IMPROVING JURY DELIBERATIONS THROUGH JURY INSTRUCTIONS BASED ON COGNITIVE SCIENCE

Jury Committee

Approved by the Board of Regents
February 2019

MISSION STATEMENT OF THE
AMERICAN COLLEGE OF TRIAL LAWYERS

The American College of Trial Lawyers is an invitation only fellowship of exceptional trial lawyers of diverse backgrounds from the United States and Canada. The College thoroughly investigates each nominee for admission and selects only those who have demonstrated the very highest standards of trial advocacy, ethical conduct, integrity, professionalism and collegiality. The College maintains and seeks to improve the standards of trial practice, professionalism, ethics, and the administration of justice through education and public statements on important legal issues relating to its mission. The College strongly supports the independence of the judiciary, trial by jury, respect for the rule of law, access to justice, and fair and just representation of all parties to legal proceedings.

◆◆◆

"In this select circle, we find pleasure and charm in the illustrious company of our contemporaries and take the keenest delight in exalting our friendships."

—Hon. Emil Gumpert,
Chancellor-Founder, ACTL

American College of Trial Lawyers
1300 Dove Street, Suite 150
Newport Beach, California 92660
Telephone: (949) 752-1801
Website: www.actl.com
Email: nationaloffice@actl.com

American College of Trial Lawyers

CHANCELLOR-FOUNDER

Hon. Emil Gumpert
(1895-1982)

OFFICERS

JEFFREY S. LEON, LSM, *President*
DOUGLAS R. YOUNG, *President-Elect*
RODNEY ACKER, *Treasurer*
MICHAEL L. O'DONNELL, *Secretary*
SAMUEL H. FRANKLIN, *Immediate Past President*

