

SEX ON THE BRAIN: ADOLESCENT PSYCHOSOCIAL SCIENCE AND SANCTIONS FOR RISKY SEX

LISA T. MCELROY*

ABSTRACT

The increased rates of sexually transmitted disease among adolescents have been the subject of much public concern over the past several decades. Lawmakers and legal scholars have responded to this public health crisis by suggesting or, in some cases, actually implementing laws that impose harsh sanctions on the risky sexual behavior associated with sexually transmitted diseases. This Article argues that these efforts to limit the spread of sexually transmitted diseases among teens are doomed to fail because they are neither predicated on nor informed by adolescent psychosocial science. Because adolescents enter puberty before their brains and corresponding reasoning and emotional systems are fully mature, they are unlikely to take these laws into account when making decisions about sexual behavior. Furthermore, because punishment does not deter risky behaviors in teens unless it is highly certain to occur, the sanctions built into these proposals are unlikely to be effective. Finally, it is doubtful that adolescents will be aware of these laws, making it even less probable that they will consider potential legal penalties in making decisions about sexual behaviors.

Although such laws are unlikely to be successful in slowing the spread of disease, however, they may have a negative impact on another audience. The expressive effect of these laws may alter adult attitudes about adolescent sexuality, leading to decreased intergenerational communication about sex. Because most teens rely on parents to help them access health care services and because teens who have positive communication experiences with their parents are less likely to engage in risky sex, the net effect of these laws may in fact be negative rather than positive. In the end, the legal system's most productive role in addressing this public health crisis may be a legislative and executive one: to create

* Associate Professor of Law, the Earle Mack School of Law at Drexel University. The author would like to thank Peter Egler, Michael Barton, John Cannan, Janine Franey, Whitney Kummerow, and Carlos Ramirez for their excellent research help; Larry Steinberg, Beth Haas, Miriam Weismann, Naomi Goldstein, Evan Slavitt, the members of the 2008 LWI Writers' Workshop, the ALWD workshop group, and the Drexel, Chicago-Kent, and John Marshall (Chicago) law faculties for their insights on earlier drafts of this article; and the Drexel University Earle Mack School of Law for its financial support of the underlying research.

and fund programs designed to increase teen self-efficacy, sexual responsibility, and connectedness with parents and schools.

I. INTRODUCTION.....	709
II. PUBLIC HEALTH CRISIS: SEXUAL DISEASE TRANSMISSION.....	713
A. Risky Adolescent Sexual Behavior and its Consequences.....	714
B. Societal Attitudes Toward Adolescent Sex.....	717
C. Public Health Initiatives Designed to Counter the Spread of STDs.....	719
III. LEGAL SANCTIONS FOR RISKY SEXUAL BEHAVIOR AND THE TRANSMISSION OF SEXUAL DISEASE	722
IV. WHY SANCTIONING RISKY SEX WILL NOT ACHIEVE PUBLIC HEALTH GOALS WHEN APPLIED TO AN ADOLESCENT POPULATION....	729
A. Adolescent Brain Development	730
B. The Adolescent Decision-Making Process.....	733
C. The Role of Penalties and Punishment in Deterring Risky and Undesirable Behavior.....	738
D. Deterring Risky Sex Through Legal Measures.....	740
1. Advancing Public Policy by Slowing the Spread of Disease	740
V. THE NEGATIVE CONSEQUENCES OF SANCTIONING SEX	746
A. The Development of Self-Efficacy	746
B. The Negative Expressive Consequences of Sanctioning Sex ...	748
C. Social Justice	751
VI. RECOMMENDATIONS.....	753
VII. CONCLUSION.....	758

INTRODUCTION

If there is anything that can be safely said about what is new in the minds of adolescents, it is that they . . . have sex on their minds.¹

Imagine for a moment the following scene: Two teenagers are involved in a sexually intimate relationship. A few weeks after they first have sexual intercourse, one of the teens learns that she has become infected with herpes, an incurable sexually transmitted disease. The other apologizes, claiming that he did not know that he was infected. Both teens are angry and concerned; both look for solutions to the problem. Under these facts, should either teen be liable in tort or in crime for the sexual actions that led to the infection?² According to some lawmakers and legal

1. Lawrence Kohlberg & Carol Gilligan, *The Adolescent as a Philosopher: The Discovery of the Self in a Post-Conventional World*, in *TWELVE TO SIXTEEN: EARLY ADOLESCENCE* 144, 153 (Robert Coles & Jerome Kagan eds., 1972).

2. While this scenario involves an opposite-sex couple, the same questions would apply

scholars, the answer should be “yes.”

In recent years, growing concern with the rising rates of sexually transmitted diseases (STDs) has prompted both legislators and judges to respond by imposing criminal and civil sanctions on the knowing or negligent transmission of HIV or other STDs.³ Many legal scholars have applauded the imposition of these sanctions and have urged lawmakers to impose greater liability on risky sexual behavior when it results in the transmission of an STD—and even sometimes when it does not.⁴ Legal sanctions, these scholars argue, can play an important role in altering dangerous sexual behavior among the general population and therefore help to limit the spread of these diseases.⁵

Sanctioning risky sexual behavior makes a certain amount of intuitive sense in a period of rising STD transmission rates. This Article calls into

to a same-sex couple, as well.

3. See, e.g., ALA. CODE § 22-11A-21(c) (2006) (making any person who “knowingly transmit[s], or assume[s] the risk of transmitting, or do[es] any act which will probably or likely transmit such disease to another person” guilty of a misdemeanor); FLA. STAT. ANN. § 384.24 (2007) (making it a crime for any person infected with one of eleven sexually transmitted diseases, including HIV, to have sexual intercourse after having being informed that they may communicate disease through sex without disclosing to other party this fact and gaining their consent); LA. REV. STAT. ANN. § 40:1062 (2007) (making it a crime to infect another person in any manner with a venereal disease or to do any act which will expose another to . . . infection); OKLA. STAT. ANN. TIT. 63, § 1-519 (2008) (making it a felony to expose any other person by act of copulation or sexual intercourse to . . . venereal disease”); TENN. CODE ANN. § 68-10-107 (1997) (making it a crime for “any person infected with a STD to expose another person to such infection”); Kathleen K. v. Robert B., 198 Cal. Rptr. 273, 276 (Cal. Ct. App. 1984) (construing defendant’s decision to have sexual intercourse with plaintiff without telling her he had genital herpes to be “tortious conduct” and awarding damages); Deuchle v. Jobe, 30 S.W.3d 215, 218-219 (Mo. Ct. App. 2000) (recognizing common law cause of action for negligent transmission of herpes and holding that “one has a legal duty to exercise reasonable care by disclosing a contagious venereal disease before entering into sexual relations with another”); Doe v. Roe, 598 N.Y.S.2d 678, 681 (N.Y. Just. Ct. 1993) (recognizing existence of cause of action for “intentional or negligent communication of a venereal disease”).

4. See, e.g., Deana Pollard, *Sex Torts*, 91 MINN. L. REV. 769, 818-19 (2007) (calling for imposition of strict liability on nonconsensual transmission of HIV); Ian Ayres & Katharine K. Baker, *A Separate Crime of Reckless Sex*, 72 U. CHI. L. REV. 599, 601 (2005) (proposing new crime of reckless sexual conduct for having sex without condom); Vladimir Sentome, *Attacking the Hidden Epidemic: Why a Strict Liability Standard Should Govern the Transmission of Sexually Transmitted Diseases*, 2006 U. CHI. LEGAL F. 409 (2006) (arguing that courts should impose strict liability on sexual transmission of STDs, regardless of whether individual engaged in protected or unprotected sex); David J. Mack, *Cleansing the System: A Fresh Approach to Liability for the Negligent or Fraudulent Transmission of Sexually Transmitted Diseases*, 30 U. TOL. L. REV. 647, 669-670 (1999) (arguing that heightened duty of care should be imposed on married parties who negligently transmit STD to their partners).

5. See Pollard, *supra* note 4, at 771 (arguing that adopting strict liability standard for tortious sexual transmission of disease would “help tort law address the problem much more effectively than it currently does”); Ayres & Baker, *supra* note 4, at 602 (arguing that new crime of reckless sexual conduct would “make progress with regard to [the] STD epidemics”).

question, however, the effectiveness of such strategies as applied to adolescents. Adolescents are the most sexually active subgroup of the population and the age group most likely to engage in unprotected sex or sex with multiple partners.⁶ They will also therefore be the group most impacted by such laws.

Adolescents⁷ make many legal and sexual decisions differently from adults and do not necessarily respond to the threat of sanctions in the same way that adults do. Teenagers are ill-equipped to make reasoned choices about their sexual behaviors for a number of reasons, including, *inter alia*, immature development in the parts of their brains responsible for making on-the-spot decisions, disproportionate susceptibility to peer pressure, immature reasoning ability, inability to engage in sophisticated cost-benefit analysis, and inability to take the legal consequences of sexual behaviors into adequate account. Because of these inadequacies, adolescents may not view proposed legal punishments as likely to impact them. Their perceptions may significantly reduce the likelihood that the threat of legal punishment will serve as a deterrent. Therefore, laws designed to deter adolescent risky sexual behaviors through punishment may be significantly less effective in combating the STD epidemic than their proponents imagine.⁸

6. See, e.g., Pollard, *supra* note 4, at 785 (noting statistical research indicating that young people who have not yet married have on average more sexual partners than any other population group); Amanda E. Tanner Mary B. Short, Gregory D. Zimet & Susan L. Rosenthal, *Research on Adolescents and Microbicides: A Review*, 22 J. PEDIATRIC & ADOLESCENT GYNECOLOGY 285, 286–7 (2009) (noting that adolescents are “uniquely sensitive to STDs” and that “they remain a population that is disproportionately influenced by the burden of STI/HIV”); W. David Hager, *Human Papilloma Virus Infection and Prevention in the Adolescent Population*, 22 J. PEDIATRIC & ADOLESCENT GYNECOLOGY 197, 198 (2009) (discussing aspects of adolescent sexual behavior, including high number of sexual partners, reduced likeliness to use protection, and ignorance about sexual health, that lead to higher risks of STD transmissions among age group).

7. “Adolescence” is a social, legal, and cultural construct. Developmental psychologists divide adolescence into three key periods: early adolescence (ages eleven to fourteen), middle adolescence (ages fifteen to eighteen), and late adolescence (ages eighteen to twenty-one). See, e.g., Elizabeth S. Scott & Jennifer L. Woolard, *The Legal Regulation of Adolescence*, in HANDBOOK OF ADOLESCENT PSYCHOLOGY 523, 523 (Richard M. Lerner & Laurence Steinberg eds., 2d. ed. 2004). Nonetheless, they note that socioeconomic as well as cultural factors influence the experience of adolescence, as do gender differences. *Id.* Thus, when attempting to classify those aspects of adolescent behavior that apply to all adolescents, “the distinction lies in what is typical, or normative, for the age cohort as a whole” Emily Buss, *Rethinking the Connection Between Developmental Science and Juvenile Justice*, 76 U. CHI. L. REV. 493, 514 (2009). This Article will not seek to divide out subcategories of adolescents, except where it is highly relevant to the analysis. It is important to note, however, that the law defines adolescence differently depending on context. For example, in the medical context, the “legal ability of minors to consent to a range of sensitive health care services . . . has expanded dramatically over the past 30 years.” GUTTMACHER INSTITUTE, AN OVERVIEW OF MINORS’ CONSENT LAW 1 (2009), http://www.guttmacher.org/statecenter/spibs/spib_OMCL.pdf.

8. See *infra* Part IV.

Prior scholarship has invoked the biological and psychosocial differences between adults and adolescents to argue that laws designed to protect or restrict minors' decision-making are inappropriate based on the cognitive development of those minors.⁹ This Article builds upon that scholarship, using current neuroscientific research to demonstrate why laws designed to deter risky sexual behavior through punishment are unlikely to achieve that goal among their primary target population—namely, adolescents. It also identifies the significant undesirable consequences of such regulatory efforts: namely, that laws that impose new sanctions on sexual activity may in fact make teens more susceptible to risky sexual decision-making and may undermine effective communication between parents and adolescent children.

With these adolescent characteristics in mind, this Article critiques the current, punitive approach to the public health crisis of STD transmission among teens and suggests an alternative approach. Part II begins by describing the serious public health crisis in the United States created by rising rates of STDs and explores the existing public health measures implemented to address this crisis. Part III details the legal efforts to deter the spread of STDs by imposing new criminal and tort sanctions on risky sexual behavior. Part IV examines why legal efforts to deter the spread of STDs will not achieve the desired deterrent effect, particularly among the adolescent population that is largely responsible for the spread of STDs; it then explains why such proposals for legal reform will also fail to advance social justice. Part IV examines the possible negative consequences of legal sanctions on sex. Experts in adolescent sexual decision-making have found that teens with high “self-efficacy”—or a belief that they can carry out important tasks and achieve articulated goals—are less likely to engage in risky sexual behaviors than those whose self-efficacy is low.¹⁰ Imposing legal liability on teenagers' sexual behavior could, this Article argues, undermine their self-efficacy and thus, ironically, help encourage poor decision-making on their part. Legal sanctions aimed primarily at altering teenage behavior may change adult attitudes toward adolescent sex in a negative way and impede the effective communication between adults and teenagers necessary to the healthy development of adolescent sexuality. Furthermore, by treating teens as adults, such sanctions raise serious questions of equity and fairness.

9. The literature in the area of juvenile justice is particularly rich. *See generally* ELIZABETH S. SCOTT & LAURENCE STEINBERG, *RETHINKING JUVENILE JUSTICE* (2008); Elizabeth S. Scott & Thomas Grisso, *Developmental Incompetence, Due Process, and Juvenile Justice Policy*, 83 N.C. L. REV. 793 (2005); THOMAS GRISSO & ROBERT SCHWARTZ, *YOUTH ON TRIAL* (2000).

10. “[S]elf-efficacy refers to the beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations.” ALBERT BANDURA, *SELF-EFFICACY IN CHANGING SOCIETIES* 2 (1995).

Because legal scholars who have called for legal sanctions for risky sexual behavior¹¹ have almost entirely ignored the psychosocial and neurological development of the population most likely to engage in that behavior, their recommendations have little chance of achieving their goal of stalling the spread of disease. Part VI therefore offers recommendations for how policymakers could better seek to discourage and deter risky adolescent sexual behavior.

II

PUBLIC HEALTH CRISIS: SEXUAL DISEASE TRANSMISSION

STDs pose a significant threat to public health in the United States. The United States has the highest STD infection rate of any developed nation, and that rate has continued to rise for many years.¹² While the public health community has undertaken many initiatives to curb the spread of disease and encourage the use of condoms, these initiatives have had only a moderate to negligible effect (and in the case of abstinence education, even a negative one) on one of the populations most at risk for STDs: adolescents.¹³

Indeed, sexual disease transmission among teens in the United States has reached almost epidemic proportions, with adolescents contracting as many as nine million STDs per year.¹⁴ Given that earlier studies have found that three million U.S. teenagers acquire an STD every year, the data points to the likelihood that many adolescents contract more than one STD.¹⁵ Thirteen percent of the new HIV infections diagnosed in 2004

11. In this Article, “risky sexual behavior” refers primarily to sexual intercourse without a condom, especially with multiple partners or with a single partner at high risk for sexual infection.

12. COMM. ON PREVENTION & CONTROL OF SEXUALLY TRANSMITTED DISEASES, INSTIT. OF MED., *THE HIDDEN EPIDEMIC: CONFRONTING SEXUALLY TRANSMITTED DISEASES* (Thomas R. Eng & William T. Butler eds., 1998) (noting that “[t]he United States has the dubious distinction of leading the industrialized world in overall rates of sexually transmitted diseases . . . with 12 million new cases annually”); *Sexually Transmitted Disease Morbidity Data*, CTRS. FOR DISEASE CONTROL & PREVENTION, DEP’T OF HEALTH & HUMAN SERVS. (Nov. 13, 2009), <http://wonder.cdc.gov/std.html> (listing disease rates by disease, age and year).

13. See *infra* notes 58–65 and accompanying text.

14. CTRS. FOR DISEASE CONTROL & PREVENTION, DEP’T OF HEALTH & HUMAN SERVS., *TRENDS IN REPORTABLE SEXUALLY TRANSMITTED DISEASES IN THE UNITED STATES, 2007: NATIONAL SURVEILLANCE DATA FOR CHLAMYDIA, GONORRHEA, AND SYPHILIS 1* (2009), available at <http://www.cdc.gov/STD/stats07/trends.pdf> [hereinafter *DATA FOR CHLAMYDIA, GONORRHEA, AND SYPHILIS*] (estimating that approximately nineteen million new infections occur each year—almost half of them among young people fifteen to twenty-four years of age).

15. Susan L. Rosenthal, Kristin M. Von Ranson, Sian Cotton, Frank M. Biro, Lisa Mills & Paul A. Succop, *Sexual Initiation: Predictors and Developmental Trends*, 28 *SEXUALLY TRANSMITTED DISEASES* 527, 527 (2001).

occurred in the thirteen to twenty-four age group.¹⁶ Furthermore, the rate of chlamydia infection among women aged fifteen to nineteen in 2007 was higher than any other group.¹⁷ Women aged fifteen to nineteen also had the highest rate of gonorrhea infection of any group.¹⁸ Meanwhile, one study estimated in 2000 that about 640,000 youths between the ages of fifteen and twenty-four contracted genital herpes in that year alone.¹⁹ The same study estimated that seventy-four percent of the total number of cases of genital human papilloma virus (HPV) in 2000 occurred in people between the ages of fifteen and twenty-four.²⁰

These statistics make visible the riskiness of teen sexual behavior in the United States and the difficulties teens face making wise sexual choices in the contemporary social and political environment. Indeed, adolescents are—for a variety of biological and cultural reasons—more likely than adults to engage in risky sexual behavior.

A. *Risky Adolescent Sexual Behavior and its Consequences*

Although adolescents are neither children nor adults in either a developmental²¹ or a legal sense,²² today's adolescents develop into adults

16. CTRS. FOR DISEASE CONTROL & PREVENTION, DEP'T OF HEALTH & HUMAN SERVS., CDC HIV/AIDS FACT SHEET, HIV/AIDS AMONG YOUTH 1 (2008) [hereinafter HIV/AIDS AMONG YOUTH], available at <http://www.cdc.gov/hiv/resources/Factsheets/PDF/youth.pdf>. Note that, although those aged twenty and above are technically no longer teenagers, many psychologists and sociologists define the psychological state of adolescence as continuing through the early 20s. See, e.g., Scott & Woolard, *supra* note 7, at 560. Note also that many epidemiologists speculate that, while HIV might not be detected until the early 20s, its asymptomatic latency period may mean that the actual infection often occurs in the teens. See, e.g., Robert W. Blum & Kristin Nelson-Mmari, *Adolescent Health from an International Perspective*, in HANDBOOK OF ADOLESCENT PSYCHOLOGY, *supra* note 7, at 553.

17. DATA FOR CHLAMYDIA, GONORRHEA, AND SYPHILIS, *supra* note 14, at 2 (reporting rate as 3004 infections per 100,000 persons).

18. CTRS. FOR DISEASE CONTROL & PREVENTION, DEP'T OF HEALTH & HUMAN SERVS., SEXUALLY TRANSMITTED DISEASE SURVEILLANCE, 2008 59 (2009), available at <http://www.cdc.gov/std/stats08/surv2008-Complete.pdf>.

19. Hillard Weinstock, Stuart Berman & Willard Cates, Jr., *Sexually Transmitted Diseases Among American Youth: Incidence and Prevalence Estimates, 2000*, 36 PERSPS. ON SEXUAL & REPROD. HEALTH 6, 7 (2004).

20. *Id.* at 8.

