Translating Visions of Rationality into Specific Legal Reforms

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As soon as I received my invitation to discuss “Visions of Rationality in Evidence Law,” I wondered if our organizer and moderator, Professor Craig R. Callen, had intentionally invoked Bob Dylan’s “Visions of Johanna.” I was curious if Professor Callen had deliberately (or accidentally) provided us with a soundtrack for the upcoming conference and decided that a Dylan song was as good a place as any to start thinking seriously about how we understand and define rationality.¹

¹ Associate Professor of Law, New England School of Law. I would like to thank Ronald J. Allen and Craig R. Callen for the invitation to participate in this project.

Visions of Johanna is a 1966 ballad from Blonde on Blonde. The song describes experiences with three characters: Louise, who appears alternately as the beloved, the observed, and the self; a “little boy lost,” who is an aloof and detached observer; and the all-powerful provocateur Johanna who inhabits the other characters’ visions. Louise is introduced first, with lyrics that describe the following encounter.

“We sit here stranded, though we’re all doin’ our best to deny it. And Louise holds a handful of rain, temptin’ you to defy it.”

Dylan begins by contrasting “we” (who sit stranded) with Louise (who not only touches the rain, but issues the challenge). Like Louise, we all know from experience what it means to see, feel, hear, taste, and even smell rain. We also know that rain can appear in many forms, that we might describe as drops, sheets, mist, or with countless idiomatic expressions. Dylan alludes to the problems that arise when we forget that descriptions do not convey the reality of rain. We become “stranded” when we rely too heavily on detached observation and use reason to deny our human limitations. No one can meet Louise’s taunting challenge to “defy” the rain, but Dylan also suggests that denial, because it is a purely rational construct, cannot improve our situation or enhance our comprehension. Louise drives this point home with her mocking challenge.

In the third verse Dylan introduces a new outsider, the “little boy lost.” “Now, little boy lost, he takes himself so seriously. He brags of his misery.” The grown man, who Dylan disparages as a “little boy lost,” is also struggling to understand and control his world, but like all of the others (except Louise) he has adopted the wrong strategy. He is distracted by self importance and even “brags of his misery.” Although “he likes to live dangerously,” the danger exists only in his mind. The only evidence of danger is his experience of Johanna, the most powerful and sensate character and the link between all five verses. But the little boy lost does not really know Johanna. “And when bringing her name up. He speaks of a farewell kiss to me.” He is just another detached observer whose experience is limited to a kiss that he watched, but did not feel.

Dylan accuses us of isolating ourselves and relying on reason (in the form of denial, taking oneself “so seriously,” and “small talk”) instead of experience (as Louise does when she holds the rain). Perhaps there is hope

3. Id.
4. Id. (emphasis added).
5. Id.
6. Id.
for the stranded, at least they can still interact with Louise. The little boy lost is too detached and oblivious and self-satisfied to be saved.

"He's sure got a lotta gall to be so useless and all. Muttering small talk at the wall while I'm in the hall." As I listened to the song a link to the upcoming conference emerged. Dylan was reminding us that if we really want to explain, predict, or change the world, our ideas must be rooted in real human experience. I did not ask Professor Callen whether he had the Dylan song in mind when he wrote the title for his conference. It doesn't matter. He created and facilitated a conversation that never lost sight of the fact that any useful "vision of rationality" must consider how real people form beliefs. In fact, the entire conference focused on the nature and extent of this connection.

I. HOW TO AVOID BECOMING STRANDED OR LOST: ESTABLISHING LINKS BETWEEN THEORETICAL JUSTIFICATION AND HUMAN EXPERIENCE

The conference invitation contained a summary of objectives which set the tone for the papers and presentations. Professor Callen had specifically invited us to address "[j]udicial assumptions about rationality [that] are at the core of evidence law," noting that "[c]ourts and attorneys rely on implicit theories of decision-making in resolving the most common evidentiary problems." He suggested that many of the rules of evidence (such as the exclusion of hearsay) assume "some vision or model of rational evaluation." The conference was designed to expose conventional justifications for evidentiary rules and test these against more recent empirical data describing how people make decisions. Professor Callen encouraged us to aim at triggering "discussion of both specific aspects of the law of evidence and the effect that visions of rationality have on evidence law as a whole." We began with a discussion of the fact that over the past few decades, many evidence scholars have rejected the rational choice/inductive logic model of human behavior, that underlies most legal rules and practices. This has been supplanted by empirically-based theories of decision making. Legal academics have borrowed heavily from the work of psychologists, such as Amos Tversky and Daniel Kahneman, and behavioral economists to craft arguments based on the cognitive inadequacies of jurors. As Professor Erica