BOARD OF REGENTS

SUSAN S. BREWER
Morgantown, West Virginia

JOE R. CALDWELL, JR.
Washington, District of Columbia

JOHN A. DAY
Brentwood, Tennessee

RICHARD H. DEANE, JR.
Atlanta, Georgia

MONA T. DUCKETT, Q.C.
Edmonton, Alberta

KATHLEEN FLYNN PETERSON
Minneapolis, Minnesota

SANDRA A. FORBES
Toronto, Ontario

THOMAS M. HAYES III
Monroe, Louisiana

PAUL J. HICKEY
Cheyenne, Wyoming

LARRY H. KRANTZ
New York, New York

MARTIN F. MURPHY
Boston, Massachusetts

DANIEL E. REIDY
Chicago, Illinois

MICHAEL J. SHEPARD
San Francisco, California

ROBERT K. WARFORD
Riverside, California

ROBERT E. WELSH, JR.
Philadelphia, Pennsylvania

DENNIS J. MAGGI, CAE, Executive Director

American College of Trial Lawyers

PAST PRESIDENTS

1950-51 EMIL GUMPERT*
Los Angeles, California

1951-52 C. RAY ROBINSON*
Merced, California

1952-53 CODY FOWLER*
Tampa, Florida

1953-54 E. D. BRONSON*
San Francisco, California

1954-55 CODY FOWLER*
Tampa, Florida

1955-56 WAYNE E. STICHTER*
Toledo, Ohio

1956-57 JESSE E. NICHOLS*
Oakland, California

1957-58 LEWIS C. RYAN*
Syracuse, New York

1958-59 ALBERT E. JENNER, JR.*
Chicago, Illinois

1959-60 SAMUEL P. SEARS*
Boston, Massachusetts

1960-61 LON HOCKER*
Woods Hole, Massachusetts

1961-62 LEON JAWORSKI*
Houston, Texas

1962-63 GRANT B. COOPER*
Los Angeles, California

1963-64 WHITNEY NORTH SEYMOUR*
New York, New York

1964-65 BERNARD G. SEGAL*
Philadelphia, Pennsylvania

1965-66 EDWARD L. WRIGHT*
Little Rock, Arkansas

1966-67 FRANK G. RAICHLE*
Buffalo, New York

1967-68 JOSEPH A. BALL*
Long Beach, California

1968-69 ROBERT W. MESERVE*
Boston, Massachusetts

1969-70 HON. LEWIS F. POWELL, JR.*
Washington, District of Columbia

1970-71 BARNABAS F. SEARS*
Chicago, Illinois

1971-72 HICKS EPTON*
Wewoka, Oklahoma

1972-73 WILLIAM H. MORRISON*
Portland, Oregon

1973-74 ROBERT L. CLARE, JR.*
New York, New York

1974- AUSTIN W. LEWIS*
New Orleans, Louisiana

1975-76 THOMAS E. DEACY, JR.*
Kansas City, Missouri

1976-77 SIMON H. RIFKIND*
New York, New York

1977-78 KRAFT W. EIDMAN*
Houston, Texas

1978-79 MARCUS MATTSON*
Los Angeles, California

1979-80 JAMES E. S. BAKER*
Chicago, Illinois

1980-81 JOHN C. ELAM*
Columbus, Ohio

1981-82 ALSTON JENNINGS*
Little Rock, Arkansas

1982-83 LEON SILVERMAN*
New York, New York

1983-84 GAEL MAHONY*
Boston, Massachusetts

1984-85 GENE W. LAFITTE
New Orleans, Louisiana

1985-86 GRIFFIN B. BELL*
Atlanta, Georgia

1986-87 R. HARVEY CHAPPELL, JR.*
Richmond, Virginia

1987-88 MORRIS HARRELL*
Dallas, Texas

1988-89 PHILIP W. TONE*
Chicago, Illinois

1989-90 RALPH I. LANCASTER, JR.*
Portland, Maine

1990-91 CHARLES E. HANGER*
San Francisco, California

1991-92 ROBERT B. FISKE, JR.
New York, New York

1992-93 FULTON HAIGHT*
Santa Monica, California

1993-94 FRANK C. JONES*
Atlanta, Georgia

1994-95 LIVELY M. WILSON*
Louisville, Kentucky

1995-96 CHARLES B. RENFREW*
San Francisco, California

1996-97 ANDREW M. COATS
Oklahoma City, Oklahoma

1997-98 EDWARD BRODSKY*
New York, New York

1998-99 E. OSBORNE AYSCUE, JR.
Charlotte, North Carolina

1999-2000 MICHAEL E. MONE
Boston, Massachusetts

2000-2001 EARL J. SILBERT
Washington, District of Columbia

2001-2002 STUART D. SHANOR
Roswell, New Mexico

2002-2003 WARREN B. LIGHTFOOT
Birmingham, Alabama

2003-2004 DAVID W. SCOTT, Q.C.*
Ottawa, Ontario

2004-2005 JAMES W. MORRIS, III*
Richmond, Virginia

2005-2006 MICHAEL A. COOPER
New York, New York

2006-2007 DAVID J. BECK
Houston, Texas

2007-2008 MIKEL L. STOUT
Wichita, Kansas

2008-2009 JOHN J. (JACK) DALTON
Atlanta, Georgia

2009-2010 JOAN A. LUKEY
Boston, Massachusetts

2010-2011 GREGORY P. JOSEPH
New York, New York

2011-2012 THOMAS H. TONGUE
Portland, Oregon

2012-2013 CHILTON DAVIS VARNER
Atlanta, Georgia

2013-2014 ROBERT L. BYMAN
Chicago, Illinois

2014-2015 FRANCIS M. WIKSTROM
Salt Lake City, Utah

2015-2016 MICHAEL W. SMITH
Richmond, Virginia

2016-2017 BARTHOLOMEW J. DALTON
Wilmington, Delaware

2017-2018 SAMUEL H. FRANKLIN
Birmingham, Alabama

* Deceased

Jury Committee

Chair
Robert T. Adams
Kansas City, Missouri

Vice Chair
Bruce R. Parker
Baltimore, Maryland

Members

Alex Alvarez
Coral Gables, Florida

Jeptha F. Barbour
Jacksonville, Florida

Michael L. Bell
Birmingham, Alabama

Arthur P. Brock
Chattanooga, Tennessee

Michael A. Brown
Baltimore, Maryland

Cheryl A. Bush
Troy, Michigan

William J. Conroy
Berwyn, Pennsylvania

Rudy A. Englund
Seattle, Washington

Mark R. Filip
Chicago, Illinois

Vincent Galvin, Jr.
San Jose, California

Gerald R. Kowalski
Toledo, Ohio

Gregory M. Lederer
Cedar Rapids, Iowa

Andrew M. Morse
Salt Lake City, Utah

Joel A. Mullin
Portland, Oregon

Kenneth A. Murphy
Philadelphia, Pennsylvania

Joseph E. O'Neil
Philadelphia, Pennsylvania

Timothy G. O'Neill
Denver, Colorado

Larry Ottaway
Oklahoma City, Oklahoma

Angelo M. Patacca, Jr.
Jacksonville, Florida

Jane Paulson
Portland, Oregon

John R. Penhallegon
Towson, Maryland

Lyn P. Pruitt
Little Rock, Arkansas

James S. Rogers
Seattle, Washington

Joseph J. Roper
Kansas City, Missouri

Perrin Rynders
Grand Rapids, Michigan

Daniel J. Scully, Jr.
Detroit, Michigan

Ralph A. Weber*
Milwaukee, Wisconsin

Marc E. Williams
Huntington, West Virginia

Sheryl J. Willert
Seattle, Washington

Regent Liaison
Martin F. Murphy
Boston, Massachusetts

Ralph A. Weber was the primary author of this publication

TABLE OF CONTENTS

IMPROVING JURY DELIBERATIONS THROUGH JURY INSTRUCTIONS BASED ON COGNITIVE SCIENCE

With this closing instruction ringing in their ears, jurors across the country are sent off to their deliberation rooms to reach a verdict:

> *"Free your minds of all feelings of sympathy, bias and prejudice and let your verdict speak the truth, whatever the truth may be."*

For decades we believed this instruction was effective and its goals attainable. People could simply "free their minds of all feelings" and reach a verdict based on reason and objective facts—or so we thought.

Recent advances in the science of decision-making, however, undercut our assumptions about how jurors make decisions. Science now teaches that our cerebral cortex (and its deliberate, logical power) does not either solely or separately rule the day. Instead, logic or reason (described below as "System 2" thinking) operates alongside and in conjunction with the evolutionary brain and its quick, instinctual impulses (described below as "System 1" thinking). Thus, instructing someone simply to shut down part of their brains and "free their minds of all feelings . . ." is as effective as telling a child perched on a garage roof to ignore gravity.

Nobel Laureate Daniel Kahneman is among the leaders in the developing understanding of human decision-making. Kahneman and his colleague Amor Tversky relentlessly challenged the received wisdom that human beings are motivated to—and do—routinely make rational, logical decisions. Kahneman summarized his and Tversky's work in the 2011 best seller, THINKING, FAST AND SLOW. This book brings to the general public a lifetime of cognitive and social psychology research about the many non-rational ways that human beings make decisions—including the multiple ways we predictably and without awareness commit errors in logic and reasoning.[1]

Jonathan's Haidt's book, THE RIGHTEOUS MIND: WHY GOOD PEOPLE ARE DIVIDED BY POLITICS AND RELIGION (2012), likewise pulls back the curtain of myth and misunderstanding to show how humans actually make decisions. Haidt uses the tools of neuroscience and social psychology to explain how humans' intrinsic moralistic, judgmental nature is moved by forces that operate more through rapid intuitive judgment than through careful "reasoning why." Like Kahneman and his Systems 1 & 2, Haidt likewise differentiates between two types of thinking, one that is conscious (reasoning) while the other operates intuitively.

This paper first summarizes the core insights of Kahneman, Haidt and other scientists into common flaws in human decision-making. Next, Part 2 discusses recent efforts by courts to improve jury instructions about the dangers of eyewitness identifications by taking account of (and trying to offset) flaws in human decision-making. Then, Part 3 offers several model jury instructions based on the science of decision-making that are designed to counter cognitive flaws and focus jurors' attention,

---

1 Kahneman began this research with Tversky in 1969. *Id.* at 5-6, which led to a number of highly influential papers. *Id.*, Appendices A, B, at 419-48.

increase their use of deliberative thought, mitigate "confirmation bias," and broaden participation during jury deliberation.

The goals here are straightforward: to increase the thoroughness of jurors' evidence review and to improve jurors' deliberations. The premise is that jurors who focus and deliberate in a meaningful way are more likely to reach the correct decision.[2] Ideally, this paper responds to Professor Burns' request for cognitive science insights to help improve jury trials:

> I would like to see a sustained attempt by experimental psychologists and other social scientists to identify those systematic failures in human cognitive capacities (heuristics) about which there is the highest level of certainty in the scientific community and which pose special dangers of distorting jury reasoning.

Robert P. Burns, *The Death of the American Trial* (2011).

Part 1: Cognitive Science Insights into Human Decision-Making

The core concept captured in the title of THINKING, FAST AND SLOW is that our brains are wired so that they reflexively default to fast, intuitive thinking—what Kahneman calls "System 1" thinking—instead of using slow, deliberate "System 2" thinking, which requires more effort but is better suited to working through complex and difficult issues.

A simple example of System 1 "fast thinking" is the effortless decision-making we use when driving down an open highway.[3] System 1 "operates automatically and quickly, with little or no effort and no sense of voluntary control."[4]

System 2 or "slow thinking," on the other hand, "allocates attention to the effortful mental activities that demand it, including complex computations."[5] In contrast to easy highway driving, System 2 involves focus and effort such as is required to "[p]ark in a narrow space (for most people except garage attendants)."[6]

People who predominantly rely on System 1 thinking boast that they "trust their gut" and do not want to be bothered with explaining themselves or considering contrary evidence. People who predominantly use System 2, on the other hand, are marked by their patience and intentional effort to see all sides of the issue before coming to a conclusion.

If any one of us were parties to a trial (especially if the facts were in our favor) we would want jurors to use their System 2 skills—namely, deliberate and careful thought. This is because fast, System 1 thinking can be misled by its tendency to employ cognitive shortcuts that can take us to the wrong conclusion. Unfortunately, System 2 thinking does not just take over and remain in control

---

2 D. Devine, JURY DECISION MAKING: THE STATE OF THE SCIENCE 9-10 (2012).
3 Kahneman, *supra* note 1, at 29.
4 *Id.* at 20.
5 *Id.* at 21.
6 *Id.* at 22.

once the subject matter becomes more complicated—as in a trial and during deliberations. The highly diverse operations of System 2 have one feature in common: they require attention and are disrupted when attention is drawn away."[7] "The defining feature of System 2 . . . is that its operations are effortful, and one of its main characteristics is laziness, a reluctance to invest more effort than is strictly necessary."[8] System 1 thus jumps into the fray when a complex problem is presented in order to save System 2 the effort.

Jonathan Haidt similarly explains human decision-making as a combination of two interrelated types of cognition: (1) intuition, which runs automatically and efficiently, and (2) reasoning, which requires effort and attention. He describes these two types of cognition through the metaphor of an elephant lumbering down a road (representing automatic processes such as intuition and emotion) while the rider atop the elephant attempts with varying degrees of success to control the large beast (representing conscious and effortful reasoning).[9]

As applied to trials, aiming arguments and instructions only at the rider ignores (pardon the pun) the elephant in the room. Haidt puts it succinctly: "if you want to change people's minds, you've got to talk to their elephants."[10] The many trial lawyer articles and seminars dissecting the "reptilian brain" are applying the same insights to different species.

A third helpful resource comes from neurologist Dr. Robert Burton. In accord with Kahneman and Haidt, Dr. Burton urges us to appreciate the powerful drivers of decision-making that operate outside conscious thought. Burton's book, ON BEING CERTAIN: BELIEVING YOU ARE RIGHT EVEN WHEN YOU ARE NOT describes the problem as follows:

> Despite how certainty feels, it is neither a conscious choice nor even a thought process. Certainty and similar states of "knowing what we know" arise out of involuntary brain mechanisms that, like love or anger, function independently of reason.[11]

We can be led astray when the "feeling of knowing" drives us to reject or discount evidence that our "knowledge" is wrong. Burton uses the famous *Challenger* study to make his point. The morning after the space shuttle *Challenger* explosion on January 28, 1986, a psychologist studying the recall of highly dramatic events ("flashbulb memories") asked his class of 106 students at Emory University to write down exactly how they had heard of the explosion, where they were, what they had been doing and how they felt. Two and a half years later they were again interviewed. Twenty-five percent of the students' subsequent accounts were strikingly different from their original journal entries; more than half the people had lesser degrees of error; fewer than ten percent had all the details correct.