21. See Elizabeth S. Scott, *The Legal Construction of Adolescence*, 29 HOFSTRA L. REV. 547, 555 (2000) [hereinafter Scott, *Legal Construction*] (“[Adolescents] are physically mature, and most have the cognitive capacities for reasoning and understanding necessary for making rational decisions. Yet, adolescents are not fully formed persons in many regards; they continue to be dependent on their parents and on society, and their inexperience and immature judgment may lead them to make poor choices, which threaten harm to themselves or others.”). See also Terri L. Russ, *Toward a Unified Legal Approach to Adolescent Girls*, 43 RES GESTAE 29, 29–30 (2000) (describing “stuck between two worlds” existence of adolescent girls).

22. Scott, *Legal Construction*, *supra* note 21, at 548 (noting that in some legal contexts, adolescents are classified as children and in others, they are classified as adults).

physically far earlier than they do cognitively.²³ In this generation, puberty begins on average for boys at age eleven²⁴ and for girls around age twelve.²⁵ Because children become physically mature much earlier than they achieve mature cognitive and reasoning skills, adolescents may often look like adults but still act and think like children.

Changing cultural norms also mean that both girls and boys are likely to begin to engage in sexual activity at an earlier age than their parents did.²⁶ Studies show that a majority of both girls and boys will engage in oral sex with someone of the opposite sex by the age of nineteen,²⁷ and a substantial percentage will participate in heterosexual or homosexual anal sex by the same age.²⁸ By the end of high school, almost half of boys and girls will have engaged in heterosexual vaginal intercourse.²⁹ These numbers are generally higher for teens of color.³⁰ In the United States, adolescents are also more likely than adults to become pregnant unintentionally³¹ and to choose to have an abortion.³²

23. See, e.g., Reed W. Larson, Gerald L. Clore & Gretchen A. Wood, *The Emotions of Romantic Relationships: Do They Wreak Havoc on Adolescents?*, in THE DEVELOPMENT OF ROMANTIC RELATIONSHIPS IN ADOLESCENCE 19, 25 (Wyndol Furman, B. Bradford Brown & Candice Feiring, eds., 1999) (noting that adolescents today experience “biological changes that are beyond their control and that are occurring quite a bit earlier than in our evolutionary past”); LINDA P. SPEAR, THE BEHAVIORAL NEUROSCIENCE OF ADOLESCENCE 52–59 (2010) (explaining that while there is much speculation, there is no conclusive answer as to why onset of puberty occurs earlier).

24. Gilbert Herdt & Martha McClintock, *The Magical Age of 10*, 29 ARCHIVES SEXUAL BEHAV. 587, 589 (2000) (“Today, in general, the mean age of onset of gonadal puberty in boys is 11.5 years.”).

25. Sarah E. Anderson, Gerard E. Dallal & Aviva Must, *Relative Weight and Race Influence Average Age at Menarche: Results from Two Nationally Representative Surveys of US Girls Studied 25 Years Apart*, 111 PEDIATRICS 844, 847 (2003) (identifying twelve as average age of menarche).

26. See Jean-Claude Carel & Juliane Léger, *Precocious Puberty*, 358 NEW ENGLAND J. MEDICINE 2366, 2367 (2008) (noting how early pubescence can begin).

27. *Healthy Youth! Health Topics: Sexual Risk Behaviors*, CTRS. FOR DISEASE CONTROL & PREVENTION, DEP’T OF HEALTH & HUMAN SERVS., <http://www.cdc.gov/HealthyYouth/sexualbehaviors/index.htm> (last visited Dec. 2, 2010) [hereinafter *Sexual Risk Behaviors*] (citing 2002 study finding that fifty-five percent of males and fifty-four percent of females aged fifteen to nineteen had engaged in oral sex with someone of opposite sex).

28. *Id.* (citing a study finding that eleven percent of males and females aged fifteen to nineteen, had had anal sex with someone of opposite sex and three percent of males had had anal sex with another male).

29. *Sexual Risk Behaviors*, *supra* note 27 (citing Centers for Disease Control study finding that in 2009, forty-six percent of high school students had had sexual intercourse).

30. CTRS. FOR DISEASE CONTROL & PREVENTION, DEP’T OF HEALTH & HUMAN SERVS., 59 MORBIDITY & MORTALITY WEEKLY REP. NO SS-5, YOUTH RISK BEHAVIOR SURVEILLANCE—UNITED STATES, 2009 20 (2010) (showing that black and Hispanic teens are significantly more likely to be sexually active, to begin having sex at a younger age, and to have had four or more sexual partners than their white peers), *available at* <http://www.cdc.gov/mmwr/pdf/ss/ss5905.pdf>.

31. Lawrence B. Finer & Stanley K. Henshaw, *Disparities in Rates of Unintended*

Why do adolescents participate in sexual activity, even when they are not yet cognitively and emotionally mature? There are many reasons. First, sexual activity in adolescence has become normal behavior,³³ and adolescents tend to make decisions about whether to engage in intercourse—at least first intercourse—based on their personal attitudes and peer norms regarding sex or abstinence.³⁴ Second, the adolescent hormonal drive is extremely strong,³⁵ and the typical adolescent thinks about sex frequently.³⁶ Third, many adolescents have not yet learned how to control their sexual urges effectively,³⁷ both because of significant

Pregnancy in the United States, 1994 and 2001, 38 PERSP. SEXUAL & REPRODUCTIVE HEALTH 90, 92 (2006) (noting that “[t]he proportion of pregnancies that were unintended was highest among women 19 and younger”). See also GUTTMACHER INSTITUTE, FACTS ON AMERICAN TEENS’ SEXUAL AND REPRODUCTIVE HEALTH 2 (2010) (reporting statistical findings that eighty-two percent of teen pregnancies are unplanned) available at <http://www.guttmacher.org/pubs/FB-ATSRH.pdf>.

32. While older age groups account for numerically more abortions each year, women below the age of nineteen have the highest ratio of abortion (i.e., the number of abortions per 1,000 live births in that age category) of any group. CTRS. FOR DISEASE CONTROL & PREVENTION, DEP’T OF HEALTH & HUMAN SERVS., 59 MORBIDITY & MORTALITY WEEKLY REP. NO SS-8, ABORTION SURVEILLANCE—UNITED STATES, 2006 16 (2009), available at <http://www.cdc.gov/mmwr/PDF/ss/ss5808.pdf>.

33. See, e.g., Julia A. Graber, Pia R. Britto & Jeanne Brooks-Gunn, *What’s Love Got to Do with It? Adolescents’ and Young Adults’ Beliefs About Sexual and Romantic Relationships*, in THE DEVELOPMENT OF ROMANTIC RELATIONSHIPS IN ADOLESCENCE, *supra* note 23, at 364, 370 (noting that “nonmarital sexual behavior” is common for adolescents and young adults).

34. See Susan H. Gray, Bryn Austin, Bin Huang, A. Lindsay Frazier, Alison E. Field, & Jessica A. Kahn, *Predicting Sexual Initiation in a Prospective Cohort Study of Adolescents*, 162 ARCHIVES PEDIATRIC & ADOLESCENT MED. 55, 57–59 (2008) (discussing adolescent motivations to initiate sexual intercourse); Sara B. Kinsman, Daniel Romer, Frank F. Furstenberg & Donald F. Schwarz, *Early Sexual Initiation: The Role of Peer Norms*, 102 PEDIATRICS 1185, 1190 (1993) (stating that adolescent sexual initiation is closely linked to perceptions of peer sexual activity and experience).

35. See Reed W. Larson & Gerald L. Clore, *The Emotions of Romantic Relationships: Do They Wreak Havoc on Adolescents?*, in THE DEVELOPMENT OF ROMANTIC RELATIONSHIPS IN ADOLESCENCE, *supra* note 23, at 24 (quoting research stating that sexual desire “kicks in” at puberty); Carolyn Tucker Halpern, *Biological Influences on Adolescent Romantic and Sexual Behavior*, in ADOLESCENT ROMANTIC RELATIONS AND SEXUAL BEHAVIOR: THEORY, RESEARCH, AND PRACTICAL IMPLICATIONS 67–68 (Paul Florsheim ed., 2003) [hereinafter Halpern, *Biological Influences*] (citing multiple studies that suggest that “pubertal increases in testosterone meaningfully contribute to the timing of sexual initiation during adolescence for both males and females, and to the frequency of sexual experiences”); Carolyn Tucker Halpern, Richard Udry & Chirayath Suchindran, *Testosterone Predicts Initiation of Coitus in Adolescent Females*, 59 PSYCHOSOMATIC MEDICINE 161, 161 (1997) (stating that exogenous testosterone, which enhances sexual motivation, approximately doubles in females during puberty, and the rate of increase is larger in males). Halpern also notes, however, that, “hormonal contributions, considered outside the context of other social and psychological factors, are relatively modest” and notes that “high testosterone, like any other single risk factor, does not necessarily result in early or more sexual activity.” Halpern, *Biological Influences*, at 68.

36. See Kohlberg & Gilligan, *supra* note 1, at 153.

37. See *infra* notes 114–25 and accompanying text.

hormonal changes³⁸ and because they have not reached a level of cognitive development where they can reliably make rational decisions in the heat of passion.³⁹ Adolescents are particularly impulsive, or possess “diminished self-control or response inhibition that leads to hasty behaviors,”⁴⁰ and are prone to sensation-seeking, or willing “to take risks in order to seek out (and eventually take part in) stimulating or novel experiences.”⁴¹ For all of these reasons, adolescents frequently engage in risky sexual behavior and suffer a variety of negative consequences as a result.

B. Societal Attitudes Toward Adolescent Sex

We are in the midst of a period of significant evolution with respect to societal attitudes about adolescent sex, attitudes which arise in part in response to legal measures.⁴² Changing social conventions mean that we are increasingly accustomed to adolescent sexual activity. Whereas premarital sex was once viewed as inappropriate, even sinful behavior, over the last few decades, large segments of the population have come to perceive premarital sexual activity differently.⁴³ Even as most Americans continue to view sex as private and important—according to many, best shared between two people in an intimate, long-term relationship—most also now view sexual activity and desire as a normal part of adolescent development, even when they may wish that adolescents might ideally remain abstinent in practice.⁴⁴ As a result of this attitudinal shift, adolescents have become much more open about their sexuality. Studies find that adolescents today feel more comfortable than those in

38. See *infra* notes 107–28 and accompanying text.

39. See *infra* notes 131–55 and accompanying text.

40. Praveen Kambam & Christopher Thompson, *The Development of Decision-Making Capacities in Children and Adolescents: Psychological and Neurological Perspectives and Their Implications for Juvenile Defendants*, 27 BEHAV. SCI. & L. 173, 177 (2009).

41. *Id.*

42. See *infra* notes 217–224 and accompanying text.

43. See, e.g., CATHERINE S. CHILMAN, ADOLESCENT SEXUALITY IN A CHANGING AMERICAN SOCIETY 44–52 (2001); JOHN H. GAGNON & WILLIAM SIMON, SEXUAL CONDUCT 255–58 (2d ed. 2005) (noting that view of sexual morality espoused by fundamentalist Christians is in minority in contemporary United States).

44. In fact, many public health professionals assert that it is imperative that we view adolescent sexuality as “a central and positive part of the total well-being of young people.” Catherine Chilman, *Promoting Healthy Adolescent Sexuality*, 39 FAM. REL. 123, 123 (1990); SEXUALITY INFO. & EDUC. COUNCIL OF THE U.S., NAT’L COMM’N ON ADOLESCENT SEXUAL HEALTH, FACING FACTS: SEXUAL HEALTH FOR AMERICA’S ADOLESCENTS 10 (1995) (“Becoming a sexually healthy adult is a key developmental task of adolescence.”) This view is not universally shared, however. See, e.g., JUDITH LEVINE, HARMFUL TO MINORS: THE PERILS OF PROTECTING CHILDREN FROM SEX ix (2002) (noting public disquiet at the notion that adolescent sexuality is healthy and normal); Pollard, *supra* note 4, at 783 n.79 (citing report by Heritage Foundation and concluding that early sexual activity leads to increased risk of depression and suicide).

generations past discussing their sexual health with health care providers.⁴⁵ They also feel more comfortable talking with adults, peers, and partners about issues related to sexual activity.⁴⁶ Therefore, when sexual activity results in unintended or undesired consequences—such as the transmission of sexual disease—adolescents today may feel more comfortable seeking medical and psychological assistance than did their peers in past generations⁴⁷

More liberal societal attitudes toward sexual activity also may explain why, in recent years, courts and legislatures have struck down or repealed many of the laws that once regulated sex, including those prohibiting adultery and sodomy and those restricting access to abortion and contraception.⁴⁸

45. See, e.g., Cheryl R. Merzel, Nancy L. Vandevanter, Susan Middlestadt, Amy Bleakley, Rebecca Ledsky & Peter A. Messeri, *Attitudinal and Contextual Factors Associated with Discussion of Sexual Issues During Adolescent Health Visits*, 35 J. ADOLESCENT HEALTH 108, 113 (2004) (study finding that majority of teens sampled “reported discussing at least one sexual health topic at their last health care visit” with females more likely to discuss than males, but noting that this result may be attributed to the community and the health care setting); Susan L. Rosenthal, Lisa M. Lewis, Paul A. Succop, Kathleen A. Burklow, Patrick R. Nelson, Kimberly D. Shedd, Richard B. Heyman & Frank M. Biro, *Adolescents’ Views Regarding Sexual History Taking*, 38 CLINICAL PEDIATRICS 227, 232 (1999). But see Jocelyn A. Lehrer, Robert Pantell, Kathleen Tebb & Mary-Ann Shafer, *Forgone Health Care Among U.S. Adolescents: Associations Between Risk Characteristics and Confidentiality Concern*, 40 J. ADOLESCENT HEALTH 218, 222 (2007) (study finding that some high-risk adolescents may forgo health care where they have concerns about confidentiality); Cynthia M. Rand, Peggy Auinger, Jonathan D. Klein & Michael Weitzman, *Preventive Counseling at Adolescent Ambulatory Visits*, 37 J. ADOLESCENT HEALTH 87, 91 (2005) (finding that “physicians counsel adolescents at well visits at levels far below those recommended by the American Academy of Pediatrics, American Medical Association, and American Academy of Family Physicians,” but finding that older adolescents are more likely to receive counseling about HIV/STD prevention than younger adolescents, especially if seen by pediatric provider).

46. See, e.g., M. Katherine Hutchinson & Teresa M. Cooney, *Patterns of Parent-Teen Sexual Risk Communication: Implications for Intervention*, 47 FAM. REL. 185, 192 (1998).

47. See, e.g., Lee A. Rawitscher, Richard Saitz & Lawrence S. Friedman, *Adolescents’ Preferences Regarding Human Immunodeficiency Virus (HIV)-Related Physician Counseling and HIV Testing*, 96 PEDIATRICS 52, 55 (1995) (finding that “high school students wanted physicians to give them information and ask them personal questions about HIV and HIV-related topics, such as . . . sex, safe sex, condoms, and sexually transmitted diseases”).

48. See, e.g., *Eisenstadt v. Baird*, 405 U.S. 438 (1972) (holding unconstitutional state law prohibiting distribution of contraceptives to unmarried persons); *Griswold v. Connecticut*, 381 U.S. 479 (1965) (establishing privacy right to use contraception); *Roe v. Wade*, 410 U.S. 113 (1973) (establishing privacy right to have abortion); *Lawrence v. Texas*, 539 U.S. 558 (2003) (establishing liberty right to engage in consensual adult sexual relations); Gabrielle Viator, *Criminal Adultery Prohibitions After Lawrence v. Texas*, 39 SUFFOLK L. REV. 837, 842 (2006) (listing the many states that have repealed their criminal adultery statutes).

C. Public Health Initiatives Designed to Counter the Spread of STDs

Faced with growing rates of STDs among adolescents, public health officials have devoted significant resources to educating and working with adolescents, both those who are sexually active and those who simply need accurate, unbiased information about sex.⁴⁹

Public health initiatives to prevent sexually transmitted disease take many forms. Almost all public schools today offer some form of sex education in which students are taught about the dangers of STDs and effective pregnancy and disease prevention strategies.⁵⁰ Before 1996, when rules governing the federal funding of sex education were altered to promote abstinence-only programs,⁵¹ most sex education programs in public schools were premised upon a hybrid approach to the control of risky sexual behavior among teenagers. Hybrid sex education classes provide information about anatomy, contraception, condom use, and even abortion; they also help teens learn how to better communicate with one another about sex and promoted abstinence.⁵² Today, the hybrid form of sex education is once again gaining in popularity as a means of preventing pregnancy and sexually transmitted disease, and many states have repealed their abstinence-only sex education laws.⁵³ Beyond the traditional school

49. See, e.g., David Steib, *Sex Education in Schools*, 8 GEO. J. GENDER & L. 447, 447-454 (2007) (examining the variation in state sex education laws); Heather D. Boonstra, *Advocates Call for a New Approach After the Era of 'Abstinence-Only' Sex Education*, 12 GUTTMACHER POL'Y REV. 6, 6 (2009) (noting that since 1996 state and federal governments have spent over \$1 billion for sex education aimed at young Americans).

50. See, e.g., GUTTMACHER INSTITUTE, FACTS ON SEX EDUCATION IN THE UNITED STATES 2 (2006) (finding that majority of states mandate sex education, and more than two out of three public school districts have policies to teach it), available at http://www.guttmacher.org/pubs/fb_sexEd2006.pdf; Laura Duberstein Lindberg, John S. Santelli & Susheela Singh, *Changes in Formal Sex Education: 1995-2002*, 38 PERSP. ON SEXUAL & REPROD. HEALTH 182, 182 (2006) (stating that as of 2000, ninety-two percent of U.S. middle schools and ninety-six percent of U.S. high schools offered some form of sex education curriculum).

51. See, e.g., 42 U.S.C. § 300z (2009) (providing funds to organizations that discourage adolescent sexual relations); 42 U.S.C. § 710 (2009) (establishing allotment of funds for states to use for abstinence education); *Community-Based Abstinence Education Program*, ADMIN. FOR CHILDREN & FAM., DEP'T OF HEALTH & HUMAN SERV., http://www.acf.hhs.gov/programs/fbci/progs/fbci_cbaep.html (last visited Dec. 7, 2010) describing Community-Based Abstinence Education Program, which funds programs providing abstinence education); GUTTMACHER INSTITUTE, FACTS ON SEX EDUCATION IN THE UNITED STATES, *supra* note 50, at 2 (noting that in last decade of twentieth century and first decade of twenty-first, abstinence was focus of most sex education programs, in part because of federal funding restrictions.)

52. Steib, *supra* note 49, at 451 (noting that thirty-four states affirmatively require schools to educate students about "controversial topics, such as the prevention of sexually transmitted diseases, contraception, abortion, and sexuality"); Patricia Donovan, *School-Based Sexuality Education: The Issues and Challenges*, 30 FAM. PLAN. PERSPS. 188, 190 (1998).

53. See SIECUS, WE'RE OUTTA HERE: 25 STATES WITHDRAW FROM CRUMBLING

sex education curriculum, the public health community and others have attempted to address the negative potential consequences of teenage sex by making condoms available to adolescents,⁵⁴ broadcasting public service announcements (PSAs) advocating responsible sexual activity,⁵⁵ offering simulated parenting programs,⁵⁶ and promoting virginity pledges.⁵⁷

While some of these initiatives have enjoyed some measure of success, others have not. Although hybrid sex education programs do not seem to prevent adolescents from engaging in sexual activity,⁵⁸ studies show that

TITLE V ABSTINENCE-ONLY-UNTIL-MARRIAGE PROGRAM (2008), available at http://www.siecus.org/_data/global/images/25%20States%20Out%2010.8.08.pdf 1 (noting forty percent decrease in number of states participating in federal abstinence-only sex education funding program); Steib, *supra* note 49, at 457 (noting significant shift towards comprehensive sex education by state legislatures). See generally KYLE ZINTH, EDUC. COMM'N OF THE STATES, SEX EDUCATION LAWS IN THE STATES (2007) (describing sex education laws of several states and noting that many require schools to teach more than just abstinence), available at <http://www.ecs.org/clearinghouse/73/09/7309.pdf>. While most parents want sex education in the schools, polls also show that Americans consider abstinence an appropriate sexual behavior for adolescents. John Santelli, Mary A. Ott, Maureen Lyon, Jennifer Rogers, Daniel Summers & Rebecca Schleifer, *Abstinence and Abstinence-only Education: A Review of U.S. Policies and Programs*, 38 J. ADOLESCENT HEALTH 72, 74 (2006). However, few Americans believe that abstinence should be taught without any other information, such as about contraception and sexual responsibility. *Id.* Abstinence-based programs may also be called "abstinence-only" programs, depending on the degree to which abstinence is the sole or primary goal of the programming. One study conducted from 1988 until 1999 found "steep declines . . . in teacher support for coverage of birth control, abortion, information on obtaining contraceptive and STD services, and sexual orientation Four in [ten] teachers cited abstinence as their most important message in 1999, up from one in four in 1988." Jacqueline E. Darroch, David J. Landry & Susheela Singh, *Changing Emphases in Sexuality Education in U.S. Public Secondary Schools, 1988-1999*, 32 FAM. PLAN. PERSP. 204, 211 (2000).

