscene devices by law enforcement. For example, in 1969, in *People v. Clark*, the Criminal Court of the City of New York held that "a realistic, rigid plastic replica of the male organ in a state of erection commonly known as a 'dildo'" was obscene under both state and federal obscenity laws.[137] In 1962, in *United States v. Gentile*, the U.S. District Court for the District of Maryland similarly found that the sale of rubber penile "extensions" violated federal obscenity laws; these extensions were "designed and adapted for indecent and prurient use in stimulating desire for such intercourse, that they [went] substantially beyond customary limits of decency."[138] In 1970, Congress passed the Postal Reorganization Act containing an anti-pandering law that allowed anyone in receipt of a mailed advertisement they considered "erotically arousing or sexually provocative" to report it to the post office and request that a "prohibitory order" be sent to the mailer.[139] Notably, none of these federal interventions acknowledged the growing body of federally-incentivized sexual technologies, and none of the pleasure patents acknowledge this parallel legal universe.

As the number of inventors seeking and obtaining nationwide property rights in sexual technologies grew, local, state, and federal law enforcement undertook concerted efforts to shut down commerce in sex toys. The New York Police Department, for example, regularly surveilled sex shops, seized mer-

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www.sharperimage.com/si/view/category/Personal+Massagers/301022?mainCatId=100023 [https://perma.cc/6HH5-NLZA] (same).

[136] *See* LIEBERMAN, *supra* note 18, at 42–43 (recognizing that "[i]n America in the 1960s, a person couldn't legally send contraceptives . . . through the mail" and even birth control was only available to married women).

[137] 304 N.Y.S.2d 326, 328, 329 (Crim. Ct. 1969); *see also* People v. Buckley, 320 N.Y.S.2d 91, 96–97 (Crim. Ct. 1971) ("The sale of the varied sex articles and devices, and particularly those devices known as 'dildoes,' has been held to constitute prohibited 'obscene material' . . . . Advertisements, both graphic and written (both are contained in the accused material) offering for sale such articles and devices also constitute 'obscene material' within the ambit of the laws' prohibitions and are violative of such laws . . . ."), *aff'd mem.*, 340 N.Y.S.2d 191 (App. Term 1972) (per curiam), *aff'd sub nom.* People v. Heller, 307 N.E.2d 805 (N.Y. 1973) (citations omitted).

[138] 211 F. Supp. 383, 386 (D. Md. 1962).

[139] Postal Reorganization Act, Pub. L. No. 91-375, 84 Stat. 748 (1970) (codified at 39 U.S.C. § 3008(a)); *see* Rowan v. U.S. Post Off. Dep't, 397 U.S. 728, 733–34 (1970) (discussing the congressional intent and legislative developments surrounding anti-pandering laws); *see also* LIEBERMAN, *supra* note 18, at 101.

chandise, and prosecuted their purveyors.[140] The Federal Bureau of Investigations (FBI) aggressively pursued the largest national distributors of sex toys and brought obscenity charges in multiple culturally conservative jurisdictions.[141] Then in 1973, the Supreme Court handed down a decision on obscenity law in *Miller v. California*[142] that seemed to carve out space for the growing social acceptability of sex toys. But with this apparent carveout, the Court emphasized that courts should assess potentially obscene materials according to local, as opposed to national, "contemporary community standards."[143] This interpretation enabled the FBI to pursue obscenity charges in conservative jurisdictions like Kentucky, North Carolina, and Utah, and shut down national distributors of sex toys by focusing its energy on the most prudish links in the distribution chain.[144] Even if some of these obscenity prosecutions were unsuccessful, they nonetheless had the effect of substantially raising the costs of doing business in markets for sexual materials.[145] These concerted federal efforts to shut down interstate commerce in sexual materials continued into the 1990s, when courts finally started to push back on First Amendment grounds.

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[140] *See* Black Jack Distribs., Inc. v. Beame, 433 F. Supp. 1297, 1305–06 (S.D.N.Y. 1977) ("Defendants herein are admittedly trying to drive plaintiffs out of business, and plaintiffs' employees have been detained in jail overnight without apparent reason."); *see also* Krahm v. Graham, 461 F.2d 703, 705, 709 (9th Cir. 1972) (granting an injunction against pending and future prosecutions where adult bookstore owners and employees had been the subject of more than one hundred prosecutions within a two-year period); Mia. Health Studios, Inc. v. City of Mia. Beach, 353 F. Supp. 593, 595 (S.D. Fla. 1973) (observing that plaintiff's premises had been subjected to ten "raids" in a four-and-a-half month period and that police officers announced that they would continue until the employees quit and the business closed), *vacated*, 491 F.2d 98 (5th Cir. 1974).

[141] *See, e.g.*, PHE, Inc. v. U.S. Dep't of Just., 743 F. Supp. 15, 18 (D.D.C. 1990) ("Beginning after the search of plaintiffs' premises and continuing through 1986, the defendants made clear that PHE, Harvey, and other individuals associated with PHE would be prosecuted in multiple jurisdictions across the United States unless plaintiffs agreed to substantially curtail what they contend are their constitutionally protected expressive activities nationwide, and to go out of business entirely in Utah."); United States v. Pryba, 674 F. Supp. 1518, 1518 (E.D. Va. 1987) (determining whether a chain of retail video stores selling purportedly "obscene" movies and media constituted an "enterprise" for the purposes of federal RICO statutes); *see also* LIEBERMAN, *supra* note 18, at 165.

[142] 413 U.S. 15, 24–25 (1973) (articulating three guidelines for determining when state laws are permissible regulations of obscene materials: "(a) whether the average person, applying contemporary community standards would find that the work, taken as a whole, appeals to the prurient interest; (b) whether the work depicts or describes, in a patently offensive way, sexual conduct specifically defined by the applicable state law; and (c) whether the work, taken as a whole, lacks serious literary, artistic, political, or scientific value" (internal quotation marks and citations omitted)).

[143] *See* Debra D. Burke, *Cybersmut and the First Amendment: A Call for a New Obscenity Standard*, 9 HARV. J.L. & TECH. 87, 109 & n.126 (1996) (citing *Miller*, 413 U.S. at 32).

[144] *See* United States v. P.H.E., Inc., 965 F.2d 848, 850 (10th Cir. 1992) (outlining the FBI's "coordinated, nationwide prosecution strategy against companies that sold obscene materials"); *PHE, Inc.*, 743 F. Supp. at 18 (discussing the multijurisdictional strike from federal agents against associates of PHE); *see also* LIEBERMAN, *supra* note 18, at 164; Clay Calvert, *The End of Forum Shopping in Internet Obscenity Cases? The Ramifications of the Ninth Circuit's Groundbreaking Understanding of Community Standards in Cyberspace*, 89 NEB. L. REV. 47, 56 (2010).

[145] *See* LIEBERMAN, *supra* note 18, at 248–50, 263–65.

Several courts bristled at federal efforts to interrupt the sale not just of sexual materials that were legally obscene, but also sexual materials that were protected by the First Amendment.[146]

Although the federal war on sex toys appears to have largely subsided, several states nonetheless have launched their own initiatives to criminalize the sale and distribution of sex toys. During 1970s, '80s, and '90s, eight states and several municipalities amended their obscenity laws to, for the first time, expressly set forth the illegality of sex toys. Thus, even if the federal government granted market exclusivity to sexual devices, it would be unlawful for the patentee to exploit this market in numerous states. For example, Texas, Kansas, and Colorado have defined an "obscene device" as "a device including a dildo or artificial vagina, designed or marketed as useful primarily for the stimulation of human genital organs."[147] Many of these laws have been challenged as unconstitutional, and courts' divergent treatment of these laws bears closer attention in light of our study.

Sexual device statutes in Georgia, Mississippi, and Texas have all been upheld by state courts as valid enforcements of public morality.[148] In 1999, in *Williams v. Pryor*, the U.S. District Court for the Northern District of Alabama, in upholding Alabama's sexual device statute, accepted as a legitimate government objective, "[b]anning 'the commerce of sexual stimulation and autoeroticism, for its own sake, unrelated to marriage, procreation[,] or familial relationships."[149] Moreover, in 2007, in *Williams v. Morgan*, a subsequent appeal in the case's lengthy procedural history, the U.S. Court of Appeals for the Eleventh Circuit upheld the statute notwithstanding testimony presented to the district court that some customers "use these [prohibited] products to avoid the possibility of sexually transmitted diseases"; some "use the products to better stimulate intimate relationships with partner"; some "to achieve sexual satisfaction not otherwise available to them"; some "for temporary or long-term

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[146] *See PHE, Inc.*, 743 F. Supp. at 25 ("Plaintiffs' factual showing[s] . . . demonstrate a substantial likelihood of success on the merits of their claim that defendants' conduct constitutes bad faith calculated to suppress plaintiffs' constitutional rights.").

