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## ARE NORMS EFFICIENT? PLURALISTIC IGNORANCE, HEURISTICS, AND THE USE OF NORMS AS PRIVATE REGULATION

Alex Geisinger\*

### I. INTRODUCTION

In a recent article in the *National Law Journal*, Richard Epstein argued that fear of social ostracism would effectively constrain lawyers in small communities from behaving unethically toward clients in the majority of situations.<sup>1</sup> Epstein's embrace of norms as a "private" constraint on socially destructive behavior reflects a growing reliance, in law and economics, on social norms as an alternative or supplement to law. The belief that norms effectively limit negative externalities is itself based on a model that conceives of norms as arising from the cooperation of rational, self-interested individuals.<sup>2</sup> While the basic model of norms as facilitators of cooperation

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\* Associate Dean for Faculty Development and Professor of Law, Valparaiso Law School. The author would like to thank Robert Ellickson, Steve Hetcher, Jack Hiller, Lior Strahilevitz and Jeremy Telman for their thoughtful comments. Tim Barrett provided excellent research assistance.

1. Richard A. Epstein, *Lawyers' Rise or Fall?*, NAT'L L.J., May 31, 2004, at 27 ("Most routine disputes about the practice of law don't call for legal intervention precisely because the wide range of low-level social sanctions works remarkably well to keep people in line. The success of these sanctions, however, varies inversely with the size of the target group. In small communities and businesses, individuals are constantly under the watchful eye of family and friends; any small deviation from some deeply held social norm is likely to prompt a pointed response.").

2. For a discussion of the rational choice model, see *infra* Part II. The rational choice model of norms has led individuals to argue for a presumption of efficiency for existing norms, as well as a number of different relations between law and norms. See, e.g., Richard H. McAdams, *Signaling Discount Rates: Law, Norms and Economic Methodology*, 110 YALE L.J. 625, 625 (2001) (reviewing ERIC POSNER, *LAW AND SOCIAL NORMS* (2000)). Some claim that norms should be used to determine the behavioral constraints to be embodied by law, while others see norms as supplementing or filling gaps in law. See Saul Levmore, *Norms as Supplements*, 86 VA. L. REV. 1989, 1990 (2000). This is particularly the case when the entities being regulated are small groups, which occupy a special place in the rational choice model as bastions of truly efficient norm formation. See ROBERT C. ELLICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* 53-58 (1991). Indeed, going one step further than these claims, others have suggested that basic business law can be understood as shielding certain business decisions from the intrusion of other, inefficient sources of regulation. Edward B. Rock & Michael L. Wachter, *Islands of Conscious Power: Law, Norms, and the Self-Governing Corporation*, 149 U. PA.

lends itself to the current optimism regarding norm efficiency within the law and economics community, the question of norm efficiency or, more specifically, when norms are preferable to law as a means of regulating behavior, remains an open one.<sup>3</sup> One of the main reasons why the question of efficiency remains unanswered is the inability of models, such as the iterated prisoner's dilemma, to describe comprehensively how norms form and develop.

Surprisingly, although norms by definition are social,<sup>4</sup> there has been little effort by law and economics scholars to supplement the economics of norms with the sociology or social psychology of norms. This Article attempts to bridge this gap. It employs the need reinforcement model of norms developed by social psychologists and a number of other theories derived from cognitive and social psychology to provide a more complete understanding of the formation of efficient norms and to inform efforts to use norms in regulation. In particular, this Article builds on the efforts of Sanchirico and Mahoney,<sup>5</sup> considering precisely how the desire for esteem that motivates us to follow norms affects the likelihood of efficient cooperation. It then builds on this understanding to provide guidelines regarding when community norms can and cannot be considered efficient. Along the way, this Article dispatches with one of the central tenets of social norm theory—the belief that norms formed in small, close-knit communities<sup>6</sup> will be efficient.

This Article first introduces, very briefly, the rational choice model of norm formation. It then provides a short description of the need reinforcement principle and considers ways in which the principle adds to the current rational choice model of norms. In particular, it provides a basis for the claim that norms reflect the aggregate preference of members of a particular group, as well as a description of the psychological factors that lead individuals to identify and comply with group norms. The next section introduces the model of norm mismatch developed by Sanchirico and Mahoney and applies the sociology of norms to it, while also considering other issues relating to norm efficiency. Finally, this Article develops a set of criteria that must be considered before a presumption of norm efficiency can be

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L. REV. 1619, 1619-20 (2001). For a complete description see materials cited *infra* notes 69-74.

3. Richard H. McAdams & Eric B. Rasmusen, *Norms in Law and Economics*, in HANDBOOK OF LAW AND ECONOMICS (A. Mitchell Polinsky & Steven Shavell eds., forthcoming Dec. 2005) (manuscript at 19, on file with authors), available at [www.rasmusen.org/papers/norms.pdf](http://www.rasmusen.org/papers/norms.pdf).

4. This Article adopts Robert Ellickson's definition of social norms as "rule[s] supported by a pattern of informal [social] sanctions." See Robert C. Ellickson, *Law and Economics Discovers Social Norms*, 27 J. LEGAL STUD. 537, 549 n.58 (1998).

5. Paul G. Mahoney & Chris W. Sanchirico, *Competing Norms and Social Evolution: Is the Fittest Norm Efficient?*, 149 U. PA. L. REV. 2027, 2032-34 (2001) (developing a model of norm mismatch suggesting that norms produced by cooperation will not be efficient when the down-side risk of a behavior is much greater than the benefit). For a more complete analysis see *infra* text accompanying notes 76-79.

6. This is one of the central theses of ORDER WITHOUT LAW, Robert Ellickson's watershed study of law and social norms. ELLICKSON, *supra* note 2, at 137-58. For a more detailed analysis see *infra* text accompanying notes 27-29.

established and considers the implications of the sociology of norms for norm-based regulation.

## II. RATIONAL CHOICE AND NORM FORMATION

### A. *The Cooperation Problem Model*

For decades rational choice has proven to be a successful behavioral model and, with the rise of norm scholarship, has also provided the basic platform from which explanations of norm origin and development have proceeded.<sup>7</sup> The rational choice model conceives of norms as facilitating cooperation between rational individuals acting in their own self-interest.<sup>8</sup> Consider, for example, the widely used model of an N-play prisoner's dilemma.

In a single-play prisoners' dilemma the pursuit of self-interest leads to inefficient results. Take the following scenario between players Row and Column, who have been placed in separate cells at the police station and are being questioned.<sup>9</sup> If one player tells on the other player, the other player will get a sentence of three years, while the tattler will be let off for her cooperation.<sup>10</sup> If both do not tell they will both be found guilty of a lesser offense (one year in jail each).<sup>11</sup> If both do tell they will both be convicted of a more significant offense (two years each).<sup>12</sup>

	Cooperate (withhold)	Defect (tell)
Cooperate (withhold)	1/1	3/0
Defect (tell)	0/3	2/2

Under these circumstances, Row and Column will always tell.<sup>13</sup> Assume first that Column will tell.<sup>14</sup> In that case, if Row does not tell, she will get three years in jail, but if she does tell she will only get a two-year sentence.<sup>15</sup> If Column does not tell, Row will get no time in jail if she does tell

7. See McAdams, *supra* note 2, at 626 (explaining that economists fall into a group that views norms from a rational choice perspective).

8. See, e.g., ELLICKSON, *supra* note 2, at 156; Elmer J. Schaefer, *Predicting Defection*, 36 U. RICH. L. REV. 443, 459-62 (2002) (discussing how signaling helps overcome cooperation problems); Steven A. Hetcher, *Norm Proselytizers Create a Privacy Entitlement in Cyberspace*, 16 BERKELEY TECH. L.J. 877, 902 n.90 (2001); Steven Hetcher, *Creating Safe Social Norms in a Dangerous World*, 73 S. CAL. L. REV. 1, 7-8 (1999); Eric A. Posner, *Symbols, Signals, and Social Norms in Politics and the Law*, 27 J. LEGAL STUD. 765, 766 n.52 (1998); Thomas F. Cotter, *Legal Pragmatism and the Law and Economics Movement*, 84 GEO. L.J. 2071, 2126 n.235 (1996).

9. For a more complete discussion, see ERIC A. POSNER, *LAW AND SOCIAL NORMS* 13-18 (2000).

10. *Id.* at 14.

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*

15. *Id.*

and one year in jail if she does not tell. Under these circumstances, it is better for the self-interested Row to tell no matter what Column will do and vice-versa.<sup>16</sup> Therefore, the dominant strategy for both players will be to tell, resulting in each player getting two years in prison; whereas if they did not tell, they would each only get one year in jail.<sup>17</sup> Pursuit of individual self-interest leads to worse results than if they had cooperated and both withheld information.<sup>18</sup>

While defection is the dominant strategy in a one-time play of the prisoner's dilemma, cooperation is the natural result where the parties will play the game indefinitely.<sup>19</sup> Assume, for example, that Column and Row are a wholesaler and retailer of goods.<sup>20</sup> They desire to create a relationship where Column will supply the goods at a certain cost.<sup>21</sup> If Column delivers the quality of goods agreed upon, both parties will make two.<sup>22</sup> If Column cheats and sends goods of lesser quality, he will make three and Row will make zero, but Row will defect and Column will have to look for other cooperative partners.<sup>23</sup> A similar result will occur if Row cheats, for example, by challenging the quality of the goods and withholding full payment.<sup>24</sup> Assuming a desire for repeated play, it is better for the parties to cooperate than defect because making two regularly is better than making three a few times and developing a reputation for being untrustworthy, thereby losing cooperative opportunities in the future.<sup>25</sup> As Eric Posner says, "[L]ogic shows that the optimal move is always to cooperate."<sup>26</sup>

The logic of cooperation also extends to games involving more than two players in situations where information regarding one player's cooperative reputation is readily available to other group members.<sup>27</sup> Norms, it is presumed, are artifacts of this cooperation that provide information on the cooperative nature (reputation) of each group member.<sup>28</sup> Such an understanding provides significant insight into social norm formation and enforcement. In particular, it suggests that norms will promote cooperation in small groups where normative information is readily shared and "social enforcement" most readily accomplished.<sup>29</sup>

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16. *Id.* at 15.

17. *Id.*

18. *Id.*

19. *Id.* at 19.

20. *Id.*

21. *Id.*

22. *Id.* at 16.

