Federal Rule of Evidence 403: Observations on the Nature of Unfairly Prejudicial Evidence

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UNFAIRLY PREJUDICIAL EVIDENCE

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Modern evidence law favors admissibility. The Federal Rules of Evidence, for example, eliminate many old exclusionary doctrines1 while creating an expansive definition of relevancy.2 This orientation toward admissibility suggests an underlying faith that triers of fact can separate wheat from chaff.

While keeping the faith, however, the lawyers who drafted the Federal Rules also kept their options open. Rule 403 gives the court the discretion to exclude otherwise admissible evidence when the probative value of that evidence is “substantially outweighed” by, among other things, “unfair prejudice.”3 Rule 403 is intended to provide protection against the danger that the enlarged scope of admissibility under the Federal Rules will place before the trier of fact evidence which may lead to an improper decision.4 Because of its importance as a device to control the flow of evidence in a system otherwise biased in favor of increasing the flow, Rule 403 has been termed “the cornerstone”5 of the Federal Rules.

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1. For example, Article VI of the Federal Rules of Evidence abolishes many of the traditional grounds for declaring a witness incompetent to testify, leaving only the requirement of personal knowledge (FED. R. EVID. 602) and the limitations on the competency of judges (FED. R. EVID. 605) and jurors (FED. R. EVID. 606). Article VII expands the admissibility of opinion evidence, abolishing the requirement of a hypothetical question (FED. R. EVID. 703, 705) and permitting experts to testify on “ultimate issues” (FED. R. EVID. 704). Article VIII expands the scope of admissible hearsay (FED. R. EVID. 801, 803, 804). See generally Rothstein, Some Themes in the Proposed Federal Rules of Evidence, 33 Fed. B.J. 21, 21-23 (1974) (discussing the bias toward admissibility present in the proposed Federal Rules of Evidence).

2. Rule 401 makes relevant “evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.”

3. Rule 403 reads as follows: “Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.” Over 22 states have adopted a form of Rule 403. See J. WENSTEIN & M. BERGER, WENSTEIN'S EVIDENCE T-28 to -33 (1982). In addition, many other states have adopted similar rules granting courts discretion to exclude prejudicial evidence. See, e.g., CAL. EVID. CODE § 352 (West 1966).


While evidence scholars are eloquent on the significance of Rule 403, they are curiously mute as to basic aspects of its meaning. For example, the commentators and the courts have failed to develop a coherent definition of unfair prejudice. Uncertain as to the nature of the evil proscribed by Rule 403, the courts have generally reacted to claims of unfair prejudice on an ad hoc basis. They have been preoccupied with the factual nuances of each case, failing to engage in any broader analysis which might facilitate evaluation of those facts. The search for unfairly prejudicial evidence has thus been reduced to the often tried but seldom very true approach: "I know it when I see it."

As the number and variety of cases applying Rule 403 mounts, the cost of the failure to develop a coherent definition of unfair prejudice becomes increasingly clear. Without a guide to identifying or measuring the danger of unfair prejudice, the balancing required by Rule 403 cannot meaningfully be conducted. How the courts use their discretion to exclude evidence under Rule 403 can neither be predicted nor effectively reviewed. The claim of unfair prejudice has become the closing shot of every objection, trivializing an important principle while unduly increasing the number of legal issues that must be decided before the presentation of evidence may proceed. The efficacy of Rule 403, which is a basic assumption behind the expansion of admissibility under the Federal Rules, has become doubtful.

The object of this article is to identify what makes evidence unfairly prejudicial. The first part analyzes the language of and the policies behind Rule 403, and demonstrates that the courts' current ad hoc approach has frustrated those policies and prevented the rule from operating as written. Part II analyzes the nature of unfairly prejudicial evidence in light of the policies intended to be advanced by Rule 403. That part concludes that evidence may be considered unfairly prejudicial when it has a
tendency to cause the trier of fact to commit an inferential error.\textsuperscript{11} The third part describes recent empirical research in cognitive psychology which could help courts identify evidence that tends to induce inferential error. Part IV demonstrates how this research might be applied to the type of evidence most frequently analyzed for unfair prejudice: evidence of other crimes or bad acts. The conclusion makes the modest proposal that the law of evidence pay attention to how people think.

I. RULE 403: LANGUAGE, POLICY AND APPLICATION

Developing a coherent theory of unfair prejudice is necessary if Rule 403 is to be applied as it is written. If the concept of unfair prejudice has no content, Rule 403 becomes an unlimited grant of discretion to the courts to exclude probative evidence and provides inadequate protection against the admission of evidence that may induce an improper decision. These results are inconsistent with the policies behind Rule 403. The application of Rule 403 by the courts seems to have yielded such results.

A. Policy and Language of Rule 403

Two of the fundamental policies underlying the Federal Rules are the advancement of accurate factfinding and the promotion of fairness.\textsuperscript{12} As the precise formula for ascertaining truth and securing fairness has eluded humanity since Genesis, the creators of the Federal Rules understandably assumed that specific rules could not yield truth and fairness in every case. Accordingly, Rule 403 bestows upon courts the discretion to exclude evidence even when the other rules of evidence suggest admissibility. Implicit in the creation of this discretionary power is the assumption that truth and justice cannot be captured by mere language, but require the intervention of human sensibilities.\textsuperscript{13} On a more mundane level, Rule 403 recognizes that definite rules based on past situations sometimes do not work in new and unexpected contexts.\textsuperscript{14} The purpose of Rule 403 is thus to advance accuracy and fairness through judicial flexibility.\textsuperscript{15}

\begin{footnotesize}
\textsuperscript{11} Evidence may be considered unfairly prejudicial for other reasons, but the reason suggested in the text is by far the most common. See infra note 41 and accompanying text, and infra note 49.

\textsuperscript{12} FED. R. EVID. 102.


\textsuperscript{15} See Dolan, supra note 6, at 226–28. While the advisory committee’s note to Rule 403 does not specifically articulate the policies behind that rule, it does indicate that Rules 404 to 412 “reflect the policies underlying the present rule.” The policy of advancing fairness is consistently identified as a goal of the other Article IV rules. See, e.g., 23 C. WRIGHT & K. GRAHAM, supra note 4, § 5282,
\end{footnotesize}
The language of Rule 403, however, demonstrates that the discretionary power it creates is not limitless. The power to exclude otherwise admissible evidence may be exercised only after a court has detected the presence of unfair prejudice or some other enumerated danger or consideration, and concluded that the probative value of the evidence is "substantially outweighed" thereby.