7. Id.
9. Id.
10. Id.
Beecher-Monas argued, "empirical information about how people actually reach decisions is important in evaluating the truth-seeking and rationality functions of the law," and empirical information demonstrates that decision makers use "a largely unconscious method of processing information that can result in poor judgment and decisions with less than optimal consequences." Proponents of the value of cognitive and social psychology data assume that we can use empirical research to predict when decision makers will rely on specific cognitive shortcuts (including heuristics and biases), rather than inductive or probabilistic reasoning. Such predictions can then be used to develop and enhance evidentiary rules and practices.

These assumptions are not uncontroversial. Critics and skeptics have been quick to highlight the limitations of models based on this type of empirical data. It seems beyond argument, that "a valid conclusion about the irrationality of behavior requires attention to the larger context in which the behavior occurs," or that there are important distinctions between the experimental and trial conditions. This could lead to the conclusion that "we cannot presume that the studies tell us very much about jurors in actual trials." These concerns, along with Professor Gregory Mitchell's thorough identification of numerous "normative, methodological, and empirical bounds on the heuristics and biases research program," raise considerable doubt about the wisdom of over-reliance on data suggesting widespread and systematic patterns of cognitive inadequacy, as a basis for legal reform.

With the stage set for a debate on the value of this type of empirical evidence, we began with the following question: "If law, psychology, economics, and philosophy have provided a panoply of theories that purport to explain and describe how humans reason, what influence should these have on the development of the rules of evidence?" In response, some participants

17. Mitchell, supra note 14, at 1144. Professor Mitchell questioned three core contentions that underlie research supporting the cognitive miser model: (1) "that the common use of cognitive heuristics leads to systematic biases;" (2) "that the use of cognitive heuristics constitutes a basic feature of human judgment;" and (3) "that the heuristic mode of processing, with its attendant biases and errors, is the default mode of processing and is often quite difficult, if not impossible, to override." Id. at 1076-78.
explored specific ways that theory might help explain and influence the law of evidence, including:

1. How should any analysis of evidentiary rules balance descriptive information about how people make decisions against normative models to develop prescriptive goals?  

2. How do we understand the impact of the relationship between formal and natural reasoning processes on legal decisions, and can we identify the variables that make one approach yield better results than the other?  

3. Can we use argumentation theory to create a model that will inform our understanding of evidentiary relevance?  

4. Have we consistently undervalued the potential role of Federal Rule of Evidence 104(b) as a way for courts to balance relevance against the costs of admission?  

Other participants focused their attention on evaluating the quality of existing empirical research to determine whether it might form a reliable basis for evidentiary reform, including:

1. Have we systematically underestimated jurors' reasoning abilities by assuming, without adequate empirical data, that jurors must be shielded from certain evidence because they will overvalue this information in a way that distorts their decisions?

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18. See Bruce D. Burns, Address at the MSU Visions of Rationality in Evidence Law Conference (Apr. 4, 2003).
22. See Richard D. Friedman, Address at the MSU Visions of Rationality in Evidence Law Conference (Apr. 4, 2003).
2. If recent empirical data shows that jurors tend to discount the weight of hearsay statements, do the rules of evidence overestimate the effect of exposure to hearsay information on juror decision making?23

3. Has allocating the burden of gatekeeping to judges, for scientific, technical and other specialized evidence, helped to preserve rational decision making by enhancing accuracy?24

4. Are jurors biased by their understandings and misunderstandings of base rate information in a way that impedes their abilities to make rational decisions?25

5. Are we too quick to assume that data about human behavior has practical significance for evidence theory simply because it has statistical significance?26

Whether they began at the top or at the bottom, participants described visions of rationality that sought to integrate the "is" of empirical data describing human experience, with the "ought" of argument based on normative concerns. There was also an explicit effort to recognize and avoid the problem of "ought implies can" which, in general terms, is the creation of a normative theory that ignores or minimizes human limitations.

