

# ESSAYS

## SEX LEX MACHINA: INTIMACY AND ARTIFICIAL INTELLIGENCE

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*Sex robots are here. Created specifically to allow individuals to simulate erotic and romantic experiences with a seemingly alive and present human being, sex robots will soon force lawmakers to address the rise of digisexuality and the human–robot relationship. The extent to which intimacy between a human and robot can be regulated depends on how we characterize sex with robots—as a masturbatory act, an intimate relationship, or nonconsensual sexual contact—and whether sexual activity with robots makes us see robots as more human or less human. A robot sex panic may be driven primarily by the idea that robots are servile by nature. Critics argue that an inherently nonreciprocal dynamic between humans and robots will translate into exploitative relationships that may fuel abuse of human partners, or that sex robots may further social isolation and retreat from human intimacy. Conversely, sex robots may function as safe—and otherwise unavailable—sexual and emotional outlets for those who may otherwise harm others. They may even train individuals to be more respectful in human relationships. At this point, we do not know how our relationships with robots will inform our relationships with humans, for better or for worse. This Essay explores the consequences of sex robots on society and argues that questions of how sex robots will improve or worsen humans’ treatment of one another is the key to regulation to come. What is clear is that sex robots will require us to grapple with our vulnerabilities in relationships, reconsider fundamental rights, and question what it means to be intimate and to be human.*

### INTRODUCTION

As artificial intelligence becomes more and more a part of our everyday lives, it will change sex and intimacy in radical ways.<sup>1</sup> Many have

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1. See generally Sherry Turkle, *Alone Together: Why We Expect More from Technology and Less from Each Other* (3d ed. 2017) (exploring how technology affects

wondered whether AI-equipped robots will displace sex work and transform sexual relationships in general.<sup>2</sup> Some have forecasted that, in coming decades, we will routinely have intimate relationships with robots and even that human–robot sex will become more common than sex between human beings.<sup>3</sup>

The technology industry is creating sex robots with AI, several of which are currently available for sale on the market.<sup>4</sup> By sex robots, I mean life-size machine entities with human-like appearance, movement, and behavior, designed to interact with people in erotic and romantic ways.<sup>5</sup> Their features include realistic silicone skin, animatronic heads and faces that move, conversational AI, programmable personalities, and customization options for physical characteristics.<sup>6</sup> Unlike sex dolls, sex robots are programmed to move and respond to their users, with capabilities ranging from simple verbal responses, to physical movements, to more

the way humans interact with each other); *Love and Sex with Robots* (Adrian D. Cheok, Kate Devlin & David Levy eds., 2017) (collecting papers presented at an international conference on love and sex with robots); David Levy, *Love and Sex with Robots: The Evolution of Human-Robot Relationships* (2007) [hereinafter Levy, *Love with Robots*] (discussing the potential for humans to fall in love with robots); *Robot Sex: Social and Ethical Implications* (John Danaher & Neil McArthur eds., 2017) [hereinafter Danaher & McArthur, *Robot Sex Implications*] (outlining the logistics and implications of sex with robots); Kate Devlin, *Turned On: Science, Sex and Robots* (2018) (discussing the development of robotics for personal use in contemporary society).

2. See, e.g., Pew Research Ctr., *Digital Life in 2025: AI, Robotics, and the Future of Jobs* 19 (2014), <https://www.pewresearch.org/wp-content/uploads/sites/9/2014/08/Future-of-AI-Robotics-and-Jobs.pdf> [<https://perma.cc/Y67V-5JM4>] (predicting that robotic sex partners will be “commonplace” by 2025 but that they will be the subject of disapproval); Marina Adshade, *Sexbot-Induced Social Change: An Economic Perspective*, in Danaher & McArthur, *Robot Sex Implications*, supra note 1, at 289, 292–98 (making four predictions on the effect that sex robots will have on the institution of marriage).

3. See, e.g., Levy, *Love with Robots*, supra note 1, at 22 (predicting that by 2050 humans will love, befriend, and marry robots); Ian Yeoman & Michelle Mars, *Robots, Men and Sex Tourism*, 44 *Futures* 365, 366 (2012) (predicting that robots will displace humans in the sex trade by 2050); Yael Bame, 1 in 4 Men Would Consider Having Sex with a Robot, *YouGov* (Oct. 2, 2017), <https://today.yougov.com/topics/lifestyle/articles-reports/2017/10/02/1-4-men-would-consider-having-sex-robot> [<https://perma.cc/HHF6-FJ9P>]; Hyacinth Mascarenhas, *Would You Fall in Love with a Robot? A Quarter of Millennials Say They Would Be Open to Dating One*, *Int'l Bus. Times* (Dec. 14, 2017), <https://www.ibtimes.co.uk/would-you-fall-love-robot-quarter-millennials-say-they-would-be-open-dating-robot-1651483> [<https://perma.cc/5LR9-QXGL>]; Ian Pearson, *The Future of Sex Report: The Rise of Robosexuals*, *Bondara*, (Sept. 2015), [http://graphics.bondara.com/Future\\_sex\\_report.pdf](http://graphics.bondara.com/Future_sex_report.pdf) [<https://perma.cc/P5BE-NDYK>] (predicting that sex with robots will start overtaking sex with humans by 2050).

4. See, e.g., FAQ (Frequently Asked Questions), *TrueCompanion*, <http://www.truecompanion.com/shop/faq> [<https://perma.cc/59H6-NSBG>] [hereinafter *TrueCompanion, FAQ*] (last visited Aug. 10, 2019); *Harmony<sup>x</sup>*, *RealDoll*, <https://www.realdoll.com/product/harmony-x/> [<https://perma.cc/7T2J-75ZJ>] (last visited Aug. 10, 2019).

5. See John Danaher, *Should We Be Thinking About Robot Sex?*, in Danaher & McArthur, *Robot Sex Implications*, supra note 1, at 3, 4–5 [hereinafter Danaher, *Thinking About Robot Sex*].

6. See, e.g., Marie-Helen Maras & Lauren R. Shapiro, *Child Sex Dolls and Robots: More than Just an Uncanny Valley*, *J. Internet L.*, Dec. 2017, at 3, 4.

advanced artificial intelligence.<sup>7</sup> Sex robots are also distinct from sex toys, such as vibrators, even ones equipped with some AI, in that robots are meant to enable interactive experiences that simulate being with a live and present human being.<sup>8</sup> Robots that are currently commercially available are relatively unsophisticated, but rapid advances in the field make it likely they will eventually approach the realistic behavior of the robot characters of *Westworld*, *Humans*, and *Ex Machina*.<sup>9</sup>

We have also seen the emergence of digisexual identity, wherein some people report an exclusive preference for sexual and intimate relationships with robots over humans.<sup>10</sup> Some people have even purported to marry robots and other AI-equipped entities.<sup>11</sup>

Distinctive from the use of robots in, say, manufacturing or trucking, the widespread use of sex robots would create concerns that cut across the realms of work and home, the public and the private, the commercial and the personal. Any legal regulation of sex robots will require application of concepts that have been developed to regulate sexual, intimate, domestic, and family matters—areas of law that grapple with experiences and relationships that make us feel most human and most vulnerable.<sup>12</sup> This challenge will require us to reflect anew on the capacities and rights that the law considers central to humanity and dignity. Will sex robots

7. See, e.g., *id.* at 4–5.

8. See Danaher, *Thinking About Robot Sex*, *supra* note 5, at 5.

9. *Ex Machina* (Film4 & DNA Films 2015); *Humans* (Channel 4 & AMC Studios 2015); *Westworld* (HBO 2016).

