

# Prostitution 3.0: A Comment

Scott Cunningham\* & Todd D. Kendall\*\*

I. INTRODUCTION.....	131
II. PROSTITUTION 2.0 AS DE FACTO PARTIAL LEGALIZATION .....	133
A. <i>ASYMMETRIC INFORMATION</i> .....	134
B. <i>NEGATIVE EXTERNALITIES</i> .....	136
C. <i>COERCION</i> .....	136
D. <i>COMMODIFICATION</i> .....	137
E. <i>IMPLICATIONS</i> .....	138
III. PROBLEMS WITH MANAGED LIBERALIZATION .....	139
IV. CONCLUSION .....	140

## I. INTRODUCTION

Scott R. Peppet’s interesting and provocative article, *Prostitution 3.0?*, serves several valuable and necessary purposes: it compiles a truly impressive survey of the emerging literature on technology-facilitated prostitution; organizes the key economic, moral, and legal issues associated with government regulation of prostitution; and proposes a specific form of liberalization intended to promote the welfare of those involved in the sex trade while potentially assuaging the public concerns that led to prohibition.<sup>1</sup> The last contribution is a particularly important one, for while there is no shortage of calls for legalization from certain chambers of the ivory tower, key practicalities are given very little attention.

---

\* Associate Professor of Economics, Baylor University.

\*\* Vice President, Compass Lexecon.

1. Scott R. Peppet, *Prostitution 3.0?*, 98 IOWA L. REV. 1989 (2013). The authors would like to apologize for giving our 2011 article on technology-facilitated sex work the title “Prostitution 2.0.” It was not very creative, and in any case, the craze of applying a “2.0” suffix to all things internet-related had by 2011 yielded to some new Silicon Valley bubble (in fact, we intended to convey a note of irony). We hereby request—and will comply with—a moratorium on all future paper titles of the form “Prostitution X.0.”

In short, Peppet argues that legal regimes in place throughout most of the United States and other nations lead to what he terms an “unjustified circle.” In this circle, traditional forms of prostitution involve various market failures. These failures lead to bad outcomes, including the transmission of disease, brutality against sex workers, exploitation, dehumanization, blackmail, divorce, and other social problems. These social problems justify government prohibition of prostitution. New technologies (“prostitution 2.0”) have partially ameliorated some of these problems, such as online “screening” websites used by sex workers to identify and avoid violent clients. However, entrepreneurs are unwilling to invest much in the further development of these or similar technologies because they fear prosecution for facilitating prostitution, which could further ameliorate the problems in the market. Thus, the prevailing legal regimes leave society stuck with existing market inefficiencies. As a solution to the unjustified circle, Peppet proposes explicitly decriminalizing the development of particular technologies he believes would serve to reduce these inefficiencies, while strictly prohibiting other prostitution market institutions, in order to facilitate a safe and non-exploitative sexual marketplace.

There is much to agree with in this narrative. We have written elsewhere at length of how the introduction of the internet and other new technologies over the past two decades has changed the prostitution market in ways that reduce many of its traditional social problems.<sup>2</sup> At the same time, it is certainly true that many problems remain despite the introduction of prostitution 2.0 technology, and no one could argue that further technological progress, which could serve to further reduce the severity of these problems, may be stymied in part by legal risks.

However, putting aside our general agreement with Peppet’s premises, we outline below two issues we believe deserve greater attention before implementing his proposal. First, we think proper policy conclusions cannot be drawn without a better understanding of exactly *why* the internet and other prostitution 2.0 technologies had the effect Peppet identifies in ameliorating, to a limited degree, some of the darker aspects of sex work. In our view, most of the social problems associated with prostitution are not inherent to the industry, but they are the logical result of the prohibition itself, a conclusion supported by the fact that other, similar, markets not subject to a prohibition experience few of the problems associated with prostitution. Therefore, we see prostitution 2.0’s value not so much in the specific technologies, but in the de facto partial legalization of prostitution those technologies created, in the sense that they made it much more

---

2. See generally Scott Cunningham & Todd D. Kendall, *Prostitution 2.0: The Changing Face of Sex Work*, 69 J. URB. ECON. 273 (2011) [hereinafter *Prostitution 2.0*]; Scott Cunningham & Todd D. Kendall, *Risk Behaviours Among Internet-Facilitated Sex Workers: Evidence from Two New Datasets*, 86 SEXUALLY TRANSMITTED INFECTIONS iii 100 (2010) [hereinafter Cunningham & Kendall, *Risk Behaviours*].

difficult for the government to find and arrest prostitution market participants.