[147] COLO. REV. STAT. § 18-7-101(3) (2022); KAN. STAT. ANN. § 21-4301(c)(1)(C)(3) (repealed 2011); TEX. PENAL CODE ANN. § 43.21(a)(7) (West 2021), *held unconstitutional by* Reliable Consultants, Inc. v. Earle, 517 F.3d 738 (5th Cir. 2008).

[148] Yorko v. State, 690 S.W.2d 260, 266 (Tex. Crim. App. 1985) (en banc) ("[T]he rationale justifying the State's exercise of the police power against obscene expression—that is, the protection of the social interest in order and morality—also justifies the State in criminalizing the promotion of objects designed or marketed as useful primarily for the stimulation of human genital organs."); Sewell v. State, 233 S.E.2d 187, 189 (Ga. 1977), *appeal dismissed*, 435 U.S. 982 (1978) (rejecting the argument that sex-related devices constitute "protected expressions under the First and Fourteenth Amendments"); PHE, Inc. v. State, 2003-CA-00456-SCT (¶ 19) (Miss. 2004), 877 So. 2d 1244, 1250 (deducing that because the state statute prohibits selling sex devices, the advertisement of those devices cannot be "protected speech" under the Constitution).

[149] Williams v. Pryor, 41 F. Supp. 2d 1257, 1287 (N.D. Ala. 1999) (alteration in original) (emphasis omitted), *rev'd on other grounds*, 240 F.3d 944 (11th Cir. 2001).

sexual satisfaction when a partner is not otherwise available"; and some are "referred to the store by therapists treating them for sexual dysfunction or marital problems."[150] In other words, the Eleventh Circuit rejected arguments about the social utility of sex toys that were nearly identical to those found satisfactory by the Patent Office.

Moreover, even though the Supreme Court had recognized a constitutional right to use contraceptives in the context of nonprocreative, nonmarital sex[151] and had protected the intimate decision to have nonprocreative sex with people of all genders,[152] these courts refused to hold that a ban on selling sex toys triggered any constitutionally protected interest in sexual pleasure.[153] Several scholars have lamented that questions of sexual pleasure have been almost entirely missing from U.S. law, notwithstanding legal decisions ostensibly recognizing and protecting sexual freedoms.[154] In the absence of any constitutionally-protected interest in sexual pleasure for its own sake, law enforcement has undertaken numerous undercover sting operations pursuant to sexual device

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[150] 478 F.3d 1316, 1324 (11th Cir. 2007); *Williams*, 41 F. Supp. 2d at 1262–63 (quoting Stipulation of Facts, Doc. No. 33 (Dec. 3, 1998)).

[151] Eisenstadt v. Baird, 405 U.S. 438, 439 (1972) (clarifying that "whatever the rights of the individual to access . . . contraceptives may be, the rights must be the same for the unmarried and the married alike").

[152] Lawrence v. Texas, 539 U.S. 558, 564 (2003) (holding that the petitioners had the constitutional right as "free . . . adults to engage in the private conduct in the exercise of their liberty").

[153] *Williams*, 478 F.3d at 1323 ("[W]e find that public morality survives as a rational basis for legislation even after *Lawrence*, and we find that in this case the State's interest in the preservation of public morality remains a rational basis for the challenged statute."); *Yorko*, 690 S.W.2d at 265 ("Appellant does not claim that obscene devices serve, like contraceptives, to implement the constitutionally protected decision not to beget a child."); *see* Marybeth Herald, *A Bedroom of One's Own: Morality and Sexual Privacy After* Lawrence v. Texas, 16 YALE J.L. & FEMINISM 1, 10 (2004) (highlighting the incredible influence appellate courts hold over trial courts through their presentation of the pertinent constitutional inquiries that the lower court should consider on remand).

[154] Libby Adler, *The Future of Sodomy*, 32 FORDHAM URB. L.J. 197, 199–200 (2005); Katherine M. Franke, Commentary, *The Domesticated Liberty of* Lawrence v. Texas, 104 COLUM. L. REV. 1399, 1399 (2004); Teemu Ruskola, *Gay Rights Versus Queer Theory: What Is Left of Sodomy After* Lawrence v. Texas*?*, SOC. TEXT, Fall–Winter 2005, at 235, 241. Professors Laura Rosenbury and Jennifer Rothman explain, "[C]ourts have extended legal protection to consensual sexual acts only to the extent such acts support other state interests, including marriage, procreation, and . . . the development of enduring intimate relationships." Laura A. Rosenbury & Jennifer E. Rothman, *Sex In and Out of Intimacy*, 59 EMORY L.J. 809, 809 (2010). Most notably, although the Supreme Court in *Lawrence v. Texas* overturned laws banning adult consensual sodomy, in the majority opinion, sex was constitutionally protected not because of its connection to pleasure but rather because of its connection to emotional intimacy and committed relationships. According to Justice Kennedy, "To say that the issue . . . was simply the right to engage in certain sexual conduct demeans the claim the individual put forward, just as it would demean a married couple were it to be said marriage is simply about the right to have sexual intercourse." *Lawrence*, 539 U.S. at 567 (discussing the Court's previous ruling in *Bowers v. Hardwick*, see 478 U.S. 186 (1986)).

statutes in order to shut down brick-and-mortar businesses and arrest organizers of in-home, Tupperware-style passion parties.[155]

By contrast, other state supreme courts, such as in Colorado, Kansas, and Louisiana, have struck down sexual device statutes on constitutional grounds.[156] All but one of these courts,[157] however, have done so not in recognition of a legal right to engage in nonprocreative sex or to affirmatively seek sexual pleasure. Instead, these courts have held that some statutes unconstitutionally invaded the right to use dildos, vibrators, and other sex toys *as part of medical treatment or marital therapy*.[158] In 1990, the Kansas Supreme Court in *State v. Hughes* extensively recounted the expert testimony of a "state-certified psychologist and sex therapist" whose work focused on "the problem of women who do not reach orgasm during sexual intercourse"; this condition rendered women "particularly susceptible to pelvic inflammatory diseases, psychologi-

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[155] Webber v. State, 21 S.W.3d 726, 728 (Tex. Ct. App. 2000) ("Deputy Sheriff L. Carlin, working an undercover operation, entered the Adult Video Store, a licensed sexually oriented business. . . . Carlin told appellant that she was experiencing marital problems and that she was looking for a vibrator—something for sexual gratification."); Sewell v. State, 233 S.E.2d 187, 189 (Ga. 1977) (upholding conviction of an adult bookstore operator, who sold an artificial vagina and an obscene magazine to an undercover officer); Williams v. Pryor, 41 F. Supp. 2d 1257, 1260 (N.D. Ala. 1999) (involving the prosecution of the principle shareholder and investor of two sex device retailers); *see also* LIEBERMAN, *supra* note 18, at 6; Herald, *supra* note 153, at 27.

[156] People *ex rel.* Tooley v. Seven Thirty-Five E. Colfax, Inc., 697 P.2d 348, 370 (Colo. 1985) (en banc) (deeming the state's interest insufficient to prop up a statute that essentially "equate[s] sex with obscenity"); State v. Hughes, 792 P.2d 1023, 1032 (Kan. 1990) (noting the legitimate reasons individuals would seek to use sex devices, such as medical treatment, and thus finding the state's law "overbroad and unconstitutional"); State v. Brenan, 99-2291, p. 16 (La. 5/16/00); 772 So. 2d 64, 76 (determining that no "legitimate state interest" existed to rationalize plenary ban of sex devices).

[157] In *Reliable Consultants, Inc. v. Earle*, the U.S. Court of Appeals for the Fifth Circuit declared unconstitutional Texas's sexual device statute based upon the Supreme Court's decision in *Lawrence v. Texas*, which appeared to adopt the view that "the fact that the governing majority in a State has traditionally viewed a particular practice as immoral is not a sufficient reason for upholding a law prohibiting the practice." 517 F.3d 738, 745 (5th Cir. 2008) (quoting Bowers v. Hardwick, 478 U.S. 186, 216 (1986) (Stevens, J., dissenting), *overruled by Lawrence*, 539 U.S. 558 (2003)). According to the Fifth Circuit, "To uphold the statute would be to ignore the holding in *Lawrence* and allow the government to burden consensual private intimate conduct simply by deeming it morally offensive." *Id.* Texas state courts, however, have declined to follow the Fifth Circuit and have adhered to older case law upholding the sexual device statute. *See* Villarreal v. State, 267 S.W.3d 204, 209 (Tex. Ct. App. 2008).

