

INFORMATION MARKETS AS GAMES OF CHANCE

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INTRODUCTION

Humans set up vast machinery to control uncertainty. In pursuit of firm answers, we assemble smart deliberators and take their “verdict” as correct; we consult experts; we poll our peers.¹ But recent experiments suggest that one metric—the price signal—can produce startlingly accurate predictions of uncertain events.²

In an information market, people trade shares in uncertain outcomes.³ A now-infamous experiment demonstrates how information

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¹ See Cass R. Sunstein, *Group Judgments: Statistical Means, Deliberation, and Information Markets*, 80 N.Y.U. L. REV. 962, 963 (2005) (explaining that statistical methods, deliberation accompanied by a reasoned exchange of ideas and opinions, and information markets all elicit information held by the members of groups).

² *Id.* at 1023-34 (discussing the advantages of the price signal and providing examples of its success).

³ Information markets have inspired a great deal of academic work in the recent past. See generally INFORMATION MARKETS: A NEW WAY OF MAKING DECISIONS (Robert W. Hahn & Paul C. Tetlock eds., 2006) [hereinafter INFORMATION MARKETS] (addressing a number of theoretical and practical questions on information markets); CASS R. SUNSTEIN, INFOTOPIA: HOW MANY MINDS PRODUCE KNOWLEDGE (2006) (exploring different methods for accessing many minds, with a special focus on information markets); Michael Abramowicz, *Information Markets, Administrative Decisionmaking, and Predictive Cost-Benefit Analysis*, 71 U. CHI. L. REV. 933 (2004) (suggesting that information markets could help objectively assess government policy); Michael Abramowicz, *Predictive Decisionmaking*, 92 VA. L. REV. 69, 82 (2006) (“Because information markets need not have any legal consequences, they complete the separation of a prediction mechanism from the decision about what the government should do with the prediction.”); Robert W. Hahn & Paul C. Tetlock, *Using Information Markets To Improve Public Decision Making*, 29 HARV. J.L. & PUB. POL’Y 213 (2005) (presenting information markets as a new framework for containing uncertainty and arguing that information from the prices in these markets is likely to be much more accurate than other forecasts); Saul Levmore, *Simply Efficient Markets and the Role of Regulation: Lessons from the Iowa Electronic Markets and the Hollywood Stock Exchange*, 28 J. CORP. L. 589 (2003) (exploring how the lessons from simple markets, such as information markets, can aid in understanding

markets can work in a practical setting. In 2001, the U.S. Department of Defense and other federal agencies launched a pilot project called the Policy Analysis Market in order to predict trends in global politics that could affect U.S. interests.⁴ Prices of shares in the market would indicate whether participants thought certain events were probable or improbable. For example, one “future” was the military preparedness of other nations.⁵ Put simply, a high price would predict a high level of preparedness. The government scuttled the market after a political backlash in 2003, but the example illustrates how information markets can serve as an “important supplement to deliberative processes.”⁶

There are good reasons to believe that groups can come up with better answers than individual experts.⁷ But when groups, such as teams of government officials, assemble to solve problems, they commonly fall into “groupthink.”⁸ Members may, for example, erroneously defer en masse to an apparently knowledgeable individual, or they may decline to air unorthodox views for fear of extrinsic social consequences.⁹ These flaws can produce unwise decisions.

An information market, like a deliberative group, “aggregate[s] information . . . about future events.”¹⁰ But what distinguishes the information market is the availability of the price signal.¹¹ When a future uncertain event is identified, players bid on chances based on

and regulating more complex markets); Sunstein, *supra* note 1 (discussing the remarkable successes of information markets and arguing that they are worth sustained attention); Matthew Einbinder, Note, *Information Markets: Using Market Predictions to Make Administrative Decisions*, 92 VA. L. REV. 149 (2006) (proposing that decision makers in an administrative context should use information markets to inform their decisions because of the empirical evidence of their predictive accuracy); Robin Hanson, *Shall We Vote on Values, but Bet on Beliefs?* (Sept. 2003) (unpublished manuscript), available at <http://hanson.gmu.edu/futarchy.pdf> (proposing that we can change our government institutions to rely more on speculative markets because such markets induce people to acquire and share knowledge).

⁴ See Robin D. Hanson, *Designing Real Terrorism Futures*, 128 PUB. CHOICE 257, 259-61 (2006) (detailing the purpose and design of the Policy Analysis Market).

⁵ *Id.* at 259.

⁶ Sunstein, *supra* note 1, at 1028-29.

⁷ See *id.* at 971-72 (providing examples of studies that show that the average answer of groups of sufficiently large sizes is usually very accurate). For a popular account, see generally JAMES SUROWIECKI, *THE WISDOM OF CROWDS*, at xiii (2004) (exploring how “under the right circumstances, groups are remarkably intelligent and are often smarter than the smartest people in them”).

⁸ Sunstein, *supra* note 1, at 965.

⁹ *Id.* at 984-86.

¹⁰ Emile Servan-Schreiber et al., *Prediction Markets: Does Money Matter?*, 14 ELEC-TRONIC MARKETS 243, 243 (2004).

¹¹ Sunstein, *supra* note 1, at 1023.

whether they think the event is likely or unlikely to occur. The price at any point in time represents the players' "collective consensus" on the likelihood of the outcome.¹²

Cass Sunstein argues that information markets can correct for the problems inherent in deliberative groups by

impos[ing] the right incentives for people to disclose the information that they hold. . . . [I]n a deliberating group, members often have little incentive to say what they know. By speaking out, they provide benefits to others, while possibly facing high private costs. Information markets realign incentives in a way that is precisely designed to overcome these problems. Because investments in such markets are generally not disclosed to the public, investors need not fear reputational sanctions if, for example, they have predicted that a company's sales will be low or that a certain candidate will be elected president.¹³

Because people must put their own money at risk in an information market, they tend to use the knowledge they have.¹⁴ "Insiders" act on closely held knowledge, which makes prices reflect reality to the greatest possible extent.¹⁵

Despite the conspicuous fate of the Policy Analysis Market, successful counterexamples abound. The Iowa Electronic Market (IEM) is perhaps the most famous information market.¹⁶ It allows traders to wager a limited amount of real money on a variety of future events.¹⁷ In a consistent and well-publicized stream of successes, IEM traders predicted the results of four U.S. elections within a very small margin of error.¹⁸

¹² See Servan-Schreiber et al., *supra* note 10, at 243 ("[T]he trading price reflects the traders' collective consensus about the expected [outcome]."); Sunstein, *supra* note 1, at 1030 ("[T]he market price reflects the aggregate information held by participants.")

¹³ Sunstein, *supra* note 1, at 1024.

¹⁴ *Id.*

¹⁵ See, e.g., Hanson, *supra* note 4, at 265 (noting that in terrorism futures markets, terrorists or people close to terrorists might be enticed to reveal valuable information).

¹⁶ IEM is hosted by professors at the University of Iowa's Henry B. Tippie College of Business. See Joyce E. Berg & Thomas A. Rietz, *The Iowa Electronic Markets: Stylized Facts and Open Issues*, in INFORMATION MARKETS, *supra* note 3, at 142, 143-45 (describing the IEM).

¹⁷ See *id.* at 143. IEM's most celebrated predictions have concerned election results, but other predictions include "political appointments, outcomes of legislative processes, international relationships, economic indicators, movie box office receipts, market capitalizations after an initial public offering (IPO), corporate earnings forecasts, corporate stock price returns, and the incidence of influenza." *Id.*

¹⁸ See Levmore, *supra* note 3, at 591 ("The market-share security on the IEM has averaged an error rate of 1.37% over the last four elections, and this . . . error is well

Another popular market is the Hollywood Stock Exchange (HSX), which is similar in most respects to the IEM except that its traders use “play money.”¹⁹ Participants trade “virtual” shares in actors and movies and attempt to predict box office revenues.²⁰ The information the market produces is accurate enough that “HSX has started to sell data collected through the Exchange to the major studios which can profit from accurate predictions of film revenues.”²¹

Perhaps the most ambitious view is that markets can improve government decision making by aggregating views on what policies are likely or unlikely to work. Economist Robin Hanson proposes, for example, that we “vote on values, but bet on beliefs”—that is, we should rely on democracy to identify “what we want,” but “let speculative markets say how to get what we want.”²²

In a 2002 article, Tom Bell explored the feasibility and legality of markets for “science claims”—theories that eventually would prove to be true or false.²³ Bell identified the concern that such markets might run afoul of state and federal gambling laws, concluding that the legal analysis is “uncomfortably uncertain”²⁴ due to a “dearth of controlling

below that of the major polling organizations.”). Betting on presidential elections is not a new phenomenon. See Paul W. Rhode & Koleman S. Strumpf, Historical Prediction Markets: Wagering on Presidential Elections 2 (Nov. 2003) (unpublished manuscript), available at http://www.unc.edu/~cigar/papers/BettingPaper_10Nov2003_long2.pdf (“At times in the late 19th and early 20th centuries, betting on political outcomes at the Curb Exchange in New York would exceed trading in stocks and bonds.”).

¹⁹ Levmore, *supra* note 3, at 592.

²⁰ *Id.*

²¹ *Id.* at 593. There are many other anecdotes on the accuracy of information markets:

Orange juice futures improved on National Weather Service forecasts, horse race markets beat horse race experts, Oscar markets beat columnist forecasts, gas-demand markets beat gas-demand experts, stock markets beat the official NASA panel at fingering the guilty company in the Challenger accident, election markets beat national opinion polls, and corporate sales markets beat official corporate forecasts.