We argue that the proper conclusion to be drawn from the fact that violence, exploitation, and robbery still exist in the market is not that we need more or different types of technology (“prostitution 3.0”), but instead it simply reflects that the de facto legalization associated with prostitution 2.0 was only a partial, limited legalization, not a full de jure legalization. The police still attempt to arrest prostitutes who advertise online. To argue, as Peppet does, that the remaining inefficiencies and other problems in the market today justify continued prohibition of prostitution 2.0 technologies reminds us of the proverbial man who killed his parents and then begged the judge for mercy because he was an orphan. We believe the evidence regarding prostitution 2.0 supports experimentation with broader forms of legalization than proposed by Peppet.

Second, we are also concerned that a proposal that would exempt from prosecution particular types of prostitution-facilitating technology, while proscribing others, presumes too much foresight into the future development of the prostitution market, and too much wisdom on the part of lawmakers and industry regulators. In any industry, most new technologies introduced by entrepreneurs fail. Very few become popular enough to revolutionize the way business is done in that industry. It is exceedingly difficult to guess in advance which technologies will succeed. Therefore, we think some skepticism is warranted regarding our elected officials’ ability to adopt the right technologies. Politicians may be just as likely to exacerbate the “unjustified circle” as to break it. Experimentation with broader forms of liberalization would allow technology in the prostitution industry to develop more organically, taking advantage of the creativity and wisdom of the full set of entrepreneurs and market participants.

## II. PROSTITUTION 2.0 AS DE FACTO PARTIAL LEGALIZATION

The introduction of the internet appears to have substantially expanded the market for prostitution,<sup>3</sup> while the number of arrests has not increased proportionately. In our recent survey of sex workers who advertise on the internet, respondents were asked to rate their risk of arrest on a scale from 1–10 with 1 being lowest risk of arrest and 10 being highest.<sup>4</sup> The average response was 3.91, with more than 31% rating the risk of arrest at a 1 or 2.<sup>5</sup>

These facts indicate how the internet and other prostitution 2.0 technologies have diminished to some degree the legal prohibition on prostitution. Of course, prostitution 2.0 is not a full liberalization; police do

---

3. See Cunningham & Kendall, *Prostitution 2.0*, *supra* note 2, at 276.

4. See Cunningham & Kendall, *Risk Behaviours*, *supra* note 2, at iii100–05.

5. *Id.*

regularly conduct sting operations to arrest prostitutes who operate on the internet. However, such operations are much more costly, and therefore generally less frequent, than a traditional dragnet through the streets of skid row. A 2008 analysis by the Cook County Sheriff's Office estimated that the average cost of arresting one internet-facilitated sex worker is \$674, not including the opportunity costs of potential increases in other crimes while police officers were occupied in arresting sex workers.<sup>6</sup>

These facts show how prostitution 2.0 has allowed the market to flourish with very low probabilities of arrest or punishment.<sup>7</sup> Reductions in arrest probabilities directly lower both the expected cost of offering prostitution services due to fewer fines and jail terms and the likelihood of a sex worker's discovery by friends and family. Some argue that stigma is a key cost to prostitutes; this may be an important effect.<sup>8</sup>

Other than expanding it, how has this de facto partial legalization affected the market? Peppet helpfully categorizes four key social problems endemic to prostitution markets and summarizes the evidence that prostitution 2.0 has ameliorated some of these problems to a degree. However, he concludes that, despite these changes, problems in the industry are still severe enough to warrant continued prohibition on the whole. Our view, by contrast, is that the prohibition itself causes these problems, and the amelioration of these problems under prostitution 2.0, even if only to a limited degree, is suggestive of the potential value from further liberalization.