[158] *See Seven Thirty-Five E. Colfax, Inc.*, 697 P.2d at 370 ("The statutory scheme, in its present form, impermissibly burdens the right of privacy of those seeking to make legitimate medical or therapeutic use of such devices."); Kaplan, *supra* note 27, at 158 ("Constitutional challenges were successful only to the extent that they ensured statutory exceptions for medical use."); Craig Konnoth, *Medicalization and the New Civil Rights*, 72 STAN. L. REV. 1165, 1198 (2020) ("Medical challenges to bans on the sale of sexual devices, such as vibrators, have been more successful than those made purely on sexual autonomy grounds."); Reid, *supra* note 119, at 84 ("In order to recast the behavior as therapeutic, the individual interest at stake must be 'elevated' from an interest in pleasure to an interest in medical treatment.").

cal problems, and difficulty in marital relationships."[159] The psychologist testified that "anorgasmic women" often benefit from treatment with a "dildo-type vibrator" for similar reasons as "people with cerebral palsy."[160] The testimony continued, stating that a dildo-type vibrator was useful "for women suffering urinary stress incontinence" following childbirth.[161] The Kansas and Louisiana Supreme Courts also pointed out that the Food and Drug Administration (FDA) had issued guidelines about the use of "'powered vaginal muscle stimulators' and 'genital vibrators' for the treatment of sexual dysfunction," indicating that there was a bona fide medical need for legal sex toys.[162] Accordingly, the sexual device statutes invaded "a sphere of constitutionally protected privacy which encompasses the intimate medical problems associated with sexual activity."[163]

These same strategies—sex toys as instrumental to healthy relationships or as treatments for frigidity and dysfunction—are certainly present in many of the pleasure patents that this Article examines. Nonetheless, there are numerous patentees who openly claim to facilitate sexual pleasure for its own sake—an interest deemed insufficient by all courts to have addressed the legality of sex toy bans. This narrow medical framing of rights to access sexual technologies is highly significant, although perhaps too clever by half.[164] There may not be a constitutional right to use a vibrator to enhance your own sexual pleasure, but there *is* a constitutional right to use a vibrator to treat your difficulty obtaining sexual pleasure.[165] In other words, states cannot criminalize sex toys, so long as the baseline for using a sex toy is sexual dysfunction as opposed to a healthy sexual appetite.[166] If your pleasure cup is half empty, the Constitution protects your ability to fill it up; if your cup is half full, however, the Constitution has nothing to say on the matter.[167]

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[159] *Hughes*, 792 P.2d at 1025; *see also Brenan*, 772 So. 2d at 75–76 (reviewing medical literature on the use of vibrators).

[160] *Hughes*, 792 P.2d at 1025.

[161] *Id.*

[162] *Id*. at 1031 (quoting 21 C.F.R. §§ 884.5940, 884.5960 (2022)); *Brenan*, 772 So. 2d at 75 (quoting 21 C.F.R. §§ 884.5940, 884.5960).

[163] *Hughes*, 792 P.2d at 1029 (quoting *Seven Thirty-Five E. Colfax, Inc.*, 697 P.2d at 369 n.26 (citation omitted)).

[164] *See* Appleton, *supra* note 27, at 329 ("A problem with even some of the judicial opinions overturning restrictions on sex toys is that they emphasize the medical needs of otherwise anorgasmic women.").

[165] That said, the FDA has the authority to regulate medical devices pre-market. *See* Abigail All. for Better Access to Developmental Drugs v. von Eschenbach, 495 F.3d 695, 725 (D.C. Cir. 2007).

[166] *See* Kim Shayo Buchanan, Lawrence *v.* Geduldig*: Regulating Women's Sexuality*, 56 EMORY L.J. 1235, 1250 (2007) (criticizing the reliance on medical justifications for female sex toys and advocating for women's free use of these devices to attain sexual pleasure equally as men do)).

[167] According to Professor Marybeth Herald, "[F]orty-three percent of women experience sexual problems," which is consistent with historical rates of "frigidity" in women. Herald, *supra* note 153, at 25. She suggests that "[i]t is a wonder that the high percentage alone does not alert us to the fact that it

In order to sidestep the constitutionality of criminalizing women's pursuit of sexual pleasure, courts in the sexual device cases tried to point to less controversial medical interests.[168] Nonetheless, some of the products directly at issue in these cases were expressly marketed as "not Intended as a Medical Device," and included, for example, an inflatable doll that the Kansas Supreme Court took pains to bracket in its discussion.[169] Notwithstanding one court's declaration that seized items were "shameful, reprehensible and disgusting,"[170] there is no way to convincingly separate legalized sex toys from the pursuit of sexual pleasure. In the view of some scholars, sexually dysfunctional sex toy purchasers are both more sympathetic and less threatening than women seeking pleasure for its own sake.[171] In other words, the Sharper Image strategy may work fine in the Patent Office, but generalist courts have been comparatively skeptical.

To this day, sex toys hover at the legal margins. Although, as of this writing, it appears that only Alabama actively enforces its ban on selling sexual devices,[172] equivalent laws in other jurisdictions remain on the books, as do the federal Comstock laws. Most recently, the 2020 CARES Act,[173] which allocated $659 billion in low-interest small business loans, excludes businesses that profit from the sale of sexual devices.[174] The regulations promulgated by the Small Business Administration (SBA) state that businesses are ineligible for SBA loans if they "[d]erive directly or indirectly more than *de minimis* gross revenue through the sale of products or services, or the presentation of any depictions or displays, of a prurient sexual nature."[175]

In sum, from the mid-1800s until the present day, sex toys, when expressly branded as sex toys, have enjoyed little acceptance from the legal system

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may not necessarily be the woman who is sexually dysfunctional. A more logical conclusion to be drawn . . . might be that it is the culture . . . ." *Id.*

[168] *Id.* at 25 (explaining that women, as opposed to men, are more likely to face difficulties achieving orgasm through easily-attained physical positions, and therefore are more likely to benefit from the aid of a sexual device).

[169] *See* Reid, *supra* note 119, at 87 (quoting State v. Brenan, 99-2291, p. 2 (La. 5/16/00); 772 So. 2d 64, 77 (Traylor, J., dissenting)).

[170] State v. Brenan, 98-2368, p. 1 (La. App. 1 Cir. 7/1/99); 739 So. 2d 368, 373 (Carter, C.J. & Whipple, J., specially concurring), *aff'd*, 1999-2291 (La. 5/16/00); 772 So. 2d 64.

[171] Herald, *supra* note 153, at 23–24 (perceiving that litigation strategy centered on a "male-oriented lens" tends to be a popular, and more successful, route for challenging state obscenity laws).

[172] *See* LIEBERMAN, *supra* note 18, at 289.

[173] Coronavirus Aid, Relief, and Economic Security (CARES) Act, Pub. L. No. 116-136, 134 Stat. 281 (2020) (codified as amended at 15 U.S.C. §§ 9001–9080).

[174] *See generally* Brian Soucek, *Discriminatory Paycheck Protection*, 11 CALIF. L. REV. ONLINE 319, 333 (2020), https://29qish1lqx5q2k5d7b491joo-wpengine.netdna-ssl.com/wp-content/uploads/2020/07/Soucek_Discriminatory-Paycheck-Protection_11CalifLRev319.pdf [https://perma.cc/U82L-5ZHD] (detailing the exclusion of businesses related to "dangerous ideas" (quoting Regan v. Tax'n with Representation, 461 U.S. 540, 548 (1983))).

[175] 13 C.F.R. § 120.110(p)(2) (2022).

and have been outright banned in many jurisdictions. Only when marketed as a plain-old household appliance or as a medical intervention have they managed to receive the blessing—or at least tacit acceptance—of U.S. law. The Patent Office, by contrast, has found persuasive a much broader range of narratives concerning sexual pleasure regarding the utility of sex toys.

III. UTILITY, PLEASURE, AND THE USPTO

Compared with the wide range of criminal prohibitions surveyed in the previous Part,[176] the patent system is not, for the most part, designed to judge either the market or moral value of an invention. The result is a substantial body of patents that have not only been issued, but have been treated as largely unexceptional by the USPTO, district courts and the Federal Circuit.[177] One explanation for this is that inventors will not try to patent worthless inventions, for which there is no commercial demand or which are legally prohibited from sale, because the resulting patents would themselves be worthless.[178] And if inventors choose to patent worthless inventions, there is no great harm in it. Still, there is a patent requirement that addresses the worth and moral value of inventions: the utility requirement—the requirement that a patent be "useful." The patent statute defines patentable inventions as "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."[179] The result of the requirement that an invention be "useful" is that issued patents generally include a section explaining the object of the invention, followed by a section explaining how the invention accomplishes that object, allowing researchers to see how notions of utility change over time.