23. *Id.*

24. *Id.*

25. *Id.*

26. *Id.* Posner also suggests that the logic of cooperation extends to games involving more than two players by assuming that everyone has sufficient information about other people's past activities. *Id.* Thus, defection from one pairwise transaction will not lead to a "clean slate" in the next pairwise transaction. *Id.*

27. ELLICKSON, *supra* note 2, at 178.

28. *Id.* at 180.

29. *Id.*

Robert Ellickson's watershed study of ranchers in Shasta County provides the most explicit description of the conditions necessary for norms to promote cooperation, asserting the following hypothesis: "[M]embers of a close-knit group develop and maintain norms whose content serves to maximize the aggregate welfare that members obtain in their workaday affairs with one another."<sup>30</sup> He further defines groups to be "close-knit" when "informal power is broadly distributed among group members and the information pertinent to informal control circulates easily among them."<sup>31</sup> Put simply, in groups where individuals' dependence on one another makes them value their reputations, and the cost of obtaining and exchanging information about a group member's reputation is low, norms are assumed to promote efficient results.<sup>32</sup> A significant portion of norms scholarship rests on this foundation.<sup>33</sup>

### B. Rational Choice and the Need Reinforcement Principle

The game-theoretic model of norm formation is, of course, extremely parsimonious. In particular, the model fails to consider the social psychology—even rational, choice-based social psychology—of group behavior. This section will use the concept of need reinforcement developed in social psychology to inform the rational choice model and, in particular, provide an understanding of the link between the behavioral standards embodied by norms and individual preference. By identifying norms as reflections of aggregate preference and normative behavior as a signal of the importance of group standing to an individual, the model provides a framework for considering when and how norms do and do not advance welfare.

The rational choice sociological model leads to a particular view of groups and norms. Pursuant to the rational choice perspective, groups are the result of individuals coming together for the mutual satisfaction of their own needs.<sup>34</sup> The individual is the basic unit of such a conception of the

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30. *Id.* at 167. Note that Ellickson makes no claims regarding the efficiency of norms in larger, less close-knit groups. For a recent analysis of the possibility of cooperation in larger, less close-knit groups, see Lior Jacob Strahilevitz, *Social Norms from Close-Knit Groups to Loose-Knit Groups*, 70 U. CHI. L. REV. 359, 361 (2003).

31. ELLICKSON, *supra* note 2, at 177-78.

32. *Id.* at 180-82. See also Strahilevitz, *supra* note 30.

33. See Strahilevitz, *supra* note 30, at 360; Elinor Ostrom, *Collective Action and the Evolution of Social Norms*, J. ECON. PERSP., Summer 2000, at 137, 138; Richard H. McAdams, *Group Norms, Gossip, and Blackmail*, 144 U. PA. L. REV. 2237, 2291 (1996). See generally Gideon Parchomovsky & Peter Siegelman, *Selling Mayberry: Communities and Individuals in Law and Economics*, 92 CAL. L. REV. 75, 109 (2004) (noting that much of law and norms scholarship has focused on "the potential of social norms to coordinate behavior, especially in small communities"). Lisa Bernstein has conducted a number of studies suggesting that small commercial communities opt out of the legal system in favor of a private norm-based system. See Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1745 (2001) [hereinafter Bernstein, *Private Commercial Law in the Cotton Industry*]; Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115 (1992) [hereinafter Bernstein, *Opting Out of the Legal System*].

34. See generally MUZAFER SHERIF, *GROUP CONFLICT AND CO-OPERATION* (1966) (illustrating how

group,<sup>35</sup> and interdependence is the basic force that holds these individuals together.<sup>36</sup> In this sense the group is simply a reflection, or aggregation, of the individuals that comprise it, and the idea of a group as something other than a collection of individuals is meaningless. The idea of a social norm within this framework is, in turn, simply the reflection of the aggregate preferences of the individuals that comprise the group.<sup>37</sup> That is, norms are the reflection of the perceived majority position of any group of individuals and can be determined by simply combining the individual positions of the majority of group members.<sup>38</sup>

It is difficult, however, to reconcile this view of normative behavioral standards with the notion that normative behavior provides information on one's willingness to cooperate with other group members. The connection between certain moral norms, such as "do unto others as you would have them do unto you" and one's cooperativeness is apparent. It becomes harder, however, to see how the norm of eating hot dogs at a baseball game is indicative of one's cooperative nature. Eric Posner has attempted to solve this problem by describing norms as behavioral equilibria that result from people signaling their discount rates to one another.<sup>39</sup> Posner suggests that preferences regarding the value of future payoffs differ among the population. People with low discount rates are less likely to defect from a cooperation game because they value future payoffs higher than most.<sup>40</sup> He deems such people "good types."<sup>41</sup> In order to distinguish themselves from bad types, good types engage in behaviors that signal their lower discount rate.<sup>42</sup> Because they value future payoffs more highly, good types are willing to undertake more expensive signaling behaviors.<sup>43</sup> Norms, to Posner, are the behavioral equilibria that result from good and bad types signaling their discount rates.<sup>44</sup> While Posner's effort continues to be the most comprehensive attempt to explain norm formation, and, in particular, to explain the normative basis for a number of specific behaviors,<sup>45</sup> it has been subject to substantial criticism.<sup>46</sup>

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shared identity and group organization derive from group-member interdependence).

35. This concept has its roots in some of the earliest work of social psychology. As early as 1924, psychologists argued that the individual was the only psychological reality and that there was nothing in the group that was not in the individual. FLOYD HENRY ALLPORT, *SOCIAL PSYCHOLOGY* (1924).

36. John C. Turner, *Social Categorization and the Self-Concept: A Social Cognitive Theory of Group Behaviour*, in 2 *ADVANCES IN GROUP PROCESSES: THEORY AND RESEARCH* 77, 79 (E.J. Lawler ed., 1985) [hereinafter *Social Categorization and the Self-Concept*].

37. *Id.* at 80.

38. *Id.* at 82.

39. POSNER, *supra* note 9, at 19.

40. *Id.*

41. *Id.*

42. *Id.*

43. *Id.*

44. *Id.*

45. For further discussion see *infra* note 58.

46. See, e.g., Steven A. Hetcher, *Cyberian Signals*, 36 U. RICH. L. REV. 327 (2002); Dan M. Kahan, *Signaling or Reciprocating? A Response to Eric Posner's Law and Social Norms*, 36 U. RICH. L. REV. 367 (2002).

A simpler explanation of how norms reflect an individual's cooperativeness may be found in the mutual attraction that arises between people who are interdependent. This attraction is rooted in the operation of a need satisfaction or "reinforcement" principle: mutual liking between group members reflects the extent to which positive, gratifying, or rewarding outcomes are associated directly or indirectly with being in each other's company.<sup>47</sup> The greater the perceived rewards of group membership, the greater the attraction to the group, reducing the likelihood that one will defect.

Normative pressure is, in turn, an external force that affects individual behavior only to the extent that one is concerned about others to whom he or she is attracted.<sup>48</sup> Put simply, if an individual wants to do something she perceives is not condoned by other group members, and there is a sense of mutual liking or attraction between the individual and the other group members, the individual risks disapproval from others to whom she is attracted.<sup>49</sup> A group member who seeks esteem is thus required to estimate which behaviors are approved by other group members. The more uniformly held and highly valued the preference is, the more likely it will assert normative force. Take, for example, one individual's belief about group preferences regarding cursing. Consider two different possible levels of individual belief regarding the norm. In one case imagine that she believes that 90% of the group does not condone cursing (in which case her cursing will offend nine out of ten group members) and in the other she believes only 60% of the group does not condone cursing (cursing will only offend six of ten). Depending on her own beliefs regarding cursing, this difference may have an impact on her willingness to curse in the group.

These differences can be measured in terms of their impacts on expected utility.<sup>50</sup> To do so, assume that there are only two beliefs relevant to

47. *Social Categorization and the Self-Concept*, *supra* note 36, at 79.

48. Rational choice scholars intuitively understand this attraction. See, e.g., Robert Cooter, *Do Good Laws Make Good Citizens? An Economic Analysis of Internalized Norms*, 86 VA. L. REV. 1577, 1592-93 (2000) [hereinafter *An Economic Analysis of Internalized Norms*] ("Business, politics, love, and war cause people to form relationships with each other. These relationships create opportunities for mutual benefit from cooperation and also opportunities for people to exploit each other.").

49. John C. TURNER ET AL., REDISCOVERING THE SOCIAL GROUP: A SELF-CATEGORIZATION THEORY 20 (1987) (hereinafter REDISCOVERING THE SOCIAL GROUP) The authors note:

[W]here people perceive, believe, or expect to achieve mutual satisfaction from their association, they will tend to associate in a solidary fashion, to develop positive interpersonal attitudes and to influence each other's attitudes and behaviour on the basis of their power to satisfy needs for information and reward each other . . . .

*Id.*

50. This theory of beliefs as the basis of attitude can be correlated with the Subjective Expected Utility Theory of behavioral science. MARTIN FISHBEIN & ICEK AJZEN, BELIEF, ATTITUDE, INTENTION AND BEHAVIOR: AN INTRODUCTION TO THEORY AND RESEARCH 30 (1975). According to that theory, when a person has to make a behavioral choice, he will select that alternative which has the highest subjective expected utility—the alternative likely to lead to the most favorable outcome. *Id.* This theory

can be stated as: " $SEU = \sum_{i=1}^n SP_i U_i$  where . . . SP<sub>*i*</sub> is the subjective probability that the choice of this alternative will lead to some outcome *i*" & U<sub>*i*</sub> is utility of the outcome *i*. *Id.* This model can be recast in

a behavior, the belief regarding the behavior itself and the belief regarding the norm. Let us further assume that beliefs about the behavior are held constant—our subject likes to curse but she does not hold this preference very strongly. The certainty with which she holds her beliefs about the norm will thus determine her attitude regarding the behavior. To see why, assume a simple scale of certainty that runs from 0 (no certainty) to 100 (very strong certainty) and a similar scale for evaluation -100 (strong dislike) to +100 (strong like). Applying these factors to cursing could have the following results:

Belief	Certainty	Evaluation	be
I like cursing	90	15	1350
I will be sanctioned	90	-20	-1800

$$A_o = \sum b_i e_i = -700$$

Consider the situation when certainty of belief regarding the subjective norm drops:

Belief	Certainty	Evaluation	be
I like cursing	90	15	1350
I will be sanctioned	60	-20	-1200

$$A_o = \sum b_i e_i = +150$$

Because her understanding of the uniformity with which a belief is held impacts her estimation of normative sanction, she will feel constrained to act by normative control in the former case and not constrained in the latter.