For example, Professors Ronald J. Allen27 and Erica Beecher-Monas28 discussed a form of "naturalized epistemology," which incorporates empirical information about how people form beliefs into the study of the acquisition of knowledge. In fact, Professor Allen specifically identified two factors inherent to problems (ambiguity and unpredictability) and one inherent to solutions (common sense) that generated so many variables that formal

27. At the start of his presentation, Professor Allen summarized the role of naturalized epistemology as raising the larger problem of how the mind interacts with the environment and its implications for legal analysis. See Allen, supra note 19.
28. In her presentation, Professor Beecher-Monas described her argument that judges are the appropriate decision makers for questions involving scientific validity as "located in naturalized epistemology." Beecher-Monas, supra note 24.
reasoning models must accommodate or be supplanted by theories of naturalized reasoning. Professor Redmayne described the development of various different theories of naturalized epistemology, but was more skeptical about the value of this work in assessing evidentiary reasoning. Similarly, Professor D. Michael Risinger described a compromise that he referred to as "practical rationality" for legal decision makers. "Practical rationality," in contrast to "perfect rationality," incorporated the results of constraints of time, resources, and the fact that the adversary process itself is not committed to rationality.

As we began to examine these questions in detail, I wondered how the insights that were developed in the presenters' work might eventually "translate" into more specific recommendations for legal reform. Although many might agree that empirical research should play some role in the future of evidence law, even presumptively valid research findings cannot easily be transformed into evidentiary reforms. This would require that we begin to identify and select appropriate and realistic objectives. The choice of attainable goals would likely be controversial. At the same time, we would need to ensure that we did not allow ambiguity to undermine apparent agreement. This struck me as a reasonable and necessary first step towards evaluating the validity and relevance of existing empirical research to the specific task of refining legal standards.

II. IDENTIFYING AND CLARIFYING OBJECTIVES

Professor Redmayne began his presentation by noting that the rules of evidence might serve many different goals and in his paper he described the tension between "intrinsic" and "extrinsic" policy concerns. This led me to wonder how other evidence scholars had summarized the objectives of evidence law. Three introductions to evidence casebooks illustrate just some

29. See Allen, supra note 19.
30. See generally, Redmayne, supra note 16.
32. See id.
33. See Mike Redmayne, Address at the MSU Visions of Rationality in Evidence Law Conference (Apr. 4, 2003). Professor Redmayne described policy concerns as:
[A] complicating factor in the evaluation of rules of evidence. Policy concerns affecting evidence rules can be divided into two types: intrinsic and extrinsic. Intrinsic policy factors are aimed at promoting accurate fact-finding (veritism), even though they may appear to be in conflict with it . . . The concern of extrinsic policy, however, is not veritism.
Redmayne, supra note 14, at 871.
of the possibilities. At one end of the spectrum, two evidence scholars who attended the conference noted in their casebook preface that "evidence is primarily concerned with establishing facts for the purpose of resolving disputes." Other casebook editors chose to identify and rank multiple goals. One text listed five different reasons for having rules of evidence. First, "mistrust of juries is the single overriding reason for the law of evidence." Second, "to serve substantive policies relating to the matter being litigated." Third, "to further substantive policies unrelated to the matter in litigation." Fourth, "to ensure accurate factfinding." Fifth, "to control the scope and duration of trials, because lawsuits must be resolved with reasonable dispatch." Finally, one evidence text used sweeping language to identify a variety of purposes far beyond factfinding and the adjudication of individual cases. "The system of evidence in any society is itself evidence about the nature of that society and its concept of justice. It is impossible to achieve a working understanding of the rules without an appreciation of the spirit, reason, and policy that underlie them."

We may or may not agree on how to define, rank, or serve these goals, but if we do not explicitly identify and define our objectives, we obscure legitimate controversy and invite ambiguity. Clearly, our goals determine the shape of the models we create and the reforms that we advocate.

III. A SINGLE RULE ILLUSTRATES THE INFLUENCE OF ASSUMED OBJECTIVES

For example, inspired by Professor Beecher-Monas, we discussed the possibility that judges, due to their superior structured reasoning skills, repeat exposure, and accountability, make better gatekeepers of scientific evidence than jurors. Assuming a baseline level of validity for the empirical data supporting these claims, decisions about how to use this information to change
or implement existing rules are inevitably tied to our understanding of the purpose of Rule 702 of the Federal Rules of Evidence (FRE).  