While we all understand in a general sense the flaws of memory (but see Part 2, *infra*), Burton uses the *Challenger* study to make a more shocking point: when students were confronted with their

---

7 *Id.*
8 *Id.* at 31.
9 Haidt, *supra*, at 53-54.
10 *Id.* at 57. p. 1
11 Burton, *supra,* at xiii.

journals showing their contemporaneous account that conflicted with their "memory," (prior to seeing their original journals, most students presumed that their memories were correct)[12] many persisted in the belief that their false recollections were correct nonetheless! As one student responded when shown the journal, "*That's my handwriting, but that's not what happened*."[13]

As applied to trials, the feeling of certainty—especially when one is unwilling to test that certainty against the evidence—can lead to the wrong conclusion. Each of us has known a colleague about whom it could be said, "he's not always right but he's never in doubt." That is not how we would want to describe a model juror.

THE INVISIBLE GORILLA, a fourth book, is the work of cognitive psychologists Christopher Chabris and Daniel Simons who created the famous experiment for which their book is named. Subjects were shown a short video of two teams moving around and passing a basketball. They were told that as they watched they should count the number of passes made by the players wearing white while ignoring any passes by the players wearing black. Immediately afterwards the subjects were asked to report the number of passes. The real question came next: did you notice "anything unusual" or "anything or anyone other than the players" while watching the video and counting passes.[14]

Amazingly, *roughly half of the viewers did not see* that halfway through the video a female student wearing a full-body gorilla suit walks in the scene, stops in the middle of the players, faces the camera, thumps her chest and then walks off having spent about nine seconds onscreen. It turns out that this half of the subjects were "concentrating so hard on counting the passes that they were 'blind' to the gorilla right in front of their eyes."[15]

Based on this and other mental flaws outlined in their book, the authors of THE INVISIBLE GORILLA issued a call to action to the legal profession: "In our view, what is most in need of reform is the legal system's understanding of how the mind works."[16]

Decision-Making Flaws in Practice

Kahneman explains that System 1 silently "takes over" from System 2 by introducing unconscious mental shortcuts known as "heuristics." These mental shortcuts "are not chosen; they are the consequence of the mental shotgun, the imprecise control we have over targeting our responses to questions."[17] Thus, we are not even aware of the tricks our mind is playing in order to solve a problem. "The mental shotgun makes it easy to generate quick answers to difficult questions without imposing much hard work on your lazy System 2."[18] Again, this process occurs automatically without conscious awareness and these shortcuts take over our thinking easily and automatically.

---

12 *Id.* at 10.
13 *Id.* at 11 (emphasis supplied). *See also* C. Chabris & D. Simons, THE INVISIBLE GORILLA 72-73 (2010) (discussing *Challenger* study).
14 Chabris & Simons, *supra* note 12, at 6.
15 *Id.* at 7.
16 *Id.* at 114.
17 Kahneman, *supra* note 1, at 98.
18 *Id.* at 99.

Flaw 1—The "Affect" Heuristic

One System 1 mental shortcut is described as the "affect heuristic." This heuristic shifts our mind from how to respond to a difficult question—one that requires the use of logic and facts to answer correctly—to the simpler "affect" question namely: "do I like this?" The mind thereby avoids the question that requires effort and instead answers the easier "affect" question—"do I like this?"

Kahneman gives this example of the affect heuristic at work. He asked the chief investment officer of a large financial firm why he had invested tens of millions of dollars in the stock of Ford Motor Company. The right answer, according to economists, would have involved an explanation of how the current market price of Ford stock was below where it should have been (i.e., Ford's stock was undervalued by the market); how the CIO had reason to know this; and thus why the CIO chose to take advantage of his insight into the true, higher stock value by buying at the below-value market price. But that is not what the sophisticated CIO said. The CIO instead replied that he had recently attended an auto show and had been impressed by the Ford cars he saw: "'Boy, do they know how to make a car,'" he said. He made it clear that in making the stock investment he had trusted his gut feeling.[19]

Kahneman points out that this sophisticated investor had avoided the difficult question of weighing Ford's market price versus its "true" value and instead allowed the affect heuristic to take over: he liked the cars, he liked the company, and he liked the idea of owning the stock. Instead of focusing on whether Ford stock was currently underpriced, System 1 and the affect heuristic guided his judgment with a feeling of liking and disliking, with little deliberation or reasoning.[20] "If a satisfactory answer to a hard question is not found quickly, System 1 will find a related question that is easier and will answer it."[21] The question the investor faced (should I invest in Ford stock?) was difficult, but the answer to an easier and related question (do I like Ford cars?) came readily to his mind and determined his choice.

Trial lawyers (and experienced witnesses) play to the power of the affect heuristic by trying to ingratiate themselves to the court and jury. The reason is simple: we intuitively appreciate the affect heuristic and want the judge and jurors to like us (and not like the other side), because we know it can impact how they decide the case. Court personnel can attest to the Cheshire cat-like grins plastered on counsels' faces as the jurors file into the court room. Similarly, the weakest jokes shared by the judge evoke near-paroxysms of laughter from the lawyers. Conversely, we work to make our opponents unlikeable, highlighting corporate greed or malingering claimants.

We grimace at the idea of a justice system predicated on the rule "reward those you like and punish those you do not," but the affect heuristic nonetheless takes us down that path. Accordingly, juries are more likely to acquit attractive defendants and beautiful people convicted of crimes on average get lighter sentences.[22]

---

19 Kahneman, *supra* note 1, at 12.
20 *Id.*
21 *Id.* at 97.
22 Haidt, *supra*, at 69 & n.17 (citing studies).

Flaw 2—Confirmation Bias

Confirmation bias is a second powerful mental shortcut that is especially impactful in a jury trial. Because our minds dislike the discomfort of uncertainty we want to answer questions or solve riddles as quickly as possible. We do so by creating a hypothesis and then looking for facts to support—"confirm"—that hypothesis.[23] In short, *first* we pick an answer and *then* we look for facts to support that choice.[24]

In a jury trial, confirmation bias drives jurors to develop premature conclusions and then to interpret evidence received thereafter in a manner that supports their initial conclusion, *i.e*., favoring supporting evidence over contrary evidence.[25] One explanation for this distortion of evidence is that postponing all evaluation of evidence until the conclusion of the trial—as jurors are repeatedly instructed to do—is contrary to an urge too natural to suppress.[26]

The problem with confirmation bias is that it blinds us to subsequently received contradictory evidence, which, if we considered it, could cause us to change our minds. Unfortunately, confirmation bias takes over and causes us to ignore or discount as untrustworthy evidence that contradicts what we already have come to believe. To paraphrase Paul Simon's lyric in *The Boxer*, "we hear what we want to hear and disregard the rest …."[27]

One of the best-known studies on confirmation bias demonstrates why the bias can be a serious issue when a jury is tasked with evaluating evidence during the course of a trial.[28] Two groups of participants, one group that supported the death penalty and one that was against it, were shown two fake studies on the death penalty.[29] The first fake study *confirmed* participants' pre-existing beliefs (pro or con) about the effectiveness of the death penalty in reducing crime, while the other fake study *contradicted* these pre-existing beliefs.[30] When asked to rate how convincing each study was, the participants were more likely to accept the findings in the study that was in line with their pre-existing beliefs and to question the other, contradicting study's results.[31] But worse than that, not only did the confirmatory evidence strengthen people's pre-existing views, the contradicting evidence also had the effect of strengthening the pre-existing beliefs! Each side found that "those procedures that produced confirming results [were] methodologically superior to those that produced disconfirming results, and both used the perceived disparity in the quality of evidence on the two sides of the issue as justification for adopting more polarized attitudes."[32] Thus, when anti-death penalty people were shown pro-death penalty evidence, they became *more* anti-death penalty. The same held true for pro-death penalty people.