#### A. ASYMMETRIC INFORMATION

Peppet argues that prostitution markets are "lemons" markets, citing a justly famous article by Nobel Prize-winning economist George Akerlof, which focused on used cars.<sup>9</sup> Used car sellers frequently know more about the cars they are selling than do used car buyers, and it is difficult for the typical car buyer to distinguish a high-quality used car from one of low quality (a "lemon"). The fact that the buyer could get a lemon lowers the buyer's willingness to pay for a used car, which in turn reduces the incentive on the part of sellers to offer the more valuable high-quality cars. This vicious cycle only further serves to scare away buyers. Ultimately, the used

---

6. See Anthony Ponce, *Sheriff Gunning for Craigslist Hookers*, NBC CHICAGO (Mar. 6, 2009, 6:10 AM), <http://www.nbcchicago.com/news/local/Craigslist-Sued-Sheriff-Tom-Dart-Prostitution-Sex.html>.

7. See generally Cunningham & Kendall, *Prostitution 2.0*, *supra* note 2 (noting that the vast majority of prostitution offenses captured by crime statistics correspond to outdoor sex workers, or streetwalkers).

8. See generally Marina Della Giusta, Maria Laura Di Tommaso & Steinar Strøm, *Who is Watching? The Market for Prostitution Services*, 22 J. POPULATION ECON. 501 (2009).

9. George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 489-90 (1970).

car market either completely dries up or is dominated by lemons, as owners of high-quality cars choose not to sell on the used car market and buyers are unwilling to pay much for the average car.

In one translation of this logic into the prostitution market, used car sellers are prostitutes, buyers are their “johns,” and lemons are prostitutes with sexually transmitted infections. The market is populated with many infected prostitutes because johns cannot easily distinguish infected from non-infected prostitutes.<sup>10</sup>

In general, we see the value in the Akerlof lemons story not so much as providing a parable about how markets can fail, but instead as directing attention to the many unique and creative ways that entrepreneurs solve the lemons problem. In the used car market, sellers offer warranties to consumers<sup>11</sup> such as “certified used cars,” and establish reputations through advertising and tenure in the community, which incentivize sales through word-of-mouth and repeat customers.<sup>12</sup> In other words, despite all the elegant economic theory that has been published on the lemons problem, used car dealers continue to operate.

Similar creative methods of solving the lemons problem could exist in the market for prostitution, but the prohibition on prostitution stymies such efforts. It is not possible to usefully offer a warranty in a legal regime where courts will not enforce contracts. The fact that prostitutes cannot advertise openly or maintain a fixed retail location without being arrested severely limits their ability to establish a reputation for safety through advertising and tenure in the community. It is notable that disease transmission is exceedingly rare among the prostitutes who work for legal brothels (which advertise widely) in parts of Nevada.<sup>13</sup>

In our view, one of the main reasons why the internet and prostitution 2.0 technologies have reduced the social problems traditionally associated with prostitution is that they allow sellers to more widely advertise with lessened fear of arrest. Additionally, they facilitate reputation-building through repeat business and word-of-mouth, institutionalized in reviewing

---

10. The ultimate effect of a lemons problem is to reduce the number of market transactions, an outcome that would serve to offset at least in part the “negative externalities” problem Peppet describes (and which we discuss *infra* Part II.B). Either the asymmetric information concern or the negative externalities concern may be valid, but not both simultaneously (at least not to the same extent).

11. See Sanford J. Grossman, *The Informational Role of Warranties and Private Disclosure About Product Quality*, 24 J.L. & ECON. 461 (1981).

12. Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615 (1981)

13. See generally Barbara G. Brents & Kathryn Hausbeck, *Violence and Legalized Brothel Prostitution in Nevada: Examining Safety, Risk, and Prostitution Policy*, 20 J. INTERPERSONAL VIOLENCE 270 (2005); Corita R. Grudzen & Peter R. Kerndt, *The Adult Film Industry: Time to Regulate?*, 4 PLOS MED. 993–96 (2007), available at <http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.0040126>.

sites like TheEroticReview.com. Through this partial de facto legalization, prostitution 2.0 has reduced the severity of the lemons problem. While no one can say for certain what outcomes would follow if prostitution laws were fully liberalized, we view this as at least one piece of evidence that such liberalization may be worthy of consideration.