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[176] *See supra* Part II.

[177] A recent decision by the Patent Trial and Appeal Board upholding the validity of a sex toy patent over prior art references, for example, dispassionately explained that, "for purposes of this decision, Petitioner has also established through the testimony of Dr. Prisco that Guan teaches all of the other elements of claim 1 with the exception of the presence of an appendage configured as a dildo configured to be inserted into a vagina." EIS GmbH v. Novoluto GmbH, No. IPR2019-01302, 2020 WL 3273010, at *2 (P.T.A.B. June 17, 2020); *see also* Ritchie v. Vast Res., Inc., 563 F.3d 1334, 1336 (Fed. Cir. 2009) (indulging in some word play but ultimately addressing the issue of the obviousness of the use of a certain type of glass for a dildo). "By 'lubricious'—a word whose primary meaning, appropriate for a sexual device, is 'lecherous'—the patent means only 'slippery,' which is the secondary meaning of the word. . . . [W]hat is meant is that the glass, because it contains oxide of boron, is smoother than soda-lime glass and therefore becomes slippery with less lubricant than a device made out of soda-lime glass." *Ritchie*, 563 F.3d at 1336.

[178] Lowell v. Lewis, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (No. 8,568) ("If it be not extensively useful, it will silently sink into contempt and disregard.").

[179] 35 U.S.C. § 101. The concept of utility is revisited in the disclosure requirements of the Patent Act, which states that a patent application must describe "the manner and process of making and using" an invention. *Id.* § 112(a). By requiring a description of the manner of use of an invention, this section presumes that it is amenable to use, or, useful.

While this is the crux of the utility requirement—that the invention have a purpose and that the patent document explain how it achieves that purpose—courts have struggled to determine what it really means to be useful. That is because what is "useful" can be an incredibly complicated question about what pursuits are worthwhile and whether and how various inventions aid in those pursuits. Utility, it turns out, is inseparable from social norms about the worth and moral value of any given activity.

At first blush, the patent system's requirement of usefulness and the sex toy's designated purpose of sexual pleasure might seem at odds with one another. A closer look, however, reveals that the patent system has long recognized the utility of pleasure.[180] For example, the USPTO issued a patent to James L. Haven and Charles Hettrick in 1866 for a "new and useful bandelore," now better known as a yo-yo.[181] This was the same year Milton Bradley received a patent on a board game called the "checkered game of life," which, although a game, is described as imparting on youthful minds "the great moral principles of virtue and vice."[182] As a dive into the scholarship and history of the utility doctrine shows, notions of virtue and vice play a role in utility analysis, with some inventions being held unpatentable or unenforceable because they facilitated gambling or other types of deceit.

Nor has the utility requirement been a strong bar to patentability in general over the years. Noting this, Michael Risch has suggested that usefulness has become a "toothless and misunderstood . . . doctrine, which requires that patents only have a bare minimum potential for use."[183] There are three doctrinal strands to utility. The first—credible or operable utility—remains a constant but relatively unlitigated bar, requiring merely that the invention actually function as described.[184] Second, courts have interpreted the Patent Act to require that inventions have beneficial utility—that is, a requirement that inventions not have a socially deleterious purpose.[185] This moral utility requirement,

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[180] *See In re* Kirk, 376 F.2d 936, 961 (C.C.P.A. 1967) (Rich, J., dissenting) ("[T]he Patent Office [does not] worry about the utility of games, toys, and cosmetics.").

[181] U.S. Patent No. 59,745 (issued Nov. 20, 1866).

[182] U.S. Patent No. 53,561 (issued Apr. 3, 1866).

[183] Michael Risch, *Reinventing Usefulness*, 2010 BYU L. REV. 1195, 1197; *see also* Lee Petherbridge, *Road Map to Revolution? Patent-Based Open Science*, 59 ME. L. REV. 339, 356 n.90 (2007); Michael Risch, *A Surprisingly Useful Requirement*, 19 GEO. MASON L. REV. 57, 62 (2011).

[184] *See* SARAH BURSTEIN, SARAH R. WASSERMAN RAJEC & ANDRES SAWICKI, PATENT LAW: AN OPEN-ACCESS CASEBOOK 160 (2021) ("Credible utility, also called operable utility, requires that a patent be able to do what it says it does. In simple terms, the doctrine bars patentability for impossible inventions, such as perpetual motion machines or time travel inventions."). In the case of applications for inventions that are not credible, the USPTO has authority to require a working model of the invention. 35 U.S.C. § 114.

[185] *See infra* notes 189–199 (discussing judicial interpretation of the Patent Act); *see also* Act of Apr. 10, 1790, ch. 7, § 1, Stat. 109, 110 (1790) (originating the American patent), *repealed by* Act of Feb. 21, 1973, ch. 11, 1 Stat. 318 (1793) (repealed 1836) (amending the 1790 Patent Act and interpreted by the court in *Lowell v. Lewis*, see 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (No. 8,568)).

the most relevant to our inquiry, has greatly diminished in stringency, as discussed below.[186] Third is the requirement that the invention have practical utility—that is, that the identified utility be specific and substantial.[187] This requirement, driving more recent judicial and scholarly attention to the doctrine, entails that the applicant demonstrate "that that claimed invention has a significant and presently available benefit to the public."[188]

It is the second of these categories, beneficial utility, that requires patent examiners and judges to situate inventions in their social, legal, and moral context. Beneficial utility shapes the universe of patentable inventions through a lens of morality. In the canonical 1817 case, *Lowell v. Lewis,* Justice Joseph Story, sitting in a district court by designation, charged the jury that the utility bar to patentability only requires "that the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society."[189] In elevating morality as a potential bar to patentability, Justice Story relied on the commercial viability of inventions as an adequate bar to most useless inventions. The issue in that case was not one of morality of the invention (a water pump). Instead, the defendant and accused infringer argued that the patented pump was not better than any other on the market. Justice Story instructed the jury that it was not necessary that the patented invention be demonstrably superior to that which was already known.[190] Instead, Justice Story explained that if the invention was not sufficiently useful, "it will silently sink into contempt

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After enacting and repealing a litany various patent laws since the country's founding, Congress, in 1952, enacted the Patent Act that set the foundation for modern American patent law. *See* Act of July 19, 1952, ch. 950, § 1, 66 Stat. 792 (1952) (codified as amended at 35 U.S.C. §§ 1–293); *see also supra* note 179 (laying out federal patent law as it exists today).

[186] *See infra* notes 193–201.

[187] Brenner v. Manson, 383 U.S. 519, 534 (1966) ("Until the process claim has been reduced to production of a product shown to be useful, the metes and bounds of that monopoly are not capable of precise delineation.").

[188] *In re* Fisher, 421 F.3d 1365, 1371 (Fed. Cir. 2005). Modern scholarship on the utility doctrine focuses on its application in the fields of chemistry and biochemistry. Sean Seymore points out that judicial application of the doctrine results in a technology-specific patentability requirement, allowing patents on inventions in most fields but providing a more serious bar to patentability in chemical fields as well as other unpredictable fields or new technologies that are not yet well understood. Seymore, *supra* note 15, at 629. This is because of the requirement that an inventor state the purpose of her invention. In unpredictable fields, inventors may discover a new molecule or develop a new organism that has promising qualities, but the specific use of which is not yet known. In a sense, the utility requirement, as applied in these novel and unpredictable technologies, is a timing requirement: an inventor must have done enough research to state a use for her invention before applying for a patent.

[189] *Lowell*, 15 F. Cas. at 1019.

[190] *Id.* Justice Story noted the defendant's assertion "that it is necessary for the plaintiff to prove" that his claimed pump "supersede the pumps in common use" and then wrote, "I do not so understand the law." *Id.*

and disregard."[191] *Lowell* is often cited for its language on beneficial utility and the easily met requirement that an invention not be harmful to morality.

In discussing morality, the *Lowell* court posited that an invention that poisoned people or one aimed at promoting debauchery would not be patentable. Soon, cases arose that challenged the boundaries of beneficial utility. In these, lower courts addressed—and found unpatentable—inventions on gambling devices and inventions that were considered deceptive. Although gambling devices were held unpatentable in the late nineteenth and early-twentieth century, such patents were eventually allowed in the 1970s.[192] It was not until 1999 that the Federal Circuit held that deceptive devices were not necessarily immoral and were therefore patentable.