Robin Hanson, *Foul Play in Information Markets*, in INFORMATION MARKETS, *supra* note 3, at 126, 126 (citations omitted).

²² Hanson, *supra* note 3, at 2. Hanson offers a rule for policy formation: “when speculative markets clearly estimate that a proposed policy would increase expected national welfare, that policy becomes law.” *Id.*

²³ Tom W. Bell, *Gambling for the Good, Trading for the Future: The Legality of Markets in Science Claims*, 5 CHAP. L. REV. 159, 159 & n.1 (2002).

²⁴ *Id.* at 167.

cases or clearly applicable statutes.”²⁵ More recent analyses have also identified this problem and have cautioned that the apparent similarity between information markets and gambling may prevent information markets from thriving.²⁶

This Comment shows why policymakers should view this legal uncertainty with seriousness. As experiments suggest, the advantages of information markets are not limited to tax revenue and amusement—the perks that recommend activities that traditionally would be called gambling. Information markets promise second-order benefits—possibly even new product markets for predictions, as in the case of HSX. An ambiguous legal status discourages experimentation in two dimensions: first, prospective operators of information markets may be deterred by the threat of prosecution under state or federal gambling statutes;²⁷ and second, payment-system providers could refuse to provide liquidity to traders in nascent markets.²⁸

In the years since the Internet has emerged as an economic force, law enforcement authorities²⁹ and academics³⁰ have begun to confront

²⁵ *Id.* at 180; see also Tom W. Bell, *Prediction Markets for Promoting the Progress of Science and the Useful Arts*, 14 GEO. MASON L. REV. 37, 65 (2006) (“A real-money prediction market in claims about science and technology should run little risk of violating the various prohibitions that U.S. law imposes on unlicensed gaming transactions. Uncertainty persists, however, due to the vagaries of anti-gambling laws and the still-untested question of their application to prediction markets.”). Another recent article proposes that the Commodities Futures Trading Commission should regulate information markets. See Robert W. Hahn & Paul C. Tetlock, *A New Approach for Regulating Information Markets*, 29 J. REG. ECON. 265, 268 (2006).

²⁶ See Robert W. Hahn & Paul C. Tetlock, *Introduction to Information Markets*, in INFORMATION MARKETS, *supra* note 3, at 1, 6 (identifying the concern that states may treat information markets as “a kind of Internet gambling”); Posting of Saul Levmore to University of Chicago Law School Faculty Blog, *Gambling Laws*, http://uchicagolaw.typepad.com/faculty/2006/08/gambling_laws.html (Aug. 11, 2006, 12:06 PM) (same).

²⁷ Bell, *supra* note 23, at 165-68; see, e.g., *BetonSports, 3 Other Companies Are Indicted in U.S.*, WALL ST. J., Jul. 18, 2006, at D2 (reporting the indictment of a prominent online sports gambling company for racketeering, conspiracy, and fraud).

²⁸ See Michael Anastasio, *The Enforceability of Internet Gambling Debts: Laws, Policies, and Causes of Action*, 6 VA. J.L. & TECH. 6, ¶¶ 8-12 (2001), <http://www.vjolt.net/vol6/issue1/v6i1a06-Anastasio.html> (explaining that, because contracts for gambling debt are illegal in most states, there is an active dispute over the ability of credit card providers to accept charges from Internet gambling activities and to collect debts incurred from such gambling transactions); see also *infra* note 31 and accompanying text (discussing the Unlawful Internet Gambling Enforcement Act of 2006).

²⁹ See generally U.S. GEN. ACCOUNTING OFFICE, *INTERNET GAMBLING: AN OVERVIEW OF THE ISSUES* (2002), <http://www.gao.gov/new.items/d0389.pdf> (presenting Congress with research on some of the challenges of regulating online gambling).

the new problems of online gambling. The information market straddles a blurry line between legitimate commerce and illegal gambling. As online entertainment renews regulatory concerns about gambling, it is important to determine the place of information markets in U.S. gambling law.³¹ The specter of enforcement in an era of increased visibility of “problem gambling” may deter social experiments and chill the development of valuable new products.

This Comment presses two claims. The first, a descriptive claim about gambling law doctrine, is that some information markets are not clearly illegal games of chance, but the question is close enough to warrant concern. The second, a normative claim, is that information markets are distinguishable from most traditional gambling forms, and for that reason governments should consider allowing information market experiments to thrive without the threat of prosecution. To that end, I propose a carve-out in state gambling laws for specified information market experiments. History reveals a variety of exceptions to serve other ends, and I argue that information markets deserve similar treatment.

³⁰ See generally JOHN LYMAN MASON & MICHAEL NELSON, GOVERNING GAMBLING 81-85 (2001) (discussing the proliferation of Internet gambling and congressional efforts to regulate it); I. NELSON ROSE & MARTIN D. OWENS, JR., INTERNET GAMING LAW (2005) (examining the legality of online gambling). One analysis that long preceded the public embrace of the Internet unwittingly provided a point of contrast for Internet regulation. During the heyday of government regulation in the mid-twentieth century, games

required a fixed location and schedule. The bettor had to be able to come to a particular place at a particular time to place his or her bet. This made the gambling organization vulnerable to police intervention at precisely that point. The numbers collector could be easily identified by the flow of traffic at mid-morning.

Peter Reuter, *Police Regulation of Illegal Gambling: Frustrations of Symbolic Enforcement*, 474 ANNALS AM. ACAD. POL. & SOC. SCI. 36, 38 (1984).

³¹ The most efficient information markets may require technology such as the Internet. See Michael Abramowicz, *Cyberadjudication*, 86 IOWA L. REV. 533, 571-74 (2001) (presenting the “technological, geographic, and theoretic” arguments for the increased efficiency of Internet markets). Whether U.S. law reaches Internet gambling transactions, particularly those that involve a foreign jurisdiction, is the subject of ongoing debate. Bruce P. Keller, *The Game’s the Same: Why Gambling in Cyberspace Violates Federal Law*, 108 YALE L.J. 1569, 1570-73 (1999). In October 2006, Congress enacted the Unlawful Internet Gambling Enforcement Act of 2006, which seeks to discourage illegal online gambling by requiring financial institutions to ensure they do not provide payment systems for such activities. Pub. L. No. 109-347, tit. 8, 120 Stat. 1884. This Comment assumes that information markets are within the reach of federal and state law, and thus does not address the question of whether information markets on the Internet might receive different legal treatment than non-Internet markets.

Part I provides a brief history of chance games and the vexing problems of prohibiting and regulating them. It reviews policy rationales for government involvement in gaming and outlines the associated problems of clarity, consistency, and enforcement. Part II considers whether or not information markets are clearly illegal under current state and federal gambling laws. Part III presents a rationale for encouraging experimentation in information markets and proposes an exception in the gambling laws to accommodate such experimentation.

I. GAMES OF CHANCE

Deciding whether information markets are properly classified as games of chance, and determining whether the law should treat them that way, requires a brief excursion into the nature of chance games and the history of the uneasy relationship between gambling and the state.

A. Historical Overview

Playing the odds is among the oldest human rituals. Archaeological discoveries,³² literary works,³³ and early laws³⁴ reveal chance games-

³² See REUVEN BRENNER WITH GABRIELLE A. BRENNER, *GAMBLING AND SPECULATION: A THEORY, A HISTORY, AND A FUTURE OF SOME HUMAN DECISIONS* 8 (1990) (describing the popularity of lotteries and games of chance in ancient Greece and Rome); Ronald J. Rychlak, *Lotteries, Revenues and Social Costs: A Historical Examination of State-Sponsored Gambling*, 34 B.C. L. REV. 11, 15 (1992) (“Various games of chance existed among ancient Egyptians, Chinese, Japanese, Hebrews, Greeks, Romans and the early Germanic Tribes.”).

³³ See Ronald J. Rychlak, *The Introduction of Casino Gambling: Public Policy and the Law*, 64 MISS. L.J. 291, 297 n.36 (1995) (quoting several of William Shakespeare’s early seventeenth century plays that refer to a “lottery”). A method of selection that suggests a modern dice game or drawing of straws appears in ancient scripture. See, e.g., *Leviticus* 16:8 (“And Aaron shall cast lots upon the two goats; one lot for the LORD, and the other lot for [the scapegoat].”); *Jonah* 1:7 (“And they said every one to his fellow, ‘Come, and let us cast lots, that we may know for whose cause this evil is upon us.’ So they cast lots and the lot fell upon Jonah.”); see also BRENNER WITH BRENNER, *supra* note 32, at 2-7 (describing the use of “lots” in ritual as well as in social and political decisions). Brenner cautions that, unlike some modern chance games, the ancient practices “were related to making decisions, to making up one’s mind in legal and religious matters, and had nothing to do with games of chance” because people believed the result was determined by divine power. *Id.* at 5.

³⁴ The best-known attempt in England to curb gambling is the Statute of Anne, enacted in 1710. See Gaming Act, 1710, 9 Ann., c. 14 (Eng.) (voiding some gambling debts and allowing losers to sue winners to recover lost money); see also I. NELSON

—sometimes with prizes—that span swaths of space and time. Since gambling (defined broadly as “making a bet”³⁵) is widely regarded today as a vice,³⁶ one might guess that it was stigmatized throughout modern history. It was not. Chance games—legal and otherwise—were commonplace in American colonial culture, and they sometimes served important social and economic ends.³⁷ People embraced lotteries because of their large revenue potential and their usefulness in bolstering civic and cultural institutions.³⁸ Importantly, government leaders realized that “raffles offered a more painless method of raising cash than did the imposition of a new tax.”³⁹

ROSE, GAMBLING AND THE LAW 73 (1986) (describing the Statute of Anne and its purposes and effects in regard to gambling).