### B. *NEGATIVE EXTERNALITIES*

Peppet also argues that prohibitions on prostitution 2.0 are warranted because of the existence of “negative externalities,” that is, uncompensated costs imposed on third parties when a seller and a buyer complete a privately beneficial transaction. Economic theory indicates that, when the seller and buyer do not consider these additional costs, there is likely to be an inefficiently high number of transactions. Peppet mentions crime and disease as the key negative externalities associated with prostitution. We have discussed above implications of disease, arguing that it is the prohibition, not the activity, that accounts for much of the problem.

With respect to crime, it is certainly the case that, even after the introduction of prostitution 2.0 technology, violence is often coincident with prostitution. Johns still sometimes assault prostitutes, and prostitutes still sometimes rob their clients. Violent offenders in the prostitution market know that it is unlikely for a victim to file a police report because in order to file a police report, one must admit to the police an involvement in an illegal activity.<sup>14</sup> Thus, it is arguably the prohibition that generates this negative externality, and it is the de facto partial legalization associated with prostitution 2.0 technologies that has diminished to some degree these externalities. It is the marketplace that civilizes man, and prohibitions on the marketplace that make life nasty, brutish, and short.

### C. *COERCION*

Peppet argues that many street prostitutes are poor, uneducated, and vulnerable, and for this reason cannot be said to have entered into transactions with johns voluntarily. While much of Peppet’s discussion seems to focus on “coercion” in the sense that some street prostitutes may have no other good labor market options besides prostitution, our primary interest is in the less metaphorical sense of coercion, cases in which a pimp or other manager forces a person to engage in sex work against their will.<sup>15</sup>

---

14. In addition, the prohibition on prostitution means that sellers typically do not accept credit cards or checks (to avoid a paper trail). Because most transactions are in cash, buyers and sellers typically must carry larger amounts of cash with them, providing additional opportunities for robbery.

15. With respect to the limited opportunities faced by street prostitutes, we fail to see how making illegal one of the few opportunities these unfortunates have to support themselves is obviously helpful.

We agree with Peppet that prostitution 2.0 technologies have severely lessened these concerns. Again, the de facto partial legalization that prostitution 2.0 represents is, in our view, the cause. The pimp's role is to select customers for the prostitute, screening out police officers, violent johns, and other undesirables. Available evidence indicates that street prostitutes who work with pimps suffer less client violence and face a lower risk of arrest.<sup>16</sup> However, pimps frequently bring their own violence and exploitation to the market.<sup>17</sup>

Therefore, in the absence of the prohibition on prostitution, we expect that many fewer prostitutes would work with pimps. In fact, this appears to have occurred in part due to the introduction of prostitution 2.0 technologies. We examined the introduction of Craigslist's "erotic services" advertising boards as a natural experiment in the effects of prostitution 2.0 technologies.<sup>18</sup> The reported share of sex workers who operated independently of a pimp or other intermediary appears to have increased substantially after the introduction of "erotic services." While internet advertising appears to have dramatically reduced the likelihood of arrest, it clearly does not fully protect sex workers from harm.

#### D. COMMODIFICATION

Peppet discusses the work of various feminist and moralist scholars who have argued that the purchase and sale of sexual services denigrates prostitutes by commodifying their bodies, thus degrading social norms and values. We cannot disagree with this view of the dispiriting nature of sex work and would hasten to add that buyers of prostitution services may also suffer morally.

Again, however, we agree with Peppet that prostitution 2.0 technologies have diminished to some degree the commodification of prostitution. For instance, available data indicates that 61.8% of internet-facilitated sex workers kiss their clients, far more frequently than would be expected based on the traditional "no kissing" stereotype associated with street prostitution.<sup>19</sup> As one sex worker we interviewed stated:

---

16. Steven D. Levitt & Sudhir Alladi Venkatesh, An Empirical Analysis of Street-Level Prostitution (Sept. 2007) (unpublished manuscript) (on file with the University of Chicago), available at <http://economics.uchicago.edu/pdf/Prostitution%205.pdf>.

17. See generally Celia Williamson & Terry Cluse-Tolar, *Pimp-Controlled Prostitution: Still an Integral Part of Street Life*, 8 VIOLENCE AGAINST WOMEN 1074 (2002).