In 1999, in *Juicy Whip, Inc. v. Orange Bang, Inc.*, the Federal Circuit upheld the patent on a beverage dispenser with a simulated display of a mixed beverage.[193] The beverage dispenser was equipped with tubes that ran beneath a countertop and dispensed both syrup concentrate and water that mixed together into juice. The deceptive portion of the invention was above the dispenser: a plastic reservoir that held and recirculated liquid, so that customers approaching the machine would believe their drinks to already have been mixed.[194] In coming to its holding, the court declined to follow a number of cases from the U.S. Court of Appeals for the Second Circuit that had held deception to be an immoral use for patents.[195] In 1900, in *Rickard v. Du Bon*, the Second Circuit held that a chemical process used to make tobacco plants appear spotted—and therefore of a higher quality—was misleading without any added utility, and therefore unpatentable.[196] Similarly, in 1925, in *Scott & Williams, Inc. v. Aristo Hosiery Co.*, the Second Circuit held unpatentable a structure for the back of seamless stockings that imitated a seamed stocking.[197] The court ruled that the stockings' artful construction was not patentable because it

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[191] *Id.*

[192] *See, e.g.*, Brewer v. Lichtenstein, 278 F. 512, 514 (7th Cir. 1922) (holding gambling machine unpatentable); *Ex parte* Murphy, 200 U.S.P.Q. (BNA) 801, 802 (B.P.A.I. 1977) (finding gambling devices no longer unpatentable).

[193] 185 F.3d 1364, 1368 (Fed. Cir. 1999).

[194] *Id.* at 1365–66 (describing the "visual impression" that the machine's bowl gave to a consumers in an attempt to raise product sales).

[195] *Id.* at 1367 (first citing Rickard v. Du Bon, 103 F. 868 (2d Cir. 1900); then citing Scott & Williams v. Aristo Hosiery Co., 7 F.2d 1003 (2d Cir. 1925)).

[196] *Rickard*, 103 F. at 868 ("[A]n improvement in the art of treating tobacco leaves . . . is void, because not useful; the only effect . . . if not the only object, being to spot the tobacco, and counterfeit the leaf spotted by natural causes.").

[197] *Aristo Hosiery*, 7 F.2d at 1004.

focused on the marketability, as opposed to the functional improvement, of the product.[198]

In declining to follow these cases, the Federal Circuit noted how deception can be valuable—that it can be useful to design an object to appear as another. The court gave as examples gold leaf, synthetic fabrics, imitation leather, and cubic zirconium.[199] Some of these deceptive techniques were aimed at casual observers, rather than purchasers of the invention. For others, such as imitation leather, the deception avoided using the "real" material while still attaining the desired look.[200] The court noted that the deception contemplated in the claimed invention was not unlawful, and then pointed to the agencies charged with monitoring and minimizing fraudulent sales practices. While such agencies may not have existed in the time of *Lowell*, the Federal Trade Commission and the FDA now both exist and contain the expertise to determine when deceptive practices have occurred and what the appropriate remedies are.[201]

Utility is a concept tightly interwoven with the society in which it is being measured. This is true both in a general sense about the shared values of a community and in a temporal sense, as objects gain or lose utility over time based on social and cultural evolution. For example, it would have been impossible to describe the utility of a software patent in 1876, when such inventions held no meaning. Similarly, patents that were once denied as immoral, such as those on nylons that merely appear to have seams up the back, seem neither immoral nor particularly useful decades later because today seamed stockings are no longer considered more valuable than un-seamed stockings—or no stockings at all.

Accordingly, as social values change over time, so do perceptions of utility. For example, Professor Kara Swanson demonstrates such evolving perceptions through a historical analysis of the1876 Supreme Court case, *Cohn v. U.S. Corset Co.*, about corset patents.[202] Her analysis unveils the accepted social utility of these feminine undergarments, at the time, because of the result-

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[198] *Id.* ("At best, the seamless stocking has imitation marks for the purpose of deception, and the idea prevails that with such imitation the article is more salable. But such accomplishment does not create a new useful discovery or invention . . . .").

[199] *Juicy Whip*, 185 F.3d at 1367.

[200] *Id.* at 1367–68.

[201] *Id.* at 1368 (citing *In re* Watson, 517 F.2d 465, 474–76 (C.C.P.A. 1975) (pointing to the essential, supplemental function executive agencies provide to consumers and the Patent Office by conducting safety checks on otherwise patentable products, like pharmaceuticals).

[202] 93 U.S. 366, 376 (1876) (criticizing that the newly proposed process for corset-making "would not adapt to the corset to fit the wearer, and would not be consistent with elegance of shape"); Swanson, *supra* note 17, at 84–89 (remarking that the male Supreme Court Justices in *Cohn* did not employ any expert testimony when evaluating the corset patent, as was typical for other more technological patents).

ing feminine shape that men found pleasing.[203] "Corsets," she explains, "may have been feminine technology, made for use by women, but their purpose was to satisfy the male gaze, 'functioning and signifying for the beholder.'"[204]

Patents related to cannabis similarly demonstrate how changing social mores and laws affect patentability under the beneficial utility doctrine. Marijuana remains a Schedule I substance under federal law[205] and is therefore unlawful "to manufacture, distribute, or dispense, or possess."[206] Yet, as the purported medical benefits of marijuana have become more widely-accepted (and its immorality as a recreational drug questioned), its use has become sanctioned by numerous states for medical and recreational purposes.[207] As society has warmed to the use of marijuana, inventors are applying for patents on methods of extraction, use, and strains of cannabis, even as their patentability remains questionable under the beneficial utility doctrine.[208] And the USPTO now issues such patents in ever-increasing numbers.[209] Courts have yet to affirmatively weigh in on this issue, although there is a patent infringement lawsuit currently pending in the Colorado federal district court centered on a cannabis-related patent.[210]

Perhaps the most surprising observation about our study is that the accounts used by patentees to explain the value of their inventions do not closely track changes either in patent doctrine or in the legal treatment of sexual technologies more broadly. Most notably, the Federal Circuit's express renunciation of the moral utility doctrine in 1999 does not emerge as a significant in-

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[203] Swanson, *supra* note 17, at 74. Kara Swanson discusses the utility of the corset, which could "tilt the spine into the desired shape, from poker-straightness to the S-curve emphasized in the turn of the twentieth-century Gibson girl ideal," thus achieving "this ideal feminine form, although most inventions were directed to improvements in the making, wearing or washing of the corset." *Id.*

[204] Swanson, *supra* note 17, at 88 (quoting Leslie Shannon Miller, *The Many Figures of Eve: Styles of Womanhood Embodied in a Late-Nineteenth-Century Corset*, *in* AMERICAN ARTIFACTS: ESSAYS IN MATERIAL CULTURE 129, 136 (Jules David Prown & Kenneth Haltman eds., 2000)).

[205] *See* 21 U.S.C. § 812(c).

[206] *See id.* § 841.

[207] Audrey McNamara, *These States Now Have Legal Weed, and Which States Could Follow Suit in 2020*, CBS NEWS (Jan. 1, 2020), https://www.cbsnews.com/news/where-is-marijuana-legal-in-2020-illinois-joins-10-other-states-legalizing-recreational-pot-2020-01-01/ [https://perma.cc/D3RG-A3XA].

[208] *See* Ryan Davis, *Marijuana Patent Applications Face Tough Road at USPTO*, LAW360 (Jan. 8, 2015), http://www.law360.com/articles/609140/marijuana-patent-applications-face-tough-road-at-uspto [https://perma.cc/S2LR-Z839] (showing that even recently, many patent attorneys doubted the patentability of marijuana-based claims).

[209] *See* Matthew Kamps, *The Number of Cannabis-Centric Patents Is Getting High*, LAW360 (Oct. 10, 2019), https://www.law360.com/articles/1206064 [https://perma.cc/ALK8-6YMP].

[210] United Cannabis Corp. v. Pure Hemp Collective, Inc., No. 18-cv-01922, 2020 WL 376508, at *1 (D. Colo. Jan. 23, 2020) (weighing contrary interpretations of the term "cannabinoids").

flection point in either the framing or frequency of pleasure patents.[211] By that year, the USPTO had already gradually increased its issuance of the pleasure patents in our study, and that increase continued gradually after the Federal Circuit's decision in *Juicy Whip*.[212] Moreover, patentees had openly and explicitly discussed a diverse range of sexual practices even during the time periods where the moral utility doctrine was still alive in the U.S. patent system. Furthermore, such explicitly sexual themes were deployed at the same time that sexual devices were unlawful in several states and only avoided legal prohibition when dressed up as medical treatments or as general-purpose massage devices. Patentees presented frank sexual narratives to the USPTO during times when a variety of legal doctrines would suggest that doing so would be a terrible idea—and were nevertheless rewarded with patents.