At one extreme, FRE 702 might be read to reflect broad interdisciplinary concerns. This, in turn, would be based on the assumption that law and science are increasingly interdependent and that good law depends on good science while good science depends on good law. From this perspective, FRE 702 would be construed as functioning to help preserve the legitimacy of both disciplines by preventing jurors from deciding cases based on scientific evidence of questionable validity. Those who share this expansive view of the purpose of FRE 702 would advocate scrupulous adherence to stringent admissibility standards. If FRE 702 protects the integrity of both science and law, the current rule may not be sufficiently rigorous and, in practice, judges should always err in favor of exclusion, regardless of the nature of the trial or the identity of the proponent. At the other extreme, one might assume that FRE 702 should serve more pragmatic trial-related concerns of relevance, efficiency, and juror comprehension. Those who share this view would

41. If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case. FED. R. EVID. 702.

42. Justice Stephen Breyer has expressed a similar view of the essential interdependence of law and science. "The fact of interdependence is evident. You find it obvious that the practice of science depends upon sound law—law that, at a minimum, provides support for science. . . . It may be less obvious to you, but it is equally true, that the law itself increasingly needs access to sound science. . . . [A]s society becomes more dependent for its well being upon scientifically complex technology, we find that this technology increasingly underlies legal issues of importance to all of us." Associate Justice Stephan G. Breyer, The Interdependance of Science and Law, Address at the Annual Meeting of the American Association for the Advancement of Science (Feb. 16, 1998), available at http://instruct1.cit.cornell.edu/courses/comm352-fall2000/Labs/breyerspeech.html (last visited Feb. 17, 2004).

43. Philip K. Howard, an attorney with malpractice expertise, has recently written a book in which he argues that the current legal system of generalist lay judges deciding cases that involve questions of science is doomed to failure. See PHILIP K. HOWARD, THE COLLAPSE OF THE COMMON GOOD: HOW AMERICA'S LAWSUIT CULTURE UNDERMINES OUR FREEDOM (2001), originally published as PHILIP K. HOWARD, THE LOST ART OF DRAWING THE LINE (2001). Mr. Howard asserts that the only reliable system of medical justice would involve specialized tribunals with scientific expertise. See id. The practical implications of these suggestions may soon be tested. A bill to finance pilot projects based on this model is scheduled to be introduced in the Senate later this summer. See Philip K. Howard, The Best Course of Treatment, N.Y. TIMES, July 21, 2003, at A15 (Op. Ed.).
assume that the rule is designed to avoid gross errors of fact and will be far less concerned about the social costs of legal decisions based on scientifically questionable evidence. They would also favor subjugating these interests to more important concerns, such as a criminal defendant's Sixth Amendment rights. Thus, in practice, they would be more likely to encourage admission of evidence that falls short of the admissibility standard or exclusion of otherwise reliable evidence that impedes some other trial objective.

There are a panoply of possible goals for specific rules of evidence, or for the rules as a body of law. However, rather than develop the spectrum of possibilities, conference presenters focused almost exclusively on the goal of "accuracy."

IV. WHY AMBIGUITY IS FINE FOR SONGWRITERS BUT A MISTAKE FOR EVIDENCE SCHOLARS

What do we really mean when we say that evidence rules must be aimed at achieving accuracy? Accuracy is an ambiguous goal that can be defined broadly or narrowly. Most important for our purposes, how accuracy is defined can enhance or inhibit our ability to contemplate legal reforms to achieve this goal.

What are the range of possibilities? Accuracy can be defined narrowly as the avoidance of demonstrable factual error that is outcome determinative. Professor Myrna Raeder focused on this narrow definition of accuracy in her

44. See, e.g., Christopher Slobogin, The Structure of Expertise in Criminal Cases, 34 SETON HALL L. REV. 105 (2003) (arguing that lower reliability standards should be applied to mental state evidence proffered by a criminal defendant).