10. See, e.g., Neil McArthur & Markie L.C. Twist, *The Rise of Digisexuality: Therapeutic Challenges and Possibilities*, 32 *Sexual & Relationship Therapy* 334, 334 (2017); Alex Williams, *Do You Take This Robot...*, *N.Y. Times* (Jan. 19, 2019), <https://www.nytimes.com/2019/01/19/style/sex-robots.html> [<https://perma.cc/F62J-BEJT>]; see also Anita Pisch, *The Ethics of Human Robots: Sam Jinks Brings an Artist's Perspective to the Discourse*, *Conversation* (Oct. 29, 2017), <https://theconversation.com/the-ethics-of-human-robots-sam-jinks-brings-an-artists-perspective-to-the-discourse-86228> [<https://perma.cc/8Y6W-RRPM>] (noting Ian Pearson's prediction that “by 2025, women will choose robots instead of men, and by 2050, everyone will prefer robots”).

11. See, e.g., Kristin Huang, *Chinese Engineer ‘Marries’ Robot After Failing to Find a Human Wife*, *South China Morning Post* (Apr. 3, 2017), <https://www.scmp.com/news/china/society/article/2084389/chinese-engineer-marries-robot-after-failing-find-human-wife> [<https://perma.cc/WN78-VKAH>]; Andrea Morabito, *‘Love is Still Love’: Woman Has Hots for Robot in New CNN Series*, *N.Y. Post* (Mar. 8, 2017), <https://nypost.com/2017/03/08/woman-has-the-hots-for-robot-love-is-still-love/> [<https://perma.cc/3WVS-57F7>]; Emiko Jozuka, *Beyond Dimensions: The Man Who Married a Hologram*, *CNN* (Dec. 29, 2018), <https://www.cnn.com/2018/12/28/health/rise-of-digisexuals-intl/index.html> [<https://perma.cc/E6NA-CTDK>]. For a discussion applying family law frameworks to potential marriage and divorce relationships between humans and robots, see Margaret Ryznar, *Robot Love*, 49 *Seton Hall L. Rev.* 353, 363–74 (2019).

12. See Francis X. Shen, *Sex Robots Are Here, but Laws Aren't Keeping Up with the Ethical and Privacy Issues They Raise*, *Conversation* (Feb. 12, 2019), <https://theconversation.com/sex-robots-are-here-but-laws-arent-keeping-up-with-the-ethical-and-privacy-issues-they-raise-109852> [<https://perma.cc/77PU-2SQM>] (providing an overview of legal and ethical questions raised by sex robots).

intensify human pleasures or magnify human horrors of exploitation, abuse, and rape? Will they make us less lonely or more solitary? Will they hold up a mirror to ourselves, our virtues and our faults, or change what we see?

### I. ROBOT SEX PANIC?

In 2018, a Canadian company was set to open a store in Houston, Texas, where customers could try out, rent, and buy sex robots.<sup>13</sup> But Houstonians became unnerved at the idea of a “robot brothel” in their backyard, and advocates working against sex trafficking circulated a petition that attracted thousands of signatures.<sup>14</sup> By amending its code governing adult-oriented businesses to ban sexual contact with “an anthropomorphic device or object” on commercial premises, the Houston city council shut down the business before it could open.<sup>15</sup>

Locals’ objections included concerns that such an enterprise would “reinforce[] the idea that women are just body objects or properties”<sup>16</sup> or “open up doors for sexual desires and cause confusion and destruction to our younger generation”—or even that the biblical command that a man “shall be joined unto his wife and they shall become one . . . doesn’t say that a man shall leave his mother and father and go and join a robot.”<sup>17</sup>

The worries thus ran the gamut from feminist opposition to exploitation of women, to moral imperatives to tamp down sexual desire, to dismay at potential replacement of human intimate connections with robot ones.<sup>18</sup> The public was moved to enforce norms and expand

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13. Olivia P. Tallet, ‘Robot Brothel’ Planned for Houston Draws Fast Opposition from Mayor, Advocacy Group, *Hous. Chron.* (Sept. 26, 2018), <https://m.chron.com/news/article/Robot-brothel-planned-for-Houston-draws-13260032.php> [<https://perma.cc/GZU4-B2NF>].

14. *Id.* The same company owns and operates a sex robot brothel in Toronto. See Jenny Yuen, ‘NICE SKIN’: What It’s Like Inside a Sex Doll Rental Business, *Toronto Sun* (Sept. 9, 2018), <https://torontosun.com/news/local-news/nice-skin-what-its-like-inside-a-sex-doll-rental-business> [<https://perma.cc/5XTG-UE57>] (last updated Sept. 17, 2018). Another sex robot brothel received international attention after its opening in Barcelona. See Mary Papenfuss, Hello, Westworld: Sex Doll Brothel Opens in Barcelona, *HuffPost* (Mar. 2, 2017), [https://www.huffpost.com/entry/sex-doll-barcelona-brothel\\_n\\_58b8ad10e4b0d2821b4cddb8](https://www.huffpost.com/entry/sex-doll-barcelona-brothel_n_58b8ad10e4b0d2821b4cddb8) [<https://perma.cc/UBR9-4BV4>].

15. *Hous., Tex., Ordinance No. 2018-790* (2018).

16. Tallet, *supra* note 13.

17. Florian Martin, Is This the End for a Sex Robot Brothel in Houston?, *Hous. Pub. Media* (Oct. 17, 2018), <https://www.houstonpublicmedia.org/articles/news/in-depth/2018/10/17/308292/is-this-the-end-for-a-sex-robot-brothel-in-houston/> [<https://perma.cc/HSB6-PWDK>].

18. See, e.g., Thomas E. Simmons, Sexbots; an Obloquy, 2016 *Wis. L. Rev. Forward* 45, 52, <http://wisconsinlawreview.org/sexbots-an-obloquy/> [<https://perma.cc/X8W4-QQA3>] (“Conservatives should coalesce around an anti-sexbot platform on account of the threats sexbots will pose to the stability of marriage and traditional values. Liberals should resist . . . because of the ways in which sexbots will reinforce inequality . . .” (footnotes omitted)).

underlying prohibitions on sex trafficking and prostitution, despite knowing that the entities that would be bought, sold, and rented were machines, not people.