³⁵ BLACK’S LAW DICTIONARY 679 (6th ed. 1990).

³⁶ See Keller, *supra* note 31, at 1569 (“For more than a century, Americans have believed that the social ills fostered by gambling outweigh its recreational value.”). In the 1970s, sociologist David Oldman immersed himself in the gambler’s world by working part-time as a casino dealer. Oldman found “a polarization of attitude between those who gamble regularly and those who do not. The former are either incomprehensible to the latter, or else typified in terms of defect or deviance.” David Oldman, *Chance and Skill: A Study of Roulette*, 8 SOC. 407, 407 (1974). London’s Royal Commission on Betting, Lotteries and Gaming was counseled by its Church Committee that gambling “divorces wealth from worth and is of such a nature that if it becomes a governing principle of business and finance it would mean utter chaos.” *Id.* at 408.

³⁷ See generally JOHN SAMUEL EZELL, FORTUNE’S MERRY WHEEL: THE LOTTERY IN AMERICA 29-59 (1960) (discussing the historical background of the lottery in colonial America); Rychlak, *supra* note 33, at 299-300 (describing the use of lotteries to raise money for the Jamestown settlement in Virginia, to improve infrastructure in colonial America, and to found several now-prominent colleges and universities). Lotteries were particularly important to early social and economic development in Pennsylvania. See EDMUND S. MORGAN, BENJAMIN FRANKLIN 67-68 (2002) (describing a wildly popular lottery plan awarding “prizes,” through which Benjamin Franklin raised funds to buy armaments and build facilities for the Pennsylvania militia). Importantly, the lottery in early America was, for private and public fundraisers, “a substitute for what are now customary sources of public and private finance,” such as banks and securities markets. BRENNER WITH BRENNER, *supra* note 32, at 13.

³⁸ See John Ezell, *The Lottery in Colonial America*, 5 WM. & MARY Q. 185, 194-95 (1948) (discussing the factors motivating colonial governments to adopt lotteries). With the exception of the Quakers, who were morally opposed to gambling, *id.* at 188, early Americans generally

felt that as long as there was protection against fraud, it was their own affair if they risked their money. This feeling was particularly strong when the undertaking was linked with an enterprise for public good. Loyal citizens were even willing to circumvent the law by holding a drawing outside the colony if need be, when a church or school was to benefit.

Id. at 194.

³⁹ *Id.* See also ROBERT J. MACCOUN & PETER REUTER, DRUG WAR HERESIES: LEARNING FROM OTHER VICIES, TIMES, AND PLACES 132 (2001) (“By 1831 eight states spon-

Legal gambling in America waned in the early twentieth century.⁴⁰ But states again embraced lotteries beginning in the 1960s because of the potential for state-run games to raise revenue and ease the tax burden on residents.⁴¹ Over time, moral objections to gambling increasingly yielded to apparent economic interests. Lawrence Friedman argues that the historical growth in popularity of “vices” such as gambling is emblematic of the early twentieth century cultural change that followed the repeal of Prohibition.⁴² He further argues that states, seeing the revenue potential, rushed to exploit the movement in mores.⁴³

At the end of the twentieth century, gambling was widespread; about seventy percent of Americans in 1998 admitted to gambling during the previous year.⁴⁴ By 2001, thirty-eight states and the District of Columbia had government-run lotteries,⁴⁵ and those programs appeared to have broad public support.⁴⁶ Sports betting, a very different

sored 420 lotteries yielding \$66 million, over five times the budget of the federal government.”).

⁴⁰ See Rychlak, *supra* note 33, at 303 (discussing the relative lack of legalized and state-sponsored gambling from the turn of the century until the mid-1960s). For a discussion of the development of gambling regulation over time, see *infra* Part I.C.

⁴¹ See Rychlak, *supra* note 33, at 303 (discussing several examples of the reintroduction of the state-run lottery); see also NAT'L GAMBLING IMPACT STUDY COMM'N, REPORT 2-1 (1999), <http://govinfo.library.unt.edu/ngisc/reports/fullrpt.html> [hereinafter COMMISSION REPORT] (finding that “in 1997 lotteries existed in 37 states and the District of Columbia and garnered \$34 billion in sales”). Historians posit that governments sometimes respond to underground numbers games by establishing legal lotteries in order to capture tax revenue. See, e.g., BRENNER WITH BRENNER, *supra* note 32, at 9-10 (recounting the reinstatement of the state-sponsored lottery in post-Revolution France when the government realized it was forgoing a revenue source).

⁴² LAWRENCE M. FRIEDMAN, *AMERICAN LAW IN THE 20TH CENTURY* 228-29 (2002).

⁴³ See *id.* (“Lottery laws turned state governments into high-class bookies.”).

⁴⁴ MACCOUN & REUTER, *supra* note 39, at 129 (“About 68 percent of the adult population in 1998 reported having participated in some form of recreational gambling in the past year; in that same year, about 64 percent consumed alcohol.” (citations omitted)).

⁴⁵ See MASON & NELSON, *supra* note 30, at 10 (listing state lotteries and their dates of establishment).

⁴⁶ See *id.* at 13 (“Public support for lotteries in national Gallup polls rose from 61 percent in 1975 to 72 percent in 1982, and has remained above 70 percent ever since.”). However, a recent survey suggests public support may be slipping as financial stakes increase. See PEW RESEARCH CTR., *GAMBLING: AS THE TAKE RISES, SO DOES PUBLIC CONCERN* 2 (2006), <http://pewresearch.org/assets/social/pdf/Gambling.pdf> (“The negative turn in attitudes toward gambling appears to be driven by concerns that people are gambling too much rather than by any revival of the once common view that gambling is immoral.”).

kind of game, is also wildly popular.⁴⁷ Although legal sports bets can be placed through casinos in Nevada, it is estimated that up to ninety-nine percent of all sports betting in America is illegal.⁴⁸ It seems to be particularly attractive to young people.⁴⁹

B. *The Government's Interest*

If a chance game is such an economically potent (and, presumably, personally exhilarating) transaction, then why heavily regulate or prohibit it? Over time, a number of different rationales have been posed, and the type and extent of regulations have varied.

It is hard to see, at first glance, how a roulette wheel could create wealth. Thus, a fundamental criticism of gambling is that it “involves simply sterile transfers of money or goods between individuals, creating no new money or goods.”⁵⁰ This is too simple a critique, as it ignores the subjective entertainment value to gamblers.⁵¹ Even if gam-

⁴⁷ See MASON & NELSON, *supra* note 30, at 87-88 (arguing that the popularity of sports betting is driven both by Americans' desire to gamble generally and by widespread access to information that is useful in sports betting).

⁴⁸ *Id.* at 85-86. The authors note that the total annual amount of sports bets in the United States is likely between \$85 billion and \$400 billion, hardly any of which is reported to the Internal Revenue Service. *Id.* The reluctance to legalize sports betting is grounded not in “puritanical attitudes,” but in “concerns about the threat it would pose to the integrity of games that are close to holy rites in contemporary American life.” MACCOUN & REUTER, *supra* note 39, at 139-40. But legalization of other gambling forms may have brightened the prospects for illegal sports bookmakers. See *id.* at 143 (“Gambling is legitimized and the stigma of betting with bookmakers rather than legal operations seems to be declining.”); *id.* at 136 (“The major forms of gambling are now readily available in legal forms, with the important exception of wagering on sports events. . . . Off-track betting is now spreading throughout the country, allowing bettors to wager on horse races nationally, exactly the service offered by the classic bookmaker depicted in the film *The Sting*.”). In perhaps the most infamous corruption scandal in professional sports history, eight Chicago White Sox players conspired with gamblers to fix the 1919 World Series. The “Black Sox” lost to the Cincinnati Reds in eight games. See generally ELIOT ASINOF, *EIGHT MEN OUT: THE BLACK SOX AND THE 1919 WORLD SERIES* (Henry Holt & Co. 1987) (1963).

⁴⁹ See MASON & NELSON, *supra* note 30, at 88 (citing a 1999 Gallup poll in which “27 percent of teenagers reported that they had bet on a professional sporting event in the past year,” compared with only thirteen percent of the surveyed adults).

⁵⁰ PAUL ANTHONY SAMUELSON, *ECONOMICS* 425 (1971).