45. For example, at the start of his presentation Professor Redmayne called for "a normative standard for the rules of evidence concerned with accuracy." Redmayne, supra note 19. Professor Mitchell began his paper by arguing that the question of whether evidence law "operate[s] as an instrumentally rational system" gives rise to the assumption that "the rules of evidence should be constructed to constrain and counter the irrational tendencies of the judges and juries who decide cases in order to enhance the accuracy and consistency of trial outcomes." Mitchell, supra note 14, at 1066-67 (emphasis added). In the context of her discussion about scientific expert testimony, Professor Beecher-Monas described the contributions of epistemology as follows: "From an epistemic vantage point, the question of whether we need judges to act as gatekeepers focuses on whether gatekeeping actually promotes the acquisition of knowledge in the context of a particular social practice." Erica Beecher-Monas, supra note 12, at 384-85. In their paper, Professors D. Michael Risinger and Michael J. Saks described the "legal enterprise" as "assum[ing] that the products of particular factfinding exercises can, at least at times, be properly said to either correspond with ... exterior facts (be accurate), or not (be inaccurate)." D. Michael Risinger & Michael J. Saks, Rationality, Research and Leviathan: Law Enforcement-Sponsored Research and the Criminal Process, 2003 MICH. ST. L. REV. 1023, 1027.
summary of the conference proceedings, when she mentioned the 140 wrongful convictions that had been exposed through the work of various Innocence Projects.\textsuperscript{46} Professors Richard D. Friedman and Roger C. Park defined accuracy in slightly broader terms to explore the likelihood of more subtle forms of inaccuracy—not gross factual errors—but exclusion of evidence based on the assumption of juror overvaluation.\textsuperscript{47} At the opposite end of the spectrum, accuracy may be defined in extremely broad terms, as Professor Redmayne did in his presentation, as "reaching the truth."\textsuperscript{48}

The most effective advocacy will employ a narrow definition of accuracy. We can likely achieve consensus that rules of evidence should discourage egregious factual mistakes that have a decisive and negative effect on trial outcomes. Arguments of this type have lead to significant recent legal reform in eyewitness identification proceedings\textsuperscript{49} and police procedure for death penalty investigations.\textsuperscript{50} Publicizing and correcting past mistakes is a

\textsuperscript{46} See Myrna Raeder, What Does Innocence Have to Do With It?: A Commentary on Wrongful Convictions and Rationality, 2003 MICH. ST. L. REV. 1315, 1316.

\textsuperscript{47} See Richard D. Friedman, Minimizing the Jury Over-Valuation Concern, 2003 MICH. ST. L. REV. 967, 986. Professor Richard D. Friedman defines the overvaluation concern as follows: "Although a given piece of evidence has probative value, enough to warrant admission if there were an ideal fact-finder, the jury is likely to give the evidence too much weight, and the excess weight means that the truth-determination process is better off if the evidence is excluded than if it is admitted."\textsuperscript{47} at 969. Professor Park explored various experimental studies demonstrating that jurors are unlikely to find demeanor clues helpful in detecting lies told in court. See Park, supra note 15, at 1153-55. This data might undermine a fundamental assumption of the hearsay bar.

\textsuperscript{48} It is worth noting that Federal Rule of Evidence 102, which defines the purpose and construction of the rules, also focuses on the goal of ascertaining the truth. "These rules shall be construed to secure fairness in administration, elimination of unjustifiable expense and delay, and promotion of growth and development of the law of evidence to the end that the truth may be ascertained and proceedings justly determined." FED. R. EVID. 102.


\textsuperscript{50} A few weeks after our conference, in June 2003, in response to thirteen recent DNA exonerations of state death row inmates, Illinois adopted an ambitious reform of almost all of the police procedures for death penalty investigations. The new Illinois legislation "seeks to reshape every aspect of the legal process, from police lineups to reviews of death penalty cases by the Illinois Supreme Court. It also is viewed as a model for other states seeking to reform their capital punishment systems." Eric Ferkenhoff, Illinois Preparing Broad Reforms on Capital Punishment, BOSTON GLOBE, June 15, 2003, at A4. Reforms include requiring that live and photo lineups be blind and sequential. See id. Witnesses will also be instructed that the suspect may not be among those in the lineup. See id. Jailhouse informants will only be permitted to testify at trial following a pretrial credibility hearing. See id. Police must turn over their notes allowing defense attorneys access to evidence, greater access to DNA testing, death sentences can be overturned by the State Supreme Court without a finding of fundamental error,
good way to encourage legislators and judges to be pro-active. Although Professor Redmayne’s discussion of the difficulty of crafting jury instructions on DNA evidence,51 serves as a reminder that hindsight can make a complicated project look deceptively straightforward.