Now, consider that our group member values group membership much more strongly. Thus, her negative evaluation of the social consequences of acting out of step with group attitudes will be much more substantial. This evaluation will result in conformity regarding a much larger number of behaviors. Consider the following:

Belief	Certainty	Evaluation	be
I like cursing	90	15	1350
I will be sanctioned	60	50	-3000

$$A_o = \sum b_i e_i = -1650$$

In such a case, even a small perceived majority of behavior will result in conformity.

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terms of beliefs about consequences. *Id.* That is  $SP = b$  and  $U = e$ , or as the equation  $A_B = \sum_{i=1}^n b_i e_i$ . *Id.* at 30-31; see also Lynn R. Anderson & Martin Fishbein, *Prediction of Attitude from the Number, Strength, and Evaluative Aspect of Beliefs About the Attitude Object: A Comparison of Summation and Congruity Theories*, 2 J. PERSONALITY & SOC. PSYCHOL. 437, 437-43 (1965) (arguing that basic summation of belief and evaluation yields significantly better predictions of attitude than congruity theory).



The more an individual conforms to perceived group norms, the more likely other group members are to perceive her to be strongly attracted to the group. This is particularly the case when people exhibit group conformity even with norms that are not universally held.<sup>51</sup> This commitment to group membership acts as a strong signal of one's unwillingness to defect from cooperative endeavors with other group members.

The need reinforcement addition to the basic rational choice model of behavior thus establishes a very particular view of groups and norm formation with the rational individual at its core. Norms arise only because rational individuals attain benefits from interacting with others and thus value the acceptance of others. Individuals attempt to determine the majority preference, and the failure to act in accordance with the view of the majority negatively impacts one's perceived attractiveness to other group members. The higher one values group membership, the less likely she is to defect from cooperative endeavors.

### III. NEED REINFORCEMENT, NORM EFFICIENCY, AND NORM-BASED REGULATION

Adding to the basic evolutionary model, an understanding of the source of normative behavioral standards provides a further means for analyzing the ability of norms to promote welfare.

While some commentators have raised concerns regarding the efficiency of norms,<sup>52</sup> most law and economics literature has been characterized as "guardedly optimistic" about norm efficiency.<sup>53</sup> Ellickson, for example, while recognizing that his hypothesis of norm efficiency was induced rather than deduced from a specific model of social interactions,<sup>54</sup> offers anecdotal proof of his theory that norms are efficient, by describing the way in which cattle rancher norms and norms developed by the whaling industry in the seventeenth and eighteenth century promote welfare.<sup>55</sup> Many other law and economics scholars share Ellickson's optimism.<sup>56</sup>

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51. Notice the inverse of this proposition. A person who strongly desires group membership and who assumes the majority of members approve of cursing (say 60%) will actually curse unless she highly values not cursing.

52. See generally McAdams & Rasmusen, *supra* note 3, at 19-22 and citations therein (examining the potential effectiveness of varying norms among different social groups and arguing that when norms prove inefficient, enacting rules of "market-inalienability" might provide adequate incentive to affect behavior).

53. Mahoney & Sanchirico, *supra* note 5, at 2027.

54. ELLICKSON, *supra* note 2, at 167.

55. *Id.*

56. See Eric A. Posner, *The Regulation of Groups: The Influence of Legal and Nonlegal Sanctions on Collective Action*, 63 U. CHI. L. REV. 133, 136 (1996) (arguing that solidary groups should be able to regulate themselves); Robert D. Cooter, *Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant*, 144 U. PA. L. REV. 1643, 1677-78 (1996) (suggesting efficient equilibria will become norms); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051, 1133 n.332 (2000) (arguing for a presumption of efficiency that can be easily overturned); LOUIS KAPLOW & STEVEN SHAVELL, *FAIRNESS VERSUS WELFARE* (2002) (arguing that ambiguity may prevent norms from

Perhaps the greatest support for the general optimism about norm efficiency is not Ellickson's induction of efficiency but Robert Axelrod's work on multiple play cooperation problems and the notion of the evolution of norms. Axelrod's now famous computer experiments demonstrate that normative strategies evolve so that those strategies that are friendly to cooperation succeed.<sup>57</sup> Axelrod has conducted a number of different tournaments.<sup>58</sup> In his first tournament, Axelrod invited submissions of programmed strategies to a prisoners' game tournament conducted by computer.<sup>59</sup> Each entry played two hundred iterations against all other programs and against a clone of itself.<sup>60</sup> A program by game theorist Anatol Rapoport called "tit for tat," or "TFT," won the tournament.<sup>61</sup> TFT starts with a cooperative move, and subsequently its play echoes its opponent's last move.<sup>62</sup> Axelrod conducted a second computer tournament, which received four times as many entries.<sup>63</sup> However, prior to the second tournament, the results of the first tournament were disclosed, and contestants were allowed to modify their strategies based on the results.<sup>64</sup> Thus, in essence, it allowed for the players' strategies to evolve based on the strategies that had been most successful in the first tournament. The tit-for-tat strategy won again.<sup>65</sup>

In an effort to more completely model the role of evolution, Axelrod attempted to simulate natural selection in a later tournament by adjusting the number of offspring in each successive round based on a strategy's success in the previous round.<sup>66</sup> "After one thousand generations of play, weak programs became extinct, and so did some 'predatory' programs that had survived by exploiting dwindling programs lower in the food chain."<sup>67</sup> Interestingly, in this game TFT won again, just as it had in Axelrod's prior tournaments.<sup>68</sup> TFT's relation to such basic moral norms as "the golden rule" fuels the belief that norms promote solutions to cooperation problems.<sup>69</sup>

Assumptions of norm efficiency have fueled a variety of different arguments that normative behavioral standards should be used to inform or

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offering meaningful behavioral guidelines).

57. David Crump, *Game Theory, Legislation, and the Multiple Meanings of Equality*, 38 HARV. J. ON LEGIS. 331, 377 (2001).

58. *Id.* at 378.

59. *Id.* at 377.

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.* at 378.

64. Mark A. Chinen, *Game Theory and Customary International Law: A Response to Professors Goldsmith and Posner*, 23 MICH. J. INT'L L. 143, 167 (2001).

65. *Id.*

66. Crump, *supra* note 57 at 378.

67. *Id.*

68. *Id.*

69. See Theodore P. Seto, *Intergenerational Decision Making: An Evolutionary Perspective*, 35 LOY. L.A. L. REV. 235, 250-51 (2001) (describing a connection between TFT and the "Golden Rule"); cf. Jeffrey L. Harrison, *Strategy and Biology: The Continuing Interest in Self-Interest*, 86 COLUM. L. REV. 213, 214 n.7 (1986) (reviewing ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* (1984); JOHN BECKSTROM, *SOCIOBIOLOGY AND THE LAW* (1985)) (noting that Axelrod prefers TFT to the Golden Rule because it cannot be used to exploit its followers).

replace regulation.<sup>70</sup> Robert Cooter, for example, suggests that the existence of a norm is itself evidence of the efficiency of a particular behavior.<sup>71</sup> He particularly favors normative standards over the behavioral standards created through the political system, where specialized interests have great influence on what legal standards are ultimately adopted.<sup>72</sup> Lisa Bernstein has argued that, in cases of ongoing commercial relations, it is best to leave parties to themselves and to invoke legal sanctions only when relationship-preserving norms break down completely.<sup>73</sup> Others also argue that, in certain cases, law should adopt existing norms<sup>74</sup> or shield business decisions from legal recourse as a means of promoting efficient behavior.<sup>75</sup> Put simply, optimism about norm efficiency has led many scholars who are critical of the legal process to embrace norms as superior alternatives to law. The assumption of norm efficiency, however, continues to be just that—an assumption.<sup>76</sup> Until a better understanding of norm development and forma-

70. As Dan Kahan has noted:

[The law and social norms] movement seeks to identify psychological and social dynamics that promote contributions to collective goods without the prodding—and hence without the pathologies—of regulatory incentives. Law might have a constructive role to play in fostering these behavioral mechanisms, but otherwise it should simply get out of the way of their natural evolution.

Kahan, *supra* note 46, at 367-68. For explicit arguments that norms supplement or obviate the need for law, see ELLICKSON, *supra* note 2, at 56-58; Margaret M. Blair & Lynn A. Stout, *Trust, Trustworthiness, and the Behavioral Foundations of Corporate Law*, 149 U. PA. L. REV. 1735, 1808-09 (2001) (arguing that, to the extent people internalize a norm of trustworthiness, it is not necessary to regulate such standards in corporate law); Bernstein, *Private Commercial Law in the Cotton Industry*, *supra* note 33, at 1724-25 (analyzing the cotton industry, which almost entirely opts out of the public legal system); Saul Levmore, *Norms as Supplements*, 86 VA. L. REV. 1989, 1990 (2000); Peter H. Huang & Ho-Mou Wu, *More Order Without More Law: A Theory of Social Norms and Organizational Cultures*, 10 J.L. ECON. & ORG. 390, 404 (1994).

71. Cooter, *supra* note 56, at 1677-78.

72. *Id.* at 1690. (“My view that failures are rare in business games and norms, and that rent-seeking by lobbyists is common, lies behind my claim that much business law should be found, not made, by the state.”).

73. Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code’s Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765, 1796-1815 (1996).

74. This is, of course, the notion behind the standards of the Uniform Commercial Code. *See, e.g.*, U.C.C. § 2-202 cmt. 2 (2003). *See also* Bernstein, *supra* note 73, at 1766-68 (noting that the U.C.C. explicitly directs courts to discover and apply norms in reviewing commercial transactions). For other claims that norms are incorporated into law, see Stephen G. Gilles, *On Determining Negligence: Hand Formula Balancing, the Reasonable Person Standard, and the Jury*, 54 VAND. L. REV. 813, 834 (2001) (noting that the reasonable person looks to norms, among other things, in considering negligence); Daniel Gilman, *Of Fruitcakes and Patriot Games*, 90 GEO. L.J. 2387, 2387 (2002) (noting that norms inform the reasonable person standard in torts and elsewhere); William C. Heffernan, *Fourth Amendment Privacy Interests*, 92 J. CRIM. L. & CRIMINOLOGY 1, 37 (2001) (noting that the reasonable-expectations test substitutes community norms for the common law in determining when property is private for purposes of the Fourth Amendment); Jody S. Kraus, *Legal Design and the Evolution of Commercial Norms*, 26 J. LEGAL STUD. 377, 410-11 (1997) (advocating for the incorporation of business practices into regulation). *But see* Lisa Bernstein, *The Questionable Empirical Basis of Article 2’s Incorporation Strategy: A Preliminary Study*, 66 U. CHI. L. REV. 710, 715-17 (1999) (identifying the varied debates on the extent to which commercial norms should be followed under the U.C.C.).