IV. Making Sexy Patents (and Making Patents Sexy)

The main purpose of this Article is to bring attention to the strange phenomenon of pleasure patents, especially in light of patent law's historical exclusion of immoral inventions as well as the broader legal hostility towards the sale and manufacture of sex toys. Our study, however, does open up several potential avenues of research for scholars both inside and outside the field of intellectual property. This Part provides a series of invitations to legal scholars, particularly those interested in interdisciplinary studies of technology, sexuality, and social norms.

Although there may be a tension, or at least a disconnect, between patent narratives and patent doctrine within the pleasure patent dataset, there does appear to be a close connection between patent narratives and the shifting, background sexual zeitgeist. As concerns around marriage, gender norms, queer sexuality, and sexual health shifted from the 1960s through the present day, so too did the accounts accompanying issued patents. The fact that the patent registry contains such a rich archive of sexual norms suggests that the field of patent law is ripe for greater inquiry through a law and society lens. As Professor Kara Swanson has observed, "[I]ntellectual property law has been resistant to law and society scholarship, and the patent system, perhaps most of all. It is simply assumed to exist in a world apart . . . ."[213] Pleasure patents illustrate that the patent system exists very much within the world around it. In fact, this Article's analysis of pleasure patents suggests that patents may map more closely onto shifting sexual norms than the legal system writ large. At the

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[211] Juicy Whip, Inc. v. Orange Bang, Inc., 185 F.3d 1364, 1366–67 (Fed. Cir. 1999) (acknowledging Justice Story's canonical opinion in *Lowell*, but qualifying that morality had not "been applied broadly in recent years" as a barometer for patentability).

[212] For example, the USPTO issued nine patents classified as A61H19/00 in 1995, six in 1996, ten in 1997, nine in 1998, eight in 1999, thirteen in 2000, eleven in 2001, and twelve in 2002.

[213] Swanson, *supra* note 25, at 20 (footnote omitted).

very least, this analysis demonstrates that patent scholarship would benefit from at least three different types of interdisciplinary work in the law and society tradition.

The first approach is historical. Patents—and the technologies they disclose—are products of their historical contexts, and they reflect and perpetuate both the values and concerns of their time.[214] As scholars such as Professors Kara Swanson, Brian Frye, and Brenda Reddix-Smalls have shown, the U.S. patent system has been infused with race, gender, and class hierarchy since its inception.[215] As such, historical patent work can be a crucial component of understanding inequalities in the patent system that persist to this day.[216] Our study indicates that sexuality provides another historical lens through which scholars could fruitfully approach the patent system.

The second approach is sociological. Patented technologies result from the convergence of different groups of people (e.g., engineers, managers, drafting attorneys, patent agents, judges, juries, and consumers) and it can be incredibly useful to understand who these people are demographically and how they are organized within their various institutions.[217] If patent law is meant to incentivize innovation, the effectiveness of such incentives will likely hinge upon how patentees are recognized, rewarded, and compensated.[218] If certain demographics of patent applicants are statistically less likely to succeed in the Patent Office, sociological approaches may help illuminate the institutional and social barriers—both inside and outside the Office—that regularly imped-

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[214] *See* CHRISTOPHER BEAUCHAMP, INVENTED BY LAW: ALEXANDER GRAHAM BELL AND THE PATENT THAT CHANGED AMERICA 4 (2015) ("[P]atent law—so often dismissed as an arcane and impenetrable niche of legal practice—has played an active and controversial role in the course of American history.").

[215] *See* Kara W. Swanson, Essay, *Race and Selective Legal Memory: Reflections on* Invention of a Slave, 120 COLUM. L. REV. 1077, 1083 (2020) (examining the intersection between "the history of the patent system" and "the history of black inventors"); Frye, *supra* note 25, at 182 (detailing the history of slave owners who attempted to patent the technologies invented by their slaves); Brenda Reddix-Smalls, *Intellectual Property, Income Inequality, and Societal Interconnectivity in the United States: Social Calculus and the Historical Distribution of Wealth*, 11 N.C. CENT. U. SCI. & INTELL. PROP. L. REV. 1, 39 (2018) ("[I]t appears that, as with slavery, the drafters of the Constitution were acting for the benefits of the vested money classes in providing a proprietary interest to innovators and creators . . . . [C]opyright and patent regimes, as a subset of intellectual property, operated as part of a complex adaptive legal ecosystem in the eighteenth and nineteenth centuries.").

[216] *See generally* Holly Fechner & Matthew S. Shapanka, *Closing Diversity Gaps in Innovation: Gender, Race, and Income Disparities in Patenting and Commercialization of Inventions*, 19 TECH. & INNOVATION 727 (2018).

[217] *See* Dan L. Burk, *On the Sociology of Patenting*, 101 MINN. L. REV. 421, 452 (2016) (addressing the "ecology of business" that defines the patent industry).

[218] *See id.* at 441 (suggesting that the rhetoric surrounding intellectual property law encourages an elusive folklore of "the solitary genius who is motivated and rewarded for his efforts" to shift focus away from the less glamorous corporate interests at play).

ing such success.[219] In the context of pleasure patents, our study raises questions about the organization of both the sex toy industry and the Patent Office. Particularly given the historical legal precarity of making and selling sex toys at scale,[220] what benefits flowed to patentees in this industry that might justify the considerable cost of patenting? On the Patent Office side, is there something about the culture, structure, or demographics of the patent examiners that has facilitated their embrace of sexual technologies relative to other government actors?[221] Unfortunately, historical information about the interactions between applicants and examiners can be difficult to obtain, largely due to the secrecy of patent applications before 2000—a frustration other scholars share, particularly for any applications that did not result in issued patents.[222] The

[219] *See id.* at 451–52 (urging further inquiry into the institutional structures that prop up the patent process). *See generally* Stephanie Plamondon Bair & Laura G. Pedraza-Fariña, *Anti-innovation Norms*, 112 NW. U. L. REV. 1069 (2018) (exploring the "nonlegal factors" and "social norms" encircling and necessarily impacting the intellectual property and patent space).

[220] *See supra* Part II.

[221] One interesting contrast to the patent law story is that other areas of intellectual property have been slower to treat pleasure products with neutrality. The USPTO does more than examine and issue patents; it is, after all, the patent *and* trademark office. And morality has played a prominent role in recent trademark law decisions. Just as the trends in utility descriptions for pleasure patents have not closely paralleled the changes in doctrine in that area, the patent and trademark positions on morality have not evolved in parallel. In 2019, in *Iancu v. Brunetti*, the Supreme Court found that the Lanham Act's prohibition of registration of trademarks that are immoral or scandalous violated the First Amendment. 139 S. Ct. 2294, 2302 (2019). In so doing, the Court recognized how strongly questions of morality are tied into social norms and, importantly for the First Amendment analysis, into viewpoints. Thus, the law allowed "registration of marks that champion society's sense of rectitude and morality, but not marks that denigrate those concepts." *Id.* at 2299. This is a far cry from the Federal Circuit's fairly uncontroversial *Juicy Whip, Inc. v. Orange Bang, Inc.* decision decades prior and the century of pleasure patents issued before the USPTO could finally accept trademarks for marks that were immoral. Even now, Robert Mikos points out that the USPTO has a "lawful use requirement" that results in the refusal or cancellation of marks for goods and services that violate drug laws or consumer protections laws, *inter alia*. *See generally* Robert A. Mikos, *Unauthorized and Unwise: The Lawful Use Requirement in Trademark Law*, 75 VAND. L. REV. 161 (2022). What accounts for this difference between treatment of patents and trademarks, despite being granted and regulated by the same agency? One possible explanation is that trademarks govern products that are used in commerce, whereas patents grant an exclusive right with no promise of allowing use. Thus, the trademark may be seen as carrying a stronger imprimatur of government approval for use than a patent.