54. See, e.g., Susan M. Blake, Rebecca Ledsky, Carol Goodenow, Richard Sawyer, David Lohrmann & Richard Windsor, *Condom Availability Programs in Massachusetts High Schools: Relationships with Condom Use and Sexual Behavior*, 93 AM. J. PUB. HEALTH 955, 955 (2003) (noting that more than four hundred schools nationwide made condoms available to their students); Douglas Kirby, Nancy D. Brener, Nancy L. Brown, Nancy Peterfreund, Pamela Hillard & Ron Harest, *The Impact of Condom Distribution in Seattle Schools on Sexual Behavior and Condom Use*, 89 AM. J. PUB. HEALTH 182, 183 (1999) (noting same).

55. See, e.g., Rick S. Zimmerman, Philip M. Palmgreen, Seth M. Noar, Mia Liza A. Lustria, Hung-Yi Lu & Mary Lee Horosewski, *Effects of a Televised Two-City Safer Sex Mass Media Campaign Targeting High-Sensation-Seeking and Impulsive-Decision-Making Young Adults*, 34 HEALTH EDUC. BEHAV. 810, 812 (2007) (evaluating effectiveness of televised safer sex PSA campaign in Lexington, KY).

56. See, e.g., Jerrold E. Barnett, *Evaluating "Baby Think It Over" Infant Simulators: A Comparison Group Study*, 41 ADOLESCENCE 103, 103 (2006) (describing infant simulator programs); Lynne R. Tingle, *Evaluation of the North Carolina "Baby Think It Over" Project*, 72 J. SCH. HEALTH 178, 178 (2002) (evaluating effectiveness of program that uses infant simulators to teach teenagers about parenting and pregnancy).

57. See, e.g., J. Shoshanna Ehrlich, *From Age of Consent Laws to the "Silver Ring Thing": The Regulation of Adolescent Female Sexuality*, 16 HEALTH MATRIX 151, 179-80 (2006) ("[V]irginity pledging has caught on and is not limited to the classroom.").

58. William Marsiglio & Frank L. Mott, *The Impact of Sex Education on Sexual*

they do result in increased use of condoms and contraceptives.⁵⁹ Furthermore, studies show that hybrid programs do not result in earlier or increased sexual activity.⁶⁰ Condom distribution in schools has also been somewhat effective in encouraging sexually active teens to use condoms,⁶¹ as have PSAs⁶² and other media marketing campaigns, leading public health experts to recognize that measures designed to educate and empower youth can be successful.⁶³ On the other hand, studies

Activity, Contraceptive Use and Premarital Pregnancy Among American Teenagers, 18 FAM. PLAN. PERSP. 151, 161 (1986) (suggesting that, if anything, sex education might create slightly increased probability of sexual activity). *But see* DOUG KIRBY, B.A. LARIS & LORI ROLLERI, SEX AND HIV EDUCATION PROGRAMS FOR YOUTH: THEIR IMPACT AND IMPORTANT CHARACTERISTICS 23 (2006) (citing studies that provide “very strong evidence that some, but not all, [sex education] programs in both developing and developed countries reduced sexual activity, either by delaying onset of sexual intercourse, reducing frequency of sex or reducing number of sexual partners”).

59. KIRBY, LARIS & ROLLERI, *supra* note 58, at 23–24 (“[S]ome, but not all, [sexual education programs] increased condom and contraceptive use and reduced sexual risk-taking.”); Cynthia M. Lyles, Linda S. Kay, Nicole Crepaz, Jeffrey H. Herbst, Warren F. Passin, Angela S. Kim, Sima M. Rama, Sekhar Thadiparthi, Julia B. DeLuca & Mary M. Mullins, *Best-Evidence Interventions: Findings from a Systematic Review of HIV Behavioral Interventions for U.S. Populations at High Risk, 2000–2004*, 97 AM. J. PUB. HEALTH 133, 133 (2007) (“Significant intervention effects included increased condom use and reductions in unprotected sexual intercourse. . .”). *But see* Steib, *supra* note 49, at 454–55 (finding no correlation between state requirements for contraception education and teen pregnancy rates, or between STD education and STD rates).

60. Anne Grunseit, Susan Kippax, Peter Aggleton, Mariella Baldo & Gary Slutkin, *Sexuality Education and Young People’s Sexual Behavior: A Review of Studies*, 12 J. ADOLESCENT RES. 421, 445 (1997) (finding “little support for the contention that sexuality education encourages experimentation or increased sexual activity”). *Cf.* Carey v. Population Serv. Int’l, 431 U.S. 678, 695 (1977) (“[T]here is substantial reason for doubt whether limiting access to contraceptives will in fact substantially discourage early sexual behavior.”).

61. *See, e.g.*, Blake, Ledsky, Goodenow, Sawyer, Lohrmann & Windsor, *supra* note 54, at 959 (finding that sexually active students in schools that make condoms available are more likely to use condoms); Mark A. Schuster, Robert M. Bell, Sandra H. Berry & David E. Kanouse, *Impact of a High School Condom Distribution Availability Program on Sexual Attitudes and Behaviors*, 30 FAM. PLAN. PERSPS. 67, 70 (1998) (finding that males—but not females—attending schools with condom availability programs are more likely to use condoms during sex). *But see* Kirby, Brener, Brown, Peterfreund, Hillard & Harrist, *supra* note 54, at 186 (making condoms available in schools did not lead to increased sexual activity or use of condoms).

62. *See, e.g.*, Zimmerman, Palmgreen, Noar, Lustria, Lu & Horosewski, *supra* note 56, at 822 (concluding that a PSA campaign in Lexington, KY effectively increased condom usage among young adults).

63. *See* Robert H. DuRant, Mark Wolfson, Betty LaFrance, Rajesh Balkrishnan, & David Altman, *An Evaluation of a Mass Media Campaign to Encourage Parents of Adolescents to Talk to Their Children About Sex*, 38 J. ADOLESCENT HEALTH 298.e1, 298.e7 (2006) (summarizing study findings that mass media campaign that used PSAs to encourage parents to talk with children about sex resulted in increased parent/child communication); W. Douglas Evans, Kevin C. Davis, Olivia Silber Ashley, Jonathan Blitstein, Helen Koo & Yun Zhang, *Efficacy of Abstinence Promotion Media Messages: Findings from an Online Randomized Trial*, 45 J. ADOLESCENT HEALTH 409, 413 (2009) (finding that PSAs that promoted parent-child communication about sex resulted in greater

demonstrate that abstinence-based education does not deter or delay sexual initiation for extended periods of time.⁶⁴ Additionally, virginity pledges appear to have little or no effect on the initiation of sexual behavior, although they are associated with decreased use of condoms during sexual activity.⁶⁵

Out of concern that existing public health initiatives may not completely curtail the spread of sexually transmitted disease, politicians and other policymakers have jumped into the fray. Over the past few years, several legal scholars have suggested punishment-based approaches to the STD epidemic to supplement the educative approach. As I will demonstrate in Part IV, these proposals conflict with the goal of promoting adolescent self-efficacy and are unlikely to meet the objective of promoting more responsible sexual behavior among adolescents.

III

LEGAL SANCTIONS FOR RISKY SEXUAL BEHAVIOR AND THE TRANSMISSION OF SEXUAL DISEASE

Because sex is not a fully respectable subject for public discussion in the United States (at the same time it permeates the popular media, and for that matter high-brow art and literature, as well), anyone who writes about sex is apt to be a little off Yet the subject is not only rich in analytical and historical interest but also—as it is almost too obvious to mention—of enormous practical significance, and this quite apart from its traditional and

communication about sex between fathers and children, but not mothers).

64. *Myths and Facts About Sex Education*, THE MEDIA PROJECT, <http://www.themediaproject.com/facts/sexeducation/mythfact.htm> (last visited Dec 2., 2010) (“Current research findings do not support the position that the abstinence-only approach to sexuality education is effective in delaying the onset of intercourse.”). See also MINORITY STAFF SPECIAL INVESTIGATIONS DIV., U.S. HOUSE OF REPRESENTATIVES COMM. ON GOV'T REFORM, *THE CONTENT OF FEDERALLY FUNDED ABSTINENCE-ONLY EDUCATION PROGRAMS 7–8* (2004) (noting that many abstinence-only educational curricula contain serious errors and distortions), available at http://www.apha.org/apha/PDFs/HIV/The_Waxman_Report.pdf.

65. See, e.g., Lawrence K. Altman, *Study Finds that Teenage Virginity Pledges Are Rarely Kept*, N.Y. TIMES, Mar. 10, 2004, at A20 (citing study finding that virginity pledges did not reduce incidence of sexually transmitted disease, and noting lower rate of condom usage among teens who pledged than among teens who did not pledge); Janet Elise Rosenbaum, *Patient Teenagers? A Comparison of the Sexual Behavior of Virginity Pledgers and Matched Nonpledgers*, 123 PEDIATRICS e110, e114 (2009) (reporting study findings that “[d]espite having had similar birth control attitudes year before pledging, virginity pledgers were substantially less likely than matched non-pledgers to protect themselves against STDs and pregnancy” and were ten percent less likely to use condoms); Hannah Bruckner & Peter S. Bearman, *After the Promise: The STD Consequences of Adolescent Virginity Pledges*, 36 J. ADOLESCENT HEALTH 271, 277 (2005) [hereinafter Bruckner & Bearman, *After the Promise*] (finding no significant difference in incidence of STDs between pledgers and non-pledgers).

now declining importance to the future of the human race. A major source of human pleasures and pains (the latter including death long before AIDS came on the scene), of human institutions, of political controversy, perhaps even of the growth and decline of nations, it deserves our best intellectual efforts.⁶⁶

Legislators and legal scholars have responded to the increase of STD infections with a wave of proposals designed to punish risky sexual behavior.⁶⁷ The proponents of these new laws promote a form of legal sanctions theory. Hypothesizing that the problem with current public health initiatives is that they do not seek to sanction individuals who adversely affect others through their irresponsible sexual behavior, they attempt to deter such behavior by hiking the penalties associated with it.⁶⁸ Over the years, therefore, many states have imposed criminal liability for the knowing transmission of HIV as well as other STDs, including herpes.⁶⁹ The courts in many states have also imposed civil liability on individuals who knowingly transmit a sexual disease.⁷⁰ These actions typically lie in

66. RICHARD A. POSNER, *SEX AND REASON* 9–10 (1992).

67. See *supra* note 4 for a list of proposals.

68. See Pollard, *supra* note 4, at 793 (arguing that the “absence of legal sanctions for sexual misconduct . . . fail[s] to discourage sexual promiscuity, and contribute[s] to the sexual disease epidemic”); Ayres & Baker, *supra* note 4, at 601-02 (arguing that increased sanctions for reckless sexual conduct would help promote condom use and help stem STD epidemic).

69. See statutes listed *supra* note 3 and accompanying text.

70. See cases listed *supra* note 3. See also *Berner v. Caldwell*, 543 So. 2d 686, 689–90 (Ala. 1989) (recognizing cause of action for tortious transmittal of genital herpes under Alabama law); *Meany v. Meany*, 639 So. 2d 229, 235 (La. 1994) (construing state statute to impose civil liability on any individual who knows or should have known that she is infected with STD and fails to abstain from sexual intercourse or warn her partner before sexual contact); *McPherson v. McPherson*, 712 A.2d 1043, 1045-46 (Me. 1998) (holding that one who knows or should know that she is infected with STD is under duty to protect her sexual partners from infection); *B.N. v. K.K.*, 538 A.2d 1175, 1181 (Md. 1988) (holding that one who knowingly engages in conduct that is highly likely to infect another with an incurable STD and who is also aware of nature of disease not only engages in intentional or reckless conduct but has also committed extreme and outrageous conduct and can be held tortiously liable for intentional infliction of emotional distress); *Crowell v. Crowell*, 105 S.E. 206, 208 (N.C. 1920) (noting that it is “well-settled” that person who negligently exposes another to a contagious or infectious disease is civilly liable); *Mussivand v. David*, 544 N.E. 2d 265, 269-70 (Ohio 1989) (holding that person who knows or should know that she is infected with a venereal disease has duty to abstain from sexual conduct or, at the minimum, to warn those persons with whom she *expects to have sexual relations* of her condition); *Martin v. Zihlerl*, 607 S.E.2d 367, 369 (Va. 2005) (recognizing cause of action for negligent transmission of STD; holding that recovery is not barred because plaintiff was not engaged in criminal conduct); *Duke v. Housen*, 589 P.2d 334, 337-38, 353 (Wyo. 1979) (holding that person can be held liable for negligently exposing another to an infectious or contagious disease which such other person thereby contracts); *G.L. v. M.L.*, 550 A.2d 525, 526, 528 (N.J. Sup. Ct. 1988) (holding that marital privilege of sexual relations does not include immunity to personal injury suits between spouses based upon transmittal of a sexual

negligence, although courts have also found the sexual transmission of disease to constitute battery, fraud or assault in certain circumstances.⁷¹

Although there are already many existing laws penalizing risky sexual behaviors, some legal scholars are calling for even more. Deanna Pollard, for example, has suggested a new common law standard in which strict liability replaces negligence as the prevailing standard for the tortious transmission of STDs.⁷² Strict liability, she argues, would more effectively punish, and thereby deter, what she describes as “irresponsible sexual behavior.”⁷³ It would also “encourag[e] accountability by forcing disease perpetrators to internalize the costs of their behavior, provid[e] a greater likelihood of compensation to victims, and, ultimately, [help] educate the public about the very serious and pervasive health threat at hand.”⁷⁴

Pollard and others⁷⁵ believe that the answer to the spread of disease lies in imposing strict liability on “promiscuous”⁷⁶ actors when they

disease); *Hamblen v. Davidson*, 50 S.W.3d 433, 439 (Tenn. Ct. App. 2000) (holding that individual who knows or should know he has venereal disease has legal duty to use reasonable care in preventing transmission of disease); *Smith v. Walker*, 11 Pa. D. & C.4th 663, 665 (Pa. Ct. Com. Pl. 1991) (noting that sexual partner's failure to warn other partner of, misrepresentation concerning, and failure to take precautions to prevent, transmission of STD may subject partner to liability for negligence, fraud, deceit, infliction of emotional distress and battery.).

71. David J. Mack, *Cleansing the System: A Fresh Approach to Liability for the Negligent or Fraudulent Transmission of Sexually Transmitted Diseases*, 30 U. TOL. L. REV. 647, 669–670 (1999). See also Pollard, *supra* note 4 at 795 (“Although sexual disease cases are almost always brought as negligence actions, courts have also recognized sex torts grounded in fraud, intentional infliction of emotional distress, and battery where the plaintiff contracted a sexual disease.”); Sentome, *supra* note 4, at 418 (noting that in most jurisdictions, civil liability only attaches if plaintiff can show that defendant knew or should have known of her infection when disease was transmitted).

72. Pollard, *supra* note 4, at 770–71.

73. *Id.* at 801 (arguing that negligence standard “fail[s] to deter irresponsible sexual behavior” and that tort law should more effectively “encourage potential disease perpetrators to be tested and to behave responsibly to avoid disease transmission, rather than giving them a defense rooted in their own ignorance”). Interestingly, although Pollard claims that the American public is ignorant about sexually transmitted diseases, and states that strict liability would play an educative role, she criticizes courts who refuse to find defendants’ behavior to be negligent due to a lack of foreseeability. See *id.* at 800–01 (“[M]ost sexual disease transmission is perpetrated by persons whose sexual behavior predictably results in disease transmission. As a practical reality, disease perpetrators have constructive notice that they are creating an unreasonable risk of harm to others on account of their sexual practices.”) (emphasis added).

74. *Id.* at 771.

75. See, e.g., Sentome, *supra* note 4. See also *Endres v. Endres*, 968 A.2d 336, 343 (2008) (declining to impose strict liability in a case involving the tortious transmission of an STD on the grounds that plaintiff had neither briefed nor relied on that theory, but generally acknowledging policy arguments in favor of strict liability given STD epidemic); cf. *Doe v. Johnson*, 817 F. Supp. 1382, 1398 (W.D. Mich. 1993) (stating that no court in the country had imposed strict liability on sexual transmission of STD under “abnormally dangerous” doctrine and refusing to do so on that ground).

76. Pollard, *supra* note 4, at 783 (“A core group of sexually promiscuous people is

transmit STDs, even unknowingly or inadvertently.⁷⁷ The premise is predicated upon the foundational theory of strict liability: “that a strict liability regime can lead to a demonstrable activities-level decrease, since all actors become lowest cost avoiders for their activities as each actor is forced to internalize the cost of his or her activity at all times.”⁷⁸ It is because of the greater costs it imposes, Pollard argues, that a strict liability regime will better deter individuals from engaging in risky sex than will one based in negligence.⁷⁹ Toward that end, Pollard proposes asking two questions about liability for the spread of sexual disease: “[F]irst, is the duty consistent with social justice; and second, will the duty advance public policy by slowing the spread of sexual diseases?”⁸⁰

In her proposal, Pollard makes several key assumptions. First, she assumes that strict tort liability will deter people from engaging in sexual practices that are likely to result in disease transmission.⁸¹ Second, she assumes that such deterrence will slow the spread of disease.⁸² Third, she seems to assume that most sexual actors are adults, although she cites statistics to the contrary.⁸³ Fourth, she assumes that tort actions will be

responsible for the vast majority of new sexual disease cases.”) (emphasis added). Note that the public health community rarely uses this judgment-laden term, preferring to refer to behaviors rather than personal characteristics. Dictionary definitions tend to support this characterization of the term. See, e.g., MERRIAM-WEBSTER’S DICTIONARY OF SYNONYMS 644 (1984) (listing among the synonyms “licentious, lewd, wanton”); THE NEW OXFORD AMERICAN DICTIONARY 1356 (2d. ed. 2005) (defining the word as “*derogatory* (of a person) having many sexual relationships, esp. transient ones: *she’s a wild, promiscuous girl*.”). This Article intentionally casts no judgment on people who have sex with multiple partners but instead tries to look at how sex in these situations might be made safer for all parties involved. But see Pollard, *supra* note 4, at 808, n. 134 (“‘Promiscuity’ does not carry a moral connotation but means ‘indiscriminate’ or ‘not restricted to one sexual partner.’”) (quoting MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 994 (11th ed. 2003)).

77. See, e.g., Pollard, *supra* note 4, at 808 (arguing that the infected party should bear risk of legal liability because she has better access to information about her medical condition); Sentome, *supra* note 4, at 410 (“[A]n individual should be subject to strict liability for any STD he or she may pass on, regardless of whether the individual engaged in protected intercourse, because sexual activity can indeed fall under the ‘abnormally dangerous’ doctrine for strict liability in the Restatement Second of Torts.”). But cf. Doe v. Johnson, 817 F. Supp. 1382, 1398–99 (W.D. Mich. 1993) (declining to establish strict liability as cause of action for STD transmission).

78. Sentome, *supra* note 4, at 439–40.

79. Pollard, *supra* note 4, at 808–09.

80. *Id.* at 804.

81. *Id.* at 814–18.

82. *Id.* at 824.