75. *See* Rock & Wachter, *supra* note 2 (arguing that when transaction costs are high, the purpose of business law is to shield norm-based business decisions from legal intervention).

76. *See* discussion *supra* Part III. *See also* McAdams & Rasmusen, *supra* note 3 (describing different opinions on norm efficiency); Mahoney & Sanchirico, *supra* note 5, at 2030-39.

tion is reached, claims of when law should defer to norms remain, simply, conjecture.

Sanchirico and Mahoney have attempted to show when the evolutionary model may fail to promote Pareto-optimal norms.<sup>77</sup> They argue that in cases where a mismatch exists between the costs of gains from cooperation and the costs of losses from defection, dominant equilibria may not be utility maximizing.<sup>78</sup> Their description of mismatch norms using the stag hunt game is worth considering in some detail as we will revisit it in our analysis of how social influences affect optimal norm formation. According to the stag hunt game, two hunters can either work together (cooperate) to catch a stag, which they will share for dinner, or an individual hunter can opt out of the cooperative venture and hunt hare on her own.<sup>79</sup> If one hunter opts out to catch a hare, her former partner will not catch a stag and will go hungry.<sup>80</sup> Sanchirico and Maloney hypothesize a group of 10 hunters, each of which values a half stag at four and a hare at three.<sup>81</sup> Starting with the constants of all hunt hare or all hunt stag, they consider at what point change in individual behavior would lead to a change in the group norm:

The two steady states in which all hunt stag or all hunt hare are stable with respect to small numbers of mutations. Imagine that the population consists of all hare hunters and at year's end two individuals start hunting stag. Each other hunter will recognize that by hunting stag, she will achieve the cooperative solution if paired with one of the two mutated hunters. Under the circumstances, this would occur with probability  $2/9$  and would provide a daily payoff of 4. The expected daily payoff to hunting stag, then, is  $8/9$ . However, because there are 7 other hunters hunting hare, her expected daily payoff from hunting hare is  $21/9$ . Thus, as a stag hunter, the risk of encountering one of the more prevalent hare hunters and ending up with nothing is too great to justify a change of practice. Indeed, when the few individuals who have mutated to stag hunting have a chance to re-optimize, they themselves will return to hunting hare. The population, having been altered slightly from the social state in which all hunt hare, will return to that state within the year. A similar story can be told for stag hunting.

Even though both homogeneous social states are immune to *small* numbers of mutations, there is for each state *some* number of simultaneous mutations sufficient to “tip” the norm—that is, to cause the re-optimizing individuals to switch strategies during the

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77. Mahoney & Sanchirico, *supra* note 5, at 2027-41.

78. *Id.*

79. *Id.* at 2041.

80. *Id.*

81. *Id.* at 2041-45.

course of the ensuing year until all have switched to the other norm. A mutation of 7 will tip the norm from hunting hare to hunting stag (assuming it will next be the turn of a nonmutated hare hunter to re-optimize; if one of the mutants is next in line, 8 mutations are required). Consider a hare hunter's optimization problem after 7 hare hunters have mutated to hunting stag. She now expects to encounter a stag hunter with probability  $7/9$ . Stag hunting will lead to an expected daily payoff of  $4(7/9) = 28/9$ , which is greater than 3, the expected payoff for hare hunting. After this individual switches to stag hunting, there will be 8 stag hunters and the next re-optimizing individual will follow suit by the same reasoning. By year's end, the entire population will be hunting stag. By contrast, 6 simultaneous mutations will not tip hare to stag. After 6 mutations, the expected payoff to stag hunting is  $4(6/9) = 2\frac{2}{3} < 3$ .

While it takes at least 7 simultaneous mutations to tip the social state from hare hunting to stag hunting, going in the other direction is markedly easier. Imagine that 3 individuals mutate to hare hunting in a population that was formerly composed entirely of stag hunters. Assuming that a nonmutated stag hunter is the next to re-optimize, she can expect to come upon a fellow stag hunter with probability  $6/9$ . The expected payoff to stag hunting is then  $24/9$ , slightly worse than the guaranteed 3 of hare hunting. Hence, this stag hunter would switch to hunting hare. This decreases the chance of encountering stag hunters for everyone else, and by year's end the system will have tipped to a population consisting entirely of hare hunters.

Why is stag hunting so much more "tippable" than hare hunting? Compare stag hunting's efficiency advantage to its mismatch risk. Stag hunting does somewhat better against itself (payoff of 4) than hare hunting does against hare hunting (payoff of 3). The one-unit difference is stag hunting's efficiency advantage. But stag hunting does much worse against hare hunting (payoff of 0) than vice versa (payoff of 3). This 3-unit difference is stag hunting's mismatch risk. Because stag hunting's mismatch risk exceeds its efficiency advantage, hare hunters will not switch to stag hunting unless matching with another stag hunter is more likely than not—in our case, somewhat more than twice as likely.<sup>82</sup>

The need reinforcement model provides a basis for furthering our understanding of norm efficiency. In particular, by providing a means for explaining the link between norms and preference and how group members

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82. *Id.* at 2046-47.

attempt to identify aggregate preference, the need reinforcement model enables us to judge norm efficiency more completely. Supplementing the stag game with the sociology of norms provides both reason for optimism and pessimism regarding norm efficiency. Unlike the heroes in most movie dramas, let us begin with the good news first and save the bad for later. The first insight provided by the need reinforcement principle relates to the likelihood of Pareto-inferior norms evolving from cooperation games. The need reinforcement model suggests that individual group members are continuously interested in identifying the aggregate preference of group members to whom they are attracted.<sup>83</sup> The desire for esteem will assert significant influence on the likelihood that optimal behavioral equilibria will result from iterated plays of cooperation games.

Consider our ten hunters in the stag hunt game and add to their preference for  $\frac{1}{2}$  stag the value of social esteem from following the perceived preference of the majority. Assume each hunter values social esteem at two, and all hunters give esteem for hunting stags (the actual preference of all players). At the point that only three hunters defect, a “hunt stag” tipping point will be reached. First, the expected utility of a stag hunter will be  $4(3/9) = 12/9$  or 1.33. In addition, the expected utility of following the “hunt stag” norm will be two (100% certainty of receiving a benefit evaluated at two). Expected utility of stag hunting will thus be valued higher than hunting hare (which is valued only at three). Notice, as well, that we are assuming that there is no disesteem given for hunting hare. Assuming such disesteem would decrease the expected utility of hunting hare and may drop the tipping point to entrench the optimal “hunt stag” norm to an even lower number of defectors. Thus, assuming that actual preference can be communicated, the number of cases where mismatch risk negatively affects welfare will be greatly decreased.<sup>84</sup>

Another concern regarding the evolutionary model is that it does nothing to provide us with an understanding of efficiency for all the behaviors that may be associated with, but not directly related to, the benefits of group membership. Consider, again, our hunters. The hunters may benefit greatly from catching stags versus hares, and the “hunt stag” norm will contribute to this optimal behavior. Adding the sociology of groups to the narrow conception of cooperation in the stag game, however, we recognize that the hunters are part of a community (the “hunting community”). Members of the community will interact to provide a variety of benefits to each other. Hunter’s wives may share child care duties; groups of individuals may come together to help an individual hunter build a building; and hunters may share their food with others who are sick or unable to hunt for other reasons.

While the cooperative benefits of such group membership are many, so too are the norms.<sup>85</sup> The iterated cooperation game helps us to understand

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83. See *supra* note 50 and accompanying text.

84. The ability to communicate preference will be considered *infra* Part VI.A.

85. A norm is any behavior around which social sanctions develop. See *supra* note 4.

the efficiency of the norm directly resulting from the benefit (what I will call the “direct benefit norm”), but it does nothing to help us consider the efficiency of norms such as “wear certain colored clothes at ceremonies,” “wear your hair in a certain style,” or “eat hot dogs at baseball games” (what I will call the “indirect benefit” norm).<sup>86</sup> To determine the efficiency of these behaviors, one must relate the norm to aggregate preference, with norms that advance preference being welfare-enhancing.<sup>87</sup> The need reinforcement model, by suggesting that norms reflect aggregate preference, provides a basis for this analysis. It suggests that even indirect benefit norms will be efficient to the extent that aggregate preference can be properly identified.<sup>88</sup>

This, then, brings us to the concerns about norm efficiency raised by the need reinforcement model. This model suggests that direct benefit norms are more likely to be efficient to the extent that individual preference is apparent. In the case of indirect benefit norms of group membership, the cost of the behavior in isolation from group benefit can be considered by examining whether aggregate preference is embodied in the norm or not. In both of these cases, the likelihood that norms will reflect the aggregate preference is the key to efficient norm formation. The following sections will consider ways in which individuals may systematically misperceive aggregate preference.

#### IV. PLURALISTIC IGNORANCE AND THE SELF/OTHER BIAS

“The term *pluralistic ignorance* was coined by Floyd Allport . . . to describe the situation in which virtually all members of a group privately reject group norms yet believe that virtually all other group members accept

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86. Eric Posner provides some insight into these issues. See POSNER, *supra* note 9, at 172-79. Other norms scholars, however, may not characterize these indirect benefit norms as norms at all. See, e.g., McAdams & Rasmusen *supra* note 3, at 3 (defining these types of behavioral attitudes as “conventions”). Still other norms scholars may claim that such specific behaviors can be explained by more abstract norms. Thus, “use a safety seat for your children,” while not explainable through cooperation, may be explained by reference to a more abstract norm, such as “be a good parent.” See, e.g., Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338, 383, 407-08 (1997) [hereinafter McAdams, *Regulation of Norms*]. This understanding of specific behaviors, however, fails to account for specific behaviors that do not seem to reflect any deeper moral belief, such as wearing one’s hair or clothing in a certain style. Moreover, to the extent that it connects specific behaviors only loosely to more generalized norms, this understanding provides little basis upon which to judge the efficiency of a large number of specific behaviors. See generally KAPLOW & SHAVELL, *supra* note 56 (arguing that norms may be too broad to be useful).

87. It should be noted that this measure of utility accepts the preferences of individuals as a given. Efforts to change preferences through persuasion or education can and do happen in such a system, but the morality of particular preferences is well beyond the scope of the efficiency analysis. See Douglas Litowitz, *A Critical Take on Shasta County and the “New Chicago School,”* 15 YALE J.L. & HUMAN. 295, 321 (2003) (arguing that norms are not useful regulatory tools because they are agnostic toward the morality of the behaviors that they regulate).