---

23 *See, e.g.*, Scott O. Lilienfeld, Rachel Ammirati & Kristin Landfield, *Giving Debiasing Away: Can Psychological Research on Correcting Cognitive Errors Promote Human Welfare?*, 4 Persp. Psychol. Sci. 390, 392 (2009) ("Confirmation bias predisposes us not merely to interpret evidence in a self-fulfilling manner, but to seek out evidence supporting only one side of a polarized issue.")

24 *Id.*

25 Kurt A. Carlson & J. Edward Russo, *Biased Interpretation of Evidence by Mock Jurors*, 7 J. of Experimental Psych.: Applied 91 (2001); Bill Kanasky, Jr., *Juror Confirmation Bias: Powerful, Perilous, Preventable*, 33 No. 2 Trial Advoc. Q. 35 (2014).

26 Carlson & Russo, *supra* note 25, at 91.

27 Simon & Garfunkel, The Boxer (Columbia Records 1969).

28 Charles G. Lord, et al., *Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence*, 37 J. Personality & Soc. Psychol. 2098, 2099 (1979).

29 *Id.*

30 *Id.*

31 *Id.*

32 Charles G. Lord, Mark R. Lepper and E. Preston, *Considering the Opposite: A Corrective Strategy For Social Judgment*, 47 Journal of Personality and Social Psychology 1231, 1232 (1984).

"Belief Perseverance" bears a family relationship to confirmation bias. It is the tendency to maintain a belief despite receiving evidence that contradicts the belief, even evidence that destroys the factual basis for the belief. So strong is belief perseverance that offering contradictory evidence may serve only to bolster the belief.[33] One explanation for this phenomenon is that jurors more easily process information confirming—rather than falsifying—propositions and arguments. It is easier for a juror to see how information supports a proposition than refutes it.[34]

Confirmation bias' impact has been demonstrated in other studies using polarizing subjects such as political candidates and climate change. A Yale study sought to understand why the public was so divided on the subject of climate change: was it due to scientific illiteracy or opposing cultural values? [35] According to the author, the study found that "ordinary members of the public credit or dismiss scientific information on disputed issues based on whether the information strengthens or weakens their ties to others who share their values."[36] The participants were more likely to accept information that confirmed the beliefs of those with whom they shared values.

In another study in 2004, brain scans were conducted on participants as they read statements from then-presidential candidates George W. Bush and John Kerry in which the candidates clearly contradicted themselves.[37] Republican participants were far more critical of John Kerry's statements, ignoring the contradictions of their own candidate, while Democrat participants took George W. Bush to task and gave Kerry a pass.[38] The brain scans revealed that as the participants evaluated the statements the part of the brain most associated with reasoning was dormant while the parts of the brain associated with emotions and resolving conflict were very active.[39] "Essentially, it appears as if partisans twirl the cognitive kaleidoscope until they get the conclusions they want, and then they get massively reinforced for it, with the elimination of negative emotional states and activation of positive ones."[40]

---

33 Kanasky, *supra* note 25, at 35 (citing L. Ross, C. Anderson, *Shortcomings in the attribution process: On the origins and maintenance of erroneous social assessments,* in D. Kahneman, P. Slovic, A. Tversky (eds.)), JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, at 149 (1982)); Sara Gordon, *Through the Eyes of Jurors: The Use of Schemas in the Application of "Plain Language" Jury Instructions*, 64 Hastings L. J. 643 (2013).

Many authors quote a powerful statement by Ross and Anderson about belief perseverance:

> In summary, it is clear that beliefs can survive potent logical or empirical challenges. They can survive and even be bolstered by evidence that most uncommitted observers would agree logically demands weakening of such beliefs. They can even survive the total destruction of their original evidential bases.

Ross & Anderson, *supra*, at 149.

34 Kanasky, *supra* note 25, at 35.

35 Kahan, et al., *The Polarizing Impact of Science Literacy and Numeracy on Perceived Climate Change Risks*, 2 Nature Climate Change 732 (2012) (discussing that when climate change deniers are shown contradictory evidence, they have even more confidence that their initial position is correct).

36 "Yale study concludes public apathy over climate change unrelated to science literacy", www.phys.org, (May 27, 2012), https://phys.org/news/2012-05-yale-apathy-climate-unrelated-science.html.

37 Drew Westen et al., *Neural bases of motivated reasoning: An fMRI study of emotional constraints on partisan political judgment in the 2004 U.S. presidential election*, 18 J. of Cogn. Neurosci. 1947 (2006).

38 *Id.*

39 *Id.*

40 Michael Shermer, *The Political Brain*, 295 Sci. Am. 36 (July 1, 2006), https://www.scientificamerican.com/article/the-political-brain.

Flaw 3—Brain Glucose Depletion and Cognitive Performance

Biology provides yet another barrier to the careful, deliberative thought that we call System 2 thinking. The brain is a physical system that requires energy to work. The adult human brain is only 2% of total body mass but uses approximately 20% of daily calorie intake.[41] System 2 thinking draws on more mental energy in an actual, physical sense and can diminish the brain's supply of glucose (the simple sugar that is a primary energy source for living organisms).[42] Difficult cognitive tasks drain brain glucose and such depletion limits cognitive performance.[43]

The famous study of busy Israeli parole judges provides a stunning demonstration of this phenomenon.[44] Parole decisions are difficult, the default decision is to deny parole, and judges must decide each case in short order. The study methodically analyzed the parole judges' cases and decision, controlling for all relevant variables about the crime and the criminal. Incredibly, after controlling for all these variables it turned out that the most powerful determinant of whether an applicant received parole was the time of day that the case file came before the panel. The statistical regression analysis showed a dramatic correlation between outcomes and morning and afternoon snack breaks and lunch. After each opportunity to eat, the judges granted parole at a rate of 65%, which then declined essentially to zero in the ensuing hours before the next break.[45]

Trial lawyers observe something similar in jury deliberations. It is a commonplace that juries render verdicts after the lunch break. The received wisdom is they want to have one last county-supplied meal before leaving, but the Israeli parole judges' study may provide a better explanation. Jurors with their glucose stores replenished following the lunch breaks now have the mental energy to resolve disputes over verdict questions and come to a consensus.

Researchers have investigated other contexts in which decision-making is impacted. For example, a study of primary care physicians found that the likelihood of prescribing antibiotics increased over the course of clinic sessions, "consistent with the hypothesis that decision fatigue progressively impairs clinicians' ability to resist ordering inappropriate treatments."[46]

Even more concerning was a study of reaction times on a "first-person shooter task," in which persons are seated at a computer and shown a simplified video game where they assume the role of a police officer surveilling public spaces.[47] Study participants who were cognitively depleted showed exacerbated racial bias in the decision to shoot.

The common denominator in these studies is that people resort to less effortful

---

41 Benjamin C. Ampel, Mark Muraven and Ewan C. McNay, *Mental Work Requires Physical Energy: Self-Control is Neither Exception nor Exceptional,* 9 Front. Psychol. 1005 (2018).
42 Kahneman, *supra* note 1, at 43.
43 *Id*.
44 Shai Danziger, Jonathan Levav, Liora Avnaim-Pesso, *Extraneous Factors in Judicial Decisions*, 108 Proc. Nat'l Acad. Sci. U.S. 6889 (2011), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3084045/
45 Kahneman, *supra* note 1, at 43-44.
46 Jeffrey A. Linder, et al., *Time of Day and the Decision to Prescribe Antibiotics*, 174 JAMA Intern. Med. 2029, 2031 (2014).
47 Debbie S. Ma, et al., *When Fatigue Turns Deadly: The Association Between Fatigue and Racial Bias in the Decision to Shoot*, 35 Basic & Applied Soc. Psychol. 515, 516 (2013).

decision techniques (i.e., heuristics) when their cognitive functioning is diminished.[48]

Flaw 4—Juror Dominance and Submissiveness

The pitfalls in individual decision-making described above take on added importance when coupled with the impact of dominant versus submissive jurors. In theory, as more thoughtful and attentive minds work on a problem the odds of getting the right answer increase. For example, while each juror may not see or grasp each bit of evidence, when multiple people are watching and listening the odds are better that taken as a whole the group will get everything. Post-trial juror interviews and mock trial observations support this belief.