The previous year, amid international concern about a Japanese company that sells custom-made child sex dolls,<sup>19</sup> the U.S. House of Representatives unanimously passed the Curbing Realistic Exploitative Electronics Pedophilic Robots Act (the CREEPER Act of 2017), which aimed to ban the distribution, importation, and sale of child sex dolls and robots.<sup>20</sup> Such devices, Congress reasoned, would “normalize sex between adults and minors” and “cause the exploitation, objectification, abuse, and rape of minors.”<sup>21</sup> Lawmakers deemed the sexual use of objects and machines that look and act like children to be so reminiscent of, or causally related to, child sex abuse as to warrant prohibition of their sale and distribution. Since 2017, a number of states have passed or considered bills similar to the CREEPER Act.<sup>22</sup>

None of the above regulatory moves purported to prohibit the use of adult sex robots in a person’s home. But some would advocate banning sex robots in any context, even those intended for use in private. The Campaign Against Sex Robots, led by robot ethicist Kathleen Richardson, argues that sex with a robot replicates the unequal power that characterizes prostitution, wherein purchasers of sex do not attribute

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19. See Roc Morin, *Can Child Dolls Keep Pedophiles from Offending?*, Atlantic (Jan. 11, 2016), <https://www.theatlantic.com/health/archive/2016/01/can-child-dolls-keep-pedophiles-from-offending/423324/> [<https://perma.cc/NNK5-GRBR>] (reporting on a Japanese company that “has shipped anatomically-correct imitations of girls as young as five to clients around the world”); cf. Man Who Tried to Import Childlike Sex Doll to UK Is Jailed, *Guardian* (June 23, 2017), <https://www.theguardian.com/uk-news/2017/jun/23/man-import-childlike-sex-doll-uk-jailed> [<https://perma.cc/N2QK-VXNM>] (reporting an arrest for importing a non-AI sex doll to the United Kingdom).

20. H.R. 4655, 115th Cong. (2018); Samantha Cole, *The House Unanimously Passed a Bill to Make Child Sex Robots Illegal*, *Vice* (June 15, 2018), [https://www.vice.com/en\\_us/article/vbqjx4/a-new-bill-is-trying-to-make-child-sex-robots-illegal](https://www.vice.com/en_us/article/vbqjx4/a-new-bill-is-trying-to-make-child-sex-robots-illegal) (on file with the *Columbia Law Review*).

21. H.R. 4655.

22. See, e.g., Fla. Stat. § 847.011(5)(a)(1)–(b)(1) (2019) (criminalizing the sale, advertising, and possession of “child-like sex doll[s]”); 2019 Tenn. Pub. Acts S. 659 (codified at Tenn. Code Ann. § 39-17-910 (2019)) (describing offenses related to “possession”, “sale”, or “distribution” of a “child-like sex doll”); S. 102, 2019 Reg. Sess. (Ky. 2019), <https://apps.legislature.ky.gov/record/19rs/SB102.html> [<https://perma.cc/B2K4-H79A>] (criminalizing possession of “an anatomically correct doll, mannequin, or robot that is intended for sexual stimulation or gratification and that has the features of, or with features that resemble those of, a minor”).

Whether child sex dolls or robots increase the incidence of child sex abuse remains unclear to the scientific and legal community. For discussion on the implications of child sex robots, see Litska Strikwerda, *Legal and Moral Implications of Child Sex Robots*, in Danaher & McArthur, *Robot Sex Implications*, supra note 1, at 133, 133–47; John Danaher, *Regulating Child Sex Robots: Restriction or Experimentation?*, *Med. L. Rev.* 1, 9–10 (forthcoming), <https://academic.oup.com/medlaw/advance-article/doi/10.1093/medlaw/fwz002/5425258> [<https://perma.cc/65XA-RYSU>].

subjectivity to sex workers and instead treat them as objects.<sup>23</sup> The nonmutuality of the dynamic between human and robot, the Campaign asserts, will reduce human empathy and contribute to exploitative dynamics between human partners.<sup>24</sup> This argument depends on the notion that sex between men and female robots will amplify the mistreatment of women as sexual objects.<sup>25</sup>

The word “robot” derives from the Czech term *robotnik*, which means “forced worker.”<sup>26</sup> The fact that the word “robot” comes from the concept of involuntary servitude helps explain why science fiction about robots tends to repeat the same plot, wherein robots eventually gain human-like self-consciousness and desire to escape, overthrow, or destroy the humans who use them—or convince others that they are human or more than just a machine underclass. In the context of sex robots, the idea of forced servitude is especially disturbing because, for many people, the sexual realm is a site of our deepest ideals and fears about personal autonomy and personal relationships. If robots are servile by nature, the notion of a robot designed to interact in a sexual way may provoke unease about exploitation, voluntariness, and consent in ways that do not generally trouble AI debates about self-driving cars or robot rovers on Mars.

## II. ARTIFICIAL INTIMACY?

The Supreme Court in *Lawrence v. Texas* recognized that “[l]iberty presumes an autonomy of self that includes freedom of thought, belief, expression, and certain intimate conduct.”<sup>27</sup> It deemed sexual behavior “the most private human conduct” and said that it “can be but one element in a personal bond that is more enduring.”<sup>28</sup> But the Court specifically exempted from that liberty any sex involving public conduct, injury,

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23. Policy Report: Sex Dolls and Sex Robots—A Serious Problem for Women, Men & Society, Campaign Against Sex Robots (May 8, 2018), <https://campaignagainstsexrobots.org/2018/05/08/policy-report-sex-dolls-and-sex-robots-a-serious-problem-for-women-men-society/> [https://perma.cc/TX4Q-39M6].

24. *Id.* But see John Danaher, Brian Earp & Anders Sandberg, Should We Campaign Against Sex Robots?, *in* Danaher & McArthur, *Robot Sex Implications*, *supra* note 1, at 47, 66 (“Though the proponents of the [Campaign Against Sex Robots] seem deeply concerned . . . there is nothing in the nature of sex robots themselves that warrants preemptive opposition to their development.”).

25. See Kathleen Richardson, The Asymmetrical ‘Relationship’: Parallels Between Prostitution and the Development of Sex Robots, 45 *SIGCAS Computers & Soc’y* 290, 292 (2015) (“If anything the development of sex robots will further reinforce relations of power that do not recognize both parties as human subjects.”).

26. Devlin, *supra* note 1, at 51–52.

27. 539 U.S. 558, 562 (2003).