This limitation on the courts' discretion is just as necessary to the advancement of truth and fairness as is the discretionary power itself. Unbridled judicial discretion leads to unpredictability, inequality of treatment and elevation of individual whim over principles validated by experience as well as by the popular will. The need to limit discretion in the application of laws of evidence is particularly great. Because evidentiary issues must be decided frequently and quickly at trial, evidence law must also be relatively simple to understand and administer. Leaving the resolution of those issues to unrestrained discretion does not simplify the law; it merely shrouds the law in a cloud of arbitrariness.

B. Application of Rule 403

A distressingly large number of cases purporting to apply Rule 403 conclude that evidence is or is not unfairly prejudicial without explaining why or even attempting to define unfair prejudice. Still more cases ut...
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terly fail to conduct the required balancing test or, while purporting to balance, give no hint as to how or why a particular balance was struck.

The appellate courts commonly excuse these lapses on the grounds that Rule 403 grants courts discretion, ignoring the fact that the rule bestows discretion to exclude only after the court makes a serious search for prejudice and an honest attempt to balance. This approach by the appellate

20. See, e.g., United States v. Pry, 625 F.2d 689, 692 (5th Cir. 1980) (no attempt to balance prejudicial impact of evidence of prior wrong against its probative value), cert. denied, 450 U.S. 925 (1981); United States v. Fleming, 594 F.2d 598, 607–08 (7th Cir.) (no attempt to balance prejudicial impact of photographs of victim's nude and bound body against its probative value), cert. denied, 442 U.S. 93 (1979); Simpson v. Norwesco, Inc., 583 F.2d 1007, 1013 (8th Cir. 1978) (no attempt to balance prejudicial impact of cartoon against its probative value); United States v. Brown, 547 F.2d 1264, 1265–66 (5th Cir. 1977) (no attempt to balance prejudicial impact of stolen checks and fingerprint evidence against their probative value).

21. For cases excluding the disputed evidence, see, for example, Fury Imports, Inc. v. Shakespeare Co., 625 F.2d 585, 589 (5th Cir. 1980) (court fails to state why prejudicial impact of evidence bearing on when a claim arose outweighs probative value), cert. denied, 450 U.S. 921 (1981); United Fidelity Life Ins. Co. v. Law Firm of Best, Sharp, Thomas & Glass, 624 F.2d 145, 149 (10th Cir. 1980) (same, as to testimony concerning settlement offers); United States v. Fosher, 590 F.2d 381, 383 (1st Cir. 1979) (same, as to expert testimony concerning unreliability of identification evidence); United States v. DeFillipo, 590 F.2d 1228, 1240 (2d Cir.) (same, as to prior crimes evidence), cert. denied, 442 U.S. 920 (1979); United States v. Briscoe, 574 F.2d 406, 408 (8th Cir.) (same, as to exculpatory evidence), cert. denied, 439 U.S. 858 (1978). For cases admitting the disputed evidence, see, for example, United States v. Cady, 567 F.2d 771, 775 (8th Cir. 1977) (court fails to state why prejudicial impact of similar crimes evidence does not outweigh probative value), cert. denied, 435 U.S. 994 (1978); United States v. Gano, 560 F.2d 990, 993 (10th Cir. 1977) (same, as to other crimes evidence); Rigby v. Beech Aircraft Co., 548 F.2d 288, 293 (10th Cir. 1977) (same, as to telegraphic communications).

22. See, e.g., United States v. Longoria, 624 F.2d 66, 68 (9th Cir.) (admission of prior crimes evidence affirmed without discussion of prejudicial impact or balancing on grounds trial court entitled to great deference), cert. denied, 449 U.S. 858 (1980); United States v. Martin, 599 F.2d 880, 889 (9th Cir.) (court affirms admission of guns into evidence without review of prejudice or balance on grounds trial court is entitled to wide discretion), cert. denied, 441 U.S. 962 (1979); United States v. D'Alora, 585 F.2d 16, 21 (1st Cir. 1978) (court merely mentions balancing test, then relies on discretion vested in trial court); United States v. Miroyan, 577 F.2d 489, 495 (9th Cir.) (determination of balance between probative value and prejudicial impact "rests squarely within the sound discretion of the trial judge"), cert. denied, 439 U.S. 896 (1978); United States v. Jackson, 576 F.2d 46, 49 (5th Cir. 1978) (court assumes trial court determined probative value outweighed potential prejudice); United States v. Hall, 565 F.2d 1052, 1055 (8th Cir. 1977) (court describes balancing as "primarily" trial court's task and affirms admission of evidence of attempts to influence witnesses); United States v. Peden, 556 F.2d 278, 280–81 (5th Cir.) (court notes trial judge "carefully balanced" probative force against prejudicial impact without reviewing specifics of the balance), cert. denied, 434 U.S. 871 (1977); United States v. Parker, 549 F.2d 1217, 1222 (9th Cir.) (court fails to indicate why probative value of other crimes evidence outweighs prejudicial impact, relying on trial court's wide discretion), cert. denied, 430 U.S. 971 (1977); United States v. Cowser, 530 F.2d 734, 738 (7th Cir.) (court fails to review particulars of trial judge's determination), cert. denied, 426 U.S. 906 (1976); United States v. Jenkins, 525 F.2d 819, 824 (6th Cir. 1975) (admission of defendant's prison record and firearm assumed to be proper unless trial court committed "grave abuse of discretion")).

See generally 22 C. WRIGHT & K. GRAHAM, supra note 4, § 5212 (limiting discretion); id. § 5223 (misuse of Rule 403 by appellate courts).
courts arguably perpetuates the improper application of Rule 403 by trial courts.\textsuperscript{23}

It is indicative of the deficiency of the state of law in this area that the common scholarly response would simply require trial courts deciding Rule 403 issues to state their reasoning for the record.\textsuperscript{24} This requirement serves no useful purpose unless it encourages the courts to do more than state their Rule 403 reasoning in uninformative and conclusory terms. It is unreasonable, however, to expect more for the very reason that existing Rule 403 case law is deficient: No court seems to know what unfair prejudice is.\textsuperscript{25} Absent a coherent theory of unfair prejudice, trial courts cannot meaningfully evaluate evidence on or off the record for the presence of unfair prejudice, nor can they conduct the required balancing test.