18. Scott Cunningham & Todd D. Kendall, Disintermediation or Selection: Examining the Effects of Craigslist Entry on Prostitution Markets (2013) (unpublished manuscript) (on file with authors).

19. Scott Cunningham & Todd D. Kendall, *Prostitution, Technology and the Law: New Data and Directions*, in RESEARCH HANDBOOK ON THE ECONOMICS OF FAMILY LAW 221, 236 tbl.10.1 (Lloyd R. Cohen & Joshua D. Wright eds., 2011).

I remember years ago, it was common for people to say that they never kissed their clients. Kissing was considered taboo. But today, it is much more common to kiss clients on the mouth. Nowadays, it is much more common for prostitutes to admit to having orgasms with their clients, whereas such a thing seemed to me very rare from even ten years ago.<sup>20</sup>

These phenomena, while certainly not probative, suggest a deeper (if not ultimately satisfying) level of emotional connection between buyers and sellers in the prostitution market. In our view, this apparent reduction in commodification is not due to the technology of prostitution 2.0, per se, but the de facto partial legalization that the technology created.

Due to the prohibition, street prostitutes and their clients typically initiate transactions quickly on street corners, with little thought given to fully evaluating each other for compatibility. Repeat business is rare because sex workers typically move frequently from place to place to avoid arrest. One cannot expect much emotional connection in such situations. The internet and other new technologies have facilitated advertising (with lessened fear of arrest), pre-assignment communication, and repeat business, which would otherwise not be possible under the prohibition. It would therefore be unsurprising that the perceived degree of commodification has declined. We view this as a hint of the potential benefits from a broader liberalization.

#### E. IMPLICATIONS

It is incontrovertible that prostitution has traditionally been connected with a wide array of terrible social problems, which Peppet has helpfully categorized. We further agree with Peppet that the internet and other new technologies have served to partially lessen those problems. However, many problems remain, and our divergence with Peppet is in how to interpret that fact. Our reading of *Prostitution 3.0?*<sup>21</sup> indicates a view that the social problems described above are inherent in the prostitution market and therefore, prostitution should only be allowed by law under certain very strictly regulated circumstances, prostitution 3.0.

We have argued above a different perspective on these facts, namely that the key social problems traditionally associated with prostitution may in fact be the result of the legal prohibition on prostitution, rather than anything inherent to the provision of prostitution services itself. In our view, the partial amelioration of these problems after the introduction of the internet and other technologies does not reflect anything special about those technologies, but instead reflects the de facto partial liberalization from the prohibition they brought with them. While we do not believe the available evidence is sufficient to warrant sweeping conclusions as to

---

20. *Id.* at 227.



appropriate policies, we think the weight of the evidence suggests greater value in continued experimentation with further *de jure* liberalizations, rather than in support for continued prohibition on most forms of sex work, as proposed by Peppet.

### III. PROBLEMS WITH MANAGED LIBERALIZATION

As noted above, Peppet proposes a general prohibition on prostitution outside of certain very restrictive circumstances. In particular, prostitution would only be permitted if participants passed four separate tests: (1) identification of any sexually transmitted infections; (2) verification of criminal history; (3) verification that the sex worker was not coerced or “trafficked”; and (4) biometric identity verification. Under Peppet’s proposal, firms would receive protection under the law to develop innovative technologies that facilitated these tests, such as applications that securely store STI test results on smartphones or other mobile devices.

While we agree that it is highly desirable for market participants to satisfy these tests, we are concerned that it may be unrealistic to believe that lawmakers or government regulators can identify the technological breakthroughs that will improve the market, while wisely prohibiting other institutions that do not facilitate improvements. The ability to “pick winners and losers” in this way would require tremendous amounts of very specific industry and technological knowledge and foresight on the part of lawmakers and regulators. It would also assume benevolence on their part and the absence of the influence of “special interests” on their rule-making. We think it is unrealistic to assume that those who would enforce the “managed liberalization” proposed by Peppet would achieve these high standards.