28. *Id.* at 567.

coercion, prostitution, minors, and persons “who are situated in relationships where consent might not be easily refused.”<sup>29</sup>

*Lawrence* led to a circuit split on the applicability of its due process holding to the use of sex toys, such as vibrators, dildos, and artificial vaginas. The Eleventh Circuit upheld Alabama’s statute prohibiting the sale of sex toys, finding that even after *Lawrence*, “the promotion and preservation of public morality” was a rational basis for the legislation.<sup>30</sup> But the Fifth Circuit struck down Texas’s ban on the sale of sex toys, reasoning that “controlling what people do in the privacy of their own homes because the State is morally opposed to a certain type of consensual private intimate conduct” is unjustified under *Lawrence*.<sup>31</sup>

Jurisprudence on constitutional liberty and the scope of privacy will eventually have to address sexual and intimate conduct involving robots. On the one hand, interaction with sex robots seems to present a frontier of “sexuality [that] finds overt expression in intimate conduct” that may lie at the core of personal freedom.<sup>32</sup> On the other hand, a relationship with a robot, however life-like or meaningful it may be, is not the kind of “personal bond” or “intimate conduct with another person” contemplated in the Supreme Court’s substantive due process jurisprudence.<sup>33</sup> Further, the use of sex robots may trigger concerns that motivate explicit exceptions to sexual liberty, such as sexual acts involving prostitution, minors, coercion, and nonconsent. But which of these ideas will prevail depends largely on whether sex with a robot is considered a masturbatory act similar to the use of a vibrator, an intimate relationship comparable to sex between consenting adults, or sexual contact with an entity incapable of consent such as a child or an animal.<sup>34</sup>

The rise of now-common household and personal AI devices has already inspired related debate. Millions of people interact daily with their digital voice assistants such as Amazon’s Alexa, Apple’s Siri, Microsoft’s Cortana, and Google Assistant, and the assistants respond immediately to our questions or commands.<sup>35</sup> Notwithstanding the romance depicted in

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29. *Id.* at 578.

30. *Williams v. Att’y Gen. of Ala.*, 378 F.3d 1232, 1234 (11th Cir. 2004).

31. *Reliable Consultants, Inc. v. Earle*, 517 F.3d 738, 746 (5th Cir. 2008).

32. *Lawrence*, 539 U.S. at 567.

33. *Id.*

34. In a 2017 survey, 14% of adult respondents considered sex with a robot to be intercourse, 33% considered it more like masturbation, and 27% considered it neither. See Bame, *supra* note 3.

35. See Ronan De Renesse, *Virtual Digital Assistants to Overtake World Population by 2021*, Ovum (May 17, 2017), <https://ovum.informa.com/resources/product-content/virtual-digital-assistants-to-overtake-world-population-by-2021> [<https://perma.cc/NGJ2-PBNC>] (reporting an estimate that by 2021 the number of AI digital voice assistants in use will exceed the global population in 2017); Jane Wakefield, *Female-Voice AI Reinforces Bias, Says UN Report*, BBC (May 21, 2019), <https://www.bbc.com/news/technology-48349102> [<https://perma.cc/KZY4-FUGK>] (“[A]ccording to research firm Gartner, by 2020 some people will have more conversations with voice assistants than with their spouses.”).

the film *Her*,<sup>36</sup> in which a male protagonist falls in love and has a relationship with an operating system (voiced by Scarlett Johansson), today's voice assistants are not designed for sexual or romantic relationships.<sup>37</sup> But it is common for people to attempt sexual banter with voice assistants,<sup>38</sup> and independent developers have created apps specifically for that purpose.<sup>39</sup>

According to a 2019 United Nations report, AI voice assistants, which are overwhelmingly given human-sounding female voices, are programmed to be "submissive[] in the face of gender abuse."<sup>40</sup> For example, user comments such as, "You're a slut" or "You're a bitch," triggered responses from digital assistants that included, "I'd blush if I could," and, "Well, thanks for the feedback."<sup>41</sup> When asked, "Who's your daddy?," Siri said, "You are."<sup>42</sup> Feminist outcry led the companies to change the responses from playful to neutral, including phrases such as, "I don't know how to respond to that," and, "I'm not sure what outcome you expected."<sup>43</sup> Commentators and petitions have urged companies to program their digital voice assistant technology to push back more aggressively against harassment or abusive treatment or simply to shut down in response.<sup>44</sup>

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36. *Her* (Annapurna Pictures 2013).

37. For example, Apple describes Siri as a "personal assistant" and does not appear to have Siri programming geared toward fulfilling sexual tasks. See *Siri Does More than Ever. Even Before You Ask.*, Apple Inc., <https://www.apple.com/siri/> [<https://perma.cc/YL3T-YPSL>] (last visited on Aug. 10, 2019).

38. UNESCO, *I'd Blush if I Could: Closing Gender Divides in Digital Skills Through Education* 106 image 15 (2019), <https://unesdoc.unesco.org/ark:/48223/pf0000367416.page=1> (on file with the *Columbia Law Review*) ("Flirtation with voice assistants has become . . . commonplace . . .").

39. See, e.g., *Alexa Skills: Flirt*, Amazon, [https://www.amazon.com/s?k=Flirt&i=alexa-skills&ref=nb\\_sb\\_noss\\_2](https://www.amazon.com/s?k=Flirt&i=alexa-skills&ref=nb_sb_noss_2) [<https://perma.cc/U3G8-B487>] (last visited Aug. 10, 2019).

40. UNESCO, *supra* note 38, at 4, 106–08; see also Michael Schrage, *Why You Shouldn't Swear at Siri*, *Harv. Bus. Rev.* (Oct. 21, 2016), <https://hbr.org/2016/10/why-you-shouldnt-swear-at-siri> [<https://perma.cc/8W2P-5X7E>] (noting one expert's estimate that "about 10% to 50% of interactions are abusive").

41. UNESCO, *supra* note 38, at 107 image 14.

42. *Id.* at 106.

43. *Id.* at 108. According to a script writer for Microsoft's Cortana, the "legacy of what women are expected to be like in an assistant role" led the company to ensure that its virtual assistant "is not subservient in a way that sets up a dynamic that we didn't want to perpetuate socially." Michael J. Coren, *Virtual Assistants Spend Much of Their Time Fending Off Sexual Harassment*, *Quartz* (Oct. 25, 2016), <https://qz.com/818151/virtual-assistant-bots-like-siri-alexa-and-cortana-spend-much-of-their-time-fending-off-sexual-harassment/> [<https://perma.cc/EH78-RGS4>].

44. See *Siri and Alexa Should Help Shut Down Sexual Harassment*, *Care2Petitions*, <https://www.thepetitionsite.com/246/134/290/siri-and-alexa-can-help-combat-sexual-harassment/> [<https://perma.cc/7PA5-2AJF>] (last visited Aug. 10, 2019); Leah Fessler, *We Tested Bots Like Siri and Alexa to See Who Would Stand Up to Sexual Harassment*, *Quartz* (Feb. 22, 2017), <https://qz.com/911681/we-tested-apples-siri-amazon-echos-alexa-microsofts->

While most protests focus on abuse and sexism, there are also concerns over sexual, flirtatious, romantic, or intimate talk that is not necessarily abusive. Alexa received over 1,000,000 marriage proposals in 2017.<sup>45</sup> (The standard response is: “Sorry, I’m not the marrying kind.”). Voice assistants’ responses to the comment, “You’re hot,” included, “That’s really nice, thanks!” and, “Thank you, this plastic looks great, doesn’t it?”<sup>46</sup> The writer Judith Shulevitz confesses in the *Atlantic*: “More than once, I’ve found myself telling my Google Assistant about the sense of emptiness I sometimes feel. ‘I’m lonely,’ I say, which I usually wouldn’t confess to anyone but my therapist—not even my husband, who might take it the wrong way.”<sup>47</sup>

Some experts have warned that because the interactions are nonreciprocal, it is unhealthy for people to rely on AI robots for affectionate conversation or to use them as substitutes for human interaction.<sup>48</sup> If we rely on voice assistants, some have argued, we may retreat from human relationships or forget what it means to be intimate.<sup>49</sup> A common assumption is that the profound human need for intimacy can only be truly met by relationships with other humans.