The costs of the current disarray in Rule 403 law are large.\textsuperscript{26} When the courts have unlimited discretionary authority under Rule 403 to exclude evidence otherwise admissible under the rules, the efficacy of those rules is undermined. On the other hand, if evidence is admitted because of an inability to define prejudice, and the trier of fact is consequently induced to make a decision on improper grounds, the framework of burdens of proof and presumptions erected by the law may be shaken.\textsuperscript{27} For example, gory photographs of the victim of a crime may be so vivid that their probative value is grossly overvalued by the jury while comparatively pallid but highly probative defense evidence is ignored.\textsuperscript{28} Thus the jury may conclude that the presumption of innocence is rebutted and the burden of proving guilt beyond a reasonable doubt\textsuperscript{29} is met by evidence logically insufficient to achieve this result. Moreover, the improper admission or exclusion of evidence in a criminal prosecution on the basis of an incoherent or unarticulated concept of prejudice may violate the defendant's rights to due process and a fair trial.\textsuperscript{30} Finally, if important evi-

\textsuperscript{23} See Rosenberg, Judicial Discretion of the Trial Court, Viewed From Above, 22 SYRACUSE L. REV. 635, 667 (1971).

\textsuperscript{24} See, e.g., 1 J. WEINSTEIN & M. BERGER, supra note 3, ¶ 403(02), at 403-17 to -18; Note, Determining Relevancy: Article IV of the Federal Rules of Evidence, 36 LA. L. REV. 70, 76 (1975).

\textsuperscript{25} See supra note 6.

\textsuperscript{26} See supra note 18 and accompanying text.

\textsuperscript{27} See Lempert, Modeling Relevance, 75 MICH. L. REV. 1021, 1032-34 (1977).

\textsuperscript{28} See infra text accompanying notes 101-02.

\textsuperscript{29} See, e.g., In re Winship, 397 U.S. 358, 364-65 (1970) (proof beyond a reasonable doubt of elements constituting a crime required under the due process clause).

\textsuperscript{30} This can happen either when important defense evidence is excluded, see U.S. v. Thompson, 615 F.2d 329, 333 (5th Cir. 1980) (exclusion of defendant's evidence under Rule 403 denied him right to fair trial), or when unduly prejudicial prosecution evidence is allowed in, see United States ex rel. Harris v. Illinois, 457 F.2d 191, 198 (7th Cir.) (dicta that admission of prosecution evidence concerning evidence of other crimes may deny right to fair trial), cert. denied, 409 U.S. 860 (1972); United States ex rel. Durso v. Pate, 426 F.2d 1083, 1086 (7th Cir. 1970) (same), cert. denied, 400 U.S. 995 (1971). Interestingly, Rule 403 has frequently been used to exclude evidence offered by
dentiary decisions are made and substantive rights affected on the basis of rules that even lawyers do not understand, public confidence in the prospects for achieving justice through our courts will hardly be inspired.

In sum, the current application of Rule 403 without an understanding of the nature of unfair prejudice subverts rather than advances the interests of accuracy and fairness. Attempting to apply a rigid definition of prejudice is no better: Prejudice is largely a product of the circumstances of each case and the viewpoints of the decisionmakers confronting those circumstances. But absent at least a theory of the nature of the dangers to be guarded against, Rule 403 is useless. It is to the job of devising such a theory that this article now turns.

II. DEFINING "UNFAIR PREJUDICE"

Evidence presents the danger of unfair prejudice when it threatens the fundamental goals of the Federal Rules and Rule 403: accuracy and fairness. The following analysis rejects the prevailing notion that prejudicial evidence is anything that induces the trier of fact to employ emotion rather than logic in its judgment. Emotion is often associated with fairness and can be consistent with accuracy. The results of logic, on the other hand, can be no more accurate or fair than are the premises from which the logician proceeds. Evidence is not necessarily unfairly prejudicial because of the methodology it induces the decisionmaker to employ.

Detecting unfairly prejudicial evidence requires focusing on the end product of the prejudice, not just on the process by which the prejudice might be created. Under such an approach, the goals of Rule 403 suggest that evidence is unfairly prejudicial to the extent it has a tendency to cause the trier of fact to commit inferential error.

A. Emotion as Prejudice

Current case law considers "emotion" the hallmark of unfair prejudice. This notion may have been derived from the advisory committee's defendants in criminal actions. See, e.g., United States v. Dominguez, 604 F.2d 304 (4th Cir. 1979), cert. denied, 444 U.S. 1014 (1980); United States v. Castell, 584 F.2d 87 (5th Cir. 1978), cert. denied, 440 U.S. 925 (1979); United States v. Briscoe, 574 F.2d 406 (8th Cir.), cert. denied, 439 U.S. 858 (1978); United States v. Collins, 395 F. Supp. 629 (M.D. Pa.), aff'd mem., 523 F.2d 1051 (1975). Justice Department opposition to an early version of Rule 403 considered by Congress may thus have reflected an unduly pessimistic view of the impact of Rule 403. See 117 CONG. REC. 33,650 (1971).  

31. See 22 C. WRIGHT & K. GRAHAM, supra note 4, § 5215, at 278–79.  
32. See FED. R. EVID. 102.  
33. See, e.g., United States v. Salisbury, 662 F.2d 738, 741 (11th Cir. 1981) (evidence of prior bad acts not so "heinous" as to incite the jury to irrationality), cert. denied, 102 S. Ct. 2907 (1982);
note to Rule 403, which suggests that unfair prejudice is commonly caused by emotion.\textsuperscript{34} While the note leaves open the possibility that there are other causes, none are identified.

Equating emotion with prejudice is a mistake. While emotion can be an improper basis for a judgment, it can also have an acceptable, and even vital role in reaching an accurate and fair decision. It is both unrealistic and undesirable to expect a jury not to react emotionally to much of what goes on in a courtroom. This is true not only in cases with obvious emotive content, but also in virtually every case in which the actions and intentions of human beings are to be judged. In fact, the ability of twelve laypersons to interject human sensibilities into a proceeding otherwise dominated by the cold logic of the law arguably embodies the true worth of the jury system. This ability adds to, rather than detracts from, truth and accuracy by advancing the jury's empathic understanding of what the participants likely did and why. It is no coincidence that the type of litigation generally considered least susceptible to proper treatment by a jury is that which deals with abstract technical matters.\textsuperscript{35} Such cases may be inappropriate for trial by jury not only because they require intellectual resources many jurors lack, but also because they do not require the human, "emotional" resources jurors can provide.

Equating emotion with prejudice is also inconsistent with lay attitudes concerning justice. Emotive aspects of a case have an effect on a jury because those aspects are commonly perceived as vital to the rendition of justice. Eliminating evidence with emotional appeal would thus also eliminate public confidence in our system of laws as a moral force. The

\textsuperscript{34} FED. R. EVID. 403 advisory committee note.

parameters of justice are not purely coincident with the realm of logic, but also encompass common intuition.\textsuperscript{36}

Furthermore, categorizing evidence as either "emotional" or "logical" is extremely difficult. An item of evidence may have both emotional and logical qualities, as where photographs of the victim's body are logically probative of disputed issues.\textsuperscript{37} Certainly before evidence can be so categorized, emotion and logic must be defined and differentiated. No court, however, has defined emotion or logic in this context. Given the looseness of these terms, counsel can always argue for the "logic" of their case and against the "emotional appeal" of their opponent's.