83. In many places in her article, Pollard notes that adolescents are more likely to spread STDs than adults. See, e.g., *id.* at 786–7 n.103 (“Th[e] three percent of Americans [responsible for spreading sexual disease] includes a larger percent of persons under age twenty-five and a much smaller percent of persons over age forty-five, who are generally married and so presumably ‘exit’ the sexual market.”); *id.* at 779–81 (“Adolescents and young adults have the highest rates of sexually transmitted diseases. Approximately twenty-five percent of new STD cases involve fifteen- to nineteen-year olds. About half of all new HIV infections occur in people under age twenty-five; most are infected through

litigated on a regular basis and suggests that these actions will result in more frequent judgments for the plaintiffs.⁸⁴ Fifth, she assumes that the media will cover sex tort cases and that the publicity generated as a result will help educate the public about the dangers associated with risky sexual behavior.⁸⁵ As this Article explores in Part IV, many of these assumptions are unfounded when applied to adolescents.

Pollard's proposal is not alone in seeking to combat the spread of STDs through legal reform. Two other noted scholars, Ian Ayres and Katharine K. Baker, propose the creation of a new crime of "reckless sexual conduct."⁸⁶ In Ayres' and Baker's formulation, a defendant would

sex. AIDS is the sixth leading cause of death among young men and women. Every day, eight thousand teenagers in the United States contract an STD—approximately three million per year, or about one every ten seconds. At least two-thirds of people who acquire STDs in the United States are younger than twenty-five; at least one quarter are teenagers, and it appears that the percentage of young people afflicted is rising. Teenage girls have the highest rate of chlamydia, a common cause of PID [pelvic inflammatory disease], which can lead to infertility; at least ten percent of sexually active teens are infected with this disease. "); *id.* at 784 n.84 ("To the extent that this research is somewhat outdated, and considering the disease rate among young persons and the fact that young persons have always had more partners than older persons, it is logical to conclude that persons under age thirty are largely responsible for spreading sexual diseases and are frequently infecting others in the same age group."); *id.* at 786 ("Finally, persons with prior viral infections, in particular the youngest group ages eighteen to twenty-nine, 'use condoms during vaginal intercourse far less often than [those with no prior STDs].' Thus, while the consistent use of condoms can control the transmission of a variety of STDs, some of the most sexually irresponsible members of society are failing to use them.").

84. *Id.* at 818 ("Adopting strict liability would increase the salience of both liability and health risks because the media would continue to exploit sex tort cases, particularly if plaintiff's verdicts become more common.")

85. *Id.* at 817 ("A new regime of strict liability for sexual disease transmission would attract media attention and thereby educate the public and increase the salience of the risks.").

86. Ayres & Baker, *supra* note 4. Ayres and Baker define the crime of reckless sexual conduct as follows:

(1) A person is guilty of reckless sexual conduct when the person intentionally engages in unprotected sexual activity with a person other than his or her spouse and these two people had not on an occasion previous to the occasion of the crime engaged in sexual activity.

(2) Affirmative Defense: Notwithstanding Section (1), it shall be an affirmative defense to any action brought under this article that the person with whom the defendant had unprotected sex expressly asked to engage in unprotected sexual activity or otherwise gave unequivocal indications of affirmatively consenting to engage in sexual activity that is specifically unprotected.

(3) Definitions: (a) "Sexual activity" means penile penetration of a vagina or anus accomplished with a male or female. (b) "Unprotected sexual activity" means sexual activity without the use of a condom. (c) "Occasion of the crime" includes the twelve-hour period after the two people engage in sexual activity for the first time.

(4) Sanctions: (a) Sentence: The crime of reckless sexual conduct is punishable by imprisonment in the state prison for up to three months, or a fine. (b) Sexual Offender Status: The court shall not register a person as a sexual offender because the person was found guilty of reckless sexual conduct.

Id. at 632-34.

be guilty of this crime if she engaged in unprotected sexual intercourse during her first sexual encounter with a new partner, although explicit consent to unprotected sex would be an affirmative defense.⁸⁷ Making unprotected sexual activity a potentially criminal act, Ayres and Baker argue, would do a great deal to encourage condom use among first-time partners.⁸⁸ It would thereby help stem the spread of STDs and remind individuals that “[s]ex is dangerous both physically and emotionally” and that “[w]hile sexuality can be a core attribute of human expression, it can also be the occasion for infection.”⁸⁹ Because Ayres and Baker assume that a heavy penalty will make prosecution less likely,⁹⁰ they choose to impose only a “light” penalty of up to three months imprisonment or a fine under the theory that a lighter penalty will make prosecution more likely, resulting in a greater deterrent effect.⁹¹ Imposing this legal obligation on sexual partners will, they hope, “promote condoms and communication for first-time sexual encounters.”⁹² By forcing sexual partners to stop sexual activity long enough to apply a condom, Ayres and Baker hope to beneficially increase communication between sexual partners and thereby improve health outcomes.⁹³

Ayres and Baker rely upon statistics that demonstrate that STD infections most commonly occur during “one night stands” and that only a small number of people regularly engage in this kind of behavior.⁹⁴ They argue that encouraging condom use among this minority would dramatically reduce the spread of STD infections.⁹⁵ Because their proposed law directly targets first-time sexual encounters with a new partner, Ayres and Baker argue that it will induce the small population of people who regularly engage in this behavior to use protection, thereby stemming the tide of STD transmission. Although Ayres and Baker acknowledge the existence of some state and model laws addressing STD transmission, they state that “the legal regulation of physical sexual

87. *Id.* at 631–34.

88. *Id.* at 630.

89. *Id.* at 603. Ayres and Baker argue that making unprotected sex criminally liable would address other contemporary health and legal problems, such as the problem of acquaintance rape, rape generally, and poor communication between sexual partners. *Id.* at 665–56. To the extent that Ayres and Baker discuss goals other than the prevention of STDs, however, such discussion is outside the scope of this Article.

90. *Id.* at 633 n.143.

91. *Id.*

92. *Id.* at 630.

93. *Id.* at 636.

94. *Id.* at 607–08 (arguing that “[f]irst-time sexual encounters are particularly important to the epidemiological force of an STD” and noting that “[a] national survey of one thousand Americans between the ages of eighteen and sixty-five found that nine percent of respondents reported having eleven one night stands (another 26 percent reported having between two and ten)”).

95. *Id.* at 611–17.

endangerment is incomplete and sporadic, and the legal regulation of emotional sexual endangerment is nonexistent.”⁹⁶

In drafting a model “reckless sexual conduct” statute, Ayres and Baker, like Pollard, make several key assumptions. First, and most importantly, they assume that criminalizing reckless sexual conduct will deter people from engaging in sex without a condom.⁹⁷ Second, they assume (and, indeed, explicitly state) that condom use will prevent the spread of STDs virtually all of the time.⁹⁸ Third, they appear to assume that the people most ripe for prosecution will be sexually active adults, an odd assumption in light of their own statistics, which demonstrate that adolescents are the age group most likely to engage in one-time sexual encounters and sex with multiple partners.⁹⁹ Fourth, they assume that their intended audience will have the skills to talk about sex and condom use—a dangerous assumption given what we know about sex as a sensitive subject and the immature communication skills of the many adolescents who would be subject to these laws.¹⁰⁰ Fifth, they assume that the law will be enforced and that “its widespread enforcement should help elevate people’s awareness that teenage girls engaging in unprotected first-time sexual encounters are put at risk for grave, lifelong injuries.”¹⁰¹

These assumptions do not withstand scrutiny. Condoms are not always effective in preventing the spread of STDs.¹⁰² More importantly, imposing

96. *Id.* at 629.

97. *Id.* at 634–35 (“[F]rom three different analytic perspectives, the criminalization of reckless sex is likely to increase condom use. From an individualistic, rational actor perspective, the law promotes condom use by raising the cost of unprotected sex. From a behaviorist perspective, the law appropriately offsets and harnesses cognitive biases.”).

98. *Id.* at 604 (“Whether symptomatic or not, whether diagnosed or not, all carriers of STDs can spread disease unless they use condoms during intercourse. Virtually all STDs can be prevented by effective condom use.”).

99. *Id.* at 633 n.143 (noting that “a great many defendants are likely to be young”).

100. *Id.* at 631 (arguing that a crime of reckless sex would have information-forcing effects and would lead to heightened communication between sexual partners).

101. *Id.* at 638–39. Interestingly, the statutory rape analysis (in which this assertion appears) is the only section in the article where the authors acknowledge any potential effect on teens.

102. See *CDC Fact Sheet: Genital HPV Infection*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/std/HPV/STDFact-HPV.htm> (last visited Dec 7, 2010) (“HPV can infect areas that are not covered by a condom—so condoms may not *fully* protect against HPV. . . . [T]he only sure way to prevent HPV is to avoid all sexual activity.”); *CDC Fact Sheet: Genital Herpes*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/std/Herpes/STDFact-Herpes.htm> (last visited Dec. 7, 2010) (“The surest way to avoid transmission of sexually transmitted diseases, including genital herpes, is to abstain from sexual contact Genital ulcer diseases can occur in both male and female genital areas that are covered or protected by a latex condom, as well as in areas that are not covered.”); Anna Wald, Andria G.M. Langenberg, Elizabeth Krantz, John M. Douglas Jr., H. Hunter Handsfield, Richard P. DiCarlo, Adaora A. Adimora, Allen E. Izu, Rhoda Ashley Morrow & Lawrence Corey, *The Relationship between Condom Use and Herpes Simplex Virus Acquisition*, 143 ANNALS OF INTERNAL MED. 707, 711 (2005) (discussing

criminal sanctions on unprotected sex will not necessarily have the deterrent effects they imagine—particularly with respect to adolescents, who would be a primary target of such laws.

While such a statute may be appealing to those who look to the government for action in response to crises such as these, legal measures—both enacted and proposed—typically fail in one or both of two ways: either they fail correctly to target the population that will most likely to be subject to their sanctions—namely, teenagers—or they misunderstand what motivates those populations to change their behaviors. Part IV of this Article analyzes how the assumptions of lawmakers and legal scholars with regards to adolescent sexual behavior are incorrect and why, based on what we know about adolescent psychosocial science, increased tort and criminal sanctions will be unlikely to deter such sexual conduct.

IV

WHY SANCTIONING RISKY SEX WILL NOT ACHIEVE PUBLIC HEALTH GOALS WHEN APPLIED TO AN ADOLESCENT POPULATION

While proposals to end sexual irresponsibility by imposing either civil or criminal sanctions hold superficial appeal, they do not take into account what social scientists have long known about adolescent psychology. Instead, they rely upon a rational actor model of individual decision-making that departs, in important respects, from the model of the adolescent revealed in contemporary neuroscientific and psychological research.¹⁰³

This failure to take adolescent psychology into account calls into question the effectiveness of both the Pollard and the Ayres and Baker proposals. As several scholars have noted, “[t]he task of science is to chart the similarities and differences in adolescent and adult decision-making. The task of policymakers is to decide about appropriate legal responses.”¹⁰⁴ Nonetheless, although Pollard acknowledges that “[t]he

study showing condoms substantially reduce risk of herpes transmission but do not protect absolutely).

103. In fact, many legal scholars recognize the limitations of pure cost/benefit analysis, as evidenced by entire schools of thought, such as critical realism and behavioral realism, that reject the rational actor. See, e.g., Adam Benforado & Jon Hanson, *The Great Attributional Divide: How Divergent Views of Human Behavior Are Shaping Legal Policy*, 57 EMORY L.J. 311, 315–16 n.3 (2008) (“[T]he distinctions among approaches [to looking at human behavior] can be understood as follows: law and economics applies the rational actor model to all topics related to law, legal institutions, and legal theory; economic behavioralism applies the boundedly rational actor model to specific legal areas (e.g., products liability or employment law); behavioral realism applies the situational character model to specific legal areas (particularly, thus far, anti-discrimination law); and critical realism applies the situational character model to that, as well as all topics related to law, legal institutions, and legal theory.”).

104. Elizabeth S. Scott, N. Dickon Reppucci & Jennifer L. Woolard, *Evaluating*

best legal policy would consider how liability rules impact sexual choices, particularly among American youth, to discourage socially destructive sexual behavior and to expose and create healthier sexual norms,"¹⁰⁵ her proposal fails to do so by neglecting to consider the developmental capabilities of this age group and their impact on teenagers' sensitivity to deterrence regimes like the one she proposes.¹⁰⁶

The legal measures described in Part III are interesting and tap into the part of us that desires a concrete and easy answer to a nebulous and complicated problem; their proponents fail, however, to address the psychosocial and neurological development of adolescents and to recognize how their proposals will therefore affect and motivate this subgroup differently from adults.

A. Adolescent Brain Development

As parents and educators know well, adolescents tend to take risks that adults would not. Recent neuroscientific research using Magnetic Resonance Imaging (MRI) and Diffusion Tensor Imaging (DTI) technology suggests quite persuasively that adolescent brains differ quite substantially from those of adults and that these changes are responsible for many of the differences between adult and teen psychology and behavior. Scientists have found that their "understanding of [how] the neural underpinnings of adolescent psychological development is shaping—and reshaping—the ways in which [they] think about normative and atypical development in adolescence."¹⁰⁷ For example, psychologists have long noted the adolescent tendency to take risks.¹⁰⁸ Significantly, much of what neuroscientists are learning about the adolescent brain turns out to be consistent with what social scientists know about adolescent psychology, and vice versa.¹⁰⁹

Experts agree that the human brain changes in four key ways during

Adolescent Decision Making in Legal Contexts, 19 LAW & HUM. BEHAV. 221, 240 (1995).

105. Pollard, *supra* note 4, at 787.

106. See, e.g., Laurence Steinberg, Elizabeth Cauffman, Jennifer Woolard, Sandra Graham & Marie Banich, *Are Adolescents Less Mature Than Adults? Minors' Access to Abortion, the Juvenile Death Penalty, and the Alleged APA "Flip-Flop,"* 64 AM. PSYCHOLOGIST 583, 592 (2009) ("Whether and how findings [about adolescent cognitive and psychosocial development] should inform decisions about adolescents' treatment under the law depends on the specific legal issue under consideration. . . . Nevertheless, the legal treatment of adolescents should at the very least be informed by the most accurate and timely scientific evidence on the nature and course of psychological development.")

107. Laurence Steinberg, *A Social Neuroscience Perspective on Adolescent Risk-Taking*, 28 DEV. REV. 78, 81 (2008) [hereinafter Steinberg, *Neuroscience*]. Steinberg goes on to note that the scientific brain knowledge "far exceeds" scientists' understanding of its psychological implications. *Id.*

108. See *infra* notes 114–120 and accompanying text.

109. Steinberg, *Neuroscience*, *supra* note 107, at 82–83.

adolescence. First, in early adolescence, the gray matter in the prefrontal regions decreases, leading to the elimination of unused neuronal connections.¹¹⁰ Second, in early adolescence, dopamine receptors in the paralimbic and prefrontal cortical regions of the brain proliferate and then decrease and are redistributed, leading to a very high level of dopaminergic activity in the prefrontal cortex.¹¹¹ Third, throughout late adolescence and into adulthood, white matter in the prefrontal regions of the brain increases, and the nerve fibers are sheathed in myelin, which leads to better nerve signaling.¹¹² Fourth, through late adolescence, white matter projects across the brain, connecting the cortical and subcortical regions of the brain.¹¹³

Brain function also changes dramatically during adolescence. Brain systems develop and strengthen over this period of time, helping adolescents better self-regulate their behaviors in accordance with social expectations.¹¹⁴ At least one expert posits that the changes in adolescent risk-taking behaviors between childhood and adolescence occur because the brain's socio-emotional system increasingly and abruptly leads them to seek out rewards, especially from peers.¹¹⁵ Risk-taking behaviors then decline gradually between adolescence and adulthood because the brain's cognitive control system changes, allowing the newly-formed adults to self-regulate more effectively.¹¹⁶ Through MRI studies, neuroscientists have

110. Daniel P. Keating, *Cognitive and Brain Development*, in HANDBOOK OF ADOLESCENT PSYCHOLOGY, *supra* note 7, at 70–71 [hereinafter Keating, *Cognitive and Brain Development*]; Laurence Steinberg, *Should the Science of Adolescent Brain Development Inform Public Policy?* 64 AM. PSYCHOLOGIST 739, 742–43 (2009) [hereinafter Steinberg, *Adolescent Brain Development*].

111. R. Andrew Chambers, Jane R. Taylor & Marc N. Potenza, *Developmental Neurocircuitry of Motivation in Adolescence: A Critical Period of Addiction Vulnerability*, 160 AM. J. PSYCHIATRY 1041, 1045–47, (2003); Linda P. Spear, *The Adolescent Brain and Age-Related Behavioral Manifestations*, 24 NEUROSCIENCE AND BEHAVIORAL REV. 417, 439–40 (2000); Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743.

112. Rhoshel K. Lenroot, Nitin Gogtay, Deanna K. Greenstein, Elizabeth Molloy Wells, Gregory L. Wallace, Liv S. Clasen, Jonathan D. Blumenthal, Jason Lerch, Alex P. Zijdenbos, Alan C. Evans, Paul M. Thompson, & Jay N. Giedd, *Sexual Dimorphism of Brain Developmental Trajectories During Childhood and Adolescence*, 36 NEUROIMAGE 1065, 1068–69, (2007); Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743.

113. Thomas J. Euvathingal, Khadar M. Hasan, Larry Kramer, Jack M. Fletcher, & Linda Ewing-Cobbs, *Quantitative Diffusion Tensor Tractography of Association and Projection Fibers in Normally Developing Children and Adolescents*, 17 CEREBRAL CORTEX 2760, 2760–61, 2765 (2007); Steinberg, *Adolescent Brain Development*, *supra* note 110, at 12.

114. Steinberg, *Adolescent Brain Development*, *supra* note 110, at 744. See also Sarah Durston, Matthew C. Davidson, Nim Tottenham, Adriana Galvan, Julie Spicer, John A. Fossella & B.J. Casey, *A Shift from Diffuse to Local Cortical Activity with Development*, 9 DEV. SCIENCE 1, 6 (2006) (discussing impulsivity and cognitive development).

115. Steinberg, *Adolescent Brain Development*, *supra* note 110, at 744.

116. *Id.*

concluded that adolescents are just learning to use related brain regions to accomplish cognitive tasks, and that more advanced age is related to the activation of the brain areas related to cognitive control.¹¹⁷ Moreover, they have demonstrated that the nucleus accumbens, the subcortical brain structure related to reward processing, is particularly active in adolescents, perhaps leading them to be more sensitive to rewards than younger children or adults.¹¹⁸ Finally, adolescents are less able than adults to use many cortical and subcortical regions of the brain simultaneously, meaning that they cannot always marry related cognitive and emotional brain tasks.¹¹⁹ This process improves over adolescence.¹²⁰

These neuroscientific discoveries, most of them first recognized within the last ten years, have significant implications for our understanding of adolescent psychological and physical development. The changes in neuronal connections may lead to better information processing and logical reasoning as the brain matures.¹²¹ The changes in the dopaminergic systems may increase the effect and impact of rewards, as well as how adolescents weigh such rewards against potential costs.¹²² The better nerve signaling in the prefrontal cortex may aid with “many aspects of executive function, such as response inhibition, planning ahead, weighing risks and rewards, and the simultaneous consideration of multiple sources of

117. See Beatriz Luna, Keith R. Thulborn, Douglas P. Munoz, Elisha P. Merriam, Krista E. Garver, Nancy J. Minshew, Matcheri S. Keshavan, Christopher R. Genovese, William F. Eddy & John A. Sweeney, *Maturation of Widely Distributed Brain Function Suberves Cognitive Development*, 13 *NEUROIMAGE* 786, 791 (2001); Steinberg, *Adolescent Brain Development*, *supra* note 110, at 741–42 (quoting studies MRI showing that frontal lobes are one of last parts of brain to reach maturity). See also Durston, Davidson, Tottenham, Galvan, Spicer, Fossella & Casey, *supra* note 114, at 6 (reporting on results of MRI brain study of cognitive function showing developmental shift towards cortical activation).