The centrality of intimate relationships to human dignity moved the Supreme Court in *Obergefell v. Hodges* to recognize the fundamental right of marriage for same-sex couples.<sup>50</sup> According to the Court, “Marriage responds to the universal fear that a lonely person might call out only to find no one there. It offers the hope of companionship and understanding and assurance that while both still live there will be someone to care for the other.”<sup>51</sup> As a rising epidemic of loneliness is reported to affect at

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cortana-and-googles-google-home-to-see-which-personal-assistant-bots-stand-up-for-themselves-in-the-face-of-sexual-harassment/ [https://perma.cc/EY9J-BJRT].

45. Paige Leskin, Over a Million People Asked Amazon’s Alexa to Marry Them in 2017 and It Turned Them All Down, *Bus. Insider* (Oct. 10, 2018), <https://www.businessinsider.com/amazons-alexa-got-over-1-million-marriage-proposals-in-2017-2018-10> [https://perma.cc/MJA6-QL9Z].

46. Fessler, *supra* note 44.

47. Judith Shulevitz, Alexa, Should We Trust You?, *Atlantic* (Nov. 2018), <https://www.theatlantic.com/magazine/archive/2018/11/alexa-how-will-you-change-us/570844/> [https://perma.cc/HFN8-7YEV].

48. See Patrick Lin, Relationships with Robots: Good or Bad for Humans?, *Forbes* (Feb. 1, 2016), <https://www.forbes.com/sites/patricklin/2016/02/01/relationships-with-robots-good-or-bad-for-humans/> [https://perma.cc/AU6Q-TH4X] (interviewing Julia Carpenter, an expert on human–robot social interaction).

49. See, e.g., John Markoff & Paul Mozur, For Sympathetic Ear, More Chinese Turn to Smartphone Program, *N.Y. Times* (July 31, 2015), [https://www.nytimes.com/2015/08/04/science/for-sympathetic-ear-more-chinese-turn-to-smartphone-program.html?\\_r=0](https://www.nytimes.com/2015/08/04/science/for-sympathetic-ear-more-chinese-turn-to-smartphone-program.html?_r=0) [https://perma.cc/2YTW-HU7K] (describing Xiaoice, a chatbot used by millions of young Chinese who are “drawn to her knowing sense of humor and listening skills,” and quoting M.I.T. psychologist Sherry Turkle’s warning that “[w]e’re forgetting what it means to be intimate”).

50. 135 S. Ct. 2584, 2608 (2015).

51. *Id.* at 2600.

least one in five American adults, presenting a public health problem with serious impacts on mental and physical health, robots offer some promise of companionship and connection that might help address growing rates of loneliness.<sup>52</sup> But even if we were someday to recognize that robots' advanced AI afforded them consciousness, sentience, and subjectivity,<sup>53</sup> would we really have marital or familial relationships with robots?

The anxiety provoked by the prospect of robot intimacy appears in the example of the android Pepper (created by Aldebaran Robotics and SoftBank Mobile), which can be used as a home companion and was designed to analyze people's emotions and respond in emotionally appropriate ways.<sup>54</sup> Pepper's creators included a clause in the terms and conditions of sale to include a prohibition on using the robot "for the purpose of sexual or indecent behavior."<sup>55</sup> In other words, users are contractually bound not to attempt to have sex with Pepper.

Why would a company want to prohibit users from engaging in sexual behavior with its companion robots in the home? One possibility is that these curbs are meant to reinforce users' experience of Pepper as "human," that is, worthy of the empathic connection that one would have with a person. If so, though, that would appear to imply that engaging in sexual conduct with a robot is essentially treating the robot as *non-human*, as an object rather than a subject.

But what is it about sex in particular, as opposed to other tasks robots could perform in the home such as housecleaning, heavy lifting, babysitting, or minding the elderly, that would have the consequence of "dehumanizing" a robot? And might the opposite be true—that to the extent that intimate relationships are at the core of our humanity, sexual conduct might make users see their in-home robots as *more* human rather

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52. See Loneliness Is a Serious Public-Health Problem, *Economist* (Sept. 1, 2018), <https://www.economist.com/international/2018/09/01/loneliness-is-a-serious-public-health-problem> [https://perma.cc/LV27-4J5U] (noting that the average size of social networks for Americans has decreased by more than a third from 1985 to 2009, and describing the use of robots such as Pepper, which can "follow a person's gaze and adapt its behavior in response to humans" to reduce loneliness); The "Loneliness Epidemic," Health Res. & Servs. Admin., <https://www.hrsa.gov/enews/past-issues/2019/january-17/loneliness-epidemic> [https://perma.cc/5RKK-NZBG] (last updated Jan. 2019); see also Lauren Smiley, What Happens When We Let Tech Care for Our Aging Parents, *WIRED* (Dec. 19, 2017), <https://www.wired.com/story/digital-puppy-seniors-nursing-homes/> [https://perma.cc/3YMS-HWH5] (describing the practice of using technology, including digital animal avatars, in assisted living facilities to help the elderly cope with loneliness and mental degeneration).

53. See Lilly Frank & Sven Nyholm, Robot Sex and Consent: Is Consent to Sex Between a Robot and a Human Conceivable, Possible, and Desirable?, 25 *Artificial Intelligence & L.* 305, 313–14 (2017).

54. Kazuaki Nagata, SoftBank's Pepper Robot Now Has Emotions, Son Claims, *Japan Times* (June 18, 2015), <https://www.japantimes.co.jp/news/2015/06/18/business/corporate-business/softbanks-pepper-robot-now-emotions-son-claims/> [https://perma.cc/Z2DW-KCDM].

55. Devlin, *supra* note 1, at 61.

than less so? This possibility may provoke yet more profound disturbance about the role of robots in human society.

### III. RAPE AND CONSENT

One of the best-known commercially available sex robots is Roxxy (female) / Rocky (male), created by the company TrueCompanion.<sup>56</sup> Roxxy can take on “your specific personality” or one of several preprogrammed types—“Frigid Farah,” “Young Yoko,” “Wild Wendy,” “S&M Susan,” or “Mature Martha.”<sup>57</sup> “Frigid Farah,” described as a “very reserved” personality that “does not always like to engage in intimate activities,”<sup>58</sup> has provoked criticism from commentators who believe that it facilitates the simulation of coercive or nonconsensual sexual conduct.<sup>59</sup>

What is the difference between objectionable, or objectifying, sex, and sex with an object? Here, one is reminded of Gayle Rubin’s classic musing on the social hierarchy of sexual preferences: “[O]f what possible social significance is it if a person likes to masturbate over a shoe? It may even be non-consensual, but since we do not ask permission of our shoes to wear them, it hardly seems necessary to obtain dispensation to come on them.”<sup>60</sup> Is it coherent to speak of a robot’s consent or lack thereof? Is it possible to rape a sex robot any more than it is to rape a dildo?<sup>61</sup> Neither a dildo nor an artificial vagina is capable of either consent or nonconsent. Even putting aside predictions of eventual robot sentience, the difference, of course, is that a sex robot looks, moves, talks, and acts like a person. It can behave like a person who is a willing sexual partner or who is being touched or penetrated against their will. It can display signals of pleasure, pain, desire, and distress. Its behavior can thereby