Just as emotion is not always an improper basis for decision, logic is not a talisman against inaccuracy and unfairness. The inferences derived from evidence can be relentlessly logical, but if that logic flows from improper premises, the evidence is prejudicial.\textsuperscript{38} If, for example, a juror believes "once a thief, always a thief," evidence of the defendant's prior criminal record may logically lead to the conclusion that defendant is guilty as now charged. If the premise is wrong, the evidence giving effect to the premise through the process of logic leads to inaccuracy and unfairness.

Defining unfair prejudice in terms of the distinction between emotion and logic is, in part, the product of a simplistic view of the nature of the problems Rule 403 seeks to remedy. Proponents of this view envision the typical case as one in which the jury is confronted with the gruesome debris of the crime and is so repulsed that it is prepared to convict whomever is available without seriously considering guilt or innocence.\textsuperscript{39} In the context of evidence of other crimes or bad acts, the danger of unfair prejudice is often seen in terms of the jury's inclination to convict the defendant not because it determines the defendant is guilty as charged, but out of hatred for the defendant, who is seen as a "bad person."\textsuperscript{40}

\begin{itemize}
\item \textsuperscript{37} See, \textit{e.g.}, United States v. McRae, 593 F.2d 700 (5th Cir.), cert. denied, 444 U.S. 862 (1979).
\item \textsuperscript{38} Just as logic can yield inaccurate inferences when based on an improper premise, it can give effect to other dangerous actions. The extermination of European Jewry in World War II was, at least in part, the product of a ruthlessly logical and unemotional bureaucracy operating under horrific premises. See H. Arendt, \textit{Eichmann in Jerusalem: A Report on the Banality of Evil} (1965).
\item \textsuperscript{39} See 1 J. Weinstein & M. Berger, \textit{supra} note 3, ¶ 403(03), at 403-19 to -22 (evidence is unfairly prejudicial when it "appeals to the jury's sympathies, arouses its sense of horror, provokes its instinct to punish, or triggers other mainsprings of human action [which] may cause a jury to base its decision on something other than the established propositions in the case" (footnotes omitted)).
\item \textsuperscript{40} See, \textit{e.g.}, Kuhns, \textit{The Propensity to Misunderstand the Character of Specific Acts Evidence}, 66 Iowa L. Rev. 777, 778 (1981); United States v. Murzyn, 631 F.2d 525, 531 (7th Cir. 1980), cert. denied, 450 U.S. 923 (1981).
\end{itemize}
It is undoubtedly true that occasionally a jury is so emotionally moved by a particular piece of evidence that it neglects the issues it has been charged to decide and intentionally renders judgment on some other basis. Evidence which causes this should be considered prejudicial. However, while empirical data directly on this point is lacking, it seems unlikely such a breakdown occurs very often. While an occasional juror may lose sight of the issues to be decided, a simultaneous lapse by the rest of the jury or even a majority must be rare. Efforts by counsel to induce a jury to act in this manner will frequently be obvious and offensive. In any event, if there were a basis for believing that such dereliction of duty by juries is commonplace, the jury system would not endure. It seems far more likely that most jurors diligently attempt to perform the tasks with which they are charged but, as described in the next part, they are sometimes unequal to those tasks.

B. Inferential Error as Prejudice

Application of Rule 403 should be focused on a more subtle, common and dangerous problem: the introduction of evidence that has a tendency to lead the jury to unintentionally commit an inferential error. Inferential error occurs when the jury incorrectly decides that evidence is probative of an alleged fact or event. For example, evidence of damage is usually not probative of liability. When a jury concludes that the seriousness of plaintiff’s injuries suggests that defendant must have been negligent, the evidence of damage has been prejudicial. It is prejudicial not because the jury has been emotionally moved by the evidence, but because the evidence has induced an inferential error.

Inferential error also occurs when the jury decides that evidence is more or less probative of a fact or event than it is. For example, the prejudicial impact of photographs of a victim’s gory remains derives from the potential such vivid evidence has to so dominate the minds of jurors that they exaggerate its probativeness. The fact that evidence of this type may evoke an emotional reaction from the jury does not necessarily make it prejudicial. There may be nothing wrong with shocking a jury with the repulsiveness of a crime, as long as the impression made by the evidence in question is commensurate with its probative worth.

41. For example, Professors Kalven and Zeisel report data which, for the most part, positively reflect upon a jury’s ability to understand its charge and the evidence. See H. Kalven & H. Zeisel, The American Jury 149–62 (1966).

42. This is an example of a common inferential error. See infra notes 63–64 and accompanying text.

43. See infra notes 102–03 and accompanying text.

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Prejudice resulting from evidence that induces inferential error is subtle because it occurs when the jury diligently pursues the issues it is charged with deciding but errs in a manner that may not be obvious to its members or to others. Such prejudice is relatively common because, as described below, humans regularly use flawed procedures and preconceptions in evaluating evidence and drawing inferences therefrom. Prejudice resulting from evidence that induces inferential error is dangerous precisely because it is so subtle and common.

Characterizing unfair prejudice as the danger created by evidence having a tendency to promote inferential error has the satisfying quality of obvious compatibility with one of the basic goals of Rule 403—the advancement of truth and accuracy. Applying this definition, however, also has at least two obvious difficulties. It is not clear how the other basic goal of Rule 403, fairness, is accommodated by this definition. It is also not clear how one goes about identifying evidence with error-producing tendencies. Both problems, however, can be resolved.

Analyzing what is fair in a given situation, much less defining fairness generally, is profoundly difficult. This analysis is especially difficult in a legal context since most lawyers have been trained not to ask such questions. The concept of procedural or evidentiary fairness is particularly slippery in that it is often influenced by the policies of the substantive law, which are subject to change. Moreover, any attempt to fix the parameters of fairness is subject to the accusation that the evolution of the concept of fairness will thereby be halted, thus stunting the “growth and development of the law.” But even if fairness cannot be dissected, its contours can be described.

Accuracy is an aspect of fairness. The goal of fairness is thus not ignored by defining unfair prejudice as the danger presented by evidence tending to promote inferential error. Admittedly, however, fairness in the law of evidence often means considerably more than accurate factfinding. The law is replete with rules which, in the cause of fairness, exclude highly probative evidence and thus detract from the goal of accuracy.