⁵¹ See Guy Calvert, *Gambling America: Balancing the Risks of Gambling and Its Regulation*, POLICY ANALYSIS (CATO Inst., Washington, D.C.), June 18, 1999, at 7, available at <http://www.cato.org/pubs/pas/pa349.pdf> (discussing an additional, and often ignored, utility value of gambling: “the inherent enjoyment of the game”); see also Oldman, *supra* note 36, at 424 (arguing that “the overall monetary loss that one makes when playing roulette” is properly seen as a payment for roulette’s entertainment value to the player—an “entrance fee”).

bling is not a zero-sum pursuit, however, it may carry negative externalities into the broader social realm. Gambling “disorders,” for example, are now commonly acknowledged in psychology⁵² and in popular culture. In the mid-1990s, Congress created the National Gambling Impact Study Commission to “conduct a comprehensive study of the social and economic impacts of gambling in the United States.”⁵³ The Commission released its lengthy report in 1999,⁵⁴ concluding that pathological gambling causes a “variety of financial, physical, and emotional problems, including divorce, domestic violence, child abuse and neglect, and a range of problems stemming from . . . severe financial hardship.”⁵⁵ In a recent example of the effects of compulsive gambling, a college student was charged with robbing a Pennsylvania bank, allegedly in order to feed his gambling addiction.⁵⁶ Judges have even allowed evidence of such disorders in criminal cases to support diminished capacity arguments for sentence reductions.⁵⁷ The problem has become so widespread that some states now offer compulsive gamblers a state-sponsored self-help option.⁵⁸ For example, Missouri has established a voluntary program by which a gambler may contract with a casino operator to permanently bar her from the casino’s premises.⁵⁹ The law enlists the casinos to ensure that the gambler cannot bend on her promise not to gamble.⁶⁰

Internet gambling is likely to present a particularly potent threat to younger people, who find the technology exciting and easily acces-

⁵² See COMMISSION REPORT, *supra* note 41, at 4-2 (listing the characteristics of “pathological gambling” as defined under the American Psychiatric Association Diagnostic and Statistical Manual).

⁵³ National Gambling Impact Study Commission Act, Pub. L. No. 104-169, § 2, 110 Stat. 1482 (1996).

⁵⁴ COMMISSION REPORT, *supra* note 41.

⁵⁵ *Id.* at 4-13. Other pronounced consequences for pathological gamblers included unemployment and bankruptcy. *Id.*

⁵⁶ Rachel Dissell, *Student from Ohio Robbed Bank To Feed Gambling Habit, Lawyer Says*, PLAIN DEALER (Cleveland), Dec. 14, 2005, at A11.

⁵⁷ See generally Justin W. Starr, Comment, *Diminished Capacity Departures for Compulsive Gambling: Punishing the Pathological or Pardoning the Common Criminal?*, 2003 BYU L. REV. 385 (discussing, and ultimately criticizing, downward departures in sentencing for compulsive gamblers).

⁵⁸ See Andy Rhea, *Voluntary Self Exclusion Lists: How They Work and Potential Problems*, 9 GAMING L. REV. 462, 463-64 (2005) (discussing programs through which individuals can voluntarily bar themselves from casinos).

⁵⁹ See *id.* (explaining Missouri’s program). Similar programs exist in New Jersey, Indiana, Mississippi, Illinois, and Michigan. *Id.* at 463.

⁶⁰ *Id.* at 463-64.

sible.⁶¹ In addition to the effects on the gamblers themselves, another policy concern is that gambling will indirectly further other crime. For example, a casino—online or not—is an attractive front for money laundering.⁶²

C. Regulatory Approaches

Efforts in the American colonies to restrict gambling were aimed at rooting out “idleness,” or the waste of time and money.⁶³ This seems to have remained a minority view as legal lotteries flourished until the early 1800s.⁶⁴ By that time, a majority of the states had established drawings.⁶⁵ But widespread corruption in the lottery business,⁶⁶ combined with renewed moralistic critiques of gambling,⁶⁷ prompted a quick tightening of the noose around lotteries through the mid-1800s,⁶⁸ until almost every state had prohibited them⁶⁹ and Congress had banned lottery materials from the mail and interstate com-

⁶¹ MASON & NELSON, *supra* note 30, at 83. *But see* James F. Smith & Vicki Abt, *Gambling as Play*, 474 ANNALS AM. ACAD. POL. & SOC. SCI. 122, 131-32 (1984) (explaining how games popular with children and adolescents tend to involve at least some skill, whereas many games popular with adults are purely chance based).

⁶² *See* MASON & NELSON, *supra* note 30, at 83 (explaining how money launderers could take advantage of unregulated Internet gaming sites).

⁶³ *See* Rychlak, *supra* note 33, at 298 (describing Puritans’ aversion to the “unproductive use of time”).

⁶⁴ *See* Rychlak, *supra* note 32, at 32 (“Until the early 1800s, there was little opposition to state-conducted lotteries.”).

⁶⁵ *See id.* at 31 (noting that due to the lack of a banking system or strong central government, lotteries were necessary to fund public works).

⁶⁶ *See* MACCOUN & REUTER, *supra* note 39, at 132-33 (recounting corruption scandals of the late nineteenth century).

⁶⁷ A Supreme Court opinion from this era colorfully states the public morals critique and draws an interesting distinction between lotteries and what apparently were seen as less harmful games:

The suppression of nuisances injurious to public health or morality is among the most important duties of government. Experience has shown that the common forms of gambling are comparatively innocuous when placed in contrast with the wide-spread pestilence of lotteries. The former are confined to a few persons and places, but the latter infests the whole community: it enters every dwelling; it reaches every class; it preys upon the hard earnings of the poor; it plunders the ignorant and simple.

Phalen v. Virginia, 49 U.S. 163, 168 (1850).

⁶⁸ *See* Rychlak, *supra* note 32, at 32-38 (explaining how social problems associated with state-sponsored gambling and growing concern about fraudulent lotteries resulted in more state control of lotteries).

⁶⁹ *Id.* at 44.

merce.⁷⁰ The U.S. Supreme Court reviewed, and famously refused to disturb, Congress's lottery prohibitions in *Champion v. Ames*.⁷¹

The federal government's twentieth century attempts to curb prize gaming initially were aimed at fighting an organized crime problem that was viewed as both a cause and an effect of illegal gambling. The Senate's influential "Kefauver Committee," or the Special Committee to Investigate Organized Crime in Interstate Commerce, responded to the apparent ineffectiveness of state gambling enforcement and the easy transport of gambling devices in interstate commerce.⁷² The Committee's investigation culminated in the passage of the Johnson Act.⁷³ Its investigation also informed Attorney General Robert F. Kennedy's later campaign against organized crime⁷⁴ and the resulting legislative efforts, which included the Interstate Wire Act,⁷⁵ the Travel Act,⁷⁶ and a law restricting the "transportation of wa-

⁷⁰ See Act of Mar. 2, 1895, ch. 191, 28 Stat. 963 (prohibiting the movement of lottery tickets through interstate and foreign commerce).

⁷¹ (*Lottery Case*), 188 U.S. 321 (1903). The Court held that the constitutional power to regulate interstate commerce included the power to prohibit items from entering such commerce in the first place:

If a State, when considering legislation for the suppression of lotteries within its own limits, may properly take into view the evils that inhere in the raising of money, in that mode, why may not Congress, invested with the power to regulate commerce among the several States, provide that such commerce shall not be polluted by the carrying of lottery tickets from one State to another?

Id. at 356. The Court also recalled with approval its earlier admonition that "no state may bargain away its power to protect the public morals." *Id.* (citing *Douglas v. Kentucky*, 168 U.S. 488, 497 (1897)).

⁷² See G. Robert Blakey & Harold A. Kurland, *The Development of the Federal Law of Gambling*, 63 CORNELL L. REV. 923, 960-62 (1978) (explaining the Kefauver Committee's mandate and its role in policy formation).

⁷³ 15 U.S.C. §§ 1171-1178 (2000) (banning the transport of certain gaming devices across state lines).

⁷⁴ See Blakey & Kurland, *supra* note 72, at 964-77 (reviewing Kennedy's fight against organized crime and the related legislation).

⁷⁵ 18 U.S.C. § 1084 (2000). The relevant section provides:

Whoever being engaged in the business of betting or wagering knowingly uses a wire communication facility for the transmission in interstate or foreign commerce of bets or wagers or information assisting in the placing of bets or wagers on any sporting event or contest, or for the transmission of a wire communication which entitles the recipient to receive money or credit as a result of bets or wagers, or for information assisting in the placing of bets or wagers, shall be fined under this title or imprisoned not more than two years, or both.

Id. § 1084(a).

⁷⁶ *Id.* § 1952 (prohibiting travel across state lines with "intent" to engage in illegal business transactions).

gering paraphernalia.”⁷⁷ In 1970, Congress enacted the Organized Crime Control Act, which further restricted gambling activities.⁷⁸ In response to the technological boom, Congress has considered ways to curb Internet gambling. One failed attempt was the Internet Gambling Prohibition Act,⁷⁹ introduced by Senator John Kyl of Arizona in 1997.⁸⁰ Very recently, Congress enacted the Unlawful Internet Gambling Enforcement Act of 2006, which seeks to prevent credit providers from participating in illegal online gambling operations.⁸¹

A diffuse array of state and federal laws regulate games of chance today.⁸² State laws dominate in the majority of cases, because most of the relevant federal statutes define offenses by reference to state law.⁸³ Recent developments, however, suggest that an increase in the federal role might be inevitable.⁸⁴

1. Policy and Enforcement Concerns

While concern for “public health or morality” may be a plausible justification for the restriction of any activity,⁸⁵ a careful analysis exposes a degree of inconsistency in policy and enforcement in the

⁷⁷ *Id.* § 1953.

⁷⁸ *Id.* § 1955 (prohibiting gambling businesses that meet certain requirements).

⁷⁹ S. 474, 105th Cong. (1997) (proposing that the placing of bets over the Internet be made illegal); H.R. 2380, 105th Cong. (1997) (same).

⁸⁰ See MASON & NELSON, *supra* note 30, at 84 (discussing the proposed Internet Gambling Prohibition Act and observing that it passed overwhelmingly in the Senate three times).

⁸¹ See *supra* note 31 (discussing the Act).