118. Adriana Galvan, Todd A. Hare, Cindy E. Parra, Jackie Penn, Henning Voss, Gary Glover, & B. J. Casey, *Earlier Development of the Accumbens Relative to Orbitofrontal Cortex Might Underlie Risk-Taking Behavior in Adolescents*, 26 *J. NEUROSCIENCE* 6885, 6889–90 (2006); Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743.

119. Steinberg, *Neuroscience*, *supra* note 107, at 96–98; Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743.

120. Steinberg, *Neuroscience*, *supra* note 107, at 98; Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743.

121. Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743. See also Keating, *Cognitive and Brain Development*, *supra* note 110, at 70–71 (discussing increasing ability to initiate and suppress behavior as brain matures); SPEAR, *supra* note 23, at 119–120 (“Thus, rather than viewing the adolescent brain maturation merely as the last remnants of a series of brain regions sequentially maturing and coming ‘online,’ a more contemporary view of brain development is that it reflects a dynamic process of network organization, with different regions competing, influencing, and cooperating with each other over time during development, and in the process acquiring new (and often more efficient and able) roles in the modulation of cognitive abilities.”)

122. Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743.

information.”¹²³ And the spread of white matter into many different brain regions helps regulate emotions, helping adolescents to process emotional and social information and achieve cognitive control.¹²⁴

Neuroscientific research therefore suggests that the physical immaturity of their brains makes adolescents highly impulsive, more driven by rewards, and less able to self-regulate to avoid harm.¹²⁵ Of course, brain development does not necessarily control adolescent behavior entirely, although it most certainly makes an important contribution;¹²⁶ experience, context, and external information are also important factors in the equation.¹²⁷ For this reason, behavioral psychology research and neuroscientific research inform each other’s conclusions.¹²⁸ Importantly, however, “neuroanatomical and neurobiological changes observed during adolescence are generally consistent with existing psychological theories and observations.”¹²⁹ Therefore, both neuroscientific and social scientific research findings call into question adolescents’ ability to avoid the kind of risk-taking that lawmakers have sanctioned through existing laws; this same risk-taking is the kind that scholars like Pollard and Ayres and Baker propose to punish.

B. The Adolescent Decision-Making Process

[H]e was prone to notice the darker side of adolescents, the insane risks they took; the experimentation with all forms of behavior, including the obsequious and the downright cruel; a pathological procrastination that often resulted in the need for excessive sleep; a sensibility dictated by rampant hormones; and a tendency to extremes in personal hygiene (impressively long, uncut toenails on the boys; girls who changed their outfits three times a day, not

123. *Id.* See also Lenroot, Gogtay, Greenstein, Molloy Wells, Wallace, Clasen, Blumenthal, Lerch, Zijdenbos, Evans, Thompson & Giedd, *supra* note 112.

124. Steinberg, *Adolescent Brain Development*, *supra* note 110, at 743.

125. *Id.* at 744, 748.

126. *Id.* at 747 (noting that “as is the case for any biological influence on psychological functioning, the way in which brain maturation is expressed in real-world behavior depends on the context in which the behavior occurs.”).

127. *Id.* As one scholar notes, “[Brain imaging research, still in its infancy, has dramatically increased the risks that] first, . . . that law will defer to developmental science in making judgments it is the law’s responsibility to make, and second, . . . that law, in so deferring, will lock into a developmental *status quo*.” Buss, *supra* note 7, at 509. See also Laura M. Carpenter, *Gender and the Meaning and Experience of Virginity Loss in the Contemporary United States*, 16 GENDER & SOC. 345, 352–54 (2002).

128. *Id.*

129. Praveen Kanbam & Christopher Thompson, *The Development of Decision-Making Capacities in Children and Adolescents: Psychological and Neurological Perspectives and Their Implications for Juvenile Defendants*, 27 BEHAV. SCI. & L. 173, 178 (2009).

including sports uniforms).¹³⁰

Adolescents not only think differently than adults; they make decisions differently as well. While the literature demonstrates that adolescents may be able to engage in an accurate probability assessment about the likelihood of possible costs such as punishments, they do not necessarily modify their behavior accordingly. Experts have realized that “adolescents’ greater involvement than adults in risk-taking does not stem from ignorance, irrationality, delusions of invulnerability, or faulty calculations.”¹³¹ In fact, adolescents are no more likely than adults to see themselves as invulnerable.¹³² Nonetheless, studies have shown that adolescents often fail to alter their behaviors, even when they know that their behaviors are risky and may have negative consequences. This is particularly the case when those consequences are likely to occur only in the distant future. Studies show that adolescents tend to take short-term consequences more seriously than long-term consequences and find them “more salient to an evaluation of different options.”¹³³ Adolescents also tend to make choices that they know are risky if they view the consequences as attenuated, either temporally or probabilistically.¹³⁴

In addition, adolescents tend to weigh the benefits of risky behavior more heavily than they do the potential costs.¹³⁵ Conversely, they also weigh the risks of *not* participating in risky behavior more heavily than do adults.¹³⁶ One researcher has suggested that middle adolescents, in particular, experience great difficulty in effectively coordinating their

130. ANITA SHREVE, *TESTIMONY: A NOVEL* 180 (2008).

131. Steinberg, *Neuroscience*, *supra* note 107, at 80 (noting that “[t]he logical reasoning and basic information-processing abilities of 16-year-olds are comparable to those of adults” and that “adolescents are no worse than adults at perceiving risk or estimating their vulnerability to it”).

132. *Id.* See also, Marilyn Jacobs Quadrel, Baruch Fischhoff & Wendy Davis, *Adolescent (In)Vulnerability*, 48 AM. PSYCHOLOGIST 102, 1112 (1993).

133. Scott, Reppucci & Woolard, *supra* note 104, at 231 (citing several empirical studies that suggest that “adolescents seem to discount the future more than adults and to weigh more heavily the short-term consequences of decisions—both risks and benefits—a response that in some settings contributes to risky behavior”). See also Kanbam & Thompson, *supra* note 129, at 175 (finding that adolescents are less “future oriented” than adults).

134. See *infra* notes 194–213 and accompanying text.

135. See, e.g., Scott, Reppucci & Woolard, *supra* note 104, at 231 (“Compared to adults, adolescents appear to focus less on protection against losses than on opportunities for gains in making choices.”). But see Daneen P. Deptula, David B. Henry, Michael E. Shoeny & John T. Slavick, *Adolescent Sexual Behavior and Attitudes: A Costs and Benefits Approach*, 38 J. ADOLESCENT HEALTH 35, 40–41 (2006) (reporting study finding that “the perception of Costs and Benefits were *both* influential in adolescents’ decision to engage in sexual activity”).

136. Scott, Reppucci & Woolard, *supra* note 104, at 231.

cognitive and emotional systems.¹³⁷ This deficiency causes them to engage in “reward-seeking” behaviors and fail to self-regulate effectively.¹³⁸ Empirical research bears this out. A study of condom use among adolescents in college, for example, found students to be more motivated by their perceptions of the benefits of unsafe sex than by their perceptions of the costs of engaging in it.¹³⁹

Furthermore, given the social significance of sex among adolescents, not engaging in risky sex may be seen by teenagers to pose as many dangers as choosing to engage in it does. For example, teenage girls may be concerned not only that they will fail to achieve intimacy with their boyfriends if they do not have sex,¹⁴⁰ but also that they will be labeled unkindly by their peers if they do have sex.¹⁴¹ Boys must weigh the potential cost of being viewed as uncool or even homosexual if they do not have sex with girls against the risk of offending “nice” girls.¹⁴² Teens of both sexes may also choose to engage in sex to avoid the stigma of being a virgin.¹⁴³

Indeed, adolescents are, in general, far more likely than adults to respond to peer pressure¹⁴⁴ and to make judgments in response to peer

137. Steinberg, *Neuroscience*, *supra* note 107, at 99; *see also* Kanbam & Thompson, *supra* note 129, at 176 (“[M]iddle adolescence is a developmental period during which reckless behavior and subsequent problematic alterations of developmental trajectories are much more likely[sic]”).

138. Steinberg, *Neuroscience*, *supra* note 107, at 99-100.

139. Jeffrey T. Parsons, *Perceptions of the Benefits and Costs Associated with Condom Use and Unprotected Sex among Late Adolescent College Students*, 23 J. ADOLESCENCE 377, 387 (2000).

140. For a parallel idea, *see* POSNER, *supra* note 66, at 111-12 (discussing “the use of sex to construct or reinforce relationships with other people”).

141. *Cf.* Kate Sutherland, *From Jailbird to Jailbait: Age of Consent Laws and the Construction of Teenage Sexualities*, 9 WM. & MARY J. WOMEN & L. 313, 345 (2003) (noting that girls are compelled to have sex because of social need to establish their heterosexuality but are dissuaded from having too much sex for fear of being labeled a slut).

142. *Id.* at 345.

143. Steinberg, *Neuroscience*, *supra* note 107, at 88-89. *See also* Kanbam & Thompson, *supra* note 129, at 176-177. Note that this peer influence on sexual behavior appears to continue into “emerging adulthood.” Graham Bradley & Karen Wildman, *Psychosocial Predictors of Emerging Adults’ Risk and Reckless Behaviors*, 31 J. YOUTH & ADOLESCENCE 253, 262-63 (2002) (defining “emerging adulthood” as “the phase of life from the late teens through to the late twenties, with a focus on years 18-25,” and finding that reckless sexual behavior occur not only among teens but also emerging adults).

144. *See, e.g.*, Jennifer Connolly & Adele Goldberg, *Romantic Relationships in Adolescence: The Role of Friends and Peers in Their Emergence and Development*, in THE DEVELOPMENT OF ROMANTIC RELATIONSHIPS IN ADOLESCENCE, *supra* note 23, at 273-74 (“There are some indications . . . that adolescents’ sexual activity is linked to their friendship patterns. Adolescents are more likely to associate with teenagers whose pattern of participation in sexual activities is similar to their own than with adolescents who differ in this respect. Moreover, reciprocal processes exist. As the friend associations continue, there is a tendency for friends to influence each other’s sexual activities. Girls more than

pressure and out of a desire to win peer approval. They may be more vulnerable to making decisions based on direct peer pressure as well as the desire for peer approval.¹⁴⁵ Adolescents, even more than adults, tend to be highly averse to social ostracism¹⁴⁶ and very sensitive to social norms.¹⁴⁷ Importantly, they are considerably less able than adults to reject an idea, behavior, or attitude that their peers hold or demonstrate,¹⁴⁸ particularly when the peers in question are among those that an adolescent idolizes or

boys are influenced in their sexual activity. Girls who are heavily invested in their peer groups are more likely to be early initiators of sexual activity than girls who are less involved.”); Thomas J. Berndt, *Developmental Changes in Conformity to Peers and Parents*, 15 DEVELOP. PSYCHOLOGY 608, 616 (1979) (noting the peak in peer conformity occurs at ninth grade). *But see* Bonnie L. Halpern-Felsher, Jodi L. Cornell, Rhonda Y. Kropp & Jeanne M. Tschann, *Oral Versus Vaginal Sex Among Adolescents: Perceptions, Attitudes, and Behaviors*, 115 PEDIATRICS 845, 846 (2005) (“Adolescents’ perceptions of the extent to which peers are engaging in oral sex are . . . important, because studies have shown that adolescents are more likely to have vaginal sex when they perceive that it is more prevalent among their peers.”); James Jaccard, Tanya Dodge & Hart Blanton, *Peer Influences on Risk Behavior: An Analysis of the Effects of a Close Friend*, 41 DEVELOPMENTAL PSYCHOL. 135, 144 (finding that peer influence “may be less important than commonly has been assumed”); Kinsman, Romer, Furstenberg & Schwarz, *supra* note 34, at 1188 (finding that sexually experienced teens are far more likely to report that “most friends” were also sexually experienced than virgin teens and that teens who believed that most of their friends had had sex were 2.5 times more likely to intend to engage in sex that year).

145. Scott, Reppucci & Woolard, *supra* note 104, at 230.

146. *Id.*

147. Numerous studies demonstrate how sensitive teens are to peer sexual norms and attitudes. *See, e.g.*, Halpern-Felsher, Cornell, Kropp & Tschann, *supra* note 144, at 848-49 (finding that adolescents believed that “oral sex was more acceptable for their age group than vaginal sex” and that there were fewer social risks for them if there were to engage in oral sex than if they were to engage in vaginal sex); Kinsman, Romer, Furstenberg & Schwarz *supra* note 34, at 1190 (“[I]nitiation of sexual intercourse may conform to a diffusion and innovation model of behavioral change . . . [in which] an innovation or new behavior such as sexual initiation, is communicated throughout time by members of a social system.”); Barbara VanOss Marin, Douglas B. Kirby, Esther S. Hudes, Karin K. Coyle, & Cynthia A. Gomez, *Boyfriends, Girlfriends, and Teenagers’ Risk of Sexual Involvement*, 38 PERSPS. ON SEXUAL & REPROD. HEALTH 76, 81 (2006) (“It is striking that having peers who endorsed early sex in sixth grade would be predictive of having sex three years later. This may indicate the power of these early friendships or that such friendships are in part a marker for other family and community risk factors.”); Renee E. Sieving, Marla E. Eisenberg, Sandra Pettingell, & Carol Skay, *Friends’ Influence on Adolescents’ First Sexual Intercourse*, 38 PERSPS. ON SEXUAL & REPROD. HEALTH 13, 17 (2006) (finding that the higher the proportion of a teen’s friends who are having sex, the more likely teen is to begin having sex, too).

148. Laurence Steinberg & Elizabeth S. Scott, *Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty*, 58 AMERICAN PSYCHOLOGIST 1009, 1012 (2003) (“[S]ubstantial research supports the conventional wisdom that, even in middle adolescence, teenagers are more responsive to peer influence than are adults.”). Cf., Kinsman, Romer, Furstenberg & Schwarz *supra* note 34, at 1190 (“Perceptions about the prevalence of peers’ sexual behaviors were the most important peer normative predictor of intention and initiation of intercourse [in the reported study].”)

respects, such as celebrities or popular fictional characters.¹⁴⁹ This tendency does decrease with age, but only gradually, and it endures until the end of the teenage years.¹⁵⁰

Peer pressure can thereby play an important role in shaping adolescents' attitudes towards sex, as well as in influencing their sexual behaviors. Indeed, studies have shown that adolescents' sexual activity may often be "linked to their friendship patterns."¹⁵¹ Teens tend to socialize with other teens who engage in similar types of sexual activity.¹⁵² This association choice then becomes circular, especially for girls, resulting in close friends "influenc[ing] each other's sexual activities."¹⁵³

The role that peer pressure plays in adolescents' sexual lives is only increased by the tendency of most adolescents to make decisions on the fly, when the opportunity arises.¹⁵⁴ This means that when adolescents make sexual decisions, they do so without much time to engage in sustained reflection about the long-term consequences of their acts.¹⁵⁵ Therefore, as the next section will begin to explain, potential negative consequences such as punishments are unlikely to affect their decision-making process.

149. Adolescents tend to idolize celebrities and mimic their behavior, even when that behavior is risky or results in negative consequences. For example, studies show that the sexual activities of celebrities, when widely covered by the media, influence teenagers' sexual behavior and attitudes. See Rebecca L. Collins, Marc N. Elliott, Sandra H. Berry, David E. Kanouse, Dale Kunkel, Sarah B. Hunter, & Angela Miu, *Watching Sex on Television Predicts Adolescent Initiation of Sexual Behavior*, 114 PEDIATRICS e280, e287 (2004) (longitudinal study showing "substantial associations between the amount of sexual content viewed by adolescents and advances in their behavior during the subsequent year").

150. Kanbam & Thompson, *supra* note 129, at 178; Laurence Steinberg & Kathryn C. Monahan, *Age Differences in Resistance to Peer Influence*, 43 DEVELOPMENTAL PSYCHOL. 1531, 1538 (2007).

151. See, e.g., Connolly & Goldberg, *supra* note 144, at 273.

152. *Id.*

153. *Id.*, at 274. See also Graber, Britto & Brooks-Gunn, *supra* note 33, at 369; Halpern-Felsher, *supra* note 144, at 846 ("Adolescents' perceptions of the extent to which peers are engaging in oral sex are . . . important, because studies have shown that adolescents are more likely to have vaginal sex when they perceive that it is more prevalent among their peers."); Kinsman, Romer, Furstenberg & Schwarz *supra* note 34, at 1188 (study finding that sexually experienced teens are far more likely to report that "most friends" were also sexually experienced than virgin teens and that teens who believed that most of their friends had had sex were 2.5 times more likely to intend to engage in sex that year).

154. SPEAR, *supra* note 23, at 142-143 (noting the adolescent tendency to act impulsively and display "limited self-control")

155. See, e.g., Frederick X. Gibbons, Meg Gerrard, Hart Blanton & Daniel W. Russell, *Reasoned Action and Social Reaction: Willingness and Intention as Independent Predictors of Health Risk*, 74 J. PERSONALITY & SOC. PSYCHOL. 1164, 1174-76 (1998).

C. The Role of Penalties and Punishment in Deterring Risky and Undesirable Behavior

Perhaps because of the recency of laws punishing the transmission of HIV, there have been only a few empirical studies of their effectiveness. Most of these studies have found such laws do not significantly impact behavior, but none of these studies have examined how such laws impact adolescents in particular.¹⁵⁶ However, there have been numerous empirical studies of the effectiveness of sanctions in deterring risky or undesirable behavior more generally. These studies have found in general that the effectiveness of a punitive regime tends to be unrelated to the severity of the sanctions it imposes. Studies of adolescent behavior bear this out. For example, in a study on digital piracy (another "undesirable" behavior prevalent among adolescents), researchers found that the severity of punishment was not related to and did not affect the likelihood of engagement in digital piracy.¹⁵⁷ A study of inner city youths similarly found that, although the study participants were highly influenced by the threat of social sanctions and peer norms, the threat of legal sanctions had little impact on their decisions to engage in delinquent behavior.¹⁵⁸ Similar studies, examining whether the prosecution of juveniles in adult court (where punishments tend to be harsher than in juvenile court) had any impact on juvenile behavior, found that "there are no general deterrent effects of increasing the scope of transfer on the incidence generally of serious juvenile crime."¹⁵⁹

156 See, e.g., Scott Burris, Leo Beletsky, Joseph Burleson, Patricia Case & Zita Lazzarini, *Do Criminal Laws Influence HIV Risk Behavior? An Empirical Trial*, 39 *Ariz. St. L.J.* 467, 505 (2007) (reporting study findings that people who lived in states with HIV-transmission laws reported being just as risky in their sexual behavior as people who lived in states without such laws but making no distinctions on basis of ages of individuals studied).

157. Lixuan Zhang, Wayne W. Smith & William C. McDowell, *Examining Digital Piracy: Self-Control, Punishment, and Self-Efficacy*, 22 *INFO. RESOURCES MGMT. J.* 24, 30–32 (2009).

158. Wanda Foglia, *Perceptual Deterrence and the Mediating Effect of Internalized Norms Among Inner-City Teenagers*, 34 *J. RES. CRIME & DELINQUENCY* 414, 414 (1997).