88. Compare this level of specificity to the understanding of efficiency derived from connecting indirect benefit norms to more abstract norms. Pursuant to that understanding, specific behaviors can be judged efficient only in the loose sense that they reflect more abstract preferences. See McAdams, *Regulation of Norms*, *supra* note 86, at 380-84.

them.”<sup>89</sup> At the core of pluralistic ignorance is the effect of the self/other bias on our understanding of other peoples’ behavior. Individuals perceive their motivations to act as different from the motivations of others.<sup>90</sup> In particular, social psychologists have demonstrated that an individual may understand his or her own actions as being normatively controlled but perceive that other people act out of preference or true belief and not normative concerns.<sup>91</sup> Under the influence of the self/other bias,

Individuals recognize that their own norm-congruent behavior is at variance with their true sentiments, but they do not assume a similar discrepancy in others. Instead, their social perception is guided by what they observe: They infer that the actions of others reflect accurately the way they are thinking and feeling.<sup>92</sup>

Under conditions of pluralistic ignorance, normative influence leads to the entrenchment of suboptimal, as opposed to welfare-enhancing behaviors.<sup>93</sup> Take, for example, student drinking. In one well-known study, social psychologists determined that college students believed themselves to be significantly less comfortable with alcohol use on campus than they believed other students were.<sup>94</sup> The self/other bias led students to believe that, while they were motivated by the perceived social norm to drink, other students were motivated by actual preference.<sup>95</sup> The students estimated the distribution of attitudes toward drinking on campus to have a mean of ap-

89. Dale T. Miller et al., *Pluralistic Ignorance and Inconsistency Between Private Attitudes and Public Behaviors*, in ATTITUDES, BEHAVIOR AND SOCIAL CONTEXT: THE ROLE OF NORMS AND GROUP MEMBERSHIP 95, 103 (Deborah Terry & Michael Hogg eds., 2000).

90. Deborah A. Prentice & Dale T. Miller, *Pluralistic Ignorance and Alcohol Use on Campus: Some Consequences of Misperceiving the Social Norm*, 64 J. PERSONALITY & SOC. PSYCHOL. 243, 244 (1993) [hereinafter *Pluralistic Ignorance and Alcohol Use*].

91. David Hines et al., *Pluralistic Ignorance and Health Risk Behaviors: Do College Students Misperceive Social Approval for Risky Behaviors on Campus and in Media?*, 32 J. APPLIED SOC. PSYCHOL. 2621, 2622 (2002).

92. Deborah A. Prentice & Dale T. Miller, *Pluralistic Ignorance and the Perpetuation of Social Norms by Unwitting Actors*, in 28 ADVANCES IN EXPERIMENTAL SOCIAL PSYCHOLOGY 161, 162 (Mark P. Zanna ed., 1996) [hereinafter *Pluralistic Ignorance and the Perpetuation of Social Norms*]. For a discussion of the self/other difference and its sources, see Cristina Bicchieri & Yoshitaka Fukui, *The Great Illusion: Ignorance, Informational Cascades, and the Persistence of Unpopular Norms*, in EXPERIENCE, REALITY, AND SCIENTIFIC EXPLANATION 89, 97 (Maria Carla Galavotti & A. Pagnini eds., 1999). See also Dale T. Miller & Deborah A. Prentice, *Collective Errors and Errors About the Collective*, 20 PERSONALITY & SOC. PSYCHOL. BULL. 541, 544-45 (1994) (suggesting the bias is based on the cultural propensity to underestimate the power of social motives to influence behavior).

93. Note that the definition of pluralistic ignorance generally includes any instances exhibiting a mismatch between a perceived preference and an existing preference. See Miller et al., *supra* note 89, at 103. However, pluralistic ignorance is sometimes equated with a desire not to look stupid or ignorant that leads to inaction. See *id.* at 107. In that case, the self/other bias leads observers to assume the failure to act is based on actual preference and not social pressure. See *id.* Thus, instead of making the logical determination that others also prefer not to look silly, we instead assume they are acting out of preference. Under this very limited understanding of pluralistic ignorance, such misunderstanding only happens when individuals act out of a preference not to be socially chastised.

94. Hines et al., *supra* note 91, at 169.

95. *Id.* at 187-88.



proximately seven, with an interquartile range from five to nine.<sup>96</sup> In fact, the actual distribution of attitudes, as reflected by students' own private comfort ratings, had a mean of 5.33, with an interquartile range from three to eight.<sup>97</sup> A desire to act in congruence with the norms of their peer group led individual students to act in accordance with the perceived norm, creating public behavior that led to further erroneous inferences.<sup>98</sup> This results in a deeply-entrenched and self-perpetuating norm of drinking in excess,<sup>99</sup> a norm that does not reflect the actual preference of those whose behavior it controls.

“Pluralistic ignorance is a pervasive feature of social life: It has been found to characterize the dynamics of social situations . . . social groups . . . and social movements . . . .”<sup>100</sup> Prerequisites to the occurrence of pluralistic ignorance are minimal. Pluralistic ignorance may occur any time individuals engage in social comparison, do not have the means for transparent<sup>101</sup> communication of preference, and (because of the self/other bias) misinterpret the behavior of others.<sup>102</sup> In these cases, observed behavior may lead one to believe that her own preference is not norm congruent. If her desire for esteem outweighs her preference, she too will act in accordance with the observed behavior, leading ultimately to more individuals acting normatively, in turn entrenching a suboptimal norm.

Small, close-knit groups are no less impervious to pluralistic ignorance than large groups. Indeed, given the basic presumptions about information sharing and desire for esteem within close-knit groups,<sup>103</sup> it is *more likely* that individuals in such contexts will be motivated to act in accordance with observed norms rather than preference. Psychologists have demonstrated that pluralistic ignorance is most likely to occur in situations where individuals identify strongly with a particular group.<sup>104</sup> Behaviors of gang members,<sup>105</sup> prison guards,<sup>106</sup> church groups,<sup>107</sup> and nurses<sup>108</sup> are all con-

96. *Id.* at 168.

97. *Id.* These distributions demonstrate the two defining features of pluralistic ignorance: 1) a divergence of self and other ratings and 2) the illusion of universality.

98. Researchers in public opinion call this feedback phenomenon the “[S]piral of [S]ilence.” Albert C. Gunther & Cindy T. Christen, *Effects of News Slant and Base Rate Information on Perceived Public Opinion*, 76 JOURNALISM & MASS COMM. Q., 277, 278 (1999). See also James A. Kitts, *Egocentric Bias or Information Management? Selective Disclosure and the Social Roots of Norm Misperception*, 66 SOC. PSYCHOL. Q. 222, 223 (2003).

99. Hines et al., *supra* note 91, at 187.

100. *Id.* at 162.

101. Transparent communication can be difficult to establish in groups. As James Kitts has demonstrated, group members tend to conceal information regarding counter-normative behaviors and only disclose it within confidence relations within a group. Kitts, *supra* note 98, at 226.

102. Bicchieri & Fukui, *supra* note 92, at 95-96.

103. See ELLICKSON, *supra* note 2, at 180-81.

104. Bicchieri & Fukui *supra* note 92, at 100 (“[Individuals] want to behave in accordance with what they perceive to be the group norms. The gang or the church are valuable social groups, and individuals strive to be accepted as good-standing group members. It thus seems that group-identification lies at the root of many cases of pluralistic ignorance.”); see also Hines et al., *supra* note 91, at 163.

105. Bicchieri & Fukui, *supra* note 92, at 93 (citations omitted).

106. *Id.*

107. Schanck’s study of members of the Methodist Church of Elm Hollow is one of the most influen-

trolled at one level or another by pluralistic ignorance. One need look no further than the unwillingness of students to ask questions in class for examples of pluralistic ignorance in small groups. As Miller and McFarland demonstrated, when a professor pauses for questions after a difficult lecture, she is often met by complete silence in the classroom.<sup>109</sup> No student is willing to raise his or her hand for fear of asking a stupid question.<sup>110</sup> Surprisingly, these students interpret the silence of their classmates as an indication that they have a clear understanding of the material, rather than a desire not to look stupid.<sup>111</sup> In reality, of course, widespread confusion reigns!<sup>112</sup>

Business norms too have been shown to be influenced by the forces of pluralistic ignorance. Consider a situation in which an individual tells a sexist or sexually themed joke and a few others (perhaps out of courtesy)<sup>113</sup> respond somewhat favorably to it. Other members of the office may misperceive the behavior of the others as support for the joke and, because of normative influence, either refrain from sanctioning or even laugh at the joke themselves.<sup>114</sup> The result of this process, of course, is the entrenchment of a clearly inefficient norm that actually helps explain the survival of hostile workplace environments in the face of increased regulation.<sup>115</sup>

Although there have been few empirical analyses of the effects of pluralistic ignorance on business norms, scholars have begun to consider a wide variety of management behaviors that may be “caused” by pluralistic ignorance.<sup>116</sup> Recently, three professors of management have developed a model of pluralistic ignorance regarding the standards by which employee performance is appraised.<sup>117</sup> According to the model, statements made by individual managers under conditions of pluralistic ignorance become the standards for appraisal of individual performance.<sup>118</sup> In such cases, minor

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tial foundational works in the field. He found community residents to be nearly unanimous in stating the public support for the Church’s prohibitions against “card playing, drinking alcohol, and smoking.” Deborah A. Prentice & Dale T. Miller, *The Emergence of Homegrown Stereotypes*, AM. PSYCHOLOGIST, May 2002, at 352, 354. Yet, he observed that during his stay “he himself played cards, drank hard cider, and smoked with many, if not most, residents . . . in the privacy of their own homes.” *Id.*

108. Hines et al., *supra* note 91, at 162.

109. Dale T. Miller & Cathy McFarland, *Pluralistic Ignorance: When Similarity is Interpreted as Dissimilarity*, 53 J. PERSONALITY & SOC. PSYCHOL. 298, 301 (1987).

110. *Id.*

111. *Id.*

112. *Id.*

113. There are many reasons why an individual may believe the joke to be approved by the majority. The joke teller may be representative of workers in the office or may be a member of a vocal minority whose frequency of joke telling makes the behavior more available, resulting in overestimation that it is approved by others. *See infra* Parts V.A, V.B for an analysis of the availability heuristic, the representativeness heuristic, and pluralistic ignorance.

114. Jonathon R.B. Halbesleben & M. Ronald Buckley, *Pluralistic Ignorance: Historical Development and Organizational Applications*, 42 MGMT. DECISION 126, 134 (2004).