⁸² For a history of federal regulation of prize games, see generally Blakey & Kurland, *supra* note 72; James H. Frey, *Federal Involvement in U.S. Gaming Regulation*, 556 ANNALS AM. ACAD. POL. & SOC. SCI. 138 (1998).

⁸³ See, e.g., 18 U.S.C. § 1955(b)(1) (2000) (defining an “illegal gambling business” as one which violates the law of the state in which it is conducted); Racketeer Influenced and Corrupt Organizations Act, *id.* § 1961(6) (2000) (incorporating state law into the definition of an “unlawful debt” incurred in gambling activity); see also Bell, *supra* note 23, at 165 n.26 (discussing the dependence of federal statutes on state law for definitions).

⁸⁴ See MASON & NELSON, *supra* note 30, at 80 (arguing that the rise of the Internet and the popularity of interstate sports betting point toward a federal solution); see also *id.* at 81 (observing that the National Association of Attorneys General asked the federal government to assume a more active role in regulating Internet gambling, since enforcement by states is difficult).

⁸⁵ *Phalen v. Virginia*, 49 U.S. 163, 168 (1850). *But see Lawrence v. Texas*, 539 U.S. 558, 577 (2003) (“[T]he fact that the governing majority in a State has traditionally viewed a particular practice as immoral is not a sufficient reason for upholding a law prohibiting the practice” (quoting *Bowers v. Hardwick*, 478 U.S. 186, 216 (1986) (Stevens, J., dissenting))).

gambling area. For example, the lottery, which is the most popular form of gambling and the one provided by the largest number of states, is questionable as a policy matter. As a revenue-raising scheme, it is regressive: its burden falls disproportionately on the poor.⁸⁶ It also places the state in the uncomfortable position of contradicting itself on financial literacy and education by discouraging saving and promoting reliance on luck.⁸⁷ Some state lotteries offer “video lottery terminals,” which are “made with the intention of looking and sounding like slot machines.”⁸⁸ Permitting these machines while prohibiting private slot parlors, as some states do, makes it difficult to see a coherent antigambling state policy.⁸⁹

William Stuntz argues that inconsistent enforcement in the states has eroded the social norms that motivated the enactment of the laws in the first place.⁹⁰ A comparatively blunt, but sensible, critique simply observes that most states are now themselves in the gambling business.⁹¹ Only two states—Utah⁹² and Hawaii⁹³—now prohibit prize

⁸⁶ MASON & NELSON, *supra* note 30, at 25; *see also* MACCOUN & REUTER, *supra* note 39, at 141-42 (describing the “regressive” nature of the lottery). The authors concede that *illegal* numbers games, which state lotteries partially displaced, may have been even more regressive than legal state lotteries, and in the illegal games the revenues went to corrupt organizations rather than state coffers. *Id.* at 142.

⁸⁷ MASON & NELSON, *supra* note 30, at 25; *see also* David A. Skeel, Jr., A Channeling Approach to Gambling (and Derivatives) Regulation 6 (Aug. 11, 2003) (unpublished manuscript, on file with author) (“It is remarkably unseemly, to say the least, that the same states that have enacted or implemented welfare laws which limit benefits to those who are willing to work also promote their lotteries as a way for winners to become so wealthy that they ‘will never have to do another day of work.’”).

⁸⁸ MASON & NELSON, *supra* note 30, at 23, 28.

⁸⁹ *See id.* at 28 (“[B]ecause these [video lottery terminal] machines are made with the intention of looking and sounding like slot machines, states that have legalized VLTs but have not legalized casinos are entering a gray area between what their policies allow and what their lottery agencies practice.”); *see also* ROSE & OWENS, *supra* note 30, at 6 (describing a Nevada law “making it a crime . . . for anyone anywhere in the world to take a bet on-line from anyone physically in Nevada” and vice-versa, but exempting state-licensed operators in Nevada); Calvert, *supra* note 51, at 11 (arguing that by prohibiting *private* lotteries, states are able to extract unjustifiable monopoly rents).

⁹⁰ *See* William J. Stuntz, *Self-Defeating Crimes*, 86 VA. L. REV. 1871, 1878 & n.18 (2000) (observing that those who play “upscale games” escape prosecution while states shut down “numbers rackets,” the latter of which cater almost exclusively to the urban poor). Stuntz theorizes that the “differential enforcement” of vice laws produces revolutions in social norms that eventually swallow the laws. *Id.* at 1878-80; *see also* MACCOUN & REUTER, *supra* note 39, at 129 (“[G]ambling in the context of commerce is frequently seen as constructive and wealth enhancing while recreational wagering, as for example in the state lottery, is merely redistributive.”).

⁹¹ FRIEDMAN, *supra* note 43, at 229; *see also* MACCOUN & REUTER, *supra* note 39, at 138 (“[States] are directly stimulating demand to generate revenues from the high tax

gaming without exception.⁹⁴ Many states allow casinos of various kinds⁹⁵ and the dollars involved are substantial: in financial terms, “legalized gambling is bigger than movies, bigger than spectator sports, bigger than theme parks, bigger than all the books, magazines, and newspapers published in the United States put together.”⁹⁶

Enforcing gambling laws is fraught with difficulty. Unlike in many other areas of the law, prohibition and regulation of gambling transactions amount to curbing a market in which people conduct what they may believe to be mutually beneficial transactions. There are practical problems to policing such “illegal” markets. First, large numbers of people who usually comply with police requests disagree with the intervention in the market, making them less likely to comply in this context. Second, participation in illegal markets only occasionally produces a victim who will inform police.⁹⁷ During the organized crime era, corruption posed another problem for enforcement. Due to the visibility of some gambling operations, proprietors “were strongly motivated to make payments to ensure that the police did not interrupt” the business.⁹⁸ Another possible explanation for the failure of the 1960s assault on gambling is that many people simply ceased to feel strongly about its illegality and, therefore, it became difficult for officials to show concrete positive results.⁹⁹

rate on lottery play. However, the justification for that high tax is the belief that gambling is an activity of questionable worth; these are hard to reconcile when the state creates new players.” (citation omitted).

⁹² UTAH CODE ANN. § 76-10-1102 (2003).

⁹³ HAW. REV. STAT. § 712-1223 (1993).

⁹⁴ John M. Norwood, *Gambling in the Twenty-First Century: Judicial Resolution of Current Issues*, 74 MISS. L.J. 779, 779 n.2 (2005).

⁹⁵ See MASON & NELSON, *supra* note 30, at 2 (“Eleven states, most of them in the nation’s heartland, now allow commercial casinos to operate. Twenty-four states have casinos owned by American Indian tribes.”).

⁹⁶ *Id.*

⁹⁷ Reuter, *supra* note 30, at 37. Reuter observes that “[g]ambling was the most important illegal market for the police during the period from the repeal of Prohibition in 1933 to about 1970,” when the enforcement of drug laws overtook gambling as the principal police concern. *Id.* at 37 & n.1.

⁹⁸ *Id.* at 38.

⁹⁹ *Id.*; see also MACCOUN & REUTER, *supra* note 39, at 136 (“[G]ambling enforcement in the late twentieth century became a largely symbolic activity. It generated headlines, mostly about corruption, but there was discernibly little faith that it accomplished much by way of crime control. Moreover, the underlying assumption, that the activity itself needed to be criminalized, simply dissipated as a wealthier society sought more modes of exercising its freedom.”).

However, governments have not completely given up on enforcing the laws on the books. In 1998, federal prosecutors shut down an offshore betting company operated by a U.S. citizen.¹⁰⁰ In Texas in 2001, agents conducted a successful sting operation in a club that was offering chances to win retail gift certificates worth five dollars each.¹⁰¹ Further, federal prosecutors recently brought charges against the executive of a high-profile Internet gambling business.¹⁰² Given the enforcement mechanisms in place, determining the status of information markets under the current regulatory scheme is essential to these markets' ongoing development.

II. ARE INFORMATION MARKETS GAMES OF CHANCE?

This Part addresses whether information markets fall within the state and federal prohibitions on gambling. The following discussion applies to the most common state law definition and federal liability under the Interstate Wire Act.¹⁰³

A. State Law Liability

The analysis begins with the three common law elements that constitute a gambling violation in most states: consideration, the possibility of a prize, and a dominant element of chance.¹⁰⁴

1. Consideration

To give consideration in a game is to "risk something of value."¹⁰⁵ There must be some chance of gain or loss to both parties to the wa-

¹⁰⁰ See *United States v. Cohen*, 260 F.3d 68, 70-71 (2d Cir. 2001) (charging "conspiracy and substantive offenses in violation of 18 U.S.C. § 1084" as to an Internet and telephone sports book run out of Antigua by a U.S. citizen).

¹⁰¹ *Twenty-Nine Gambling Devices v. State*, 110 S.W.3d 146, 148 (Tex. App. 2003). The Court of Appeals of Texas held that the gift certificates constituted "gambling proceeds" under Texas law, despite that law's exemption for certain low-value "non-cash merchandise." *Id.* at 151-52; see also Norwood, *supra* note 94, at 780 & n.10 (discussing *Twenty-Nine Gambling Devices* and legal exemptions for noncash prizes of relatively little value).

¹⁰² See *supra* note 27 (citing the indictment of the chief executive of BetonSports).

¹⁰³ See *supra* note 75 and accompanying text (discussing the Wire Act).

¹⁰⁴ ROSE & OWENS, *supra* note 30, at 11.