In any industry, most new technologies introduced by entrepreneurs fail, and it is exceedingly difficult to predict which technologies will succeed. Prognosticators at the time of the development of the internet likely would not have anticipated the success of screening methodologies, reviewing websites, and some of the other prostitution 2.0 technologies that have partially diminished the social problems associated with prostitution. Lawmakers at that time, had they focused on the issue at all, might have just as easily been convinced to prohibit these technologies as to allow them, thereby exacerbating the problems of prostitution markets instead of relieving them.

In any industry, entrepreneurs who create products or services that resolve problems of market participants are typically able to sell at premium prices. This fact incentivizes salubrious activity. We agree with Peppet that the prohibition on prostitution likely stymies much innovation, as potential investors and inventors naturally wish to avoid the risk that their efforts will be viewed as facilitation of illegal behavior. Thus, they turn their talents to other, legal, industries. However, we think that experimentation with a

broader liberalization would allow technology in the prostitution industry to develop organically, taking advantage of the creativity and wisdom of the full set of entrepreneurs and market participants. While undoubtedly many inventions will fail, and some may even have deleterious effects on market participants, we think “unmanaged liberalization” has greater promise than a strict regulatory regime does.

#### IV. CONCLUSION

Creative and practical approaches to law, such as those promulgated in the Peppet article, are deeply needed to enrich the social discourse on regulation of prostitution. We agree with Peppet on the facts, but believe these facts support experimentation with broader forms of liberalization than that proposed by Peppet.

One alternative approach is a two-tier system wherein indoor sex work is decriminalized but outdoor (e.g., street solicitation) is prohibited.<sup>21</sup> Several governments such as Australia, New Zealand and Canada have moved to this model due to the higher mortality, violence and disease risks among street prostitutes compared to brothel and massage parlor employees.<sup>22</sup>

Estimating the effect of two-tier policies on social costs is difficult without experimentation. In the United States, a natural experiment resulted when Rhode Island’s indoor market was exogenously decriminalized as a result of a district court decision that found the state’s criminal statutes prohibited street solicitation, but not commercial sex exchange more generally.<sup>23</sup> While prostitution increased following the decision, surprisingly there was no observable deterioration in public health or violence towards women. On the contrary, the expansion of indoor sex work following the 2003 decision was followed by historically large declines in both reported rapes against females and gonorrhea incidence among males and females, with no substantial change in other crimes.<sup>24</sup>

---

21. See generally RONALD WEITZER, *LEGALIZING PROSTITUTION: FROM ILLICIT VICE TO LAWFUL BUSINESS* (2012).

22. See generally Devon D. Brewer et al., *Extent, Trends, and Perpetrators of Prostitution-Related Homicide in the United States*, 51 J. FORENSIC SCI. 1101; Stephanie Church et al., *Violence by Clients Towards Female Prostitutes in Different Work Settings: Questionnaire Survey*, 322 BRIT. MED. J. 524–25 (2001); Paul J. Gertler & Manisha Shah, *Sex Work and Infection: What’s Law Enforcement Got to Do with It?*, 54 J.L. & ECON. 811 (2011); N. Jeal & C. Salisbury, *Health Needs and Service Use of Parlour-Based Prostitutes Compared with Street-Based Prostitutes: A Cross-Sectional Survey*, 114 BJOG: INT’L J. OBSTETRICS & GYNAECOLOGY 875 (2007).

23. *Coyote v. Roberts*, 502 F. Supp. 1342 (D.R.I. 1980), supplemented by 523 F. Supp. 352 (D.R.I. 1981); see also *State v. DeMagistris*, 714 A.2d 567 (R.I. 1998); Lynn Arditì, *How R.I. Opened the Door to Prostitution; Twists and Turns*, PROVIDENCE J. BULL., May 31, 2009, available at 2009 WLNR 10330996; Tracy Breton, *State Law Foils Efforts to Thwart Prostitution*, PROVIDENCE J., May 24, 2005, available at 2005 WLNR 8288112.

24. See Arditì, *supra* note 23.

While it is unclear the degree to which the Rhode Island case study can provide external guidance to other cases, it is to date the best evidence we have of the costs and benefits from experimenting with broader decriminalizations of indoor sex work. Without more experimentation, we cannot ultimately determine optimal policy. We hope that continued experimentation of this type will generate additional evidence that can be used to craft effective policy in the future.