The theoretical benefit of group decision-making is undercut, however, if a "loud mouth juror" takes over and imposes his or her will on the others. Researchers have found that in a typical six-person group half of the people do 70% of the talking. [49] This author has observed many mock juries and typically observes "jury argument" in place of "jury deliberation." In such situations, jurors come into the room knowing which side should win and their competitive drive reveals itself as they work to make sure their view prevails.

"Dominance" refers to the personality trait to behave in an assertive, forceful and self-assured manner.[50] Dominant personalities gain disproportionate control over group decisions. They speak first and speak more and their opinions are more prominent in group decisions, even when their opinions are not more insightful or accurate than the opinions held by those who speak less.[51] Dominant personalities are motivated to take charge of decision-making groups and do so by appearing more competent to others, even when they lack competence.[52] On juries, a dominant person is likely to be the foreperson, whose election to that position increases his or her ability to influence the group decision.[53]

The converse of the effect of a dominant personality is the resulting "spiral of silence" on the part of more reticent jurors.[54] A dominant person who speaks first will change the nature of opinion of the group. More reticent jurors who agree will feel more correct and confident in voicing their opinions, and those who feel their opinions are not gaining acceptance will fear isolation within the group, remain silent, and vote with the majority, regardless of whether they hold a dissenting opinion. Dominant jurors thus have the ability to influence group decisions and silence dissent, not based on their competence or the merit of their opinions but based on their ability to appear

---

48 Mindy Engle-Friedman, et al. *The Role of Sleep Deprivation and Fatigue in the Perception of Task Difficulty and Use of Heuristics*, 11 Sleep Sci. 74 (2018).

49 Leigh Thompson, *How to Neutralize a Meeting Tyrant,* Fortune (2013), http://fortune.com/2013/02/11/how-to-neutralize-a-meeting-tyrant/

50 Cameron Anderson & Gavin J. Kilduff, *Why Do Dominant Personalities Attain Influence in Face-to-Face Groups? The Competence-Signaling Effects of Trait Dominance*, 96 J. Pers. & Soc'y Psych. 491 (2009).

51 *Id.* at 491, 500; Adam M. Chud & Michael L. Berman, *Six-Member Juries: Does Size Really Matter?* 67 Tenn. L. Rev. 743, 758 (2000).

52 Anderson & Kilduff, *supra* note 51, at 491.

53 Chud & Berman, *supra* note 52, at 757.

54 *Id.* at 759 (citing Elizabeth Noelle-Neuman, *The Spiral of Silence: Public Opinion-Our Social Skin* 5 (1984)).

competent and on group dynamics.[55]

The film 12 ANGRY MEN (United Artists 1957) portrays both the dominant juror problem and a way to overcome it. The author, Reginald Rose, drew on his own jury service in a murder trial.[56] The jury in the movie must decide whether a poor Puerto Rican teenager killed his abusive father. Juror 10—a loudmouth and a bigot—argues immediately that the prosecution has presented an open-and-shut case of guilt. Several of the jurors are clearly content to let others lead while they stay quiet. A vote is taken; except for a lone dissenter, Juror 8, everyone agrees with Juror 10 and votes for conviction.

Juror 8, played by Henry Fonda, then quietly, persistently and in a non-confrontational way induces his fellow jurors to examine the evidence more carefully. He begins by explaining that he voted "not guilty" in the initial round not because he's certain the defendant is innocent, but instead because he wanted more time to discuss the case and the evidence. He also encourages the other jurors—some of whom are quite reticent—to express themselves. Juror 8 takes up each piece of the prosecution's critical evidence and questions it, including improbable eyewitness testimony. Slowly the other jurors see the points Juror 8 is making and switch their votes. Through calm, deliberate (Type 2) thinking and discussion Juror 8 transforms a truncated process initially dominated by the loudest voice in the room into a genuinely collaborative effort.

Part 2: How Courts and Jury Instruction Committees Have Used Cognitive Science Regarding Eyewitness Testimony

State jury instruction committees are beginning to accept that instructions should take into consideration how humans make decisions. This acceptance is evident in the evolution of model instructions related to eyewitness identifications. What began as an instruction promulgated by the D.C. Circuit in 1972 asking jurors to consider several factors in assessing the accuracy of an identification has evolved in recent years based on extensive social science research. Numerous states now offer an explanation to jurors about how human memory works, what circumstances can affect the reliability of an identification, and how race plays a role in identification.

In 1972, the D.C. Circuit held in *U.S. v. Telfaire* that "[t]he presumption of innocence that safeguards the common law system must be a premise that is realized in instruction and not merely a promise."[57] Accordingly, the D.C. Circuit "pointed out the importance of and need for a special instruction on the key issue of identification, which emphasizes to the jury the need for finding that the circumstances of the identification are convincing beyond a reasonable doubt."[58] The court included a model instruction in the appendix of the opinion "[t]o further the administration of justice[.]"[59]

---

55 Chud & Berman, *supra* note 52, at 759-760; Nicole L. Waters & Valerie P. Hans, *A Jury of One: Opinion Formation, Conformity, and Dissent on Juries*, 6 J. Empirical Legal Stud. 513 (2009) ("Classic studies in social psychology on social pressure to conform have found that individuals regularly conform to the majority views of a group, particularly if they are alone and without other supporters, and we see that operating in the jury context.").

56 Myrna Oliver, *Reginald Rose, 81; Writer Honored for '12 Angry Men,'* L.A. Times, April 23 2002, *available at http://articles.latimes.com/2002/apr/23/local/me-rose23*.

57 *U.S. v. Telfaire*, 469 F.2d 552, 555 (D.C. Cir. 1972).

58 *Id.*

59 *Id.* at 557.

This "*Telfaire* Instruction" has become the most commonly used jury instruction on eyewitness identification.[60] The instruction explains that "[i]dentification testimony is an expression of belief or impression by the witness. Its value depends on the opportunity the witness had to observe the offender at the time of the offense and to make a reliable identification later."[61] It identifies four potential factors depending on the specific facts of the case that jurors should consider in appraising identification testimony.[62]

Since the '70s the effectiveness of the *Telfaire* Instruction has been studied repeatedly. Courts began to see the need for improvement because the 1972-era instruction was not effective in assisting jurors evaluate the accuracy of an eyewitness identification.[63] For example, the instruction was criticized for not explaining how memory process works and not describing "the lack of any positive relationship between witness confidence and identification accuracy."[64] Most significantly, "[w]ithout any background in science or psychology, most jurors are unable to assess the impact of various psychological factors on the accuracy of the eyewitness."[65] According to one study, "such guidance is essential if jury instructions are to be effective."[66]

Acknowledging this research on the *Telfaire* instruction's limited effect, state jury committees have begun to implement changes to eyewitness identification instructions that go further than identifying in general terms four factors to consider in assessing reliability. Leading the charge is New Jersey. In *State v. Cromedy*, the Supreme Court of New Jersey in 1999 began by addressing jury instructions related to eyewitness identifications involving a cross-racial identification. After reviewing decisions from other jurisdictions, a New Jersey Supreme Court Task Force on Minority Concerns report, and "the professional literature of the behavioral and social sciences," it held "that a cross-racial identification, as a subset of eyewitness identification, requires a special jury instruction in an appropriate case."[67] The *Cromedy* court discussed the forty years of empirical studies on the psychological factors affecting eyewitness cross-racial identifications and went on to "request the Criminal Practice Committee and the Model Jury Charge Committee revise the current charge on identification to include an appropriate statement on cross-racial eyewitness identification that is consistent with this opinion."[68] The New Jersey Model Jury Charge Committee then did just that.[69]

Twelve years later in *State v. Henderson*, the Supreme Court of New Jersey acknowledged further research in the area, made the instruction mandatory whenever there is a cross-racial

---

60 Angela M. Jones, et al., *Comparing the Effectiveness of Henderson Instructions and Expert Testimony: Which Safeguard Improves Jurors' Evaluations of Eyewitness Evidence?* Journal of Experimental Criminology (forthcoming), https://www.law.upenn.edu/live/files/6280-jonesbergoldetal).