159. Jeffrey Fagan, *This Will Hurt Me More Than It Hurts You: Social and Legal Consequences of Criminalizing Delinquency*, 16 *NOTRE DAME J.L. ETHICS & PUB. POL'Y* 1, 29 (2002). See also Donna M. Bishop, *Juvenile Offenders in the Adult Criminal Justice System*, 27 *CRIME & JUST.* 81, 85 (2000) ("There is no evidence that transfer [of adolescents to the adult criminal justice system] has any general deterrent value: the enactment and implementation of well-publicized transfer legislation does not appear to decrease the incidence of target offenses."); Eric L. Jensen & Linda K. Metsger, *A Test of the Deterrent Effect of Legislative Waiver on Violent Juvenile Crime*, 40 *CRIME & DELINQUENCY* 96, 100–02 (1994) (discussing study indicating automatic transfer of juveniles to adult courts through legislative waiver did not deter violent juvenile crime in Idaho); Simon Singer & David McDowall, *Criminalizing Delinquency: The Deterrent Effects of the New York Juvenile Offender Law*, 22 *L. & SOC'Y REV.* 521, 529–33 (1988) (discussing study indicating New York law requiring certain juveniles be tried in adult criminal courts did not reduce

On the other hand, studies have found that certainty of punishment is related to behavior change.¹⁶⁰ Richard Posner, one of the leaders of law and economic theory, has acknowledged that unenforced laws are unlikely to deter effectively, because rational actors will not consider a distant threat of punishment to be a real “cost” in their cost-benefit analyses.¹⁶¹ The same may be true when the penalty is civil in nature. According to one source:

[M]ajor schools of psychology tell us that punishment, or its threat does little to generate desired behavior. Behavioral change theory and social learning theory give more credence than other theories to negative reinforcement, but it only works if it is immediate and consistent. Neither of these conditions is met in the tort . . . system, as actions are taken so rarely and penalties, if any, are imposed years after the conduct. Worse, threat of punishment only creates short-term behavior change. In our natural response, we behave more safely initially, but this behavior diminishes over time and is often replaced only by anxiety.¹⁶²

In fact, at least one court has concluded that tort sanctions are unlikely to deter risky sex, noting that “the nature of the activities underlying criminal conversation, that is sexual activity, are not such that the risk of damages would likely be a deterrent.”¹⁶³

Imposing strict liability—as Ayres and Baker suggest—would not solve this problem, at least among the adolescents targeted by the law. Although “[d]eterrence is . . . sometimes cited as a reason for strict liability [because] it encourages persons engaged in abnormally dangerous activities to find safer methods¹⁶⁴ or safer places for their activities,”¹⁶⁵

juvenile crime). *But cf.* SCOTT & STEINBERG, *supra* note 9, at 199 (“[T]he research on the deterrent effect of legal regulation on juvenile crimes is sparse and gives no clear answer to the question of whether legislative waiver laws and other punitive measures reduce juvenile crime.”); Steven D. Levitt, *Juvenile Crime and Punishment*, 106 J. POL. ECON. 1156, 1159 (1998) (discussing fifteen-year study of crime rates concluding threat of harsh punishment in adult criminal courts deters juveniles from committing more crimes once they reach age of majority).

160. *E.g.*, Zhang, Smith & McDowell, *supra* note 157, at 32.

161. POSNER, *supra* note 66, at 205. Ayres and Baker and Pollard agree, although they argue that the laws they propose will be enforced. *See* Ayres & Baker, *supra* note 4, at 603; Pollard, *supra* note 4, at 815.

162. Virginia L. Morrison & Nicola B. Truppin, *Using the Law to Strengthen the Patient's Voice*, in *PATIENT ADVOCACY FOR HEALTH CARE QUALITY* 533, 545 (Jo Anne L. Earp, Elizabeth A. French & Melissa B. Gilkey eds., 2008) (citation omitted).

163. *Neal v. Neal*, 873 P.2d 871, 875 (Idaho 1994) (finding that, for this among other reasons, “Idaho civil law does not afford a party a cause of action outside divorce, for adultery”).

164. Note that, in the case of sex, there sometimes may be no safer method than abstinence, as herpes and HPV, for example, may be transmitted even when a condom is used. *See supra* note 102.

planning for safety is less likely to occur among the adolescent population. Paternity support laws are a case in point. The passage of the Family Support Act of 1988 requiring fathers to pay child support upon proof of paternity instilled a strict liability regime, "relative to sexual activity resulting in pregnancy: there is no excuse for avoiding child support payments upon proof of paternity."¹⁶⁶ However, despite this legislation, teen pregnancy has again increased,¹⁶⁷ indicating that a strict liability law with significant financial cost has not deterred sexual behavior among adolescent males.¹⁶⁸ Furthermore, adolescent females are often unlikely to enforce the law against the fathers of their children,¹⁶⁹ lessening the law's deterrent effect even more. In other words, in the tort context, the same rule seems to govern: neither severe nor uncertain penalties deter risky behavior.

D. Deterring Risky Sex Through Legal Measures

We turn now to an analysis of the underlying premises of the laws and legal proposals intending to sanction risky sex and thereby decrease its frequency. Though advocates for risky sex penalties like Pollard argue that their reforms are consistent with social justice and will slow the spread of STDs, this section of the Article will explain why penalties in tort or crime will not advance public policy: namely, because they will not slow the spread of disease. Furthermore, this section will argue that the imposition of such punishments for risky sexual behavior is inconsistent with social justice.

1. Advancing Public Policy by Slowing the Spread of Disease

These [kids] . . . they're just teenagers. And teenagers are supposed to f*** up. I mean, when else do you get to do that? But if they f*** up and they get caught . . . it's the end of

165. Pollard, *supra* note 4, at 807 (citation omitted).

166. *Id.* at 804 (citing Family Support Act of 1988, Pub. L. No. 100-485, §101, 102 Stat. 2343 (1988) (codified as amended at 42 U.S.C. § 666 (2000))).

167. GUTTMACHER INSTITUTE, U.S. TEENAGE PREGNANCIES, BIRTHS AND ABORTIONS: NATIONAL AND STATE TRENDS AND TRENDS BY RACE AND ETHNICITY (2010) (finding three percent increase in teen pregnancy rates in 2006), *available at* <http://www.guttmacher.org/pubs/USTPtrends.pdf>

168. See Chien-Chung Huang & Wen-Jui Han, *Child Support Enforcement and Sexual Activity of Male Adolescents*, 69 J. MARRIAGE & FAM. 763, 770-72 (2007) (reporting studing findings that better enforcement of child support obligations had no effect on "first intercourse" or likelihood of having sex, but may have had impact on risky behavior, e.g. frequency of sex and use of contraception among male adolescents).

169. See, e.g., Barbara D. Savage & Paula Roberts, *Unmarried Teens and Child Support Services*, 21 CLEARINGHOUSE REV. 443, 443-49 (1987) (explaining why establishing paternity and seeking child support may be difficult or undesirable for teen mothers).

everything.¹⁷⁰

Where public health initiatives have not been entirely successful in reducing risky sex among adolescents,¹⁷¹ there is no reason to expect that legal sanctions will succeed in their place,¹⁷² particularly when those sanctions are not targeted to the needs of the age group. While the proponents of increased sanctions for risky sex have recognized that “it is logical to conclude that persons under age thirty are largely responsible for spreading sexual diseases and are frequently infecting others in the same age group,”¹⁷³ their failure to take social science findings about adolescents into account when drafting proposals leads to serious flaws in their theories. As social scientists know so well, any proposal for behavior change must be predicated upon knowledge about the population it seeks to affect.

Importantly, in formulating their proposals, Pollard and Ayres and Baker (unlike, for example, scholars looking at criminal sanctions for HIV transmission) have not performed or cited to empirical studies looking at how teens—or anyone else, for that matter—might alter their behaviors in the face of such laws.¹⁷⁴ With respect to existing laws designed to target the same behaviors, there is simply no evidence that they work in any population, much less in the adolescent population. For example, it appears that not a single researcher has looked at trends in teenage sexual behavior after the institution of stricter age of consent laws.¹⁷⁵

170. JEAN HANFF KORELITZ, ADMISSION 228 (2009) (obscenities modified).

171. See *supra* notes 49–65 and accompanying text. See also Frederick X. Gibbons & Meg Gerrard, *Predicting Young Adults' Health Risk Behavior*, 69 J. PERSONALITY & SOC. PSYCHOL. 505, 505 (1995) (“When measured in terms of increase in knowledge, [health] education programs appear to have been reasonably effective. This enhanced awareness among high school and college-age people has not been accompanied by an equally impressive decline in health risk behavior, however.”); Steinberg, *Neuroscience*, *supra* note 107, at 79–80 (“Although it is true, of course, that the situation might be even worse were it not for these educational efforts, most systematic research on health education indicates that even the best programs are far more successful at changing individuals’ knowledge than in altering their behavior.”). Steinberg also notes that these efforts are “massive, ongoing, and costly.” *Id.* at 80.

172. Posner points out that “[c]riminalization may actually undermine efforts to fight venereal disease. . . . In addition, criminalization retards the dissemination and circulation of accurate information about the risks involved in an activity.” POSNER, *supra* note 66, at 209.

173. Pollard, *supra* note 4, at 784 n.84.

174. For example, Ayres and Baker cite a California law on sexual endangerment and a Missouri law on HIV prevention as imperfect models for the crime of reckless sex they propose, but do not examine whether or not either of these laws have had any deterrent effect on risky sexual behavior. Ayres & Baker, *supra* 4, at 628–29.

175. In her study of the impact of stricter age of consent laws on teenage sexuality, Kate Sutherland discusses the extensive media campaigns several states mounted to publicize the laws and concludes that such laws do “have a place in teenage consciousness.” Sutherland, *supra* note 141, at 338. Nonetheless, the only evidence she presents to suggest

Therefore, the proposals described in Part IV are unlikely to be effective for a number of reasons, some of which are specific to adolescents as a group. First, adolescents are not typically cognizant of laws designed to sanction both children and adults.¹⁷⁶ Interestingly, Ayres and Baker tie knowledge about the law to consistent punishment, saying, “[t]he more people are punished, the more certain punishment will be, the more people will become aware of the dangers, and the less likely people will be to engage in the behavior.”¹⁷⁷ The basis for their assumption is unclear, but it seems unlikely to be true, given the continued rise of STD transmission despite the existence of other laws on the books that seek to control this behavior.¹⁷⁸

While it is true that law may play an educative role, such as in the case of seatbelt laws, which may have been instrumental in teaching the public about safe driving practices,¹⁷⁹ it is highly unlikely that strict liability or criminal laws would educate adolescents about the risks of sexual activity. For example, while some scholars have pointed to the newsworthiness of laws such as age of consent laws,¹⁸⁰ it is unlikely that increased tort and criminal sanctions for risky sex would be deemed to be newsworthy.¹⁸¹ Unless they were enforced against public figures or involved dramatic fact scenarios, these laws would be unlikely to get significant media attention, except perhaps at the time they were passed. Even if these laws were to

that the legal change in the age of consent altered teen behavior is the anecdotal report of an Internet teen advice columnist that thirty percent of the questions he receives have to do with the age of consent issue. *Id.* In fact, as legal scholars have noted with respect to statutory rape laws, “there is skepticism regarding whether or not [more vigorous enforcement of statutory rape laws would] have a noticeable impact on . . . the rate of sexual activity between adolescent females and adult males.” Gary W. Harper, *Contextual Factors that Perpetuate Statutory Rape: The Influence of Gender Roles, Sexual Socialization and Sociocultural Factors*, 50 DEPAUL L. REV. 897, 899 (2001).

176. Importantly, the lack of information may not be only about the existence of laws, but also about the existence of risks. Posner notes that “criminalization retards the dissemination and circulation of accurate information about the risks involved in an activity.” POSNER, *supra* note 66, at 209.

177. Ayres & Baker, *supra* note 4, at 655.

178. See *supra* notes 14–20 and accompanying text.

179. See Alex Geisinger, *A Belief Change Theory of Expressive Law*, 88 IOWA L. REV. 35, 63–64 (2002).

180. See, e.g., Sutherland, *supra* note 141, at 337 (citing widespread education about, and advertisement of, public service-type announcements about statutory rape laws in various states).

181. Indeed, Pollard notes that many jurisdictions already have laws on the books sanctioning risky sex through alternative tort theories and that many of these tort sanctions have resulted in judgments against defendants. Pollard, *supra* note 4, at 793–803. However, she then asserts that “it seems fair to conclude that a small number court of judgments [sic]—word of which would spread rapidly—could have a big effect on the overall rate of sexual disease transmission.” *Id.* at 783. It is unclear why, in Pollard’s analysis, word of strict liability judgments would spread, but word of other types of tort judgments to date has not.

receive extensive coverage in the mainstream media, most adolescents would not hear about the new legal sanctions through these venues, as adolescents are much less likely than their adult counterparts to consume media sources aimed primarily at adults, such as newscasts.¹⁸² Therefore, the media's coverage of new laws would only play a significant educative role if teen-oriented publications and outlets—such as schools, teen clinics, teen magazines, teen websites, and teen-focused television stations—devoted extensive coverage to their passage and enforcement. Even if were to occur, it is just as likely that the targets of prosecution would become minor celebrities and idolized rather than ostracized.¹⁸³ Because the particulars of legal definitions and parameters are of limited interest to most adolescents—especially when compared to topics geared towards adolescents, such as how to excite or seduce a partner—media outlets aimed at this market would likely devote time and space to such coverage only when prosecutions involving celebrities or public figures (including individuals who came into the public eye through such controversies) occurred.¹⁸⁴ Therefore, even if “[a]dopting strict liability is newsworthy,” as Pollard claims, and would therefore “help to educate the public about the high sexual disease rate,”¹⁸⁵ the adoption of these laws will be newsworthy only very briefly; beyond that, the laws' very existence will attract little interest and attention except as part of already-existing public health campaigns.

Second, although proponents of strict liability and criminal transmission laws argue that “[p]eople respond to incentives . . . [a]t the root of economic theory is the expectation that humans will seek rationally

182. See DAVID T. Z. MINDICH, *TUNED OUT: WHY AMERICANS UNDER 40 DON'T FOLLOW THE NEWS* 3 (2005); Richard Potts, Angela Dedmon & Jeff Halford, *Sensation Seeking, Television Viewing Motives, and Home Television Viewing Patterns*, 21 PERSONALITY & INDIV. DIFFER. 1081, 1083 (1996) (finding that those college students who were labeled high sensation seekers “tended to watch more music videos, daytime talk shows, stand-up comedy programs . . . documentaries, and animated cartoons, and watched fewer newscasts”).

183. Take, for example, the recent case of Jamie Lynn Spears, a sixteen year-old actress who became pregnant. Far from a cause of her social ostracization, Spears' pregnancy provided her both significant publicity and revenue. See Brian Stelter, *For Celebrity Magazine, Pregnancy Is a Bonus*, N.Y. TIMES, Jan. 2, 2008, at C1, (discussing widely circulated reports that Spears' mother sold exclusive rights to news of her pregnancy to celebrity magazine for \$1 million), available at <http://www.nytimes.com/2008/01/02/business/media/02ok.html?scp=1&sq=&st=nyt>.

184. This may also happen where non-celebrity stories become blockbusters. See Sutherland, *supra* note 141, at 339 (citing statutory rape prosecutions of Joey Buttafuccho and Mary Kay LeTourneau, which were heavily covered by the sensationalist media); Lindsay H. Hoffman and Tiffany L. Thomson, *The Effect of Television Viewing on Adolescents' Civic Participation: Political Efficacy as a Mediating Mechanism*, 53 J. OF BROADCASTING & ELECTRONIC MEDIA 1, 3 (2009).

185. Pollard, *supra* note 4, at 818–19.

to maximize their expected utility or self-interest,”¹⁸⁶ the problem with teenage sex is that there are significant competing incentives, as well as emotional and hormonal influences, that threaten adolescents’ ability to engage in rational utility maximization. As discussed in Part IV, adolescent psychosocial development is at a stage where adolescents cannot easily self-regulate their spontaneous, high-risk behaviors.¹⁸⁷ The incentive to fit in with peers, to be loved, and to satisfy hormonal urges will very often outweigh the incentive to avoid punishment, especially because adolescents are likely to weigh benefits more heavily than costs in their behavioral decision-making.¹⁸⁸ Therefore, adolescents, who are driven by sensation seeking, will weigh the benefit of the sensation more heavily than the risk of sanctions.

Third, adolescents look to peers, not the law, for normative behaviors.¹⁸⁹ Looking at teenage sexuality in the social context, laws punishing adolescent sexual activity and its consequences will likely have little to no effect on adolescent attitudes about their own sexuality, although law and economics scholars and expressivists would undoubtedly posit otherwise.¹⁹⁰ Rather than looking to the law for guidance, adolescents form their attitudes in response to and consistent with those of their “close knit groups,”¹⁹¹ other adolescents. As most adolescents display a lack of concern about premarital sexual activity (as observed by their rates of engaging in that activity),¹⁹² they are unlikely to change their attitudes about their sexual activity in response to legal rules made by adults.

Fourth, legal consequences are too attenuated in terms of time, likelihood, and causality to be effective for this age group. Teens are unlikely to be plaintiffs,¹⁹³ especially because doing so would involve telling their parents about their sexual activity and because teens are unlikely to be familiar with the legal system as a forum for redressing their harms.

186. *Id.* at 813.

187. *See supra* notes 103–69 and accompanying text.

188. *See supra* notes 136–39 and accompanying text.

189. *See supra* notes 144–153 and accompanying text. *See also* Kinsman, Romer, Furstenberg & Schwarz *supra* note 34, at 1191 (“[C]are providers interested in reducing initiation of risk behaviors will want to understand their adolescent patients’ intentions and perceptions of peers’ norms to better target health promotion counseling.”)

190. *See infra* note 213 and accompanying text.

191. ROBERT C. ELLICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* 167 (1991).

192. *See supra* notes 26–32 and accompanying text. *Contra* Linda Lyons, *Teens: Sex Can Wait*, GALLUP, Dec. 14, 2004, <http://www.gallup.com/poll/14341/Teens-Sex-Can-Wait.aspx>.

193. *See, e.g.*, KATRINA BAUM, BUREAU OF JUSTICE, *JUVENILE VICTIMIZATION AND OFFENDING, 1993–2003* 6 (2005), available at <http://bjs.ojp.usdoj.gov/content/pub/pdf/jvo03.pdf> (detailing statistical study showing that “[a]bout a quarter of overall violent victimizations against younger teens and about a third of the victimizations against older teens were reported to the police from 1993 to 2003”).

Cases could take many years to come to trial if tried,¹⁹⁴ making the threat of prosecution that much more remote and diminishing an adolescent's interest in pursuing justice through the legal system as she grows older. Social sanctions within close peer groups could be quite high for teens who initiate lawsuits against their peers.¹⁹⁵ As a result, the fear of social ostracism or damage to an ongoing intimate relationship will deter teens from reporting or prosecuting risky sex violations.¹⁹⁶

Moreover, recovery would be extremely unlikely due to the difficulty in proving causation and the other elements of the tort, just as it might be under a negligence standard.¹⁹⁷ Therefore, to the extent that the laws will not be enforced because lawsuits would not be initiated, they are unlikely to deter risky behaviors any more successfully than existing laws already do (or do not). Although scholars hypothesize that clear liability rules will lead to sufficient certainty of punishment,¹⁹⁸ punishment will be anything but certain under either a tort or criminal law scheme.

Fifth, even though the punishments are severe,¹⁹⁹ they will do little to reduce the behaviors leading to sexually transmitted disease, as severity of punishment does not seem to relate to increased deterrence rates among

194. See, e.g., LYNN LANGTON & THOMAS H. COHEN, BUREAU OF JUSTICE, CIVIL BENCH AND JURY TRIALS IN STATE COURTS, 2005 8 (2008), available at <http://bjs.ojp.usdoj.gov/content/pub/pdf/cbjtsc05.pdf> (finding that the average months from filing to disposition for a jury trial in a tort case is twenty-six months); MATTHEW R. DUROSE & PATRICK A. LANGAN, BUREAU OF JUST. STATS., DEP'T OF JUSTICE, STATE COURT SENTENCING OF CONVICTED FELONS, 2002 58 (2005), available at <http://bjs.ojp.usdoj.gov/content/pub/pdf/scscf02.pdf> (reporting results of statistical study finding average time between arrest and sentencing for persons convicted of sex-related felony in state courts is 270 days, and only sixty-six percent are sentenced within year).

195. Many scholars, most notably Dan Kahan, have written about the deterrent effect of shaming. See generally Dan M. Kahan, *What's Really Wrong with Shaming Sanctions*, 84 TEX. L. REV. 2075 (2006); Dan M. Kahan, *What Do Alternative Sanctions Mean?*, 63 U. CHI. L. REV. 591, 638 (1996). Social shaming may occur as teens seek to bring lawsuits and this shaming may potentially, as in criminal cases, serve as a deterrent for teens bringing lawsuits.