¹⁰⁵ *Id.* at 12; see also 38 AM. JUR. 2D *Gambling* §§ 2-3 (1999) (discussing the necessity that a party can lose as well as win in order for activity to constitute gambling).

ger.¹⁰⁶ Most U.S. jurisdictions require that money be given as consideration.¹⁰⁷ Chance games in which players need not pay, but can win a prize, are legal sweepstakes because they lack consideration.¹⁰⁸ For games conducted online, the burden of Internet access itself probably will not suffice as consideration.¹⁰⁹

Most information markets require players to contribute something of value—indeed, advocates would say this is the reason for the markets’ predictive accuracy. Thus, the element of consideration would be satisfied in most states in a typical information market.¹¹⁰

2. Prize

The second necessary element is that a prize be at stake. A “free round” is not a prize in and of itself; in other words, the reward of more amusement does not suffice.¹¹¹ When information markets trade with real cash, the prize element is certainly satisfied.

Notably, the Hollywood Stock Exchange operates with “play money.”¹¹² One author argues that “no market limited to mere play-money can fully duplicate the incentives generated by a market using real money.”¹¹³ How, then, does HSX achieve predictive success? There is some new evidence that real money is not necessarily an essential feature of an accurate information market. Saul Levmore observes that, in the well-functioning HSX market, “players desire to win, presumably because winning can be as good a motivation as profit.”¹¹⁴

¹⁰⁶ See 7 SAMUEL WILLISTON & RICHARD A. LORD, A TREATISE ON THE LAW OF CONTRACTS § 17:6 (4th ed. 1997) (distinguishing wagers from competitions that simply offer prizes).

¹⁰⁷ ROSE & OWENS, *supra* note 30, at 13. A small number define consideration more broadly as a “right, interest, profit or benefit accruing to one party, or some forbearance, detriment, loss or responsibility given, suffered or undertaken by the other.” *Id.* (quoting Op. Att’y Gen. N.Y. No. 96-F1 (Jan. 29, 1996), available at http://www.oag.state.ny.us/lawyers/opinions/1996/formal/96_f1.html).

¹⁰⁸ *Id.* at 17.

¹⁰⁹ *Id.* at 18.

¹¹⁰ Bell, *supra* note 23, at 166.

¹¹¹ See ROSE & OWENS, *supra* note 30, at 26 (“The overwhelming majority of jurisdictions differentiate between a free replay and a credit which can be redeemed for cash or merchandise. . . . There are no cases on record of an Internet operator being accused of violating an anti-gambling law, when players can only win more game time or another round of the game.”).

¹¹² See Hollywood Stock Exchange, About HSX, <http://www.hsx.com/about> (last visited Jan. 21, 2007) (describing “virtual entertainment securities”).

¹¹³ Bell, *supra* note 23, at 164.

¹¹⁴ Levmore, *supra* note 3, at 594.

In fact, some HSX traders have been able to sell their play money on auction sites such as eBay for “hundreds of real dollars.”¹¹⁵ A 2004 study provided strong evidence on the effectiveness of play money markets. Researchers tracked sports predictions on two information markets that are similar in most respects, except that one uses real money and the other uses play money.¹¹⁶ They found that the predictions in the play money market were not significantly less accurate than those in the real money market.¹¹⁷ The authors noted, however, that the predicted event—football game outcomes—is one that has a wide and relatively informed group of prospective traders in the U.S. market.¹¹⁸ When other, lesser-known or less understood events are to be predicted, real money may be the only way to motivate people to participate and become informed.¹¹⁹ Unfortunately, this suggests that the most useful information markets may also be the illegal ones.

3. Chance

Generally, chance must “predominate” over skill in order for a game to be illegal as a form of gambling.¹²⁰ Bowling,¹²¹ chess,¹²² checkers,¹²³ and baseball¹²⁴ are all examples of skill games.¹²⁵ On the other

¹¹⁵ *Id.* at 596. Nonmonetary incentives are increasingly common online. A number of Internet communities award nonmonetary “points” to users based on the quality of their contributions. Users with a high number of points gain seniority and moderation privileges. See, e.g., Slashdot, FAQ—Comments and Moderation, <http://www.slashdot.org/faq/com-mod.shtml> (last visited Jan. 21, 2007) (discussing “Karma,” a peer rating of user comments on a popular online technology forum).

¹¹⁶ Servan-Schreiber et al., *supra* note 10, at 245.

¹¹⁷ *Id.* at 250.

¹¹⁸ *Id.*

¹¹⁹ *Cf. id.* (suggesting that “knowledgeable traders can be motivated . . . by community bragging rights or by prizes awarded to the best forecasters”).

¹²⁰ See Anthony N. Cabot & Louis V. Csoka, *The Games People Play: Is It Time for a New Legal Approach to Prize Games?*, 4 NEV. L.J. 197, 223 (2003) (explaining the Predominance Test, the prevailing test for identifying a game of chance).

¹²¹ See *State v. Wiley*, 3 N.W.2d 620, 625 (Iowa 1942) (“Obviously, pin ball machines may not properly be compared to games of skill such as bowling or base ball [sic].”).

¹²² See *People ex rel. Ellison v. Lavin*, 71 N.E. 753, 755 (N.Y. 1904) (“Throwing dice is purely a game of chance, and chess is purely a game of skill.”).

¹²³ See *Johnson v. McDonald*, 287 P. 220, 221 (Or. 1930) (“The predominant element in [checkers] is one of skill. The game would not appeal to any one who did not like to play checkers. There is no apparent likelihood at all that the game, if played as designed, would cultivate a spirit of gambling.”).

¹²⁴ See *Wiley*, 3 N.W.2d at 625.

¹²⁵ See generally 38 AM. JUR. 2D *Gambling* § 55 (1999) (discussing games of skill).

hand, poker games¹²⁶ and contests whose outcomes depend on the weather¹²⁷ have been called games of chance.¹²⁸

Commentators have noticed that the doctrinal dichotomy of chance and skill is a problematic one, even when applied to relatively simple games.¹²⁹ “[W]hat is, and what is not, a game of chance is not a simple matter of definition by *fiat*.”¹³⁰ In playing a pure game of chance, a person is “entirely passive; he does not deploy his resources, skill, muscles or intelligence. All he need do is await, in hope and trembling, the cast of the die.”¹³¹

When games begin to blur perceptions of chance and skill, consistent classification can become problematic. John Norwood recounts two recent cases in New York City involving the legal status of “shell games.”¹³² In a shell game, the player tries to keep track of an object placed under one of three shells as another person rapidly moves the shells.¹³³ The cases Norwood cites focus on the closely analogous game of “three card monte,” in which the player must choose the “winning” card among three cards rapidly shifted by the dealer.¹³⁴ In one case, the criminal court found that three card monte is a game of

¹²⁶ See *State v. Schlein*, 854 P.2d 296, 305 (Kan. 1993) (holding that a poker tournament turns its location into a gambling place). But see *Smith & Abt*, *supra* note 61, at 129 (“Though the deal and draw are governed by chance, unless of course someone is cheating, the play of [poker] is ruled by skill and is a clear example of competitive play.”).

¹²⁷ See *Classic Oldsmobile-Cadillac-GMC Truck, Inc. v. State*, 704 A.2d 333, 335 (Me. 1997) (holding that a game that depended on the weather was illegal gambling because there was an element of chance).

¹²⁸ 38 AM. JUR. 2D *Gambling* § 4 (1999).

It is the character of the game, and not the skill or want of skill of the player, which determines whether a game is one of chance or skill. Thus, whether a game is one in which skill greatly predominates over chance is not to be measured by the standards of experts or any limited class of players, but by that of the average skill of a majority of players likely to play the game.

Id. (citations omitted).

¹²⁹ See *ROSE & OWENS*, *supra* note 30, at 18-26 (describing the element of chance and how it factors into identifying illegal gambling activities); *Cabot & Csoka*, *supra* note 120, at 223-24 (noting that Internet skill games raise issues as they approach chance gambling).

¹³⁰ *Oldman*, *supra* note 36, at 407. *Oldman* points out that even in pure chance games, one or more players may think they can recognize patterns or probabilities. These players may regard the game as one of skill even if it really is not. *Id.* at 425.

¹³¹ *Id.* at 408 (quoting *ROGER CAILLOIS, MAN, PLAY, AND GAMES* 17 (Meyer Barash trans., 1961)).

¹³² *Norwood*, *supra* note 94, at 786-88.

¹³³ *Id.* at 786.

¹³⁴ *Id.*

skill, since “the accuracy of the eye of the player competes with the speed of the hand of the dealer.”¹³⁵ Just a year later, another judge on the same court relied on another line of cases to find that three card monte is “essentially a game of chance, wherein the player has a one-in-three chance of selecting the ‘right’ card if he can resist the operator’s manipulations and simply choose randomly.”¹³⁶

The problem of defining skill and chance becomes clear when one looks to things that usually are not considered games. For example, the fact that gambling unites money and risk is not enough to distinguish it from transactions that are unquestionably legal and socially valuable.¹³⁷ The conceptual link between gambling and speculation in financial instruments like derivatives, for example, is often noted.¹³⁸

¹³⁵ *People v. Mohammed*, 724 N.Y.S.2d 803, 806 (Crim. Ct. 2001); *see also* Norwood, *supra* note 94, at 787 (discussing judicial determinations of “skill” and “chance”).

¹³⁶ *People v. Denson*, 745 N.Y.S.2d 852, 856 (Crim. Ct. 2002).