115. *Id.* (citing Robert K. Robinson & Dwight D. Frink, *A Manager’s Primer for Sexual Harassment in the Workplace*, in HUMAN RESOURCES MANAGEMENT: PERSPECTIVE, CONTEXT, FUNCTIONS AND OUTCOMES (Gerald R. Ferris et al. eds., 4th ed. 2002)).

116. *See id.* at 131-35 (citing to studies varying from the management of Roman Catholic Priests to labor relations and business ethics).

117. *See id.* at 132-33.

118. *Id.*

concerns about behaviors unique to individual managers can become important factors that guide employee performance.<sup>119</sup>

In all these cases, norms do not reflect aggregate preference or are less likely to reflect Pareto-optimal behavioral equilibria. In the case of indirect benefit norms, misinformation leads individuals to choose behaviors that are contrary to their own desires. In the case of direct benefit norms, individuals enter into cooperative relationships assuming preferences that are wrong: the added social sanction thus further decreases the likelihood that the preferred equilibrium will actually be reached through cooperation.

It might be argued that the effect of pluralistic ignorance is not welfare-decreasing, but rather, that it substitutes satisfaction of one's preference for esteem with satisfaction of other preferences. For example, one may argue that heavy drinking provides increased social esteem, which outweighs any lost utility that results from drinking more than desired. This argument, however, ignores the fact that such a trade-off need not be made. As will be discussed *infra*, regulation that provides true normative information would allow for increased social esteem without the attendant utility loss that comes from acting against preference.<sup>120</sup> By "fixing" the problem that causes normative failure one can "have her cake and eat it too."

## V. BIASES IN PROBABILISTIC DETERMINATIONS AND NORM ESTIMATION

The general model of rational norm formation describes individuals as being attracted to one another because they associate positive outcomes with those with whom they cooperate.<sup>121</sup> This attraction to others is usually modeled as a preference for esteem in the law and economics literature.<sup>122</sup> Social psychologists also recognize that rational individuals seek the approval of others.<sup>123</sup> To the extent that one has a preference for the esteem of others, she must gather information on what behaviors other people deem esteem-worthy.<sup>124</sup> Individual efforts to make such determinations, however, will suffer from the same types of systematic cognitive "errors" that impact individuals' abilities to make probabilistic determinations in general. These systematic limitations—or heuristics—have been considered thoroughly in the behavioral law and economics literature.

The increased focus of scholars on social norms and behavioral law and economics reflects the growing dissatisfaction in legal academia with the

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119. *See id.*

120. *See infra* Part VI.B.

121. *See supra* text accompanying notes 34-38.

122. *See* McAdams, *Regulation of Norms*, *supra* note 86, at 355-57.

123. *See generally* Diane M. Mackie & Sarah Queller, *The Impact of Group Membership on Persuasion: Revisiting "Who Says What to Whom with What Effect?,"* in *ATTITUDES, BEHAVIOR, AND SOCIAL CONTEXT: THE ROLE OF NORMS AND GROUP MEMBERSHIP* 135 (Deborah J. Terry & Michael A. Hogg eds., 2000) (providing empirical evidence of and discussing the importance of approval from other group members).

124. I will use the notion of esteem-seeking for the rest of this section.

rational choice theory.<sup>125</sup> The task of behavioral law and economics is “to explore the implications of *actual* (not hypothesized) human behavior for the law. [It asks] [h]ow do ‘real people’ differ from *homo economicus*?”<sup>126</sup> Behavioral law and economics focuses on three different bounds on human behavior: bounded rationality, bounded willpower and bounded self-interest.<sup>127</sup> Each different bound suggests that humans function differently than *homo economicus*—the theorized rational individual of the Chicago School.<sup>128</sup>

Of particular interest in the intersection between norms and behavioral law and economics is the limit of human rationality. Building on the groundbreaking work of Kahneman and Tversky,<sup>129</sup> cognitive psychologists have identified a number of ways in which individuals may miscalculate the probability that an act will result in a certain outcome.<sup>130</sup> Such things as the availability of information and whether the information is delivered by an individual who is representative of a particular group can greatly skew such probabilistic determinations.<sup>131</sup> It should be noted that heuristics themselves may well reflect rational decisionmaking. Individuals do not have the time or resources to process all probabilistic information completely. Heuristics are simply rational responses to these limitations, providing cognitive “short cuts” that allow individuals to process such information meaningfully.<sup>132</sup> As Korobkin and Ulen explain:

Research in the behavioral sciences has demonstrated that individuals are systematically biased in their predictions of the probable results of various events. This line of research, pioneered by psychologists Amos Tversky and Daniel Kahneman, does not necessarily lead to the conclusion that individuals are “bad” decision makers. Often, systematic errors arise from the use of decision-making heuristics that simplify decision-making tasks, thus significantly reducing the costs of information processing and decision making, thereby rendering it possible to operate in an increasingly complex world. In some cases, systematic decision-making errors might be the result of perceptual biases that may be, on balance, evolutionarily adaptive. But whether or not the well-documented collection of

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125. See generally Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998) (explaining that behavioral law and economics compliments, not replaces, rational choice); Korobkin & Ulen, *supra* note 56, at 1070-74 (describing behavioral law and economics as a response to the limitations of rational choice theory).

126. Jolls et al., *supra* note 125, at 1476.

127. *Id.*

128. *Id.*

129. Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124 (1974).

130. See, e.g., Korobkin & Ulen, *supra* note 56, at 1127-34.

131. For a systemic discussion of a variety of heuristics and their influence on probabilistic determinations, see *id.*

132. *Id.* at 1143.

heuristics and biases are rational adaptations in a global sense, they have the consequence of causing actors to make decisions that violate the predictions of rational choice theory in individual circumstances.<sup>133</sup>

The purpose of this section is to consider the effect of such short cuts on assessments of a particular behavior's worthiness of esteem. It will, in particular, briefly discuss availability and representativeness as examples of the many heuristics that may affect probabilistic determinations of others' preferences and describe the effect they have on norm formation. The following section will then consider the implications of these heuristics and the impact of those implications upon our understanding of efficient norms and normative regulation.

#### A. *The Availability Heuristic*

Availability refers to the tendency to overestimate the likelihood of a certain outcome due to the fact that information regarding that outcome is more "vivid, well publicized, or more prevalent among a particular actor's friends and acquaintances."<sup>134</sup> For example, when asked the number of words that end in "ing" people give much larger estimates than when asked to estimate the number of words that have "n" as their second to last letter, presumably because one can readily bring to mind many examples of the former category.<sup>135</sup>

The main sources of available information regarding the opinions of others are vocal members of a group and the media. Before considering how a vocal minority can control the normative beliefs of other group members, we will look at how the media affects our sense of public opinion. By making certain information about public attitudes more apparent and vivid than others, news media can skew beliefs about the preferences of others.<sup>136</sup> Reporters pass information regarding the beliefs of others to the public through a variety of informal "exemplars," such as showing individuals acting in conformity with perceived norms or showing the reactions of particular bystanders to demonstrations.<sup>137</sup> Experimental evidence demonstrates that "the vividness and distribution of exemplars . . . in news stories [are] significantly related to the perceived distribution of majority and minority opinions, dramatically overshadowing any influence of poll results or other types of base rate information representing actual public opinion."<sup>138</sup> Put

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133. *Id.* at 1085 (footnotes omitted).

134. *Id.* at 1087-88.

135. Jolls et al., *supra* note 125, at 1518.

136. Gunther & Christen, *supra* note 98, at 278 (citing Hans-Bernd Brosius & Anke Bathelt, *The Utility of Exemplars in Persuasive Communication*, 21 COMM. RESEARCH 48, 78 (1994)).

137. Douglas M. McLeod & James K. Hertog, *The Manufacture of Public Opinion by Reporters: Informal Cues for Public Perceptions of Protest Groups*, 3 DISCOURSE AND SOCIETY 259, 261 (1992).

138. Gunther & Christen, *supra* note 98, at 278.

simply, the information carried by these exemplars plays a much greater role in the creation of perceptions of aggregate preference than the provision of actual information on individuals' beliefs.<sup>139</sup> The slant of news coverage also provides information on distribution of preference through society. The editorial slant of news articles and editorials has, for example, been shown to exert a significant influence on the perceived distribution of preference within a community.<sup>140</sup> Strong empirical evidence thus supports the claim that perceived access to others' opinions provided by the news media through exemplars and news slant plays a significant role in the formation of our sense of community norms.

A separate source of available group information may be a vocal minority within a particular group.<sup>141</sup> Consider, for example, a study of prison inmates' attitudes toward prison administration, which found that inmates systematically estimated the opinions of fellow inmates to be more anti-administration than their own.<sup>142</sup> The cause of this pluralistic ignorance was determined to be "that prison dynamics enabled a vocal minority of anti-administration prisoners to have a disproportionate degree of visibility within the prison."<sup>143</sup> Mass media contributes to this false impression by providing already vocal minorities deemed newsworthy with a stage for expressing their opinions.<sup>144</sup> As a result, "the opinions of minorities who speak up in public are [often] perceived to be more widespread than they [really] are."<sup>145</sup>

Both intergroup dynamics, giving voice to a non-representative group, and media exemplars and slant can thus skew an individual's perception of the distribution of aggregate preference within a group. Again, it is worthwhile to consider explicitly how these cognitive phenomena, like pluralistic ignorance, are just as likely to occur within small, close-knit communities. Small communities are as likely to be influenced by local media as national media. Indeed, studies have specifically shown the ability of local media to influence perceptions of aggregate preference within a community.<sup>146</sup> Similarly, vocal minorities have also been proven to influence perceptions of preference in small, close-knit groups.<sup>147</sup> While these are not the only sources of available information on the preferences of others, they provide

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139. *Id.* at 278 (citations omitted). The reason why exemplars overshadow poll information has been persuasively demonstrated to be based on the way in which the mind accesses certain types of information from memory. *Id.* at 287.

140. Diana C. Mutz & Joe Soss, *Reading Public Opinion: The Influence of News Coverage on Perceptions of Public Sentiment*, 61 PUB. OPINION Q. 431, 434-35 (1997). See also Gunther & Christen, *supra* note 98, at 289.

141. For a discussion of how the representativeness heuristic may further contribute to the power of a small, vocal group to skew norm perception, see *infra* text accompanying notes 146-49.

142. See Miller et al., *supra* note 89, at 111-12.

143. *Id.* at 111.