196. It is true that many courts would allow a teenager to bring such a lawsuit anonymously. See, e.g., Joel M. Schumm, *No Names, Please: The Virtual Victimization of Children, Crime Victims, the Mentally Ill, and Others in Appellate Court Opinions*, 42 GA. L. REV. 471, 484–85 (2008). Still, while the courts might allow anonymity, the media would not necessarily respect it, and a teen's peer group would serve as a very efficient grapevine.

197. See Pollard, *supra* note 4, at 771 (noting that the “fact-intensive case-by-case negligence analysis, has resulted in unclear legal standards and very uncertain liability, even in cases of clear causation[sic]”).

198. Pollard, *supra* note 4, at 815 (noting that the “law should engage in clear liability rules to maximize certainty of punishment”).

199. Although Ayres and Baker argue that the sanction they impose on the crime of reckless sex is a “mild” one, *supra* note 4, at 654, a teen would likely consider a three-month jail term or a fine of any amount to be a severe sanction. Similarly, the damages that would result from a strict liability regime would likely be quite hefty, especially considering that three of the most common STDs—herpes, HPV, and HIV—are incurable and may lead to serious health consequences.

adolescents.²⁰⁰

V

THE NEGATIVE CONSEQUENCES OF SANCTIONING SEX

[L]aw has a broad distributive impact; that is, law forms a backdrop to negotiations about sex and sexual expression among teenagers, and also between teenagers, parents, school officials, and various other actors.²⁰¹

Laws imposing punitive sanctions on risky sexual behavior may not achieve the results intended for them when applied to adolescents. They may also result in a number of negative consequences, such as decreased self-efficacy among teenagers, poorer communication between parents and teens about sex, and a legal scheme that does not promote social justice.

A. *The Development of Self-Efficacy*

Studies have shown that increased self-efficacy—defined as a person's belief in her power to act in a way to achieve certain goals²⁰²—is related to better decision-making in health-related situations, particularly among adolescents.²⁰³ According to Albert Bandura, the patriarch of self-efficacy theory, “efficacy beliefs determine the choices people make at important decisional points. A factor that influences choice behavior can profoundly affect the courses lives take.”²⁰⁴

For example, where public health programs seek to give teens information about reducing risky sex behaviors, rates of self-efficacy rise, making teens more confident that they can use condoms properly and leading them actually to use them.²⁰⁵ In other words, when a teenager has

200. See *supra* notes 157–159 and accompanying text.

201. Sutherland, *supra* note 141, at 313.

202. See *supra* note 10. Note that self-efficacy is different from self-esteem, or perceived self-worth. See, e.g., Deirdre O'Sullivan & David R. Strauser, *Operationalizing Self-Efficacy, Related Social Cognitive Variables, and Moderating Effects*, 55 REHABILITATION COUNSELING BULL. 251, 253 (2009).

203. See, e.g., Ralf Schwarzer & Aleksandra Luszczynska, *Self-Efficacy, Adolescents' Risk-Taking Behaviors, and Health*, in SELF-EFFICACY BELIEFS OF ADOLESCENTS 139, 140 (Frank Pajares & Tim Urdan, eds. 2006).

204. Albert Bandura, *Adolescent Development from an Agentic Perspective*, in SELF-EFFICACY BELIEFS OF ADOLESCENTS 4 (Frank Pajares & Tim Urdan, eds. 2006) [hereinafter Bandura, *Agentic Perspective*]. While people with high self-efficacy are strongly motivated to act to further their personal goals, Bandura notes that “people of low self-efficacy are easily convinced of the futility of effort in the face of difficulties . . . [and] quickly give up trying.” *Id.*

205. See, e.g., Schwarzer & Luszczynska, *supra* note 203, at 143 (citing study finding that “[a]mong sexually active adolescents, those who expressed confidence in their ability to put on a condom and in being able to refuse intercourse with a sexual partner were more likely to use condoms consistently”). Schwarzer and Luszczynska cite other studies that

higher levels of self-efficacy, she is more likely to use condoms consistently and correctly, resulting in the sharp reduction of her disease risk. Similarly, teen girls who have intercourse frequently have been found to use contraceptives more effectively and more regularly when they have high self-efficacy regarding their sexual behavior.²⁰⁶ They are also less likely to become pregnant unintentionally.²⁰⁷ Overall, adolescents with high self-efficacy appear better able to handle the many types of challenges in their lives, including challenges related to sexual decision-making.

Experts in adolescent development know that, for adolescents, connection to central life figures and institutions is key to the development of self-efficacy.²⁰⁸ Where parents and teachers create warm, supportive home and school environments—environments characterized by open communication between adults and teenagers, and significant respect for the adolescent autonomy—adolescents are likely to develop greater self-efficacy.²⁰⁹ Adolescents with high self-efficacy typically talk to their

suggest it is not teenagers' application skills that increase the likelihood they will use condoms but their self-efficacy. *Id.* at 145. It is important to note that condom application skills do not affect the frequency of unprotected sex, whereas self-efficacy does. *Id.*

206. See, e.g., Bandura, *Agentic Perspective*, *supra* note 204, at 22 (citing Stephanie Kasen, Roger D. Vaughan & Heather J. Walter, *Self-Efficacy for AIDS Preventive Behaviors Among Tenth Grade Students*, 16 HEALTH EDUC. Q. 263–83 (2003)); Jennifer Pearson, *Personal Control, Self-Efficacy in Sexual Negotiation, and Contraceptive Risk Among Adolescents: The Role of Gender*, 54 SEX ROLES 615, 622 (2006) (noting study findings, “consistent with previous research . . . [that] [a]dolescents who felt a sense of control over their lives, both in general and in sexual situations, were more likely to abstain from sex or to use condoms if they did engage in sexual intercourse”); Suzanne Ryan, Kerry Franzetta & Jennifer Manlove, *Knowledge, Perceptions, and Motivations for Contraception: Influences on Teens’ Contraceptive Consistency*, 39 YOUTH & SOC’Y 182, 195 (2007) (noting link between contraceptive use and self-efficacy among teenage girls); Schwarzer & Luszczynska, *supra* note 203, at 146 (“Contraceptive self-efficacy . . . predicts girls’ use of contraceptives.”) Conversely, women who have low self-efficacy are less likely to use contraceptives consistently and effectively, even where they know of the significant negative life consequences associated with unplanned pregnancy. Bandura, *Agentic Perspective*, *supra* note 204, at 22 (citing Linda B. Heinrich, *Contraceptive Self-Efficacy in College Women*, 14 J. ADOLESCENT HEALTH 269, 273 (1993)). Low self-efficacy has been found to have a greater influence on sexual behavior than do “beliefs about personal susceptibility to sexually transmitted diseases (STDs) and about their severity.” *Id.*

207. See e.g., Hannah Brückner, Anne Martin & Peter S. Bearman, *Ambivalence and Pregnancy: Adolescents’ Attitudes, Contraceptive Use and Pregnancy*, 36 PERSP. SEXUAL & REPROD. HEALTH 248, 256 (2004) (reporting study findings that “factor most strongly associated with the risk of pregnancy among young women is contraceptive use, with nonusers being significantly more likely than inconsistent and consistent users to become pregnant” and suggesting that efforts to reduce teen pregnancy focus on teen attitudes towards contraception).

208. Alessio Vieno, Massimo Santinello, Massimiliano Pastore, & Douglas D. Perkins, *Social Support, Sense of Community in School, and Self-Efficacy As Resources During Early Adolescence: An Integrative Model*, 39 AM. J. COMMUNITY PSYCHOL. 177, 177–178 (2007).

209. See *id.* at 89.

parents about the difficult situations they must face.²¹⁰ A supportive family environment then reinforces self-efficacy, leading to an adolescent's ability to make better choices about risky behaviors.²¹¹ Notwithstanding the importance of peer pressure in shaping adolescent social norms, families continue to play a significant role in offering teens guidance and feedback about risk taking.²¹²

B. The Negative Expressive Consequences of Sanctioning Sex

Recognizing that law has the power to stigmatize certain kinds of sexual acts and relationships, many legal scholars have noted the law's potential expressive impact²¹³ on attitudes toward sexuality, though without necessarily referring to it as such.²¹⁴

210. See, e.g., Hutchinson & Cooney, *supra* note 46, at 192 (finding that a high level of parent-teen communication about sex significantly associated with greater self-efficacy around condom use and better communication with sexual partners); Albert Bandura, Gian Vittorio Caprara, Claudio Barbaranelli, Maria Gerbino & Concetta Pastorelli, *Role of Affective Self-Efficacy in Diverse Spheres of Psychosocial Functioning*, 74 CHILD DEV. 769, 778 (2003) ("Adolescents who are assured in their efficacy to manage peer pressure stay clear of delinquent activities and freely discuss with their parents the predicaments they face outside the home.").

211. Bandura, *Agentic Perspective*, *supra* note 204, at 25 (noting that "adolescents who feel efficacious to withstand peer pressure discuss with their parents the predicaments they face Supportive and enabling parental communication and monitoring, in turn, operate as social safeguards against detrimental involvement in risky activities.").

212. See, *id.* at 25–26 ("Peers are an influential socializing agency, but as shown in the child-parent linkage in the management of high-risk activities, peer affiliation does not disembody adolescents from their families."); Christopher C. Heinrich, Kathryn A. Brookmeyer, Lydia A. Shrier & Golan Shahar, *Supportive Relationships and Sexual Risk Behavior in Adolescence: An Ecological-Transactional Approach*, 31 J. PEDIATRIC PSYCHOL. 286, 293–94 (2006) (noting association between high levels of parental connectedness and lower levels of teen sexual risk behavior); Geoffrey L. Ream & Ritch C. Savin-Williams, *Reciprocal Associations Between Adolescent Sexual Activity and Quality of Youth-Parent Interactions*, 19 J. FAM. PSYCHOL. 171, 175–76 (2005) (finding that family support and involvement related to onset and continuation of sexual activity in teens). According to a 2008 global study, parents were "the single most impactful source of sex education for achieving higher levels of sexual confidence overall." DUREX NETWORK, THE FACE OF GLOBAL SEX 2008: THE PATH TO SEXUAL CONFIDENCE 24 (2008), available at <http://www.durexnetwork.org/SiteCollectionDocuments/Research—Face of Global Sex 2008.pdf>.

213. Expressivists theorize that law has an impact on social norms, attitudes, and behaviors. See, e.g., Rosemary J. Coombe, *Cultural Life of Things: Anthropological Approaches to Law and Society in Conditions of Globalization*, 10 AM. U. J. INT'L L. & POL'Y 791 (1995); Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943 (1995); Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021 (1996).

214. See, e.g., Pollard, *supra* note 4, at 793 ("The absence of legal sanctions for sexual misconduct . . . result[s] in the] contemporary belief among some Americans that they owe nothing to their sexual partners . . ."). See also William R. Corbett, *A Somewhat Modest Proposal to Prevent Adultery and Save Families: Two Old Torts Looking for a New Career*, 33 ARIZ. ST. L.J. 985 (2001) (favoring use of tort law to prevent adultery).

With respect to regulation of sexual activity, one scholar has commented, “the diffuse body of sexual regulation . . . operates to compare, differentiate, hierarchize, homogenize, and exclude. Its effect is not simply repressive but constitutive.”²¹⁵ Scholars have also noted the expressive function of punishment.²¹⁶ Scholars point, for example, to the anti-sodomy laws held unconstitutional by the Supreme Court in *Lawrence v. Texas*²¹⁷ as laws which, even when not frequently enforced, “express contempt for certain classes of citizens,” and in so doing, help reinforce heteronormative standards of sexual behavior.²¹⁸ Indeed, laws that stigmatize certain sexual acts or individuals can help encourage or allow harm against them. At least one study has discovered a causal connection between anti-sodomy legislation and increased violence and hate speech against gays and lesbians.²¹⁹

Non-punitive laws can also have a profound expressive impact on the social construction of sexuality and sexual identity. Critics have argued, for example, that the Americans with Disabilities Act (ADA), by omitting sexual behavior disorders such as transexualism from its definition of disabilities, “carves out a new class of untouchables defined by sexuality and sex behaviors”²²⁰ and “sends the message that it is through a conformity to social norms that rights and privileges are conveyed to the human body.”²²¹

STD transmission laws, like the anti-sodomy statutes, may similarly serve to stigmatize people with those diseases. According to the Soros Foundation, for example, “applying criminal law to HIV exposure or transmission, except in very limited circumstances . . . reinforces the stereotype that people living with HIV are immoral and dangerous criminals, rather than, like everyone else, people endowed with responsibility, dignity and human rights.”²²² Many public health scholars

215. Sutherland, *supra* note 141, at 334.

216. Peggy Sasso, *Criminal Responsibility in the Age of “Mind-Reading,”* 46 AM. CRIM. L. REV. 1191, 1201–1204 (2009).

217. 539 U.S. 558 (2003).

218. Dan Kahan, *The Secret Ambition of Deterrence*, 113 HARV. L. REV. 413, 421 (1999).

219. Ryan Goodman, *Beyond the Enforcement Principle: Sodomy Laws, Social Norms and Social Panoptics*, 89 CAL. L. REV. 643, 705 (2001) (noting how the “criminalization of homosexuality helps generate anti-gay hate crimes”).

220. Adrienne L. Hiegel, *Sexual Exclusions: The Americans with Disabilities Act as a Moral Code*, 94 COLUM. L. REV. 1451, 1452–53 (1994).

221. *Id.* at 1492–93.

222. RALF JÜRGENS, JONATHAN COHEN, EDWIN CAMERON, SCOTT BURRIS, MICHAELA CLAYTON, RICHARD ELLIOTT, RICHARD PEARSHOUSE, ANNE GATHUMBI & DELME CUPIDO, *SOROS FOUND., TEN REASONS TO OPPOSE THE CRIMINALIZATION OF HIV EXPOSURE OR TRANSMISSION* 10 (2008), available at http://www.soros.org/initiatives/health/focus/law/articles_publications/publications/10reasons_20080918/10reasons_20081201.pdf.

and activists have argued that the stigmatizing effects of laws mandating HIV testing or criminalizing transmission of the virus—or even sexual contact between a person with HIV and an uninfected person—outweigh whatever benefits could possibly be gained from these measures.²²³ Therefore, as Ryan Goodman has argued, the relevant inquiry with respect to laws of this kind “should focus on social practices produced by legal sanctions rather than the social practices or behaviors those laws are meant to prohibit.”²²⁴

When considering adolescent sexual behavior, then, we should be particularly cognizant of the perhaps unintended or unwelcome expressive consequences of laws punishing their sexual behavior.²²⁵ These expressive effects may extend beyond those actually targeted by the law. Indeed, laws criminalizing the transmission of STDs might change adults’ attitudes towards teen sexuality, as well as those of teens themselves. A majority of adults today believe that teen sexuality is a healthy, natural, and normal part of the human experience, particularly when expressed within the context of a loving, committed relationship.²²⁶ Imposing harsh sanctions on sex might undermine society’s increasingly tolerant attitude towards teen

223. See, e.g., Scott Burris, *Law and the Social Risk of Health Care: Lessons from HIV Testing*, 61 Alb. L. Rev. 831, 835–36 (1998) (noting that “concerns about stigma have been consistently raised in opposition to . . . criminal laws directed at conduct that was thought to contribute to the spread of the disease”); C. Dodds & P. Keogh, *Criminal Prosecutions for HIV Transmission: People Living with HIV Respond*, 17 INT’L J. STD & AIDS 315, 317 (2006) (noting various negative consequences that result from stigma produced by laws criminalizing transmission of HIV). The increased stigma produced by the criminalization of HIV transmission, Dodds and Keogh argue, “inhibits people’s ability to live openly with HIV infection . . . significantly reduc[ing] the quality of life of those living with HIV.” *Id.* They note that there is “also evidence that [the] stigma [produced by criminalization] detracts from the aims of HIV prevention work because it increases the difficulty of disclosing an HIV-positive status in sexual settings, and provides a disincentive for those at risk of exposure to . . . come forward for testing.” *Id.*

224. Goodman, *supra* note 219, at 651–52 (explaining how reasoning of Justice Powell and Richard Posner in dismissing expressive effects of sodomy laws—because they are not typically enforced—led to decision to uphold Texas sodomy laws in *Bowers v. Hardwick*, 478 U.S. 186 (1986)).

225. Goodman, *supra* note 219, at 659 (“[S]odomy laws have an effect outside of traditional understandings of the law, because citizens feel empowered by the background of these laws to commit acts of extreme violence against individuals who are, or are presumed to be, lesbian or gay.”) (citing Kendall Thomas, *Beyond the Privacy Principle*, 92 COLUM. L. REV. 1431, 1461, 1477 (1992)).

226. A study by the Guttmacher Institute reveals that only one-third of adults believe that adolescent sexual activity is wrong. A majority of adults, however, are not opposed to it and think that, under certain conditions, adolescent sexual conduct is normal, healthy behavior. Ron Stodghill, Julie Grace, Richard Woodbury & Charlotte Faltermayer, *Where’d You Learn That?*, TIME, Jun. 15, 1998, at 52 (citing Guttmacher study), available at <http://www.time.com/time/magazine/article/0,9171,988535-1,00.html>. See also Laurie L. Meschke, Suzanne Bartholomae & Shannon R. Zentall, *Adolescent Sexuality and Parent-Adolescent Processes: Promoting Healthy Teen Choices*, 49 FAMILY RELATIONS 143, 147 (2000) (arguing that increased parental communication about sex is more likely to lead to less risky sexual behavior on part of teens).

sexuality, and might cause parents renewed anxiety about the sexual experimentation of their children, as well as about the possible threat of prosecution of them. This additional worry may cause them to change their attitudes about adolescent sexuality and advise adolescent children to refrain from engaging in sexual activity.

This potential change in perception about consensual sex between adolescents may lead to significant undesirable consequences. As discussed in the previous section, positive communication between parents and children leads to greater self-efficacy and, in turn, safer sexual behaviors.²²⁷ Similarly, feeling connected to school is a significant factor in reducing risky sex behavior among adolescents.²²⁸ If more adults came to view adolescent sexual activity as outside the bounds of acceptable behavior, adolescents might be less likely to communicate with adult figures such as parents, teachers, and doctors. They might be less likely to access health care out of fear of disapproval from health care providers, or parents or school officials.²²⁹ In the end, then, the very laws that would seek to slow the spread of disease might actually serve to increase it.

C. Social Justice

Legal scholars and developmental psychologists with an interest in adolescent legal issues have paid increasing attention to and commented with great interest on the legal rights of adolescents. Especially in response to calls for more restrictions on independent adolescent decision-making around abortion and fewer or reduced penalties for criminal convictions, scholars have debated the extent to which the law can and should take adolescents' reduced capacities into account.²³⁰ In looking at adolescence as a legal construct, many scholars have argued that because adolescents are psychosocially immature, they may be ill-equipped to

227. See *supra* notes 208–212 and accompanying text.

228. See *supra* note 209 and accompanying text.

229. Posner agrees. See POSNER, *supra* note 66, at 209.

230. See, e.g., Britton Guerrina, *Mitigating Punishment for Statutory Rape*, 65 U. CHI. L. REV. 1251, 1252 (1998) (arguing that conduct of child and adolescent victims of statutory rape should not be considered when sentencing adult offenders); Abbe Smith, "I Ain't Taking No Plea": *The Challenges In Counseling Young People Facing Serious Time*, 60 RUTGERS L. REV. 11, 18–19 (2007) ("Young people . . . are less able than older people to recognize, understand, and carefully weigh consequences when making important life decisions. This is something about which law and science are in sync. The Supreme Court has noted young people's lesser capacity for decision-making in a variety of contexts: when they are in need of mental health treatment; when they seek an abortion; when they want to take up cigarette smoking; and when they are prosecuted for capital murder."); Steinberg, Cauffman, Woolard, Graham & Banich, *supra* note 106, at 10 (arguing that adolescents are cognitively able to make decisions about abortion and so should be allowed to make independent decisions but psychosocially too immature to make "heat of the moment" decisions such as whether to commit crime and so should not be subject to capital punishment).

make key decisions about certain types of legal issues.²³¹ The Supreme Court has, in a number of important decisions, understood this to have significant implications for the legal treatment of adolescents.²³²

Traditionally, as Elizabeth Scott has noted, adolescents have been described in legal rhetoric as if they were indistinguishable from young children, and are subject to paternalistic policies based on assumptions of dependence, vulnerability, and incompetence [while f]or other purposes, teenagers are treated as fully mature adults, who are competent to make decisions, accountable for their choices and entitled to no special accommodations.²³³ This disparate treatment appears to have served adolescents well in some situations²³⁴ and poorly in others.²³⁵ However, it has worrying implications for criminal sanctions for adolescent sex.