¹³⁷ *See* Milton Friedman & L.J. Savage, *The Utility Analysis of Choices Involving Risk*, 56 J. POL. ECON. 279, 279 (1948) (analogizing an individual’s choice among occupations, securities, or lines of business activity to the decision whether to gamble).

¹³⁸ *See* Thomas Lee Hazen, *Disparate Regulatory Schemes for Parallel Activities: Securities Regulation, Derivatives Regulation, Gambling, and Insurance*, 24 ANN. REV. BANKING & FIN. L. 375, 377 (2005) (“One thing that investing, hedging, insurance, and gambling have in common is that they all involve risk-taking, while only the first three activities are generally seen as involving risk-shifting or other legitimate economic benefits.”); Christine Hurt, *Regulating Public Morals and Private Markets: Online Securities Trading, Internet Gambling, and the Speculation Paradox*, 86 B.U. L. REV. 371, 373-74 (2006) (“Regulators characterize investing as an enterprise of skill in which the assiduous and diligent may earn deserved rewards. Conversely, gambling is viewed as an enterprise of chance that encourages the lazy and untalented to divert useful capital into a chaotic system whereby an undeserving few reap ill-gotten gains while the vast majority foolishly lose.” (footnote omitted)); David A. Skeel, Jr., *When Markets and Gambling Converge*, in THEOLOGY AND THE LIBERAL STATE (forthcoming 2007) (on file with author) (describing speculation as gambling’s “first cousin”); Lynn A. Stout, *Why the Law Hates Speculators: Regulation and Private Ordering in the Market for OTC Derivatives*, 48 DUKE L.J. 701, 715 (1999) (“Common law courts regarded speculation as a type of wagering rather than a useful form of economic commerce.”); Skeel, *supra* note 87, at 22 n.40 (noting that certain instruments like futures and derivatives “are designed to minimize risk, rather than to increase it” as gambling does). Hanson argues that

[t]he history of financial regulation can . . . be roughly summarized as everything being banned as gambling (or usury) until an exception was granted for some newly legitimized higher purpose. For each purpose, such as capitalizing firms, insuring idiosyncratic risk, or insuring common risk, laws and regulations were created to ensure that generic gambling could not slip in. We may thus reasonably hope to someday legitimate, and thereby legalize, markets whose main function is to aggregate information on questions that matter.

Hanson, *supra* note 3, at 9 (citation omitted).

Because of the diversity of events that can be predicted with information markets, the third prong of the test—the predominant element of chance—is the most difficult to apply.¹³⁹ It is possible that an information market can be legal if it is “set up so that a strong argument can be made it is genuinely skill-based.”¹⁴⁰ As Bell observes, whether a plausible argument can be made that the market does not run predominantly on chance depends on the nature of the uncertain event.¹⁴¹ Bell is concerned primarily with science claims, and to the extent that a good deal of scientific knowledge is required even to participate meaningfully in the market, it seems there is a good argument that chance does not predominate.¹⁴²

Perhaps some types of uncertain events in information markets are more conducive to skill-based “bets” than others. Christine Hurt recently offered a taxonomy of speculative transactions, using the amount of chance involved to differentiate among seemingly similar pursuits.¹⁴³ “L” games, such as slot machines, lotteries, and roulette, are “pure” chance games. The player cannot control the outcome through the exercise of skill.¹⁴⁴ On the other hand, in “W” games, like blackjack and poker, skilled players actually can influence outcomes, but chance remains a significant factor.¹⁴⁵ Hurt analogizes these games to derivatives and “day trading.”¹⁴⁶ In a separate category (called “Type B speculation”) are sports betting and trading in individual stocks. Hurt contends these activities are dominated by skill because of the information people typically deploy when trading or betting.¹⁴⁷ Under the doctrinal analysis described above, “W” games may have a predominant element of chance, while “Type B speculation” probably does not. If information markets can fairly be characterized as “Type B speculation,” they might escape classification as games of chance.

¹³⁹ See Bell, *supra* note 23, at 167 (discussing the difficulty of applying this test).

¹⁴⁰ Cabot & Csoka, *supra* note 120, at 226.

¹⁴¹ Bell, *supra* note 23, at 167.

¹⁴² *Id.*; see also Bell, *supra* note 25, at 66 (“By design, such a market concerns only questions susceptible to resolution by dint of skill rather than chance. A prediction market aims, after all, to promote progress in the sciences and useful arts—not merely to reward good luck.”).

¹⁴³ Hurt, *supra* note 138, at 378. The distinguishing factor is “the extent to which the occurrence of a random event influences the return.” *Id.* at 379.

¹⁴⁴ *Id.* at 379-80.

¹⁴⁵ *Id.* at 381-82.

¹⁴⁶ *Id.* at 382-85.

¹⁴⁷ *Id.* at 387-90.

On this continuum of speculative transactions, information markets would seem to fall somewhere between “W” games and “Type B speculation.” Information markets look quite different from “L” games: in “L” games, the uncertain event itself—for example, the spin of the roulette wheel—is not susceptible to anyone’s knowledge or skill. The question, then, is whether information markets are more like “W” games (poker and blackjack or day trading and derivatives) or “Type B speculation” (sports betting or customary trading in the stock market). As Bell notes, the point of the market is that people use information to make money¹⁴⁸—if chance entirely explained outcomes, the market would be worthless and would probably not achieve predictive success. But the universe of useful information markets may be quite a bit larger than the one Bell contemplates, and there is conflicting information as to what exactly drives people to participate. For example, attracting “uninformed traders” is a crucial factor in efficient information markets (those that generate accurate predictions).¹⁴⁹ Uninformed traders are likely to be motivated by “[r]isk-love, or the ‘thrill of a gamble,’” rather than by superior skill or knowledge.¹⁵⁰ This suggests that for many traders in efficient information markets, chance may predominate over skill.

B. *Federal Liability Under the Wire Act*

There is ongoing debate about the extent of the Interstate Wire Act’s prohibitions on betting on non-sports events such as casino-style games or political contests. By its text, the statute extends to “placing of bets or wagers on any sporting event or contest.”¹⁵¹ It is disputed, however, whether “contest” encompasses bets on all types of future uncertain events, or only those relating to sports. The Fifth Circuit settled on the latter reading in dicta when it affirmed a Louisiana district court’s holding that “the Wire Act does *not* prohibit non-sports Internet gambling.”¹⁵² Some officials at the Justice Department ap-

¹⁴⁸ Bell, *supra* note 25, at 53-54.

¹⁴⁹ Justin Wolfers & Eric Zitzewitz, *Five Open Questions about Prediction Markets*, in INFORMATION MARKETS, *supra* note 3, at 13, 19.

¹⁵⁰ *Id.*

¹⁵¹ 18 U.S.C. § 1084(a) (2000).

¹⁵² *In re Mastercard Int’l Inc.*, 313 F.3d 257, 263 (5th Cir. 2002) (emphasis added).

pear to believe, by contrast, that the Wire Act reaches beyond sports betting.¹⁵³

C. *Litigation Strategies*

The discussion above suggests that the law of gambling may tend to produce different fates for seemingly similar “games.” If the government appears to be making and enforcing policy in an irrational way, one potential avenue for redress for a criminal defendant is an equal protection challenge. The U.S. Court of Appeals for the Third Circuit considered and rejected just such a challenge to Pennsylvania’s gaming laws in 1997 in *United States v. Williams*.¹⁵⁴ The defendants in *Williams* were convicted of running a gambling business under the Pennsylvania statute that prohibits “‘pool selling,’ ‘bookmaking,’ and related activities.”¹⁵⁵ On appeal, the defendants argued that because the statute under which they were convicted prohibited some kinds of gambling, while different statutes in the same state allowed other kinds, the state had impermissibly infringed the defendants’ economic rights by dividing state-authorized gambling from gambling not authorized by the state.¹⁵⁶ In his opinion for the unanimous panel, then-Judge Alito easily dispensed with the defendants’ equal protection challenge, since the rights the defendants claimed were not entitled to strict scrutiny.¹⁵⁷ In an interesting elaboration, the opinion favorably recalled the Supreme Court’s view in an earlier case:

Evils in the same field may be of different dimensions and proportions, requiring different remedies. Or so the legislature may think. Or the reform may take one step at a time, addressing itself to the phase of the problem which seems most acute to the legislative mind. The legislature may select one phase of one field and apply a remedy there, neglecting the others.¹⁵⁸

As the *Williams* case illustrates, the basic rationality and consistency of a state’s gaming policy is unlikely to be subjected to a search-

¹⁵³ Hurt, *supra* note 138, at 414 n.289 (comparing the views of government lawyers on the issue).

¹⁵⁴ 124 F.3d 411, 423 (3d Cir. 1997) (finding that such a law was rationally related to a legitimate state interest).

¹⁵⁵ *Id.* at 421 (quoting 18 PA. CONS. STAT. ANN. § 5514 (West)).

¹⁵⁶ *Id.* at 421-22.

¹⁵⁷ *Id.* at 423.

¹⁵⁸ *Id.* (quoting *Williamson v. Lee Optical of Okla., Inc.*, 348 U.S. 483, 489 (1955) (citations omitted)).

ing judicial examination.¹⁵⁹ Prospective information market operators should not expect, therefore, to be able to fight a battle in the courts on this issue.