61 *Telfaire*, 469 F.2d at 558.

62 *Id.* at 558-59.

63 *See, e.g.*, Brian L. Cutler, Hedy R. Dexter, & Steven D. Penrod, *Nonadversarial Methods for Sensitizing Jurors to Eyewitness Evidence*, 20 J. of Applied Social Psychol. 1197 (1990); Edith Greene, *Judge's Instruction on Eyewitness Testimony: Evaluation and Revision*. 18 J. of Applied Social Psychol. 252 (1988); Gabriella Ramirez, *Judges' Cautionary Instructions on Eyewitness Testimony*, 14 Am. J. Forensic Psychol. 31, 45 (1996).

64 Christian Sheehan, *Making the Jurors the "Experts": The Case for Eyewitness Identification Jury Instructions*, 52 B.C. L. Rev. 651, 681 (2011).

65 *Id.*

66 *Id.* (citing Ramirez, *supra* note 7).

67 *State v. Cromedy*, 158 N.J. 112, 131, 727 A.2d 457, 467 (1999), *abrogated by State v. Henderson*, 208 N.J. 208, 27 A.3d 872 (2011).

68 *Id.* at 133.

69 N.J. Model Instruction, Non 2C: Identification.

identification, and updated New Jersey's model instructions on eyewitness identifications.[70] The *Henderson* court again conducted a survey of the state of scientific research on the issue of eyewitness identification and described in detail how memory works based on numerous studies: "Science has proven that memory is malleable. The body of eyewitness identification research further reveals that an array of variables can affect and dilute memory and lead to misidentifications."[71] The court detailed those variables, which were significantly more than the four factors identified in the *Telfaire* Instruction, and crafted a jury instruction that took each one into consideration.[72] The instruction was quickly adopted as a model instruction.

As a result of *Henderson*, New Jersey now has the most thorough model jury instruction regarding eyewitness identification. The ten-page instruction relies on social science and explains (1) how human memory works, (2) the factors that can affect an eyewitness identification and (3) how those factors can potentially affect the identification.[73] Thus, New Jersey juries are told in some detail why they must be especially cautious in using such evidence. The following are just a few examples taken from the instruction:

- Human beings have the ability to recognize other people from past experiences and to identify them at a later time, but research has shown that there are risks of making mistaken identifications. That research has focused on the nature of memory and the factors that affect the reliability of eyewitness identifications.[74]

- Human memory is not foolproof. Research has revealed that human memory is not like a video recording that a witness need only replay to remember what happened. Memory is far more complex.[75]

- The process of remembering consists of three stages: acquisition -- the perception of the original event; retention -- the period of time that passes between the event and the eventual recollection of a piece of information; and retrieval -- the stage during which a person recalls stored information. At each of these stages, memory can be affected by a variety of factors.[76]

Following New Jersey's lead, Massachusetts also implemented a detailed model jury instruction on eyewitness identification.[77] After initiating a Court study on eyewitness evidence,[78]

---

70 *State v. Henderson*, 208 N.J. 208, 299, 27 A.3d 872, 926 (2011), holding modified by *State v. Chen*, 208 N.J. 307, 27 A.3d 930 (2011) ("Since then, the additional research on own-race bias . . . , and the more complete record about eyewitness identification in general, justify giving the charge whenever cross-racial identification is in issue at trial.").

71 *Id.* at 247.

72 *Id.* at 248-272.

73 N.J. Model Instruction, Non 2C: Identification.

74 *Id.*

75 *Id.*

76 *Id.*

77 Mass. Instruction 9.160.

78 Supreme Judicial Court Study Group on Eyewitness Evidence: Report and Recommendations to the Justices (July 25, 2013), http://www.mass.gov/courts/docs/sjc/docs/eyewitness-evidence-report-2013.pdf [http://perma.cc/WY4MYNZN].

the Massachusetts Supreme Judicial Court recognized that it was "not alone in concluding that certain scientific principles should be incorporated into a model jury instruction on eyewitness identification."[79] Thus the Massachusetts's Supreme Judicial Court likewise proposed a model jury instruction (since adopted)[80] that mirrors New Jersey's.[81]

Other states have followed suit in acknowledging the importance of scientific research on crafting jury instructions. In 2012, the Supreme Court of Hawaii held that "[i]t is apparent . . . that, based on the empirical studies, it cannot be assumed that juries will necessarily know how to assess the trustworthiness of eyewitness identification evidence."[82] The state's committee on pattern criminal jury instructions adopted the court's proposed instruction, which was more robust than the *Telfaire* Instruction.[83]

In 2016, the Supreme Court of Maine acknowledged that "a significant body of scientific research has emerged concerning the mechanics of human memory and the reliability of eyewitness identifications generally. These extensive scientific studies have provided new insights into the fallibility of eyewitness identifications, and as a result many state and federal courts now instruct jurors accordingly."[84] The Maine Jury Instruction Manual now includes an instruction like Hawaii's.[85]

Utah,[86] Florida,[87] Connecticut,[88] and Georgia[89] have also incorporated the extensive research on eyewitness identification into their pattern jury instructions.

In addition to the States' efforts outlined above, federal Judge Mark W. Bennett of the United States District Court for the Northern District of Iowa likewise used insights from cognitive science in his courtroom. While he is especially known for his efforts at offsetting implicit bias,[90] he also pioneered efforts to incorporate scientific research in jury instructions in order to inform jurors about

---

79 *Com. v. Gomes*, 470 Mass. 352, 368, 22 N.E.3d 897, 910–11 (2015), *holding modified by Com. v. Bastaldo*, 472 Mass. 16, 32 N.E.3d 873 (2015).

80 *Id.* at 376.

81 Mass. Instruction 9.160.

82 *State v. Cabagbag*, 127 Haw. 302, 313–14, 277 P.3d 1027, 1038–39 (2012) (mandating that "when eyewitness identification is central to the case, circuit courts must give a specific jury instruction . . . to focus the jury's attention on the trustworthiness of the identification.").

83 Hi. Pattern Criminal Instruction 3.17.

84 *State v. Mahmoud*, 2016 ME 135, ¶ 13, 147 A.3d 833, 837–40 (concluding that "in light of the voluminous body of scientific research that has emerged regarding the reliability of eyewitness identification, and the subsequent evolving trend among both state and federal courts to instruct juries on this matter, we conclude that it is permissible, where relevant, to instruct jurors on the reliability of eyewitness identification.").

85 Me. Jury Instructions at § 6–22A.

86 Ut. Model Instructions, CR404 Eyewitness Identification.

87 Fl. Model Instruction 3.9(e) Eyewitness Identification.

88 Conn. Criminal Jury Instruction 2.6–4 Identification of Defendant.

89 *See Brodes v. State*, 279 Ga. 435, 442, 614 S.E.2d 766, 771 (2005) ("In light of the scientifically-documented lack of correlation between a witness's certainty in his or her identification of someone as the perpetrator of a crime and the accuracy of that identification, and the critical importance of accurate jury instructions as "the lamp to guide the jury's feet in journeying through the testimony in search of a legal verdict," we can no longer endorse an instruction authorizing jurors to consider the witness's certainty in his/her identification as a factor to be used in deciding the reliability of that identification.")

90 *See, e.g.*, Justin D. Levinson, Mark W. Bennett & Koichi Hioki, *Judging Implicit Bias: A National Empirical Study of Judicial Stereotypes*, 69 FLA. L. REV. 1 (2017); Bennett, Mark W., *The Implicit Racial Bias in Sentencing: The Next Frontier*, 126 YALE L.J. (Forum Essay Collection, Jan. 31, 2017), https://www.yalelawjournal.org/forum/the-implicit-racial-bias-in-sentencing.

the problems of eyewitness identification and the limitations of human memory.[91]

Part 3: Model Instructions Based on Cognitive Science

So, can these insights from Kahneman and his colleagues improve jury deliberations? Can we continue the momentum begun by courts' adoption of science-based jury instructions in the area of eyewitness identification and broaden the benefits of using cognitive science to improve jury work?