[222] *See* Swanson, *supra* note 25, at 13 n.67 (explaining the difficulty of identifying whether and how many patents for abortifacient technologies were sought prior to 1968); *see also* Christopher A. Cotropia & David L. Schwartz, *The Hidden Value of Abandoned Applications to the Patent System*, 61 B.C. L. REV. 2809, 2828–30 (2020) (explaining that in the twenty-five years before passage of the American Inventors Protection Act in 1999, abandoned applications were not published or considered prior art for later-filed patent applications). However, in a review of the file histories of the six earliest pleasure patents in the study, only one reveals any discussion related to the pleasure-seeking purposes of the invention. U.S. Patent No. 2,594,097 (filed Nov. 15, 1949) (issued Apr. 22, 1952). In that case the applicant for a body harness, titled a "device for promoting marital accord," deleted language that the examiner suggested was "surplusage," and changed a submitted drawing following a meeting between the applicant and the examiner by removing the lines in the diagram that depicted a woman's breast. Letter from John A. Marzall, Comm'r of Pats., U.S. Pat. & Trademark Off., to Lewis Twyman, Pat. Applicant (Apr. 5, 1951) (on file with authors). While the breast was ostensibly omitted as "sur-

third approach is literary—and presents a methodological opportunity. As demonstrated by the patents highlighted in this Article, the patent document itself can be a culturally rich text that exists in conversation with both the patent system and the background culture. Professors Dan Burk and Jessica Reyman have suggested approaching patents as a genre: a style of writing that has its own internal conventions designed to appeal to a variety of different audiences—administrative, scientific, judicial, and commercial.[223] Patents can accordingly be understood as discursive objects, situated within social contexts, that are subject to the full panoply of critical literary and linguistic theories.[224] Professor Burk has deployed both structuralist and postmodern feminist literary theories to deconstruct and "queer" the patent system, exposing gendered implications that too often fly beneath the radar of long-dominant economic analyses of patent law.[225] The texts of pleasure patents reveal a diverse and shifting relationship between the disclosed technologies and extant social

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plusage," a subsequent letter from the examiner stated that the omission was "in the interest of propriety and decorum." Letter from John A. Marzall, Comm'r of Pats., U.S. Pat. & Trademark Off., to Lewis Twyman, Pat. Applicant (Apr. 30, 1951) (on file with authors). The examiner apparently objected to some of the descriptive language in the application as surplusage as well, resulting in the deletion of language describing the device as useful "where the husband has lost one or more hands or arms, or where the husband is small of stature, or where there is other disparity, such as in the strength of the two," and stating that the invention could then "make normal sexual intercourse between husband and wife more easy of accomplishment and more pleasurable and healthful for the participants." *See* Letter from John A. Marzall to Lewis Twyman (Apr. 5, 1951), *supra* (referring to language included in Lewis Twyman's original application for the body harness, see U.S. Patent Application Serial No. 127,316 (filed Nov. 15, 1949)). While this patent file shows some pressure from the examiner to explain the benefits of the invention less explicitly (by excising the description of how the device could aid a disabled husband), one file is insufficient to draw a conclusion of general pressure from examiners to "clean up" the descriptions of pleasure patents, leaving open the question of how the examination process affects descriptions of pleasure patents. The file histories of five other, early patents, show no such correspondence. *See* U.S. Patent No. 1,863,533 (filed Aug. 8, 1929) (issued Dec. 2, 1931) (for a Thermal Treatment Applicator); U.S. Patent No. 2,024,983 (filed Sept. 10, 1934) (issued Dec. 17, 1935) (for a Device for Promoting Marital Accord); U.S. Patent No. 2,112,646 (filed Aug. 10, 1936) (issued Mar. 29, 1938) (for a Device for the Treatment of Diseases of the Genital Organs); U.S. Patent No. 2,559,059 (filed Oct. 24, 1949) (issued July 3, 1951) (for a Helper Device); U.S. Patent No. 3,375,381 (filed June 30, 1966) (issued Mar. 26, 1968) (for a Cordless Electric Vibrator for Use on the Human Body).

[223] Burk & Reyman, *supra* note 16, at 175 (listing the various communities interacting with the patent system, including "federal bureaucrats," "technology transfer officers," "visual artists," "judges," "lawyers," "patent trolls," and "scholar") (internal quotations omitted).

[224] *Id.* at 164 ("[W]e want to consider how the language of patent documents shapes meaning, not simply in the process of technological innovation, but as an artifact of a society that values technological innovation.").

[225] *See* Dan L. Burk, *Feminism and Dualism in Intellectual Property*, 15 AM. J. GENDER SOC. POL'Y & LAW 183, 185 (2007) (delving into the cross-disciplinary nature of "mind and body" and "nature and culture" concepts previously analyzed under a feminist theory lens, from the perspective of intellectual property law); *see also* DONNA J. HARAWAY, SIMIANS, CYBORGS, AND WOMEN: THE REINVENTION OF NATURE 183 (1991) (shedding light on the second-class treatment women and feminists received during the 1980s because leaders of academia did not consider them to be credible contributors to scientific and technological innovation).

norms and set forth a variety of different ways in which patented technologies can facilitate happier and healthier sexual cultures. The markers of happiness and healthiness shift across the patent texts just as they shift in the society that the patented technologies are meant to improve. In order to establish patentability, the patent text must tell a story that successfully mediates the details of the disclosed invention, the legal requirements of the Patent Act, and the social norms surrounding the technology in question.[226]

This analysis of pleasure patents also suggests the need for more sustained conversations between scholars of technology law and scholars of law and sexuality. Compared with a broader legal system that has harshly penalized nearly all forms of nonprocreative, nonmarital sex, including sodomy, adultery, fornication, masturbation, and sex work,[227] patent law—and to some extent intellectual property more broadly[228]—stands apart for its seemingly open embrace of sexual inventions. Although pleasure patents often do embody traditional sexual, gender, and marital norms, they nonetheless are an area of law in which the federal government, after individualized review, has been giving valuable property rights to entities that emphasize the importance of masturbation, same-sex sexuality, gender experimentation, and women's sexual autonomy. Patentees disclose explicitly sexual technologies, the Patent Office issues patents to the inventors of such technologies, and courts enforce such patents in litigation.[229] Accordingly, patent law complicates any straightforward "repressive hypothesis"[230] in which the legal system exhibits a single-minded antipathy towards nonprocreative, nonmarital sex.

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[226] *See* Burk & Reyman, *supra* note 16, at 181 ("Patents are commonly understood to be imbued with information about technologies, but we argue that they collectively and simultaneously carry information about the community in which they arise.").

[227] *See, e.g.*, UMMNI KHAN, VICARIOUS KINKS: S/M IN THE SOCIO-LEGAL IMAGINARY 10 (2014) (unveiling the moral and legal policing of "s/m" ("sadism and masochism")); JOEY L. MOGUL, ANDREA J. RITCHIE & KAY WHITLOCK, QUEER (IN)JUSTICE: THE CRIMINALIZATION OF LGBT PEOPLE IN THE UNITED STATES 20 (2011) (tethering violence against the LGBT community to centuries of racial oppression); Andrew Gilden, *Punishing Sexual Fantasy*, 58 WM. & MARY L. REV. 419, 419 (2016) (honing in on the complexities of Internet-posted content and virtual fantasies as grounds for retribution); Kaplan, *supra* note 27, at 92 (focusing on obscenity statutes, criminalization of BDSM, and constitutional frameworks for sex-related rights).

[228] *See* Tushnet, *supra* note 26, at 275 (arguing that copyright's fair use doctrine favors works that involve sexualization of earlier works). *But see* Rothman, *supra* note 23, at 119–20 (arguing that copyright and trademark laws often disfavor sexual materials).

[229] *See, e.g.*, Lambert Snyder Vibrator Co. v. Marvel Vibrator Co., 138 F. 82, 82 (C.C.S.D.N.Y. 1905) (holding that "[t]he fact that a patent has not been adjudicated is not sufficient ground for refusing a preliminary injunction against its infringement"); TZU Techs., LLC v. Vibease, Inc., No. LA CV15-04907, 2016 WL 6836951, at *10 (C.D. Cal. May 6, 2016) (considering "disputed terms" in a patent infringement claim).