When accuracy is defined more broadly, the harm caused by inaccurate judgements is more amorphous and difficult to measure. For example, both Professor Park and Professor Friedman described work that might be used to encourage legislators and judges to be more skeptical about certain conventional long-standing assumptions about juror decision making. Professor Park has developed data that undermines the assumption that jurors gain valuable information about witness credibility through observation.52 This is relevant to any effort to reassess rules governing hearsay and cross-examination. Professor Friedman has critiqued the assumption that jurors inevitably over-value hearsay, prior misconduct evidence, and expert testimony evidence.53 Challenges to inaccurate assumptions about juror decision making may provide a legitimate basis for legal reform. However, those inside and outside the legal process are more likely to be persuaded by concerns of inaccuracy when an inaccurate decision can be linked to egregious outcome-determinative factual errors.

Finally, if accuracy is defined most broadly, as a synonym for truth, it may be quite ineffective as an explicit goal. Although rules of evidence purport to provide judges with an organized list of criteria used to shepherd jurors away from irrational decision making, that does not mean they are aimed at ascertaining the truth. We accept that trials can never recreate the facts and circumstances of actual events. We also accept that two trials that arise from the same set of facts can have unique, even inconsistent, outcomes. Evidentiary rules specifically require the exclusion of highly probative evidence, without any measure of its truth-finding potential, based on other concerns. Truth is problematic as a legal goal because the fit between the truth and a jury verdict is impossible to measure. Although Professors Redmayne and Risinger at times defined accuracy as truth, they were both explicit about the difficulties inherent in assessing the truth-finding properties of any rule or set of rules.54 According to Professor Redmayne, “we are often not in a position to easily judge whether a particular evidentiary rule or practice is veritistic. Empirical evidence will rarely give us clear answers.”55

and in two years all confessions in murder cases must be video or audio taped. See id.
51. See Redmayne, supra note 16, at 879.
52. See Park, supra note 15, at 1153-55.
53. See Friedman, supra note 47, at 976-77.
54. See Redmayne, supra note 33; Risinger & Saks, supra note 45, at 1027-28.
55. Redmayne, supra note 16, at 863.
Similarly, Professor Risinger acknowledged that "if we accept that the legal system contextually defines the goal by which the role played by rationality . . . is to be judged (truthseeking), we still have not set out any criteria by which to recognize such ‘veritistic’ rationality when we see it.”

Admittedly, identifying possible objectives and legitimate controversies and clarifying ambiguity are only first steps, but they are essential components of any useful model of rational evaluation designed to improve evidentiary rules and enhance adjudication. We need to select clear, realistic, and common objectives that reflect human experience and ability. This will help us develop guidelines for evaluating the validity of current and future empirical data and assessing whether models based on this data will advance specific goals.

CONCLUSION: VISIONS OF IRRATIONALITY IN BASKETBALL AND IN LIFE

Perhaps it was not surprising that the most animated discussion of the conference followed a lunchtime presentation by Professor Bruce Burns on the phenomenon of the “hot hand.” The theory of the “hot hand” explores a shared human experience that, like Dylan’s description of Louise holding the handful of rain, is governed more by instinct, intuition, and sensation rather than deliberative thought, analytic reasoning, or rational judgment. The theory presumes that athletes recognize when a team member is on a streak and serve his/her hot hand by providing that player with additional scoring opportunities by passing him/her the ball.

Anyone who has played or watched sports immediately recognizes the existence of this phenomenon, although Professor Burns described it as demonstrably irrational. However, our hot hands discussion was both entertaining and optimistic. The existence of a hot hand may be belied by the lack of any statistical relationship between a player's previous hits and misses or the probability that they will make the next shot, but we all know that serving the hot hand wins games. Irrational belief in the power of the hot hand produces adaptive behavior that gives the better players (those with higher overall shooting percentages) more opportunities to score.

This is encouraging for two reasons. If players are actually making decisions based on more complicated factors, such as a knowledge of their teammates’ abilities that transcends the immediate perception of a hot hand during this game, perhaps humans are more complex and more capable than

56. Risinger & Saks, supra note 45, at 1028.
57. For an interesting introduction to recent efforts to use more sophisticated probability-based decision making in professional sports, see Ben McGrath, The Professor of Baseball, THE NEW YORKER, July 14 & 21, 2003, at 38.
some researchers have assumed. Even if this is not the case, it is reassuring to think that on the basketball court or in the jury box, even when we behave in ways that might be described as demonstrably irrational, we achieve our goals.