144. See Gunther & Christen, *supra* note 98, at 278.

145. *Id.*

146. See Mutz & Soss, *supra* note 140, at 434-35; See also Gunther & Christen, *supra* note 97, at 289.

147. See Miller et al., *supra* note 89, at 111-12.

the beginnings of an understanding of different day to day forces that may influence the creation of inefficient norms.

### B. *The Representativeness Heuristic*

The representativeness heuristic “refers to the tendency of actors to ignore base rates and overestimate the correlation between what something appears to be and what something actually is.”<sup>148</sup> This cognitive shortcut may lead to miscalculation of norms in situations where one person becomes representative of the opinions of any group—dentists, Republicans, Americans, environmentalists, baseball fans—to which we belong. Such a phenomenon can occur in any case where a particular individual or group of individuals is representative of the group prototype, and it may be more pronounced where there is significant uncertainty about the normative status of any behavior.<sup>149</sup>

Take, for example, the neighbor who takes excellent care of her house, cuts her grass, and always buys the products offered by the neighbors for various fundraisers. The neighbor represents all the qualities of a good neighbor; she is, in essence, prototypical. Assume, as well, that some members of the neighborhood may desire to use organic fertilizers and herbicides on their lawns.<sup>150</sup> Even though such use will result in a few more weeds showing, assume that virtually all other neighbors are indifferent to the use because the increase in weeds will be minimal. In such a case, the optimal behavior will be to use organic lawn care products. If the prototypical neighbor, however, states a dislike for organic lawn care, her statement may be considered by others to represent the view of most neighbors. In such a small community where desire for esteem is likely pronounced, the misperception of the majority norm can serve to discourage the desired behavior and organic lawn care will not occur.<sup>151</sup>

The effect of heuristics on understanding preference will not always be to create pluralistic ignorance. Rather, at times, they may have the effect of further entrenching a preference held by a majority of group members. For example, a vocal subgroup may share the preferences of the majority, just as news slant and exemplars may also reflect what people actually prefer. It is only in cases where the available information or the representative information differs from actual aggregate preference that pluralistic ignorance will result. While the ability of heuristics to cause pluralistic ignorance has been demonstrated in a number of cases,<sup>152</sup> there is no complete model to explain

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148. Korobkin & Ulen, *supra* note 56, at 1086.

149. See Miller et al., *supra* note 89, at 112 (discussing the exaggerated normative influence of those who embody the norms of a particular group).

150. Lawn care, of course, is a well-recognized example of normatively controlled behavior. See, e.g., McAdams, *Regulation of Norms*, *supra* note 86, at 359 n.91 (discussing lawn care norms).

151. The same, of course, could be true for ranchers in Shasta County who attempt to introduce new products into their care of cattle.

152. See, e.g., Mutz & Soss, *supra* note 140 (study of opinions and actual preferences regarding low

the contribution of heuristics to pluralistic ignorance in all circumstances, and more research will be necessary before a complete understanding of the effects of heuristics on norm estimation is developed. There is, however, some guidance we can take from the former discussion to inform our understanding of when norms form efficiently. For example, the Spiral of Silence, as well as to the tendency of people who feel strongly about an issue to speak out about their beliefs, both contribute to the creation of pluralistic ignorance in some cases.<sup>153</sup> As we will discuss in the next section, any time these and other factors potentially play a role in the determination of group preference, efficiency must be questioned.

## VI. NORM-BASED REGULATION AND NORM EFFICIENCY

### A. *Implications for Claims that Norms Replace or Inform Law*

In cases where the self/other bias, or heuristics such as availability and representativeness result in pluralistic ignorance, misperceived norms will contribute to the entrenchment of welfare-decreasing behaviors in cooperation games, such as the stag hunt, and will create disincentives, in the form of social sanctions, to the establishment of efficient indirect-benefit norms as well. Of course, heuristics can actually result in the overestimation of behaviors that are majority preferences. In such cases, the overestimation may result in a norm that is too powerful<sup>154</sup> to the extent it works against the expression of the preferences of a marginal group of individuals. Returning to our earlier discussion of cursing,<sup>155</sup> consider the following illustration. Assume a person values cursing at 1500, but due to the influence of heuristics, she overestimates the likelihood of being sanctioned, which in turn, results in a negative utility of 1600 (-1600). In such a case she will not curse. Assuming the actual distribution of preferences would result in a negative utility of 1400 (-1400), less cursing than is socially optimal will occur. As a general matter, however, the behavioral signal embodied in a norm that results from overestimation of majority preference will be welfare-promoting.<sup>156</sup>

We have examined how the phenomena of pluralistic ignorance and heuristics can lead to broad scale misperception of aggregate preference within and across groups. These observations provide important insights into claims of norm efficiency that are based only on the cooperation game model. In particular, the sociology of norm formation suggests that the efficiency of norms is not a foregone conclusion even in small, close-knit

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income housing); Miller et al., *supra* note 89, at 111-12; Gunther & Christen, *supra* note 98, at 278 (arguing that pluralistic ignorance created by media coverage of President Reagan explains the disparity of poll results that show his approval to be much less than perceived).

153. See Miller et al., *supra* note 89, at 112; see also Gunther & Christen, *supra* note 98, at 278.

154. See *supra* text accompanying note 51.

155. *Supra* notes 50-51 and accompanying text.

156. *Id.*



communities.<sup>157</sup> Indeed, as mentioned previously, particularly where the conditions of pluralistic ignorance exist, the close-knit nature of a group may be the key to the formation of inefficient norms.<sup>158</sup> Similarly, general claims that norms should be presumed efficient—or at least more efficient than law<sup>159</sup>—must also be reconsidered. This is not to say that norms do not promote welfare. However, the cognitive factors discussed herein clearly demonstrate that optimism about norm efficiency, and the claims for norm-based regulation, resting on the notion of efficiency, are misplaced in certain situations.

The factors discussed herein also provide the beginnings of a road map as to when norms may not be efficient. As a general matter, when conditions of pluralistic ignorance, availability, representativeness, or other heuristics<sup>160</sup> exist, the norms that develop within a group must be questioned and the possible influence of pluralistic ignorance considered.<sup>161</sup> In many cases the possibility of norm misperception will be apparent. Where there has been significant local or national media coverage of an event, or where a small group of people have been identified as speaking for a larger group, the norms that develop cannot be assumed efficient. Within small groups, such as the ranchers in Shasta County, questions of how information is developed within the group and processed by group members may provide additional reasons to question norms. If, for example, the norm that requires ranchers to fix a fence results from the statements of a single rancher who others find representative, such a behavior itself will not be dispositive on the question of efficiency.

It is, perhaps, the conditions of pluralistic ignorance that provide reason for the greatest concern regarding presumptions of norm efficiency. As discussed previously, pluralistic ignorance is a widespread social phenomenon.<sup>162</sup> The conditions of pluralistic ignorance—individuals within a group undertake social comparison, communication of preference is not transparent, and the behavior of others is misinterpreted<sup>163</sup>—exist for almost all groups, including small groups. Indeed, given the fact that normative information (not true normative information but simply information on compliance with perceived norms) is likely to be shared readily by close-knit

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157. See, e.g., *supra* text accompanying notes 134-35.

158. See *infra* notes 159-62 and accompanying text.

159. See ELLICKSON, *supra* note 2, at 170-74.

160. While availability and representativeness may be the most likely sources of norm misperception, there are a number of heuristics that may affect perception of the preference of others that this Article and social psychologists have yet to consider. For a general review of heuristics in law and economics literature, see Korobkin & Ulen, *supra* note 56. Of course, more research on how these norms affect perceptions of preference is needed.

161. Tests of whether norms reflect preference are relatively easy to administer. In essence, they ask group members to evaluate their preference for a particular behavior and their perceived preference of other group members for the same behavior. Mismatch, pluralistic ignorance, exists where each individual ranks her own preference as greater or lesser than the perceived preference of the group. For a specific example of such testing, see Hines et al., *supra* note 91, at 162.

162. See, e.g., *supra* notes 100-02 and accompanying text.

163. See *supra* notes 89-90 and accompanying text.

groups and that individual desire for esteem is greatest within such groups,<sup>164</sup> it is likely that pluralistic ignorance will play an even greater role in small, close knit communities than larger, diffuse ones.

At first glance, the notion that norms may not develop efficiently within small groups seems irreconcilable with Ellickson's thesis,<sup>165</sup> but this is not necessarily the case. Rather, the social psychology of groups teaches us simply that *actual* communication of *true* reputational information happens very infrequently.<sup>166</sup> Communication of true preference, it turns out, is a rare phenomenon and only occurs within a small group of people with whom the communicator is intimate.<sup>167</sup> All other communications within a group are actually normatively controlled.<sup>168</sup> Moreover, even when information on distribution of actual preference—such as opinion poll data—is available, such information is discounted in favor of other, more cognitively appealing sources.<sup>169</sup> The issue is perhaps best understood thusly: experimental evidence suggests that the free flow of information, required as a condition of efficiency by Ellickson, occurs very infrequently. In all other cases, the possibility exists for other sources of normative information to create inefficient norms.

In summation, the social and cognitive psychology of norms suggests that optimism regarding norm efficiency is greatly exaggerated and that more specific analysis of the phenomena behind norm formation should be undertaken before any claims of efficiency can be made. Suggestions that norms replace or supplement law must be similarly qualified, with normative standards being deemed superior to law only when conditions allow for aggregate preference to be properly identified. Given the pervasive nature of pluralistic ignorance and heuristics, it is unlikely that actual preference can be properly identified in many circumstances. Moreover, small groups are no more immune from these phenomena than others. Claims that norms emanating from such groups be presumed efficient are thus also misplaced.

### B. *Pluralistic Ignorance and Normative Regulation*

While, as a general matter, the potential existence of pluralistic ignorance provides a basis for qualifying the general suggestions that normative standards be adapted to or even protected by law, the fact that pluralistic ignorance may *control* behavior in certain circumstances also provides a new way of thinking about normative regulation. Pursuant to the rational choice model, normative regulation can work in one of two ways: either through the provision of information on consensus beliefs or on objective

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164. See *Pluralistic Ignorance and Alcohol Use*, *supra* note 90.