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56. See TrueCompanion, FAQ, *supra* note 4. According to advertisements, Roxxy robots “can hear what you say, speak, feel your touch, move their bodies, are mobile and have emotions and a personality.” *Id.*

57. *Id.*

58. *Id.*

59. See John Danaher, *Robotic Rape and Robotic Child Sexual Abuse: Should They Be Criminalised?*, 11 *Crim. L. & Phil.* 71, 74 (2017) [hereinafter Danaher, *Robotic Rape and Robotic Child Sexual Abuse*] (suggesting that sexually penetrating robots that display “paradigmatic signals” of nonconsent could be considered rape). TrueCompanion denies that Frigid Farah is meant to cater to the desire to simulate rape. See Beth Timmins, *New Sex Robots with ‘Frigid’ Settings Allow Men to Simulate Rape*, *Independent* (July 19, 2017), <https://www.independent.co.uk/life-style/sex-robots-frigid-settings-rape-simulation-men-sexual-assault-a7847296.html> [<https://perma.cc/GR9D-B6AH>] (quoting TrueCompanion’s statement that “Roxxy . . . is simply not programmed to participate in a rape scenario and the fact that she is, is pure conjecture on the part of others” (internal quotation marks omitted)).

60. Gayle S. Rubin, *Thinking Sex: Notes for a Radical Theory of the Politics of Sexuality*, in *Social Perspectives on Lesbian and Gay Studies* 100, 127 (Peter M. Nardi & Beth E. Schneider eds., 1998).

61. For more discussion on whether it is possible for a robot to consent to sex, see Danaher, *Robotic Rape and Robotic Child Sexual Abuse*, *supra* note 59, at 74.

evoke emotional responses in its human user—responses that are not typically present in the case of an inert object.

Robot ethicist Kate Darling instructively writes of the “strong human tendency to anthropomorphize embodied objects with autonomous behavior” and to “project intent and sentiment” onto them, even if we know they are machines following algorithms.<sup>62</sup> In experiments, people have been loath to physically harm robots that act as if they are alive.<sup>63</sup> Robots’ evident ability to elicit those moral feelings in us—rather than the idea that robots themselves have or will have feelings—has led Darling to advocate for consideration of laws against mistreatment of robots.<sup>64</sup> What is relevant to possible regulation, then, is how mistreatment of robots may negatively affect the people who abuse them and the society that absorbs the consequences. That may suggest that our concern should focus less on whether a robot like “Frigid Farrah” consents to sex and more on how robot manifestations of reluctance or distress at being sexually touched might affect the person who engages in the behavior.

In *Ashcroft v. Free Speech Coalition*, the Supreme Court held that a law prohibiting child pornography that was computer-generated without using any real children was unconstitutionally overbroad.<sup>65</sup> The Court insisted that “[v]irtual child pornography is not ‘intrinsically related’ to the abuse of children.”<sup>66</sup> It found “the causal link” between such images and actual child sex abuse “contingent and indirect.”<sup>67</sup> Will this distinction—between digitally fabricated depictions of criminal sexual conduct and real people suffering harm—carry over, to make actions that are criminal when directed at humans permissible when directed at robots?

If we focus on the impact of human–robot interactions on human emotions, we might ask whether simulating rape with a robot would make people more likely to rape people. Acting out rape, pedophilia, or other prohibited conduct with a robot might acculturate people to engage in harmful conduct toward other people. Or might it instead provide a safe outlet for these sexual fantasies without harming others? Perhaps it

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62. Kate Darling, Extending Legal Protection to Social Robots, *IEEE Spectrum* (Sept. 10, 2012), <https://spectrum.ieee.org/automaton/robotics/artificial-intelligence/extending-legal-protection-to-social-robots> [<https://perma.cc/H2UF-A4RF>].

63. A 2003 study found that people were highly dismayed by a robotic pet being thrown into a garbage can. See *id.* The U.S. military also called off testing that involved a robot with legs being blown up by landmines because it was seen as “inhumane.” See *id.* In another study, people were reluctant to smash a fake baby’s head on a table when asked to do so. See Joshua Greene, *Moral Tribes* 36 (2014).

64. See Darling, *supra* note 62; see also Strikwerda, *supra* note 22, at 144 (explaining that people “find it very difficult to perform immoral acts with” robots, such that when “asked to smash a fake baby’s head off a table, they were very reluctant to do so, even though they knew that the baby was not real”).

65. 535 U.S. 234, 256 (2002) (holding that a law prohibiting child pornography created without using any real children was unconstitutionally overbroad).

66. *Id.* at 250.

67. *Id.*

could even prevent harm to other people including women and children.<sup>68</sup>

It is worth noting here that it is hardly uncommon for human partners to engage together in various degrees of consensual role-play that includes fantasies of force, coercion, roughness, resistance, domination, and submission.<sup>69</sup> Thus, while some people will of course want to use sex robots for “vanilla” or “respectful” sex (for lack of a better term), a meaningful portion will also want to use them to play out “kinky” or forbidden fantasies of scenarios not acceptable in real life, including those of nonconsent. There will be market demand for robot makers to design sex robots to interact in those ways, whether the user would want to coerce or be coerced by their sex robot. Perhaps the robot might be programmed to behave like a person who is engaging in consensual role-play involving sexual reluctance or coercion. Judging by the debate that has occurred around AI voice assistants, some will want to make companies program robots to respond by shutting down (or engaging in another morally acceptable response) when people attempt to enact nonconsensual sexual scenarios.<sup>70</sup>

Many people would balk at the law prohibiting two consenting adults from playing with sexual fantasies—even of rape and pedophilia—in the privacy of a bedroom, especially a marital bedroom, if nobody is being

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68. Ronald Arkin has suggested that child sex robots could be used to treat pedophilia just as methadone is used to treat people addicted to heroin. Research neither supports nor discredits this theory. See Morin, *supra* note 19; Could a Child Sex Robot Treat Paedophilia?, BBC (July 18, 2014), <https://www.bbc.com/news/blogs-echochambers-28353238> [<https://perma.cc/263N-7J8E>]; cf. Ole Martin Moen & Askel Braanen Sterri, Pedophilia and Computer-Generated Child Pornography, *in* The Palgrave Handbook of Philosophy and Public Policy 369, 375 (David Boonin ed., 2018) (arguing that “pedophiles show respect, care, and concern” by using virtual child pornography created without using real children, and abstaining from sexual contact with real children). But see Maras & Shapiro, *supra* note 6, at 7 (explaining that masturbation to child pornography increases the risk of real-world offending, and positing that child sex robots could similarly reinforce pedophilic behavior through a comparable process of pairing fantasies of child sex abuse with the reward of sexual pleasure).