44. See infra note 107 and accompanying text.
45. See infra part III.
46. “It is what men do at their best, with good intentions, and what normal men and women find that they must and will do in spite of their intentions, that really concern us.” G.B. Shaw, Saint Joan, lxxv (1924).
47. See 1 J. Weinstein & M. Berger, supra note 3, ¶ 403(01), at 403-11.
49. Rules establishing evidentiary privileges, for example, clearly deprive the trier of fact of valuable evidence for the sake of fairness or some other goal. See McCormick’s Handbook of the Law of Evidence 152 (E. Cleary 2d ed. 1972). There are many policies other than accuracy which might be advanced by excluding evidence on the ground of unfair prejudice. See 1 J. Weinstein &
Nevertheless, accuracy may be the most important indicator of fairness under Rule 403.

Perhaps the most salient fact of litigation life is that attorneys are generally not so much concerned with the truth as they are with winning.50 However, the danger that they will distort, mislead or even lie is usually reduced by the adversary’s power to reveal the deceit.51 Providing each side with a meaningful opportunity to be heard is thus not only a fundamental aspect of fairness but also central to the goal of accuracy.

When the tendency of evidence to induce inferential error cannot be overcome by opposing counsel, that evidence is unfairly prejudicial. The opportunity to challenge such evidence may be insufficient due to a lack of clarifying evidence or because the evidence distorts the truth in such a subtle way that its dangers cannot be explained to the jury.52 The courts have frequently invoked the concept of fairness as a basis for excluding evidence under Rule 403 in precisely this context.53 Conversely, when

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M. BERGER, supra note 3, ¶ 403(01), at 403-11. Thus limiting the definition of unfair prejudice to the tendency of evidence to induce inferential error is not appropriate in every case.


51. However, one might question the likelihood that somehow the truth will magically emerge from a process conducted by opponents who both place winning over accuracy.

52. See infra note 107 and accompanying text.

53. See, e.g., United States v. Westbo, 576 F.2d 285, 292 (10th Cir. 1978) (evidence was prejudicial because it implied defendant committed prior crimes, and defendant could not effectively rebut such evidence without waiving objection to direct evidence of prior crimes); United States v. Stabler, 490 F.2d 345, 348–49 (8th Cir. 1974) (testimony regarding bloodstains on clothing was unfairly prejudicial since stains had been consumed by prosecution’s tests, depriving defendant of opportunity to conduct his own tests); Thomas v. C.G. Tate Constr. Co., 465 F. Supp. 566, 571 (D.S.C. 1979) (plaintiff’s video tape depicting his painful condition excluded as unfairly prejudicial because defendant had no opportunity to depict plaintiff’s absence of pain in similarly vivid manner); United States v. DeMarco, 407 F. Supp. 107, 114 (C.D. Cal. 1975) (testimony was unfairly prejudicial because inaccuracies could not be rebutted without evidence that was itself highly prejudicial); Apicella v. McNeil Laboratories, Inc., 66 F.R.D. 78, 86 (E.D.N.Y. 1975) (misleading evidence could not be rebutted due to denial of discovery to defendant).

Applying a related version of the connection between accuracy and fairness under Rule 403, the courts have admitted evidence that was conceded to be prejudicial when the evidence was necessary to allow a meaningful response to evidence of an adversary. See, e.g., Bowden v. McKenna, 600 F.2d 282, 285 (1st Cir.) (evidence of prior crime admitted to rebut evidence suggesting party was at hospital when the prior crime occurred), cert. denied, 444 U.S. 899 (1979); Miller v. Poretsky, 595 F.2d 780, 783 (D.C. Cir. 1978) (evidence that defendant had committed other acts of discrimination should have been admitted despite prejudicial nature in order to rebut evidence that defendant had not discriminated against certain witnesses); United States v. Benedetto, 571 F.2d 1246, 1250 (2d Cir. 1978) (prior crimes evidence could be admitted to rebut defendant’s testimony that he had not taken bribes); United States v. Sellers, 566 F.2d 884, 886 (4th Cir. 1977) (expert testimony excludable under Rule 403 should have been admitted because opponent was permitted to present expert testimony on same issues). There are limits, however, to the extent to which evidence otherwise inadmissible under Rule 403 will be admitted to rebut. In Hamling v. United States, 418 U.S. 87, 125–27 (1974), for example, the defendant in a prosecution for mailing obscene material sought to introduce materials which were readily available on newsstands or which had been found constitutionally pro-
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evidence threatens to lead the jury to error, but this threat can easily be exposed and removed by the opponent, courts have been reluctant to consider the evidence unfairly prejudicial.\(^{54}\) Thus, finding unfair prejudice under Rule 403 in the tendency to lead to inferential error advances the cause of fairness by identifying Rule 403 as a remedy for an inadequate opportunity to rebut.\(^{55}\)

Defining “unfair prejudice” in terms of the tendency of evidence to cause inferential error would be of little value absent some guide to identifying the presence of that tendency. Attempts to develop such a guide from case law are unlikely to be fruitful. In evaluating the prejudicial nature of evidence, courts have made many assumptions about the inferential processes of jurors and the potential of evidence to cause inferential error. These assumptions are usually unproven and unconvincing.\(^{56}\) This should not be surprising, since judges do not necessarily have more ability to analyze the inferential processes of the human mind than do the jurors whose minds they attempt to analyze.

Since lawyers are generally not schooled in this area, it makes sense to seek the help of those who are. Accordingly, the following part outlines a guide to determining when evidence has the potential to lead jurors into inferential error by referring to empirical research in the area of cognitive psychology. This literature suggests that people, hence jurors, predictably tend to commit profound inferential errors under certain circumstances.

Applying these findings in the courtroom should reduce the arbitrariness of judicial efforts to measure the unfairly prejudicial nature of evidence. That application will not be simple. Measuring the prejudicial potential of evidence requires an understanding of complex inferential

\(^{54}\) See, e.g., Pierce Packing Co. v. John Morrell & Co., 633 F.2d 1362 (9th Cir. 1980) (Rule 403 challenge to exhibits denied on grounds opponent had full opportunity to present its case concerning proper inferences to be drawn therefrom); United States v. DeLillo, 620 F.2d 939, 947 (2d Cir.) (possibility of prejudice resulting from introduction of tape recording could have been offset by cross-examination of witness whose statements had been recorded), cert. denied, 449 U.S. 870 (1980). Consistent with this theory of prejudice is the widely accepted premise that surprise is not a basis for exclusion under Rule 403 because a continuance can provide counsel with an opportunity to deal with the unanticipated evidence. See Fed. R. Evid. 403 advisory committee note.