[230] 1 MICHEL FOUCAULT, THE HISTORY OF SEXUALITY: AN INTRODUCTION 15 (Robert Hurley trans., Vintage Books 1990) (1976) (originating the term); *see also* Andrew Gilden, *Intellectual Property's Queer Turn*, *in* THE OXFORD HANDBOOK OF LAW AND HUMANITIES 549, 555 (Simon Stern,

Several scholars have sought to move law and legal scholarship in a more "sex positive" direction. Professor Margo Kaplan has set forth several guiding principles for sex-positive law:

> A sex-positive framework values sexual autonomy and all forms of consensual sexual activities as sources of pleasure and fulfillment. It rejects a view that sex and sexual pleasure are shameful. It respects diverse ways of expressing and experiencing sexuality and sexual pleasure, and rejects a culture that privileges male or heterosexual desire and pleasure above female or queer desire and pleasure.[231]

Measured against these principles, Professor Kaplan has critiqued First Amendment law and criminal law for focusing solely on the harms that might arise from sexual pleasure, sidelining the positive side of pleasure.[232] Professor Katherine Franke similarly has critiqued feminist legal theory for focusing almost entirely on the potential harms associated with sex: rape, sexual assault, sexual harassment, and exploitative pornography.[233] Rather than solely empowering women to say "no" to various forms of bad sex, Professor Franke seeks a law reform project that would better highlight women's experiences of sexual pleasure, asking, "Can law protect pleasure? Should it?"[234] Professor Susan Frelich Appleton similarly focuses on the legal marginalization of women's pleasure, envisioning a "culturally cliterate" body of law in which women learn to appreciate the potential for pleasure residing in their bodies.[235]

Although several of these scholars do indeed discuss the role of sex toys in a more sexually empowered society—and directly critique the sex toy cases discussed in Part II—none have looked at the patent system.[236] Given the overlap between many of the themes examined in the pleasure patent database and the visions of sex-positive law set forth in previous scholarship, the patent system's treatment of sex toys merits broader attention. From the 1980s through the pre-

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Maksymilian Del Mar & Bernadette Meyler eds., 2020) (illustrating how IP law reflects Foucauldian insights about the production of social norms).

[231] Kaplan, *supra* note 27, at 95 (footnotes omitted) (focusing on the inherent value of pleasure in sex, separate from romantic love, relationships, or child-bearing).

[232] *Id.* at 91 (challenging the constitutional "calculus" that results from our society's negative view of sex and sexual pleasure).

[233] Franke, *supra* note 27, at 181 ("Without a doubt, when it comes to sex, we have done a more than adequate job of theorizing the right to say *no*, but we have left to others the task of understanding what it might mean to say *yes*.").

[234] *Id*. at 183.

[235] Appleton, *supra* note 27, at 269–70 (seeking to "bring[] together sex-positive feminist theory and mainstream family law" to "establish[] and place[] in a larger context the law's silence about women's sexual pleasure").

[236] *See id.* at 327 (acknowledging the range of responses from the judiciary regarding access to sex toys and the crucial role access to sexually-stimulating devices plays in building "cultural literacy"); Kaplan, *supra* note 27, at 115 (touching on the criminalization of certain sex practices, including BDSM); Rosenbury & Rothman, *supra* note 154, at 832.

sent, patentees celebrate sexual pleasure both for its instrumental value—improving marriage, countering loneliness, preventing disease—and for its own intrinsic value. Moreover, *women's* pleasure is often front and center in pleasure patent accounts. Many patentees detail the ways in which women—alone or with partners—can use the disclosed technology to improve their sexual experiences. Furthermore, these patents do not just allude to sexual pleasure in the abstract or skirt around it through creative euphemisms; instead, they often describe, in detail, how the invention interacts with a woman's anatomy, centering the clitoris in a way that seems to reflect the "cultural cliteracy" envisioned by Professor Appleton. Particularly compared with federally supported abstinence-only education programs,[237] or the Department of Education's heavily critiqued guidelines on student sexual conduct,[238] the federal patent registry provides a pretty thorough education on the anatomies and psychologies of sexual pleasure.

This is not to say, however, that the patent system is a bastion of sexually liberated, ethical feminism. Patent law has welcomed sex toy entrepreneurs into its fold almost certainly in part due to its free market commitments—by providing property rights in novel and nonobvious inventions, patent law can counter the public goods problem associated with intellectual investments and facilitate a competitive marketplace.[239] Several scholars have warned against adopting a libertarian, free market approach to law and sexuality, insulating sexual domains from forms of regulation necessary to keep patriarchal dynamics in check. Professors Marc Spindelman,[240] Catherine MacKinnon,[241] and Martha McCluskey[242] all have critiqued queer theorists for celebrating sexual

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[237] *See* Appleton, *supra* note 27, at 283–85 (highlighting the "Healthy Marriage Initiative"—a program funded by the administration of President George W. Bush—which promoted abstinence before marriage, as one example of government intervention into American sex education).

[238] Jacob Gersen & Jeannie Suk, *The Sex Bureaucracy*, 104 CALIF. L. REV. 881, 899 (2016).

[239] *See* Dan L. Burk, *Law and Economics of Intellectual Property: In Search of First Principles*, ANN. REV. L. & SOC. SCI., Aug. 2012, at 397, 400–01 ("Public goods are typically described as being nonrivalrous and nonexclusive. . . . There [is] a tendency for rational consumers to free ride on public goods, taking the benefits without incurring the costs."). To address the free-rider problem, Professor Burk explains, "[I]ntellectual property policy . . . assign[s] property rights" to essentially "place[] a legal fence around goods that cannot be physically fenced off," allowing the creator to obtain market control (i.e., price-setting, production, and distribution) over their invention. *Id.*

[240] Marc Spindelman, *Sex Equality Panic*, 13 COLUM. J. GENDER & L. 1, 1 (2004) (accusing the court in *Oncale v. Sundowner Offshore Services, Inc.*, of "render[ing] [same-sex sexual violence] legally invisible" (citing 523 U.S. 75 (1998))).

[241] Catharine A. MacKinnon, *The Road Not Taken: Sex Equality in* Lawrence v. Texas, 65 OHIO ST. L.J. 1081, 1091 (2004) (critiquing the *Lawrence* Court for presuming that a sexual encounter between a same-sex couple could not include or incite violence).

[242] Martha T. McCluskey, *How Queer Theory Makes Neoliberalism Sexy*, *in* FEMINIST AND QUEER LEGAL THEORY: INTIMATE ENCOUNTERS, UNCOMFORTABLE CONVERSATIONS 115, 125 (Martha Albertson Fineman, Jack E. Jackson & Adam P. Romero eds., 2009) (asserting that because queer theory fluidly considers the "harmful and the beneficial in sex," it injects unwanted and unnecessary ambiguity into feminist-driven agendas, like eliminating unwanted sexual advances in the workplace).

freedoms, dark side and all, and in so doing, sidelining feminist concerns with workplace inequality, sexual assault, and domestic violence.

These concerns do have some resonance in the patent context. First, the inventors in most of the pleasure patents are men, suggesting that the effect of these patent grants is to give men control over technologies designed to be used by women. Second, although many of these patented technologies do legitimately seem aimed at women's pleasure, others are quite arguably demeaning. One example, U.S. Patent No. 7,122,000 B1 discloses "a water pipe shaped to be inserted into, and thereby utilize, the vagina as a water reservoir to provide sexual stimulation during use of the water pipe, which may optionally be used to smoke";[243] in other words, a patent issued for a vagina bong. Another example, U.S. Patent No. 5,620,429, discloses a sanitary napkin with a "circular bag" affixed to the outside, so that "[t]he husband can insert his penis" while his wife is menstruating and "having continuous bleeding from her womb."[244] The patentee disclosed the following useful purpose for this invention: it "makes it possible to maintain the continuity of the love relationship between the husband and his wife . . . so that the wife can give her husband full sexual enjoyment at any time he wishes."[245] So as much as patent law may be "sex positive," its libertarian ethos opens up the system to a whole lot of patriarchy as well.

This Article certainly cannot resolve disputes about the proper quantum of sexual morality that should be infused into the patent system, or how patent law might best further the causes of sex equality or sexual freedom. Its aim is to bring questions of intellectual property and the regulation of technology more squarely into scholarly conversations about law and sexuality.

CONCLUSION

Technology and sexuality both have been subject to histories of regulation that are deeply infused with moral judgment. And, as the laws of technology and sexuality have evolved, moral questions have gradually loosened their grip over legal doctrines in each area, opening both up to a diverse range of perspectives about how to balance morals, markets, equality, and individual freedoms. Nevertheless, these domains have remained largely siloed from each other in legal scholarship. This Article brings scholars in each domain together by demonstrating that the patent system provides a rich intersection for the study of law, technology, *and* sexuality. It shows that patents can be sexy, and sex can be patentable.

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[243] U.S. Patent No. 7,122,000 B1 col. 1 ll. 7–10 (filed July 30, 2003) (issued Oct. 17, 2006).
[244] U.S. Patent No. 5,620,429 col. 1 ll. 16–17, 59–60 (filed June 22, 1995) (issued Apr. 15, 1997).
[245] *Id*. at col. 1 ll. 42–46.