The answer to these questions is yes. Building on foundations laid by the jurisdictions and courts that recognize the value of cognitive science, we wish to add several simple jury instructions aimed at improving jurors' thinking and deliberations. Here are a few suggestions on how to use what we have learned from science to help improve the likelihood that jurors will think carefully and deliberate well.

1. **Activate System 2 Thinking by an "Accountability" Instruction**

Fortunately, researchers have found ways to move people toward more careful thinking. One way to do this is to make people feel "accountable." Studies have shown that if you tell a decision maker at the outset that at the end of the process they will be called upon to justify their decision to others, then they pay more attention to the facts needed to support their vote.

Jennifer Lerner and Philip Tetlock are leading researchers in accountability.[92] Lerner and Tetlock report that accountability can offset the cognitive shortcuts described above and thereby improve the quality of thinking and deliberations:

> Self-critical and effortful thinking is most likely to be activated when decision makers learn prior to forming any opinions that they will be accountable to an audience (a) whose views are unknown, (b) who is interested in accuracy, (c) who is interested in processes rather than specific outcomes, (d) who is reasonably well informed, and (e) who has a legitimate reason for inquiring into the reasons behind participants' judgments.

Id. at 259. Others have corroborated this conclusion: "[I]f jurors know that they will be accountable for the accuracy of their decisions, this can motivate them to prolong the decision-making process and think more carefully."[93]

---

91 *E.g.*, Instructions to the Jury, Dkt. Entry 72-4 at 10, *Gosch et al. v, Sergeant Bluff Comm. Sch. Dist., et al.*, Casse No. 15-4242-MWB.The instruction with regard to memory states, in part: "Scientific research has established that human memory is not at all like video recordings . . . human memory can be distorted, contaminated, or changed, and events and conversations can even be falsely imagined." *Id. See also See* Bennett, Mark W., *Unspringing The Witness Memory And Demeanor Trap: What Every Judge And Juror Needs To Know About Cognitive Psychology And Witness Credibility*, 64 Am. U. L.R. 1331, 1373-75 (2015).

92 Jennifer Lerner & Philip Tetlock, *Bridging Individual, Interpersonal, and Institutional Approaches to Judgment and Decision making: the Impact of Accountability on Cognitive Bias, in* EMERGING PERSPECTIVES ON JUDGMENT AND DECISION RESEARCH (Sandra L. Schneider & James Shanteau eds., 2003); Jennifer Lerner & Philip Tetlock, *Accounting for the Effects of Accountability,* 125 Psychol. Bull. 255, 256 (1999).

93 Sara Gordon, *What Jurors Want to Know: Motivating Juror Cognition to Increase Legal Knowledge & Improve Decisionmaking,* 81 Tenn. L. Rev. 751, 772 (2014).

The reason accountability has this impact is people do not want to look foolish in front of others and thus prepare themselves for the upcoming justification by paying attention to facts that justify their beliefs.[94] With this in mind, courts should give the following instruction as soon as the panel is seated for voir dire and before the lawyers begin to try to impact the prospective jurors' thinking.

Model Accountability Instruction:

People Of The Jury

This is the first step of a process that ultimately will lead to some of you going into the jury room at the conclusion of the trial. When you go into that room you will be asked to decide the case. But you not only will have to vote "yes" or "no" on certain verdict questions; in order to do your duty as a juror you will have to explain to your fellow jurors what evidence you believe supports your decision to vote a certain way.

I tell you this now because research has shown that jurors who understand they will be accountable to their fellow jurors for their vote pay more attention to the evidence and are more engaged in jury deliberation. Our system wants you to pay attention and to engage fully in jury deliberation because jurors who do these things help make sure the trial reaches a just result. Thus, good jurors pay attention and participate with their fellow jurors during deliberation.

2. Offset Confirmation Bias by a "Devil's Advocate" Instruction

Assuming that the accountability instruction achieves our purpose of having jurors pay more attention to the evidence, we then run into the problem presented by confirmation bias. As outlined above, *supra*, pp. 6-7, confirmation bias unfortunately directs our attention to evidence that supports our initial hypotheses and finds ways to ignore or discount evidence pointing in a different direction. (Again, can you hear Paul Simon's voice from "The Boxer," "*Still a man hears what he wants to hear and disregards the rest*."). So how do we get jurors to look at evidence going both ways which, of course, is at the core of what we expect from a jury?

Again, fortunately, science provides an answer. Building upon the insights from accountability research and a decision maker's desire not to look foolish when justifying a decision, confirmation bias can be offset by an explicit instruction that the decision maker must consider and explain facts that would support an answer *different from* the one they have selected. In short, we require the decision makers to be their own "devil's advocate."

---

94 Philip E. Tetlock, *Accountability and Complexity of Thought*, 45 J. Person. & Soc. Psychol. 74, 81 (1983).

Telling someone they have to think about ways to justify a different decision requires one "to give serious weight to the possibility that their preferred answers are wrong. Accountability, in this view, does not simply motivate thought; it functions as a social brake on judgmental biases that occur in our less reflective moments."[95]

Support for such an instruction is found in the words of the legendary Judge Learned Hand. In his June 28, 1951 Senate Committee testimony, Judge Hand warned against unquestioned certainty. Judge Hand quoted from Oliver Cromwell's letter asking the Scots to reconsider their position and avoid what became the Battle of Dunbar. Judge Hand then urged that Cromwell's plea—"*I beseech ye in the bowels of Christ, think that ye may be mistaken*."[96]—be inscribed over the door of every court house and used to begin every court session. Hand understood the value of challenging your own thinking and wanted that value broadly and permanently expressed in our courts.

Science has affirmed the usefulness of Judge Hand's admonition -- to consider that we "may be mistaken" -- as a way to improve decision-making. Professor Lord and his colleagues tested this strategy and described their findings in *Considering the Opposite*.[97] Their work investigated whether the kind of confirmation bias found in the death penalty opinion study described above, *supra*, pp. 6-7, could be overcome either (1) by an instruction to "be unbiased" or (2) by an instruction to "consider the opposite."[98] The "consider the opposite" instruction was worded as follows:

> Ask yourself at each step whether you would have made the same high or low evaluations had the same study produced results on the *other* side.[99]

The experiment showed that the "consider the opposite" approach worked. While those instructed to "be unbiased" became more extreme in their beliefs, those told to "consider the opposite" were able to offset confirmation bias. The authors reported, "We cannot but conclude that Judge Hand's advice should be taken literally."[100]

Therefore, following the accountability instruction, *supra*, p. 15, the Court should give the following Devil's Advocate Instruction:

---

95 Philip E. Tetlock, Jae I. Kim, *Accountability and Judgment Processes in a Personality Prediction Task,* 52 J. Pers. & Soc. Psychol. 700, 708 (1987).

96 Learned Hand, THE SPIRIT OF LIBERTY 229 (1953). 17th-century readers would understand "in the bowels of Christ" as akin to "in the pity/compassion/mercy of Christ." Glen, *Bowels of Mercy*, The King's English (2012), http://kingsenglish.info/2012/12/08/bowels-of-mercy/

97 Lord, Preston & Lepper, *supra* note 33.

98 *Id*. at 1233. The "be unbiased" instruction is of course familiar to trial lawyers and judges; Wisconsin's version is quoted at the outset of this paper.

99 *Id.* (emphasis in original).

100 *Id.* at 1241.

Model Devil's Advocate Instruction:

People Of The Jury

I have just explained to you that jurors in the jury deliberation room will be accountable for their vote. That is, you will be required to talk about the reasons for your vote.

Now I will add another element. Research shows that people tend to look for facts to support their beliefs and to disregard facts that do not fit their beliefs. The problem with this tendency in a jury trial is you may miss important facts and reach the wrong result.

Therefore, after you explain to your fellow jurors why you believe the evidence supports your decision to vote a certain way, you then will also be asked to be your own "Devil's Advocate." This means you will also state a fact or facts that you believe would support a decision reaching a different result. The reason we ask you to do this—to focus both on evidence that supports and does not support a certain result—is because it will help each of you keep an open mind throughout the trial. If you stop considering evidence that goes against your thinking you may reach the wrong result.