\(^{55}\) See supra notes 19 and 33.

\(^{56}\) See supra notes 19 and 33.
The jury's basic task is to ascertain the truth. However, the truth is seldom clear. Jurors must overcome the problems of inadequate evidence, conflicting evidence, and evidence relayed through the flawed perceptual, retentive and narrative abilities of witnesses. Jurors are thus forced to estimate the truth—in other words, to judge the probability of an alleged fact or event. Jurors make these judgments in the courtroom by applying the cognitive tools they have fashioned and used over a lifetime. These tools are largely reliable, but there is abundant evidence that in particular decisionmaking contexts relevant to the trial of lawsuits these tools may distort rather than reveal the truth.

57. See supra notes 13–15 and accompanying text.
58. The psychology literature surveyed in this part assumes a normative model of human inference somewhat akin to the so-called scientific model of analysis. See, e.g., R. Nisbett & L. Ross, HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT ch. 1 (1980). This model assumes there is something which may be called "the truth," that the search for it is basically a probabilistic inquiry, and that it is more likely to be discovered through systematic and logical processes than through, for example, a ouija board. This article makes the same assumptions, but acknowledges that the first assumption raises numerous philosophical issues while the second two assumptions may run counter to common belief and practice.

It should be noted, however, that the law also assumes there is something called "the truth" which is more readily ascertainable through rational rather than irrational means. See generally Weinstein, Some Difficulties in Devising Rules for Determining Truth in Judicial Trials, 66 Colum. L. Rev. 223, 231–32 (1966). It is also conceded by legal commentators that the legal norm of rationality means that the search for truth in the courtroom may, for heuristic purposes, be seen as essentially a Bayesian or probabilistic process. See Lempert, Modeling Relevance, 75 Mich. L. Rev. 1021 (1977); Tribe, Trial by Mathematics: Precision and Ritual in the Legal Process, 84 Harv. L. Rev. 1329, 1358, 1378–93 (1971). The relevance of the psychological literature reviewed here thus rests on the fact that it shares these assumptions with the law. That relevance may be limited, however, because the law sometimes seeks to do more than discover the truth, and these other objectives may require that the truth be compromised. See Weinstein, supra, at 241.

59. The author of this article is not a psychologist, and, while citing psychology literature, is not qualified to evaluate it critically. Such literature has been criticized elsewhere. See, e.g., Loftus & Beach, Human Inference and Judgment: Is the Glass Half Empty or Half Full?, 34 Stan. L. Rev. 939, 950–56 (1982). Even if this literature remains subject to scholarly critique, its implications for the law are important. See, e.g., Saks & Kidd, Human Inferential Processing and Adjudication: Trial by Heuristics, 15 Law & Soc'y Rev. 123 (1980–81); Spitzer, Book Review, 9 Hofstra L. Rev. 1621 (1981) (reviewing R. Nisbett & L. Ross, HUMAN INERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT (1980)). As the following discussion suggests, however, the validity of many of
Two important cognitive tools are heuristics and knowledge structures. An understanding of the manner in which heuristics and knowledge structures might be improperly employed by juries provides a basis for estimating the tendency of evidence to lead to inferential error.

A. Heuristics

Heuristics are cognitive simplifying strategies used to reduce the complexity of information that must be considered in making a decision. Heuristics permit us to sift through available information and select that which is most important. For example, in deciding whether to categorize a particular plant as a tree or a bush, a decisionmaker may wish to avoid a systematic study of the subject plant and the science of botany in favor of a quick search of the plant's most salient characteristics. These characteristics can then be compared to presumed characteristics of trees and bushes. Using this shortcut, a decisionmaker may classify the plant as a bush if it appears mature yet is only two feet high. But research suggests that this strategy, while effective in many cases, can often lead to inferential errors. Thus the process described above might lead to an inferential error if the decisionmaker were unfamiliar with bonsai trees. Furthermore, while simplifying available data, heuristics sometimes direct our attention toward vivid, anecdotal information which may be misleading, and away from more pallid, complex evidence which may be highly probative. The following discussion focuses on two heuristics frequently mentioned in the relevant literature, representativeness and availability.

1. The Representativeness Heuristic

The representativeness heuristic reduces problems of estimating the relationship between events or physical objects to what are essentially similarity judgments. As in the tree/bush hypothetical described above, people who apply this heuristic to the problem of categorizing objects "assess the degree to which the salient features of the object are representative of, or similar to, the features presumed to be characteristic of the category." If the plant is relatively short, the representativeness heuristic suggests to the decisionmaker that there is a greater probability that it is a bush than a tree.

the points established by this literature seems to be buttressed both by common sense and by existing law, which in many instances has reached the same conclusions through less scientific means.

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60. See generally R. Nisbett & L. Ross, supra note 58, at 6-8.
61. See, e.g., R. Nisbett & L. Ross, supra note 58; Saks & Kidd, supra note 59.
Obviously, this may be a useful decision strategy in many situations. The salient features of objects or events, however, are not always accurate indicators of the relationship between them. For example, in one study an accident case was described to two groups of subjects. A man had left his car parked on a hill. After he left the car it rolled down the hill. The descriptions of the case given to the two groups of subjects were identical, except that one group was told the car struck a fire hydrant while the other group was told the car struck and injured a person. Subjects informed of the more severe results found the car owner more at fault than did subjects informed of the trivial results. The subjects used the representativeness heuristic to infer that the benign result had benign antecedents and the destructive result had been preceded by negligence, even though the relative seriousness of the results had nothing to do with the car owner's degree of fault.

As suggested by this study, people employ the representativeness heuristic when given a result and asked to infer the process by which that result was generated. The heuristic encourages the conclusion that the process resembles or is representative, in some salient way, of the result it produces. The reverse is also true. Given the generating process or event, a person employing the representativeness heuristic will tend to assume a result that resembles or is representative of its antecedent.

Using the representativeness heuristic may therefore lead to serious inferential errors in the courtroom. For example, questions of causation, a "process," might be resolved by simply comparing the salient characteristics of possible causative factors with the characteristics of the given

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64. It is true that this study along with all the other studies cited herein shows only that results are found with a certain statistical frequency in a particular population. Since not all individuals in that population exhibit the behavior tested for, it is arguable that a given trier of fact might similarly fail to exhibit such behavior, and thus the study does not conclusively establish a basis for detecting inferential error. However, Rule 403 does not ask the judge to look only for obvious and undeniable occurrences of inferential error. When asked to weigh the "danger" of unfair prejudice, a judge must necessarily engage in calculations of probability concerning the presence of danger and the seriousness of that danger. That there may be exceptions to the generalizations derivable from the psychology research cited herein suggests only that those generalizations should be the starting point of an analysis which then must consider the specific nuances of each case.