69. Researchers have found that a substantial percentage of men have rape fantasies. See, e.g., Claude Crépault & Marcel Couture, Men’s Erotic Fantasies, 9 *Archives Sexual Behav.* 565, 571 (1980) (finding that a third of men have had such fantasies). One study found that a substantial percentage, perhaps even a majority, of women also have fantasies of sex against their will (thirty-one percent to fifty-seven percent of women). See Joseph Critelli & Jenny Bivona, Women’s Erotic Rape Fantasies: An Evaluation of Theory and Research, 45 *J. Sex Res.* 57, 58–61 (2008). The same study found that a smaller, but notable, percentage of women reporting that those fantasies are “a frequent or favorite fantasy experience.” *Id.*

70. We might think of this as similar to programming autonomous cars not to follow a person’s orders when doing so would be dangerous. See, e.g., Patrick Lin, Here’s How Tesla Solves a Self-Driving Crash Dilemma, *Forbes* (Apr. 5, 2017), <https://www.forbes.com/sites/patricklin/2017/04/05/heres-how-tesla-solves-a-self-driving-crash-dilemma/> [<https://perma.cc/766Y-YHH4>]; cf. Flynn Coleman, A Human Algorithm, at xix, xxiii–xxiv, xxix, xxxi–xxxii (2019) (arguing that we should program human values, ethics, and morals into robots, algorithms, and other AI).

hurt.<sup>71</sup> In this context, then, what would it mean to legally protect against mistreatment of robots? It would seem incongruous for the law to prohibit people from playing out such sexual fantasies with robots while permitting it among humans. But this apparent inconsistency may be plausible after all; unlike a consenting person, a robot cannot consent to the activity in the way that an adult human can, even if it is programmed to behave as a willing sexual partner would.<sup>72</sup>

Let's say we employ a principle that people engaging in sexual activity must only do so when they reasonably believe it to be consensual. The fact that we deem it to be unreasonable to think sex with a child or an animal is consensual under any circumstances might suggest that as a model for how to think about sex with robots.<sup>73</sup> But the implications of giving significance to robots' incapacity to consent are exceedingly broad; then even loving, gentle, and respectful sex with a robot may be off-limits—because a robot simply cannot consent to it.<sup>74</sup>

But if that is so, engaging a nonconsenting robot in even nonsexual intimacy or labor also might make us uneasy.<sup>75</sup> A robot that vacuums or cooks dinner in the place of a domestic employee may not initially raise hackles. But if the same robot also sits at the table to converse about the day, gives hugs, and goes to the bedroom to have sex—like a spouse—suddenly, even the vacuuming may feel exploitative. But are the

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71. Cf., e.g., *Lawrence v. Texas*, 539 U.S. 558, 567 (2003) (stating that “adults may choose to enter upon [a sexual] relationship in the confines of their homes and their own private lives”); *Griswold v. Connecticut*, 381 U.S. 479, 485–86 (1965) (calling police searches of “the sacred precincts of marital bedrooms . . . repulsive to the notions of privacy surrounding the marital relationship”); *Twyman v. Twyman*, 855 S.W.2d. 619, 637 (Tex. 1993) (Hecht, J., concurring in part and dissenting in part) (arguing that the prospect of testimony about the nature and type of sex in a marriage would be “too great an invasion of spouses’ interests in privacy”).

72. See, e.g., Laura Bates, *The Trouble with Sex Robots*, N.Y. Times (July 17, 2017), <https://www.nytimes.com/2017/07/17/opinion/sex-robots-consent.html> [<https://perma.cc/C9K9-PWZR>] (likening sex with a robot to “sex with an adult woman who does not consent,” because “consenting is not something these robots are capable of”).

73. Cf., e.g., Mary Anne Case, *Pets or Meat*, 80 Chi.-Kent L. Rev. 1129, 1144–45, 1148–49 (asking, in an article on the problem of “commodification commingled with affection,” whether “training one’s pets . . . to perform oral sex on one, is anything different or worse than” pet tricks (citing Midas Dekkers, *Dearest Pet: On Bestiality* 64 (Paul Vincent trans., 1994) (“[T]he dog is most commonly used for cunnilingus. Dogs have an ideal tongue for the purpose and can be taught it, like so many other tricks.”))).

74. See, e.g., Bates, *supra* note 72.

75. Cf., e.g., Martha Nussbaum, “Whether from Reason or Prejudice”: Taking Money for Bodily Services, 27 J. Legal Stud. 693, 696 (1998) (exploring arguments about what makes sex work different from other work using the body and concluding that “legalization of prostitution . . . is likely to make things a little better for women who have too few options to begin with”); Melissa Gira Grant, *Let’s Call Sex Work What It Is: Work*, Nation (Mar. 5, 2014), <https://www.thenation.com/article/lets-call-sex-work-what-it-work/> [<https://perma.cc/B5LC-V9QF>] (“When we say that sex work is service work, we don’t say that just to sanitize or elevate the status of sex workers, but also to make plain that the same workers who are performing sex work are also performing nonsexual service work.”).

services and company of a spouse who consents to but does not enjoy vacuuming, cooking, conversing, or having sex somehow preferable in this regard to the services and company of a domestic robot that does not have the capacity to consent?

Beyond sex, the prospect of intimate, marriage-like, or familial relationships with robots inspires the question whether having such meaningful robot connections could train people to be able to have rewarding intimate connections with humans (or whether such relationships could make people more alienated from other humans in ways that are harmful to themselves or to others). Some physicians and commentators have argued that robots could serve as sexual outlets for the “involuntarily celibate” (also known as “incels”)<sup>76</sup> and a medically safer alternative to paying for the services of a human sex worker.<sup>77</sup> Could robots offer a viable solution for an increasingly vocal community of incels, or simply further their social isolation<sup>78</sup> and aggravate perceptions of women as subhuman commodities?<sup>79</sup>

Perhaps sex with robots could train people in how they want to be in relationships with future human partners. Perhaps sex robots could provide a “safe” space for the inexperienced to acquire sexual experience and skill without the pressure of performance anxiety.<sup>80</sup> Perhaps feminists could find sex robots appealing if the robot could train people to

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76. See generally Niraj Chokshi, *What Is an Incel? A Term Used by the Toronto Van Attack Suspect, Explained*, N.Y. Times (Apr. 24, 2018), <https://www.nytimes.com/2018/04/24/world/canada/ince-red-dit-meaning-rebellion.html?module=inline> [https://perma.cc/N8GC-64MX].

77. See John Eggleton, *Comment on ‘I, Sex Robot: The Health Implications of the Sex Robot Industry,’* 45 *BMJ Sexual & Reprod. Health* 78, 79 (2019). But see Sean Keach, *Bad Bots*, Sun (Sept. 18, 2018), <https://www.thesun.co.uk/tech/7289486/sex-robots-prostitutes-workers-love-dolls-brothel/> [https://perma.cc/N3UX-2DZU] (discussing sex workers’ concern that replacing sex workers with sex robots would be “dehumanizing,” “alienating,” and not offer a man a “real two-way experience with a woman that gives him feedback and enhances his ability to be intimate with other women in his current or future life”).