3. Schedule Juror Breaks and Nutrition to Offset Brain Drain

Judges should acknowledge the insights from the Israeli Parole Board Study.[101] If highly educated and well-trained judges are impacted by the effects of cognitive load, jurors surely are as well. A tired mind will take the path of least resistance, which means defaulting to intuitive System 1 thinking and avoiding the effort and concentration that System 2 thinking requires. Judges thus should help jurors preserve their ability to think clearly and effectively. If we want jurors to stay focused on the evidence and maintain a willingness to change their minds, then they need regular breaks and nutrition to replenish the glucose that is essential to high cognitive functioning. Jury rooms thus should be supplied with items that contain simple carbohydrates, such as foods like fruit and fruit drinks that naturally taste sweet. Foods that get their sweetness from artificial sweeteners, however, have no effect on glucose depletion.[102]

---

101 *See, supra,* p. 8.

102 Will Tumonis, *Ego-Depletion: 4 Effective Methods for Restoring Ego Strength*, Swaycraft (2015), http://www.swaycraft.com/restoring-ego-depletion/.

4. Instruct on the Processes of Jury Deliberation and the Foreperson's Role in Order to Counteract Dominant Jurors

It will be the rare jury that includes a juror with the wisdom and care shown by "Juror No. 8" in 12 ANGRY MEN, *supra*, p. 10. Therefore, judges should create processes for jury deliberation that help mitigate the impact of dominant jurors. For example, when jurors discuss their views before voting they are less likely to shape their expressed views to conform to the majority view as revealed by their fellow jurors' votes.[103] Also, if a juror writes down some initial thoughts before discussion begins, they are more likely to share thoughts that go against the majority view.[104] Further, having jurors speak in reverse order of likely dominance (with the foreperson speaking last) will help counter ingrained deference to the authority figure.[105] The following instruction builds on these insights into dominance, submissiveness and participation.

Model Deliberation Guide Instruction:

People Of The Jury, And Especially The Jury Foreperson

You may be wondering why we ask a group of lay people to decide cases instead of just having an experienced person, such as a judge, hear the evidence and issue a ruling. The reason is we believe that there is great value in group decision-making.

For example, when a group hears and sees evidence, we have found that all the evidence is heard and seen by some if not all of the individual jurors. In other words, each of you acts as a backstop for each other, picking up on evidence that one or more of your fellow jurors may have missed. That helps make for a fair trial for everyone.

In addition, we have found that when a group deliberates fairly and respectfully then such a group is most likely to come to a fair and just result. Again, that is why the parties are here and why this process works.
Accordingly, because you will be deliberating as a group, here are a few simple practices to follow during deliberation to help ensure that the process runs well. I will have a copy of these practices for the jury foreperson's reference during deliberation, but I want every juror to understand how the process should work so you can help the foreperson do a good job.

---

103 Tetlock, *supra* note 95, at 82.
104 Kahneman, supra note 1, at 85.
105 Cass R. Sunstein & Reid Hastie, *Making Dumb Groups Smarter*, 92 Harv. Bus. Rev. (2014) https://hbr.org/2014/12/making-dumb-groups-smarter.

First, before you vote on any verdict question, you should discuss the pros and cons of the evidence. Discussing before voting will make the process work better.

Second, as I explained before, each of you will be expected not only to discuss what evidence you think supports your decision on each verdict question, but also what evidence you believe would best support a different decision. To make this work, before you begin discussions you should jot down in your notebook one or more of the reasons for and against your initial answer to the verdict question.

Third, as your fellow jurors speak about the evidence they found important, PLEASE LISTEN. In order for this process to work best I want each of you to have the benefit of your fellow jurors' insights and ideas. Those insights and ideas may impact your thinking—or they may not—but unless you listen and allow them to speak you will not have the chance to have your own thinking challenged and improved.

Fourth, as in any group some of you will be more comfortable than others in sharing your thoughts. But just as others will lose out if they do not listen, the group will also lose out if they do not have the benefit of everyone's input. So, I will ask the foreperson to speak last and allow everyone else to have their say before providing your input. And, I would suggest that those most hesitant to speak out go first so their ideas are sure to be heard.

Conclusion

If we want to increase the chances that jury verdicts reflect careful consideration of all the evidence by jurors who actually deliberate with each other, we should use insights from cognitive science that inform how humans make decisions. The instructions and procedures set forth above are premised on insights from leading cognitive scientists and build upon work already done by courts and Jury Instruction Committees in the area of eyewitness evidence. Let's continue this progress in making our juries perform in a thoughtful and effective manner.

EXHIBIT A

Accountability Instruction

This is the first step of a process that ultimately will lead to some of you going into the jury room at the conclusion of the trial. When you go into that room you will be asked to decide the case. But you not only will have to vote "yes" or "no" on certain verdict questions; in order to do your duty as a juror you will have to explain to your fellow jurors what evidence you believe supports your decision to vote a certain way.

I tell you this now because research has shown that jurors who understand they will be accountable to their fellow jurors for their vote pay more attention to the evidence and are more engaged in jury deliberation. Our system wants you to pay attention and to engage fully in jury deliberation because jurors who do these things help make sure the trial reaches a just result. Thus, good jurors pay attention and participate with their fellow jurors during deliberation.

EXHIBIT B

Devil's Advocate Instruction

I have just explained to you that jurors in the jury deliberation room will be accountable for their vote. That is, you will be required to talk about the reasons for your vote.

Now I will add another element. Research shows that people tend to look for facts to support their beliefs and to disregard facts that do not fit their beliefs. The problem with this tendency in a jury trial is you may miss important facts and reach the wrong result.

Therefore, after you explain to your fellow jurors why you believe the evidence supports your decision to vote a certain way, you then will also be asked to be your own "Devil's Advocate." This means you will also state a fact or facts that you believe would support a decision reaching a different result. The reason we ask you to do this—to focus both on evidence that supports and does not support a certain result—is because it will help each of you keep an open mind throughout the trial. If you stop considering evidence that goes against your thinking you may reach the wrong result.

EXHIBIT C

Deliberation Guide Instruction

You may be wondering why we ask a group of lay people to decide cases instead of just having an experienced person, such as a judge, hear the evidence and issue a ruling. The reason is we believe that there is great value in group decision-making.

For example, when a group hears and sees evidence, we have found that all the evidence is heard and seen by some if not all of the individual jurors. In other words, each of you acts as a backstop for each other, picking up on evidence that one or more of your fellow jurors may have missed. That helps make for a fair trial for everyone.

In addition, we have found that when a group deliberates fairly and respectfully then such a group is most likely to come to a fair and just result. Again, that is why the parties are here and why this process works.

Accordingly, because you will be deliberating as a group, here are a few simple practices to follow during deliberation to help ensure that the process runs well. I will have a copy of these practices for the jury foreperson's reference during deliberation, but I want every juror to understand how the process should work so you can help the foreperson do a good job.

First, before you vote on any verdict question, you should discuss the pros and cons of the evidence. Discussing before voting will make the process work better.

Second, as I explained before, each of you will be expected not only to discuss what evidence you think supports your decision on each verdict question, but also what evidence you believe would best support a different decision. To make this work, before you begin discussions you should jot down in your notebook one or more of the reasons for and against your initial answer to the verdict question.

Third, as your fellow jurors speak about the evidence they found important, PLEASE LISTEN. In order for this process to work best I want each of you to have the benefit of your fellow jurors' insights and ideas. Those insights and ideas may impact your thinking—or they may not—but unless you listen and allow them to speak you will not have the chance to have your own thinking challenged and improved.

Fourth, as in any group some of you will be more comfortable than others in sharing your thoughts. But just as others will lose out if they do not listen, the group will also lose out if they do not have the benefit of everyone's input. So, I will ask the foreperson to speak last and allow everyone else to have their say before providing your input. And, I would suggest that those most hesitant to speak out go first so their ideas are sure to be heard.

American College of Trial Lawyers
Phone: 949-752-1801
Website: www.actl.com
Email: nationaloffice@actl.com