66. Subjects in one study were asked to assess the relative likelihood of three sequences of births of boys (B) and girls (G) for the next six babies born. The sequences were (1) BBBB BB, (2) GGGGGG, and (3) GBBGBB. The likelihood of each sequence is almost identical according to accepted laws of probability. Most subjects, however, assumed the third sequence to be far more likely than the other two. Since the generating process is known to be random and haphazard, most people assume the result should look the same. Id. at 432.
"results." Similarly, calculation of damages, a "result," may be influenced by the degree to which the given "process," the acts of the defendant, deviate from the level of normative "non-damaging" behavior. In each such case, vital issues may be decided on the basis of surface similarities between events even though those similarities may have little or no probative value.

The danger presented by the representativeness heuristic is heightened by the fact that, while the decisionmaker is led into inferential error, the process generating that error has an aura of logic which may inspire a strong feeling of confidence in the decision made and discourage self-analysis. The presence of this illusion of validity may handicap efforts by advocates to demonstrate to the jury the misleading nature of prejudicial evidence, thus increasing the unfairness of admitting that evidence.

At the same time the representativeness heuristic focuses attention on similarities that may be misleading, it directs attention away from other relevant evidence of relationships between objects or events. For example, studies show that decisionmakers supplied with representativeness information tend to ignore less vivid but probative statistical data on the probability of the relationship suggested by the heuristic. Following this pattern, the jury in a paternity suit is liable to be greatly influenced by a

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67. R. NISBETT & L. ROSS, supra note 58, at 115-17.
68. Of course, surface similarities are sometimes highly probative. For example, where a witness gives a detailed description of a criminal, similarities between the defendant and the description are highly probative, albeit probably less probative than we think. See E. LOFTUS, EYEWITNESS TESTIMONY (1979). Use of the representativeness heuristic, however, does not assume a capacity to differentiate between meaningful and misleading similarities. The very fact of similarity suggests meaningfulness. It should be noted that when surface similarities have absolutely no probative value, then evidence of those similarities is irrelevant and the use of the representativeness heuristic to give import to those similarities raises an issue under Rule 401, not Rule 403.
69. This phenomenon has been referred to as the "illusion of validity." See Kahneman & Tversky, On the Psychology of Prediction, 80 PSYCHOLOGY REV. 237, 248-49 (1973).
70. See infra note 107.
71. See generally R. NISBETT & L. ROSS, supra note 58, at 141-50. One study has been described as follows:

A cab was involved in a hit-and-run accident at night. Two cab companies, the green and the blue, operate in the city. A witness reports that the offending cab was blue, and legal action is brought against the blue cab company. The court learns that 85 percent of the city's cabs are green and 15 percent are blue. Further, the court learns that on a test of ability to identify cabs under appropriate visibility conditions, the witness is correct on 80 percent of the identifications and incorrect on 20 percent. Several hundred persons have been given this problem and asked to estimate the probability that the responsible cab was in fact a blue cab. Their typical probability response was .80. In actuality, the evidence given leads to a probability of .41 that the responsible cab was blue.

physical resemblance between the child and the alleged father\textsuperscript{72} even in
the presence of conflicting and highly probative statistical evidence of
blood types.\textsuperscript{73} Thus the prejudicial effect of evidence analyzed with the
representativeness heuristic may consist of not only the misleading nature
of the evidence itself, but also the lost value of other discarded evi-
dence.\textsuperscript{74}

Research also reveals that people are prone to use the representa-
iveness heuristic to commit inferential error when confronted with problems
that require calculating compound probability. For example, in one
study\textsuperscript{75} subjects were provided with personality profiles of persons and
were asked to estimate separately the probability that those persons be-
longed to a particular political party and the probability that they held a
particular job. The subjects were then asked to estimate the compound
probability that the described persons both belonged to a particular party
and held a particular job. Subjects based their estimates of compound
probability on the average similarity of the personality profiles to their
stereotypes of members of the political parties and occupations in ques-
tion. As an illustration, a person judged very likely to be a Republican but
unlikely to be a lawyer would be judged moderately likely to be a Repub-
lican lawyer. Thus the subjects used the representativeness heuristic to

\textsuperscript{72}. See J. Maguire, J. Weinstein, J. Chadbourn \& J. Mansfield, Cases and Materials on

\textsuperscript{73}. See Ellman \& Kaye, Probabilities and Proof: Can HLA and Blood Group Testing Prove

\textsuperscript{74}. This suggests courts should be wary of the representativeness heuristic in cases involving
scientific or technological subject matter. See Saks \& Kidd, supra note 59, at 133–34. It is ironic that
some courts have invoked Rule 403 as a basis for excluding largely statistically based expert testi-
mmony aimed at attacking the reliability of eyewitness accounts because of the danger that juries may
be misled by the aura of trustworthiness surrounding such expert testimony. See, e.g., United States
v. Fosher, 590 F.2d 381, 383 (1st Cir. 1979); United States v. Collins, 395 F. Supp. 629, 637 (M.D.
Pa.), aff'd mem., 523 F.2d 1051 (3d Cir. 1975). Just the reverse seems to be true: Juries tend to
ignore pallid statistical evidence in favor of vivid eyewitness accounts, which tend to be much less
reliable than one might assume. See E. Loftus, supra note 68, at 178–203.

It has been asserted that statistical data refuting what the jury intuitively infers should not be re-
ceived in evidence because they may impair the perceived legitimacy of the trial. Tribe, supra note
58, at 1375–77. One could also question the perceived as well as the actual legitimacy of a judgment
based on inferential error that statistical data might have corrected. Much of the law of evidence is
based upon the philosophy that the laypersons who are jurors are not logicians, and thus should be
prevented from hearing facts that will likely inspire illogical conclusions when considered from the
jury's intuitive perspective. Similarly, jurors should not be prevented from hearing logically proba-
tive evidence simply because they cannot intuitively appreciate its worth. With proper explanation,
the "legitimacy" of statistical evidence might be made apparent to a jury. If statistical evidence in
some cases is so abstract or complex that its import cannot be made clear to a jury, then the legiti-
macy of the jury as trier of fact in those cases may be questioned. Cf. 22 C. Wright \& K. Graham,
supra note 4, § 5215, at 278–79 (discussing the relationship between jury selection and the prejudi-
cial impact of evidence).

\textsuperscript{75}. See R. Nisbett \& L. Ross, supra note 58, at 146.
violate the basic axiom that a compound event cannot be more likely than the least probable of its constituent events.