165. See *supra* note 28 and accompanying text.

166. See Kitts, *supra* note 98, at 228.

167. *Id.*

168. *Id.*

169. See Gunther & Christen, *supra* note 98, at 278.

reality to group members.<sup>170</sup> Information on consensus beliefs may change an individual's understanding of what activities will incur social sanction.<sup>171</sup> This is understood as "normative" influence. Information may also change one's belief about the actual outcome of a particular behavior and thus change the behavior one would prefer to undertake in that situation.<sup>172</sup> This latter form of influence is "true"<sup>173</sup> influence, to the extent that it actually changes the aggregate preference of the individuals in any group.<sup>174</sup> If enough individual preference is changed, or enough group members change their beliefs about what activities will be sanctioned, a tipping point may be reached, and a new norm entrenched around a new behavior.

These influences are best understood through an example. Assume that Bob is the parent of a child who, according to the law, is not required to sit in the back seat of the car anymore. Bob must decide whether to continue seating his child in the back seat even though she fits well in the front seat, can use the front seat belt, and Bob would generally prefer to have her up front where he could see her better. Under these assumptions, it seems likely that Bob would move his child to the front seat. Let us further assume that Bob's preference to move his child to the front seat is shared by the majority of parents in similar situations.

Bob may be influenced to keep his child in the back seat for one of two reasons. First, Bob may hear information from an "expert" or someone else who has a trusted understanding of objective reality, that sitting a child in the front seat is still a more dangerous activity than he had imagined. This, in turn, could influence Bob's analysis of the costs and benefits of sitting his child in the front seat and cause him to change his preference to sitting her in the back seat. This would be a result of "true" influence. Bob would actually change his mind about which activity he preferred. Further, if the expert influenced enough other parents, then it is possible that a tipping point

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170. See Alex Geisinger, *A Belief Change Theory of Expressive Law*, 88 IOWA L. REV. 35, 52 (2002); see also Richard H. McAdams, *An Attitudinal Theory of Expressive Law*, 79 OR. L. REV. 339, 334 (2000); Robert E. Scott, *The Limits of Behavioral Theories of Law and Social Norms*, 86 VA. L. REV. 1603, 1603 (2000) (arguing that law affects beliefs about majority attitudes). See generally Richard H. McAdams & Dhammika Dharmapala, *The Condorcet Jury Theorem and the Expressive Function of Law: A Theory of Informative Law* (Ill. Coll. of Law, Working Paper No. 00-19, 2001), available at <http://papers.ssrn.com/paper.taf?abstractid=260996> (arguing that law can influence beliefs about the outcomes of particular behaviors).

171. See, e.g., McAdams & Dharmapala, *supra* note 170, at 1663-72 (explaining that law provides focal points that help individuals know how other individuals will respond in certain circumstances); Scott, *supra* note 170, at 1603 (arguing that the law carries with it information about the majority view and thus, educates individuals about the majority's attitude toward the behavior).

172. See McAdams & Dharmapala, *supra* note 170, at 1672 (arguing that individuals may infer new information about activities from legislative decisions to regulate them); Geisinger, *supra* note 170, at 65 (arguing, generally, that legislation can cause a change in certainty about the outcome of one's acts, thereby influencing preference for undertaking the act or not).

173. "True" refers to the fact that the information actually changes attitudes and preference versus normative change, which is seen simply as going along with the group. REDISCOVERING THE SOCIAL GROUP, *supra* note 49, at 35-36.

174. I refer to this as a change in preference. See Geisinger, *supra* note 170, at 49 (suggesting that some may define preference in terms of "moral" norms only). Others may disagree. In any case, the information would work to change attitudes toward a particular behavior.

would be reached and a new norm entrenched around keeping children in the back seat of the car. Second, Bob may not change his mind about what he prefers in such a situation but a majority of other parents may. If Bob receives information about the new majority, Bob may still choose to keep his daughter in the back seat if he is concerned about social sanctions from the others. That is, although Bob does not prefer to keep his daughter in the back seat, he has information that a majority of his social group does, and he does not want to incur their social sanction. In such a case the influence being asserted on Bob is normative. He is not acting out of preference but out of concern for how he is perceived by others.

Law and norms scholars have focused on a number of different ways in which regulators may change behavior. Passage of a law, it is recognized, can affect both preference and normative belief.<sup>175</sup> Law can provide a basis for inferring new information about the regulated behavior. Passage of a law requiring seat belts to be worn, for example, may lead individuals to believe seat belts provide more safety than they originally thought.<sup>176</sup> Law may also affect normative belief because it might carry with it signals of majority belief or increase the likelihood that one will be sanctioned by others who believe one should follow the law.<sup>177</sup>

Regulators may also try to provide information on objective reality through, for example, warning labels on cigarettes and alcohol or campaigns against smoking such as the recent “the truth” campaign.<sup>178</sup> In some cases, regulators have actually tried to ambiguate the normative meaning of a particular behavior, such as through the “[t]his is your brain on drugs” campaign. These campaigns have met with varying degrees of success.<sup>179</sup> It is

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175. See generally Geisinger, *supra* note 170.

176. *Id.* at 64.

177. *Id.* at 70.

178. See Truth Campaign, <http://www.protectthetruth.org/truthcampaign.htm> (last visited Oct. 1, 2005).

179. Many people argue that cigarette smoking regulation has worked effectively to decrease and change the social meaning of smoking. See, e.g., News Batch, Tobacco Policy, <http://www.newsbatch.com/tobacco.htm> (last visited Oct. 1, 2005). Efforts to decrease drug use, however, have simply not been as successful. For example, several studies have suggested that students participating in the popular D.A.R.E. program are either as likely or *more likely* than their non-D.A.R.E. counterparts to use drugs in later years. See Dennis P. Rosenbaum & Gordon A. Hanson, *Assessing the Effects of School-Based Drug Education: A Six-Year Multi-Level Analysis of Project D.A.R.E.*, 35 J. RES. IN CRIME & DELINQUENCY 381 (1998) (describing the results of an empirical study wherein participation in the D.A.R.E. program had no effect on later drug use by adolescents, and when middle school D.A.R.E. program participation was supplemented with drug education at the high school level, usage rates among participants actually increased in comparison to a control group). Drug abuse prevention programs and advertising proliferated in the late 1980s and early 1990s, but ironically, drug use among high school seniors increased by more than 50% in these early years and has maintained a level of roughly 22% (percentage of high school seniors who regularly use illicit drugs) since 1995. See U.S. DEPT. OF HEALTH AND HUMAN SERVS., NAT'L CTR. FOR HEALTH STATISTICS, HEALTH, UNITED STATES, 2004 at 230 (2004), available at <http://www.cdc.gov/nchs/data/hs/hs04.pdf>. See also Mark Tushnet, “*Everything Old is New Again*”: *Early Reflections on the “New Chicago School*,” 1998 WIS. L. REV. 579, 588 & n.29 (1998) (noting that the “This is your brain on drugs” campaign became a joke to some teenagers who simply joked, “This is your brain on drugs with a side of bacon”).

likely that some of the behaviors that have not responded to traditional expressive regulation may be influenced by pluralistic ignorance.<sup>180</sup>

If the behavior is controlled by pluralistic ignorance, efforts directed at changing actual preference will simply miss their mark—and so too will efforts that merely “ambiguate” normative meaning.<sup>181</sup> Regulators would, instead, be much better served by focusing on our beliefs about the beliefs of others.

Consider, for example, warnings regarding the effects of drinking. Such warnings are directed at changing beliefs about drinking and thus preferences about drinking. However, in cases of pluralistic ignorance, people already prefer to drink less. In such cases the government is more likely to be successful if it “uncovers” the misperceived norm. It can do so by describing the mechanism of pluralistic ignorance and making information available when privately surveyed preference diverges from revealed preference. This tactic has worked in other contexts. In the case of college drinking discussed earlier,<sup>182</sup> students already preferred to drink less than they actually did. Efforts to update their beliefs about drinking thus failed to change behavior significantly. That is, efforts to explain the costs of drinking simply did not work. The source of the inefficient behavior was actually normative. As a result, when the experimenters revealed to the students the actual preferences of their colleagues and explained to them the phenomenon of pluralistic ignorance, student drinking dropped 40 percent.<sup>183</sup>

Pluralistic ignorance thus not only leads us to question the efficiency of norms, but also provides us with a different understanding of why certain types of normative regulation may fail. Put simply, efforts to change preference in cases where a misperceived norm is entrenched will have little or no effect. Instead, in such cases, regulators would be much better served by pointing out, in a meaningful way, the beliefs of others and the reasons why individuals act in the way that they do.

## VII. CONCLUSION

In recent years, law and economics scholarship has benefited greatly from the study of social norms. Attempting to understand norms solely through the lens of cooperation games, however, leaves serious gaps in our knowledge of norms and their role in regulation. The limited model is, of course, a compelling one. It provides a theoretical basis for claims for de-

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180. Studies have shown that pluralistic ignorance influences alcohol consumption. See *Pluralistic Ignorance and Alcohol Use*, *supra* note 90, at 247. A similar group attraction may also be at work regarding cigarette smoking, drug use, and motorcycle riding without a helmet—all favorite sources of discussion among expressive law scholars. See, e.g., Cass R. Sunstein, *Law, Economics, & Norms: On the Expressive Function of Law*, 144 U. PA. L. REV. 2021, 2035 (1996); Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943, 964 (1995).

181. For a discussion of how law “ambiguates” meaning, see Lessig, *supra* note 180, at 1031-33, 1040-41 (explaining how government regulation affects public perception of behavior).

182. *Supra* text accompanying notes 94-97.

183. *Pluralistic Ignorance and the Perpetuation of Social Norms*, *supra* note 92, at 162.

regulation and the return to a system of private ordering, superior to law as a means of promoting welfare. This model, however, chooses parsimony over reality.<sup>184</sup> The addition of the psychology of norms to the model provides for a much more cautionary tale. The limits on individual information processing and other cognitive factors suggest that, at the least, a much more complete model of norms must be developed before claims of the superiority of norms to law are acted upon. This Article has attempted to provide the initial building blocks for a more complete rational choice model of norms.

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184. See Litowitz, *supra* note 87, at 303-04. Litowitz noted that:

When the time came to examine the phenomenon of social norms more closely, Ellickson found himself having to choose between two theoretical traditions: "law and society" versus "law and economics." For Ellickson, law and society scholars tend to eschew system-building in favor [of] Clifford Geertz's notion of social explanation as "thick description," primarily because these scholars "have their roots not in economics but in the more humanistic social sciences such as history, sociology, and anthropology." . . . By contrast, Ellickson sees law and economics as a scientific search for verifiable explanations of human behavior, encompassing methodologies such as game theory, rational choice theory, public choice theory, evolutionary biology, and economic models that, according to Ellickson, generate verifiable predictions. When faced with these competing traditions, Ellickson chose law and economics.

*Id.* (footnotes omitted).