As described in part in Part IV, psychological and neuroscientific

231. See, e.g., THOMAS GRISSO, JUVENILES' WAIVER OF RIGHTS: LEGAL AND PSYCHOLOGICAL COMPETENCE 42-53 (1981) ("[A]n immature defendant may know that he has a right to remain silent, yet believe that the judge can take away this 'right' at any time by demanding a response to questions."); Deborah K. Cooper, *Juveniles' Understanding of Trial-Related Information: Are They Competent Defendants?* 15 BEHAV. SCI. & L. 167, 177-78 (1997); Vance Cowden & Geoffrey McKee, *Competency to Stand Trial in Juvenile Delinquency Proceedings: Cognitive Maturity and the Attorney-Client Relationship*, 33 LOUISVILLE J. FAM. L. 629, 651-57 (1995); Thomas Grisso, Laurence Steinberg, Jennifer Woolard, Elizabeth Cauffman, Elizabeth Scott, Sandra Graham, Fran Lexcen, N. Dickon Reppucci & Robert Schwartz, *Juveniles' Competence to Stand Trial: A Comparison of Adolescents' and Adults' Capacities as Trial Defendants*, 27 L. & HUMAN BEHAV. 333 (2003) (describing study finding that the younger the adolescent, the less understanding and recognition of key trial-related information they have); Jeffrey C. Savitsky & Deborah Karras, *Competency To Stand Trial Among Adolescents*, 19 ADOLESCENCE 349, 349 (1984); Elizabeth S. Scott & Thomas Grisso, *Developmental Incompetence, Due Process, and Juvenile Justice Policy*, 83 N.C. L. REV. 793, 818 (2005) ("Juveniles . . . may be more likely than adults to have extensive deficits in their basic knowledge of the trial process"); *id.* at 819 ("[Y]ouths may lack adequate capacities to process information and reason in making trial decisions, especially when the options are complex and their consequences far-reaching. Moreover, emotional and psychological immaturity may influence youths to make choices that reflect immature judgment.").

232. See e.g., *Belotti v. Baird*, 443 U.S. 622, 634 (1979) (stating that children possess "peculiar vulnerability" and an "inability to make critical decisions in an informed, mature manner"); *Lorillard Tobacco Co. v. Reilly*, 533 U.S. 525, 587 (2001) ("[Children] lack the judgment to make an intelligent decision about whether to smoke."); *Parham v. J.R.*, 442 U.S. 584, 602-03 (1979) ("Most children, even in adolescence, simply are not able to make sound judgments concerning many decisions."); *Roper v. Simmons*, 543 U.S. 551, 564-79 (2005) (holding that adolescents are different enough from adults to be treated differently when it comes to capital punishment). Cf. *Hodgson v. Minnesota*, 497 U.S. 417, 452 (1990) (noting that "[t]he State has a strong and legitimate interest in the welfare of its young citizens, whose immaturity, inexperience, and lack of judgment may sometimes impair their ability to exercise their rights wisely" but holding that state interest is satisfied where minor must notify parent before making abortion decision).

233. Scott, *Legal Construction*, *supra* note 21, at 548 (citing as examples of child-like treatment "judicial language supporting restrictions on abortion" and of adult-like treatment several statutes related to sexual decision-making).

234. *Id.* (citing low driving age as an example).

235. *Id.* (pointing to juvenile justice system as an example).

research suggests that adolescents are not always able to competently defend their legal rights. Research on developmental maturity has shown that adolescents may not understand their legal rights as well as adults do,²³⁶ and they may be less able than adults to assist legal counsel or understand and value the trial process and its participants.²³⁷ This is particularly true of young adolescents, who, in one large empirical study, were found to be “less likely to recognize the risks inherent in different [legal] choices and less likely to consider longer-term consequences of their [legal] choices.”²³⁸ Adolescents might therefore be unable adequately to anticipate and guard themselves against legal punishment for what might be entirely ordinary behavior within their social context.

Researchers therefore have concerns that adolescents’ more immature decision-making capacities may further impair their competence during the legal process.²³⁹ The fact that their neural regulatory systems are still relatively immature only compounds this problem.²⁴⁰ Because adolescents do not fully understand legal options and consequences, laws imposing sanctions on risky sexual behavior are unlikely to be effective.

VI

RECOMMENDATIONS

We have now considered closely why the threat of punishment may not function as anticipated when applied to the adolescent population.²⁴¹ This Article has argued in earlier Parts that HIV transmission laws, and other laws that seek to deter risky sexual behavior by sanctioning it, provide too temporally remote and unlikely a penalty successfully to alter teenage sexual behavior.

Although legal measures designed to reduce STDs through the imposition of legal sanctions are unlikely to work, we can learn a great deal from them in planning future efforts to deter risky sexual behavior

236. Kanbam & Thompson, *supra* note 129, at 181.

237. *Id.*; Melinda G. Schmidt, N. Dickon Reppucci & Jennifer L. Woolard, *Effectiveness of Participation as a Defendant: The Attorney-Juvenile Client Relationship*, 21 BEHAV. SCIENCES & L. 175, 191 (2003).

238. Kanbam & Thompson, *supra* note 129, at 182.

239. *Id.*

240. *Id.* at 184.

241. In fact, most teens think that more information about protection, relationships and access to contraceptives is the key to prevention, not greater sanctions. *Cf.*, Karen A. Hacker, Yared Amare, Nancy Strunk & Leslie Horst, *Listening to Youth: Teen Perspectives on Pregnancy Prevention*, 26 J. ADOLESCENT HEALTH 279, 285 (2000) (“[Y]oung people are most likely to think that more information on pregnancy and birth control, communication with parents, education about relationships, and easy access to contraception would prevent teen pregnancy.”); Deptula, Henry, Shoeny & Slavick, *supra* note 135, at 41 (stating that sexual education programs should target both costs and benefits to advance goal of postponing sexual initiation).

action. First, when making proposals for legislative and other legal reforms related to sexuality and impacting sexual activity, we should look closely at the subgroup of the population the new laws will most affect—in this case, adolescents—and consider whether the laws will actually achieve the desired effects in that subgroup.²⁴² Second, we must base our consideration on social science findings about what motivates the actors we seek to affect, not on punishment-driven theories about what may or may not deter an average adult. In the case of laws that will affect adolescents and their sexual behaviors, this will mean looking to adolescent behavioral and neural science and crafting legal initiatives designed to meet the needs of this very specific group.²⁴³

This Article has also suggested that when we pass laws regulating sexual behavior, we should consider the expressive effect of those laws, i.e., what normative and attitudinal changes the laws are likely to cause, both among those targeted by the law and those secondarily affected. As prominent scholars have argued, looking to the potential of law to affect social meaning should influence our law-making decisions, even in the area of risky sex.²⁴⁴

Indeed, according to Lawrence Lessig, in a society where condom use

242. Of course, as Landon Summers argues, it is also imperative that lawmakers ensure that the social science on which they rely is on point, peer-reviewed, and subject to verification. They must also be sure that they interpret data correctly. See Landon Summers, *The Justices and Psychological Research: But Is It Really Science?*, 21 LAW & PSYCHOL. REV. 93, 108–09 (1997) (critiquing Supreme Court's reliance on psychological studies that were neither on point nor supportive of conclusions it drew from them). See also Buss, *supra* note 7, at 507 (“Common to the law's use of all social science is the risk of bad data or misused data, and the danger that lawmakers will not have the sophistication or the inclination to assess the data closely and limit its use accordingly.”); *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579, 597 (1993) (“‘General acceptance’ is not a necessary precondition to the admissibility of scientific evidence under the Federal Rules of Evidence, but the Rules of Evidence—especially Rule 702—do assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. Pertinent evidence based on scientifically valid principles will satisfy those demands.”). In *Daubert*, the Court also recommended that a trial judge consider, when deciding whether to admit scientific evidence, whether it had been tested scientifically and subject to peer review and publication. *Daubert*, 509 U.S. at 593–94. The Court acknowledged, however, that it would be “unreasonable to conclude that the subject of scientific testimony must be ‘known’ to a certainty; arguably, there are no certainties in science.” *Id.* at 590.

243. See John Monahan & Laurens Walker, *Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law*, 134 U. PA. L. REV. 477, 488, 499 (1986) (advocating use of social science as precedent in court proceedings and suggesting that “[c]ourts should place confidence in a piece of scientific research to the extent that the research (1) has survived the critical review of the scientific community; (2) has employed valid research methods; (3) is generalizable to the case at issue; and (4) is supported by a body of other research”).

244. See, e.g., Lessig, *supra* note 213, at 1019–1025 (critiquing Richard Posner and Thomas Philipson's economic analysis of AIDS crisis for ignoring role of government-subsidized AIDS education in changing attitudes towards safer sex practices)

is an ordinary part of the “sex dance,” there are few social costs to using a condom.²⁴⁵ To achieve this sort of society, however, the policymaker must ask “what can be done . . . to construct [this social meaning]. . . .”, and one common technique has been to involve “[p]opular figures—Magic Johnson, for example—advocating the use of condoms.”²⁴⁶ Like public health experts, Lessig also notes the power that peer groups, peer education, and sex education in schools have to influence social meaning and social norms.²⁴⁷

Although public health initiatives designed to limit the negative consequences of sexual behavior have not always been as successful as we would like, there is no reason to think that removing the issue entirely from the public health arena and putting it solely into the legal arena will solve the problem.²⁴⁸ Instead, perhaps we might begin to look at other developed countries and study what has driven their success in this area.

Other countries have been successful in reducing their rates of sexually transmitted disease, despite having roughly similar rates of teen sexual activity.²⁴⁹ The lower rates in those countries may not be due to the existence of heightened legal sanctions, however, but rather to different social norms that we cannot replicate on command in the United States.²⁵⁰ In England, for example, a branch of the National Health Service recently published a leaflet telling schoolchildren that they had a right to enjoy sex, even on a daily basis, and that regular sex was good for their cardiovascular health.²⁵¹ The United States is more sexually conservative

245. *Id.* at 1023

246. *Id.* Note that this is frequently the approach taken by PSAs.

247. *See id.*

248. *See* Andrew M. Francis & Hugo M. Mialon, *The Optimal Penalty for Sexually Transmitting HIV*, 10 AM. L. & ECON. REV. 388, 389 (2008) (“It is crucial to craft effective public policies that involve both public health programs and statutory law.”).

249. The United States is said to have the highest rate of unintended pregnancies and sexually transmitted diseases of any developed country. Other developed countries, such as Sweden, Canada, and France have similar rates of sexually active teenagers but lower rates of unintended pregnancy and STD infection. *See* GUTTMACHER INSTITUTE, CAN MORE PROGRESS BE MADE? TEENAGE SEXUAL AND REPRODUCTIVE BEHAVIOR IN DEVELOPED COUNTRIES 5 (2001), available at http://www.guttmacher.org/pubs/eurosynth_rpt.pdf. Behavioral scientists note that in those countries, societal attitudes are more accepting of teenage sex and it may be easier for teens to access health services and obtain contraception without fear of reprisal. *Id.*

250. *Id.* at 7–8 (noting that other developed countries provide stronger support for teens’ transition to adulthood, greater social acceptance of teen sexual activity, and easier access to contraception). Importantly, as one scholar notes, “[b]rain imaging studies cannot . . . explain why adolescents with presumably similar brain structures behave so differently in different cultures around the world, nor have they yet captured the influence adolescents’ different life experiences might have on the maturation of their brains.” Buss, *supra* note 7, at 509.

251. Jack Grimston, *Pupils Told: Sex Every Day Keeps the GP Away*, ONLINE TIMES, July 12, 2009, <http://www.timesonline.co.uk/tol/news/uk/education/article6689953.ece>. Note that England still has high rates of sexually transmitted disease and unintended pregnancy

than developed European countries in general and more similar to countries with conservative Catholic cultures.²⁵² The result of these different sexual norms is that American adolescents do not have as much support as those of other nationalities for their burgeoning sexual activity, especially in the form of easily available contraceptive services.²⁵³

It is also important for us to look at public health programs that have worked and consider why they have succeeded. The role of law may then be to fund programs that draw from such successes. For example, it will be important to consider initiatives that build self-efficacy, such as sex education. In a 2008 global study, the United States scored lowest of any American country on a sexual confidence scale.²⁵⁴ The same study found that “the earlier a person receives sex education, the more sexually confident they are likely to be throughout their lives.”²⁵⁵ This was especially true for people who received sex education before the age of seventeen.²⁵⁶ It concluded that “the 11 to 16 age range should be considered as a ‘window of opportunity’ for the most effective provision of sex education.”²⁵⁷ Because self-confidence leads to increased self-efficacy, our goal should be to increase sexual self-confidence rather than legislate punitively in the hope that adolescents’ low levels of confidence and knowledge will lead to abstinence behaviors.

In seeking to emulate other countries’ success, then, we may need to use the law’s expressive effect to change societal attitudes and values about adolescent sexuality, particularly through talking about sex in a healthy way²⁵⁸ and providing access to contraceptive services. Rather than punishing teen sexual decision-making, a successful preventative health program should therefore seek to educate teens about sex rather than to punish them. It should help empower them to make good choices.²⁵⁹ Such a program would contain four components: information about health risks and benefits, training in social skills designed to prevent sexual risk-taking, components designed to build “a resilient sense of efficacy” among teens,

as compared to other European countries. See, e.g., GUTTMACHER INSTITUTE, *supra* note 249, at 27–30.

252. Eric D. Widmer, Judith Treas & Robert Newcomb, *Attitudes Toward Nonmarital Sex in 24 Countries*, 35 J. SEX RESEARCH 349, 356 (1998).

253. See, e.g., GUTTMACHER INSTITUTE, *supra* note 249, at 7–8.

254. DUREX NETWORK, *supra* note 212, at 12.

255. *Id.* at 14.

256. *Id.*

257. *Id.*

258. Cf. CARL LATKIN, *Overview to DUREX NETWORK*, *supra* note 212, at 5 (“[S]chool-based sex education programs may now want to consider promoting conversations about sexual health and confidence amongst peers and family members, as well as disseminating accurate information.”).

259. See Bandura, *Agentic Perspective*, *supra* note 204, at 16–17.

and finally, social support for behavioral change.²⁶⁰ For example, such a program might offer a lecture component with information about healthy behaviors, then an interactive component helping teens develop skills like correct condom application and good partner communication skills. After teens are confident that they know how to take care of themselves, the program could help teens strategize about how to handle difficult situations—such as a partner’s refusal to use protection. It could also identify resources such as websites, institutions, and individuals who could support adolescents’ efforts. Because they “equip children with the skills and efficacy beliefs that enable them to manage the emotional and social pressures to adopt detrimental health habits,”²⁶¹ programs that teach skills and promote self-efficacy are likely to be more successful at achieving desired behaviors than those that merely impart information. Such programs are particularly successful when families, communities, and schools are involved and reinforce the program messages.²⁶² In fact, when adolescents feel connected to school they are less likely to initiate sexual activity at an early age.²⁶³ Unfortunately, as many public health professionals note, the majority of information adolescents receive about risky health behaviors does not include instruction about the skills necessary to avoid these behaviors.²⁶⁴ It follows logically, then, that these programs are not promoting the self-efficacy teens need to avoid risky sexual behaviors. Moreover, messages about healthy sexuality need to come from more than one source for maximum effect.²⁶⁵

Another approach to health behavior change involves framing messages about health behaviors in a way that resonates with the audience. For example, some people respond better to motivational messages emphasizing healthy outcomes, and others respond better to messages warning of dangers. Framing health messages in a way that is congruent to a person’s approach/avoidance disposition makes the messages more

260. *Id.*

261. *Id.*

262. *Id.* at 18.

263. Clea A. McNeely, James M. Nonnemaker & Robert W. Blum, *Promoting School Connectedness: Evidence from the National Longitudinal Study of Adolescent Health*, 72 J. SCH. HEALTH 138, 138 (2002). Importantly, students report less school-connectedness in schools with harsh sanctions for relatively minor infractions like alcohol use. *Id.* at 145. See also Douglas R. Thompson, Ronaldo Iachan, Mary Overpeck, James G. Ross & Lori A. Gross, *School Connectedness in the Health Behavior in School-Aged Children Study: The Role of Student, School, and School Neighborhood Characteristics*, 76 J. SCH. HEALTH 379, 379 (2006); Melissa Jonson-Reid, *An Ounce of Prevention: Connections to Schools*, 31 CHILD. & SCHS. 67, 67–68 (2009). 264. See, e.g. Bandura, *Agentic Perspective*, *supra* note 204, at 17.

265. DUREX NETWORK, *supra* note 212, at 27.

persuasive.²⁶⁶ Legal sanctions are typically blunt instruments that are not calibrated to account for dispositional differences, and they may not therefore be effective in changing health behaviors. In sum, even Ayres and Baker acknowledge that:

Even if you reject [the premise] about the utility of criminalization, we hope that you will nonetheless accept that enhancing condom use in first-time encounters is a worthy policy goal . . . [Even] if criminalization is not the answer, . . . other social policies aimed at promoting condom use in first-time sexual encounters—programs such as public service announcements, education programs, or civil penalties—should be taken very seriously.²⁶⁷

CONCLUSION

While the rate of sexually transmitted disease is a topic of great concern in this country, lawmakers misplace their energies in seeking to punish risky sex. In passing and proposing laws seeking to slow the spread of disease by sanctioning individuals who transmit sexual disease or have sex without a condom, they fail to attend to several key points—points which refute their assumptions and undermine their conclusions.

First, existing legal measures and legal proposals designed to punish risky sexual behavior are not likely to reduce the spread of disease or the incidence of unintended teen pregnancies, largely because they are neither predicated on nor informed by adolescent psychosocial science. Adolescents are the age group most likely to engage in the behaviors that spread sexual disease, and they are the age group least likely to disengage in these behaviors in response to punishments. Because adolescents enter puberty before their brains and corresponding reasoning and emotional systems are fully mature, they are unlikely to make decisions about sexual behavior in reliance on such laws. Second, because punishment does not deter risky behaviors in teens unless it is highly certain to occur, the sanctions built into these proposals are unlikely to be effective. Third, adolescents are unlikely to be aware of these laws, making it even less likely that they will consider potential legal penalties in making decisions about sexual behaviors.

Although such laws are unlikely to be successful in slowing the spread of disease, however, they may have a negative impact on other audiences.

266. David K. Sherman, Traci Mann & John A. Updegraff, *Approach/Avoidance Motivation, Message Framing, and Health Behavior: Understanding the Congruency Effect*, 30 MOTIVATION & EMOTION 165 (2006); Traci Mann, David Sherman & John Updegraff, *Dispositional Motivations and Message Framing: A Test of the Congruency Hypothesis in College Students*, 23 HEALTH PSYCHOL. 330 (2004).

267. Ayres & Baker, *supra* note 4, at 666.

The expressive effect of these laws may be to alter adult attitudes about adolescent sexuality, leading to decreased intergenerational communication about sex. Because most teens rely on parents to help them access health care services and because teens who have positive communication experiences with their parents are less likely to engage in risky sex, the effect of these laws may in fact be negative instead of positive. In the end, the legal system's most productive role in addressing this public health crisis may be a legislative and executive, not a punitive, one: to create and fund programs designed to increase teen self-efficacy and connectedness with parents and schools, rather than to punish teen sexual decision-making.