Although it appears that arguments about lax enforcement and policy inconsistency are very difficult to win, defendants in gambling cases may, as a last resort, be able to avail themselves of the protection of the rule of lenity, by which courts strictly construe criminal statutes when the statutes do not clearly cover new factual situations.¹⁶⁰ The Second Circuit addressed such a claim in *United States v. Cohen* in 2001.¹⁶¹ Cohen had been convicted of running a novel sports-betting operation from Antigua, taking bets from U.S. citizens in violation of the Wire Act.¹⁶² On appeal, Cohen argued, in part, that he lacked the requisite mens rea because he did not knowingly violate the statute and, further, that the rule of lenity should bar his conviction because the Wire Act is too ambiguous to apply to his alleged offenses.¹⁶³ Cohen lost on both counts. As to the first argument, the court held that liability under the Wire Act requires only intent to do the *acts* that form the elements of the offense, not intent to violate the statute.¹⁶⁴ The court also applied a stringent lenity standard: Cohen failed to show a “grievous ambiguity”¹⁶⁵ in the statute such that the court could “make no more than a guess as to what Congress intended.”¹⁶⁶ This certainly is a difficult standard for defendants to meet. The Supreme Court in recent years has been willing to recognize lenity challenges,

¹⁵⁹ The Pennsylvania Supreme Court confronted a similar question in *Commonwealth v. Kratsas*, 764 A.2d 20 (Pa. 2001). The defendants were charged with dealing in gambling machines. *Id.* at 22. They argued in a pretrial due process challenge that the relevant prohibitions on gambling in the state statute should be ignored, because the conduct that formed the basis of the alleged violation had become de facto legal because of lax enforcement. *Id.* at 26. The trial court agreed and dismissed the case. *Id.* at 25. The Pennsylvania Supreme Court reversed, and it stressed that it lacked authority to “nullify a legislative enactment on the basis that its objectives have been frustrated, or even thwarted pervasively, even by those who are charged with enforcement responsibility.” *Id.* at 26. The idea for which the court had such distaste is desuetude, “the obscure doctrine by which a legislative enactment is judicially abrogated following a long period of nonenforcement.” Note, *Desuetude*, 119 HARV. L. REV. 2209, 2209 (2006).

¹⁶⁰ See Bell, *supra* note 23, at 168 n.40 (discussing *United States v. Lanier*, 520 U.S. 259, 266 (1997), which explained the rule of lenity).

¹⁶¹ 260 F.3d 68 (2d Cir. 2001).

¹⁶² *Id.* at 70-71.

¹⁶³ *Id.* at 76.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* (quoting *Huddleston v. United States*, 415 U.S. 814, 831 (1974)).

¹⁶⁶ *Id.* (quoting *Reno v. Koray*, 515 U.S. 50, 65 (1995)).

but only where, under the criminal statute, “the defendant does not even need to be aware of the factual circumstances that make her actions criminal to be convicted *or* if the defendant must be aware of the relevant facts but need not be aware of their legal significance.”¹⁶⁷

As the above discussion suggests, there is a real danger that a particularly successful information market experiment could attract legal action. This was most likely the worry that led the operators of the IEM to obtain a “no-action” letter from the Commodity Futures Trading Commission (CFTC).¹⁶⁸ But it is difficult to know whether the CFTC will be willing to grant additional similar exemptions for nascent markets.¹⁶⁹

III. A LEGISLATIVE EXCEPTION

The benefits of information markets are still emerging, as the literature is relatively new, but the experiments are promising. The prospect that successful information markets can improve important public and private decisions recalls the early use of lotteries as government tools in the American colonies.¹⁷⁰ Both phenomena promise amusement and the chance at a windfall, but only as means toward a larger socioeconomic end.

On the cost side of the scale, we can try to distinguish information markets on the ground that they are less likely to carry some of the negative externalities that inhere in traditional chance games. For example, as opposed to commercial casinos, which concentrate rapid, high-value financial transactions in confined physical spaces and may therefore aggravate street crime, information markets require little or no physical infrastructure.¹⁷¹ Of course, this hardly distinguishes information markets from online blackjack; in both cases, compulsive “play” remains a concern. But the relatively small amount we know

¹⁶⁷ Note, *The New Rule of Lenity*, 119 HARV. L. REV. 2420, 2435 (2006).

¹⁶⁸ See Iowa Electronic Markets, Frequently Asked Questions, <http://www.biz.uiowa.edu/iem/faq.html> (last visited Jan. 21, 2007) (addressing this issue under the heading “Is the IEM regulated?”).

¹⁶⁹ See Hahn & Tetlock, *supra* note 26, at 6 (reporting that CFTC no-action letters are “no longer being given out” for information markets such as IEM).

¹⁷⁰ See *supra* notes 37-39 and accompanying text (describing such lotteries).

¹⁷¹ See Nicole Davidson, Comment, *Internet Gambling: Should Fantasy Sports Leagues Be Prohibited?*, 39 SAN DIEGO L. REV. 201, 222 (2002) (“The private environment of the Internet would not increase the incidence of street crime and prostitution. . . . Fantasy sports contests tend not to involve great amounts of money and arguably would not have any effect on crime rates.”).

about traders in information markets seems to confirm the suspicion that such markets are unlikely to attract people for whom windfall profit is the ultimate object. For example, as of 2002, most IEM traders were putting less than fifty dollars into the market.¹⁷² In fact, the IEM limits investments to \$500 per player.¹⁷³ Particularly where state lotteries and slot parlors offer instant gratification, trading in information markets—where more than mere seconds or hours pass between consideration and prize—may appear less attractive as pure entertainment.¹⁷⁴ But it remains possible that if information markets grow beyond the experimental early adopters, many of whom have purely academic interests, the typical compulsive use problem could emerge. The HSX example suggests that information market operators may be able to use “virtual” carrots,¹⁷⁵ but more obscure (albeit very useful) markets might require real financial incentives.¹⁷⁶

An exception for information market experiments would not be a legislative anomaly. For example, Alaska explicitly allows for wagers on some uncertain events that do not concern the outcomes of sports games.¹⁷⁷ At the same time, other states explicitly prohibit some conceptually similar bets.¹⁷⁸ Since a majority of states allow certain forms

¹⁷² Levmore, *supra* note 3, at 592 n.13.

¹⁷³ *Id.* at 593.

¹⁷⁴ See Rhode & Strumpf, *supra* note 18, at 19 (observing that the legalization in New York in 1939 of some betting on horse racing offered prospective gamblers “several contests per day to wager on that promised immediate rewards rather than a single political contest stretching over several months”).

¹⁷⁵ See Servan-Schreiber et al., *supra* note 10, at 250 (concluding that there was “no significant difference in predictive accuracy” whether the market involved real or fake money).

¹⁷⁶ See *supra* note 149 and accompanying text (discussing the need to attract uninformed traders for market efficiency).

¹⁷⁷ By statute, Alaska may authorize a municipality or charitable organization to allow, among other things, a game in which “a prize of money is awarded for the closest guess of the total number of salmon harvested commercially statewide . . . during a certain period of time,” or one in which the goal is the “closest guess of the time of the arrival of the first king salmon of the year at a designated spot.” ALASKA STAT. §§ 05.15.100(a), .690(27), .690(43) (2004 & Supp. 2005); see also ROSE & OWENS, *supra* note 30, at 44 (discussing nonsports bets such as wagers on the due dates of pregnant celebrities).

¹⁷⁸ For example, an Illinois statute includes within its definition of illegal gambling “[s]ell[ing] pools upon the result of any game or contest of skill or chance, political nomination, appointment or election.” 720 ILL. COMP. STAT. ANN. 5/28-1(a)(6) (West 1993). Another subsection criminalizes the making of wagers on such events. *Id.* at 5/28-1(a)(2). In Pennsylvania, it is a first degree misdemeanor to receive a bet on a “political nomination, appointment or election, or upon any contest of any nature.” 18 PA. CONS. STAT. § 5514(3) (2002).

of gambling for charitable purposes, it is clear that states are willing to carve out exceptions that suit their policy goals.¹⁷⁹

There are substantial practical problems with a legislative exception for information markets. First, because information markets are relatively new and variable, there is no commonly accepted model. This will make it difficult to write statutory language so that it is easy for courts to determine what is and is not permitted. Some have proposed that states should establish “a review mechanism so that promoters can submit prize game schemes for proper characterization under existing laws.”¹⁸⁰ A similar process for information markets could help eliminate confusion over definitions.

A second problem is a trait of federalism that is perhaps unavoidable. Some efficient information markets would probably require the participation of people in multiple states. This means that even if an “early adopter” state takes the initiative to create an exception for information markets, the market may run afoul of prohibitions in federal law or the statutes of other states. Still, as IEM market experts have observed, far more experimentation is necessary to determine the optimal design of information markets.¹⁸¹ Legislative approval of such experimentation could clear a barrier and help reveal whether real-money information markets will produce benefits that outweigh their social costs.

CONCLUSION

Governments should encourage information market experiments by providing legal clarity. Markets could improve public and private decision making and spawn entirely new product markets, but the current ambiguous gambling doctrine may stifle market development. As policymakers consider whether to raise revenue by licensing traditional gambling forms such as slot machine parlors, it would be worthwhile to include this new decision tool in the debate.

¹⁷⁹ See MASON & NELSON, *supra* note 30, at 30 (stating that “[c]haritable bingo . . . is legal in every state but Arkansas, Hawaii, Tennessee, and Utah”).

¹⁸⁰ Cabot & Csoka, *supra* note 120, at 259.

¹⁸¹ See Berg & Rietz, *supra* note 16, at 164 (describing the “many open questions about prediction markets and when they are likely to be most accurate”).