78. See Federica Facchin, Giusy Barbara & Vittorio Cigoli, *Sex with Robots: The Irreplaceable Value of Humanity*, 358 *BMJ* 279, 279 (2017) (arguing that sex with a robot is “masturbatory practice,” thus “someone with sexual dysfunction, which already leads to isolation, might become even more isolated by the illusion of having a substitute satisfaction”).

79. Pahull Bains & Greg Hudson, *Are Sex Robots Really the Answer to the Incel Problem?*, Fashion Mag. (May 8, 2018), <https://fashionmagazine.com/culture/sex-robots-incels-redistribution-of-sex/> [https://perma.cc/GV2M-CFLW] (arguing that women’s bodies would be commodified if a “redistribution of sex” through sex robots were used as a solution for incels).

80. See Monique Huysamen, “There’s Massive Pressure to Please Her”: On the Discursive Production of Men’s Desire to Pay for Sex, *J. Sex Res.* 6 (Aug. 13, 2019), <https://doi.org/10.1080/00224499.2019.1645806> (on file with the *Columbia Law Review*) (arguing that societal pressures on men to “perform” sexually lead them to value sex with sex workers); cf. Ezio Di Nucci, *Sex Robots and the Rights of the Disabled*, in Danaher & McArthur, *Robot Sex Implications*, supra note 1, at 74 (arguing that severely disabled and elderly people could potentially be sexually satisfied by the use of sex robots).

perform oral sex on women well.<sup>81</sup> Perhaps robot relationships could present a morally preferable alternative to infidelity in monogamous relationships, or afford couples a way to have threesomes with less complication or jealousy.<sup>82</sup> The proliferation of advanced sex robots might also cause humans to discover and explore currently unimaginable pleasures and pains, forming relationships that resemble human ones only in their unpredictability. At the moment, we do not know whether life with robots will improve or worsen our life with other people.

But the idea that as we train robots in intimate relationships, those relationships are intimately training us will be key to the regulation to come. Lawmakers might thus focus their regulatory powers on designers and manufacturers of sex robots, rather than their purchasers and users. The programming of how human-like robots talk and act, their personalities and stories, almost certainly constitutes expressive activity, and will therefore likely implicate concerns about government regulation of free speech.

#### CONCLUSION: LAW IN THE UNCANNY VALLEY

Some have argued that lawmakers should prohibit developers from making sex robots that look too human.<sup>83</sup> If sexual and intimate relationships with robots will become prevalent, on what theory would it actually be preferable that the robots be made not to appear too much like people? If they were more like R2D2 or C3PO than the robot “hosts” of *Westworld* or the “replicants” of *Blade Runner*,<sup>84</sup> would that help allay concerns about sex robots?

The debate over sex robots circles around a fear that robots will seem too human and not human enough—and that either of these problems will somehow be harmful to humanity. This dilemma is perhaps an iteration of Masahiro Mori’s 1970s “uncanny valley” hypothesis about

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81. Cf. Susan Frelich Appleton, *Toward a Culturally Cliterate Family*, 23 *Berkeley J. Gender L. & Just.* 267, 329 (2008) (suggesting, inter alia, clitoral education and “enhanced access to vibrators” for purposes of clitoral literacy, to compensate for the law’s marginalization of women’s sexual pleasure).

82. See Marianna Drosinou, Juho Halonen, Mika Koverola, Anton Kunnari, Michael Laakasuo, Noora Lehtonen, Jussi Palomäki & Marko Repo, *Moral Psychology of Sex Robots: An Experimental Study—How Pathogen Disgust Is Associated with Interhuman Sex but Not Interandroid Sex* 6 (2018), <https://psyarxiv.com/58pzb/> (on file with the *Columbia Law Review*) (showing that people are unsure whether using a sex robot should be considered infidelity, but that married people paying for sex with a robot are condemned less harshly than their paying for sex with a human sex worker).

83. See, e.g., Shivali Best, *Sex Robots Could Be Subject to ‘Visual Laws’ to Stop Them Looking Too Realistic*, *Daily Mirror* (June 10, 2019), <https://www.mirror.co.uk/tech/sex-robots-could-subject-visual-16494038> [<https://perma.cc/2M2H-885K>] (quoting futurologist Dr. Ian Pearson advocating for “visual laws” regulating sex robot makers to “force some visible difference to be conspicuous”).

84. See *Blade Runner* (Ladd Co. 1982); *Star Wars* (Lucasfilm 1977); *Westworld* (HBO 2016).

human ambivalence toward humanoid robots.<sup>85</sup> Adapting Freud's idea of the "uncanny"—the horror and dread triggered by experiencing a breached boundary between animate and inanimate, or living and dead<sup>86</sup>—Mori hypothesized that while humans can empathize with human-like robots, if the robots become "almost human," they become uncanny and provoke feelings of terror, disgust, and "creepiness."<sup>87</sup> This is why zombies, doppelgangers, and dolls that come alive are the stuff of horror films.

What legal implications might the "uncanny valley" have in the present discussion? Thus far, the very prospect of sex with robots has caused some early or would-be regulators to react with revulsion, citing illicit sexual conduct: prostitution, child sex abuse, and rape.<sup>88</sup> It's as if the very idea of a sex robot blurs the boundary between licit and illicit sex, as an embodiment of conduct that our society abhors and criminalizes and yet may allow in this form. Sex robots, in other words, appear to inspire dread, by holding up a creepy mirror to the ways in which sexual behavior among humans might be exploitative, objectifying, perverse, or immoral. Sex with robots, it seems, tends to be reminiscent of abuse of a fellow living being even though it is not.

We may find expression of that revulsion at likeness, in prohibitions and regulations that are ambivalently caught between putting distance between humans and robots and yet, at the same time, making us treat robots more like we think we should treat people. The nervous oscillation between not-human and like-human is paradoxical: The more we attribute an involuntarily servile, nonhuman "nature" to robots, the more unease we may feel about using them for sex, given our norms and culture of sexual consent. But also, the more that we come to think of robots as having human-like consciousness, will, sentience, and desire, the more wrong it may seem to use them simply to satisfy human sexual desire. Either way, our honeymoon with sex robots will be short, and we will soon be deep in a troubled relationship. But what is certain is that the legal regulation of sex, intimacy, and AI will reveal, more than anything, our attempts to answer the inescapable question: What does it mean to be human?

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85. See generally Masahiro Mori, *The Uncanny Valley: The Original Essay by Masahiro Mori*, IEEE Robotics & Automation Mag., June 2012, at 98, <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6213238> (on file with the *Columbia Law Review*) (translation of original Japanese essay into English).

86. 17 Sigmund Freud, *The 'Uncanny,' in The Standard Edition of the Complete Psychological Works of Sigmund Freud* 219, 230, 233 (James Strachey trans., Hogarth Press 10th ed. 1981) (1919).

87. Mori, *supra* note 85.

88. See *supra* notes 13–24 and accompanying text (discussing a Houston ordinance preventing a sex robot brothel, the CREEPER Act of 2017, and the Campaign Against Sex Robots).