This study has disturbing implications for the law. Juries are frequently asked to make judgments or draw inferences that involve the calculation of compound probabilities. The prima facie case for every civil cause of action and every crime contains multiple elements, each of which must be established with the requisite degree of proof. Bits of circumstantial evidence are frequently integrated into a chain, each link of which must be established before the ultimate fact can be inferred. The representativeness heuristic may incorrectly suggest to a jury that the presence of strong links or convincingly established elements of a prima facie case can compensate for weak or even absent links and elements. Because the totality of the evidence resembles a strong and complete case, the jury may ignore critical defects.

Studies also suggest that the representativeness heuristic can lead to error when jurors are asked to infer generalizations about a relatively large amount of data. In making such decisions, people are often insensitive to the amount of evidence they consider and tend to be swayed by a small amount of vivid, anecdotal information. Candidates often capitalize upon this tendency in political debate, where the wisdom of social programs is "established" not by reference to the mass of data demonstrating their value, but by reference to an absurdly small number of colorful case histories. The representativeness heuristic permits voters to infer incorrectly that, since the case histories have been taken from a larger mass of data, those histories must be representative of the mass. In the courtroom, this potential for error exists whenever the proper decision of an issue depends upon consideration of a large body of evidence, some vivid parts of which might be used to misrepresent the whole.

76. Id. at 147; Spitzer, supra note 59, at 1628–29.
77. See generally R. Nisbett & L. Ross, supra note 58, at 77–89 (describing problems in generalizing from instances to populations caused by unreliability of small samples or bias in sampling procedures).
78. See, e.g., LeSueur Creamery, Inc. v. Haskon, Inc., 660 F.2d 342, 352 (8th Cir. 1981) (in action for breach of warranty, evidence that plaintiff's tax return showed plaintiff made an overall profit for the years in question offered by defendant to prove lack of damage resulting from defective machinery excluded as misleading and confusing), cert. denied, 455 U.S. 1019 (1982); Harless v. Boyle-Midway Div., American Home Prods., 594 F.2d 1051, 1058 (5th Cir. 1979) (evidence in wrongful death action that decedent once smoked marijuana, when offered to prove his character, excluded as prejudicial); Reeg v. Fetzer, 78 F.R.D. 34, 37 (W.D. Okla. 1976) (evidence in medical malpractice action that defendant did not complete a specific training program not relevant to prove competency as general practitioner and possibly prejudicial). Of course the fact that one bit of evidence may seem more probative than it really is, or otherwise is not representative of a larger body of data, does not necessarily qualify it for exclusion. In every case the court must consider the ability of the party opposing the evidence to demonstrate to the jury its true worth, or lack thereof. See United States v. Hickey, 596 F.2d 1082, 1089 (1st Cir.) (fiber evidence linking defendant to crime not
The preceding discussion demonstrates that while the representativeness heuristic can be an important and often effective tool for simplifying otherwise difficult inferential problems, it can often lead to error. Predictably, this heuristic presents a high danger of error in those cases where simplification may not be appropriate—cases where relevant evidence is unavoidably complex or abstract, linked together in a complex fashion, or simply large in quantity. In such cases, courts should be wary of the prejudicial potential of evidence that may direct the jury’s attention away from the complexities and toward misleading similarities.

2. The Availability Heuristic

Like the representativeness heuristic, the availability heuristic is a cognitive procedure designed to simplify the process of choosing data used in making a decision. The data most available to the decisionmaker’s perceptions, memory and imagination will be that selected for consideration.

The normative applications of the availability heuristic in everyday life are numerous. For example, in predicting the probability that the morning train will reach the station by 8 a.m., a commuter may often reliably base his prediction on a timetable listing an 8 a.m. arrival. Often, however, there are many factors unrelated to probability that can influence availability. If the commuter has not previously traveled on the train in question, the fact that this train has never in the history of the railroad been on time may be unavailable to him. Thus the availability heuristic, like the representativeness heuristic, may cause the decisionmaker to rely on data of little or no probative value. If, in relying on a timetable, the commuter neglects to check its reliability with one of the weary veterans of public transportation standing on the platform next to him, then using the availability heuristic has also caused him to ignore the most reliable evidence.

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79. We cannot look entirely to the lawyers to reduce this danger. It should go without saying that for every attorney whose case is complex or abstract there is an opposing attorney who will argue to the jury “this is really a simple case . . . .”

80. See generally R. Nisbett & L. Ross, supra note 58, at 18–23 (describing the potential for bias resulting from use of the availability heuristic).

81. For a discussion of the representativeness heuristic, see supra notes 62–79 and accompanying text.

82. See, e.g., Thomas v. C.G. Tate Constr. Co., 465 F. Supp. 566, 571 (D.S.C. 1979) (presentation of video tape excluded because dramatic effect showing plaintiff in pain could never be offset by testimony of doctors). It has been suggested that the availability of evidence for decisionmaking can be impacted at three stages: (1) at the time evidence is selected for introduction, (2) at the time it
Several factors unrelated to probativeness can affect the "availability" of evidence to the jury. The literature of both psychology and law notes that the first information presented to a decisionmaker has a disproportionately large influence over final judgments. This "primacy effect" suggests that the order in which evidence is presented to the jury can affect its memorability and thus its availability in subsequent decisionmaking. Evidence that is revealed shortly before decisionmaking and evidence that is redundant may also be available in a juror's memory to a degree not reflective of its true probativeness. Courts have recognized and attempted to limit the prejudicial impact of such evidence by using their powers to control the order of proof and exclude cumulative evidence.

is stored in memory and (3) at the time it is retrieved from memory. See R. Nisbett & L. Ross, supra note 58, at 18-21. The discussion in the text relates to the second and third stages since the law of evidence concerns itself only with the possible impact of evidence on the jury after it is offered and admitted and does not purport to regulate anything occurring prior to that time, such as which evidence is selected by the advocates to be offered. Obviously, if the advocates select unrepresentative or misleading evidence, what is eventually "available" to the jury may encourage inferential error. Since both sides have the opportunity to select the evidence they offer, however, the biases in selection may cancel out each other.

There is one strong bias in selection, however, that should be mentioned here. The mere fact that one person has been selected to be the defendant focuses attention on that individual and makes that person a far more "available" causal factor in the commission of the alleged crime or injury than any other person. This suggests that defense counsel should never be content with merely refuting the case of the state or the plaintiff but, whenever possible, should also introduce evidence of other actors or casual factors inconsistent with the defendant's guilt or liability.

The impact of first-encountered evidence may be the result of processes more complex than memory. It has been suggested that first-encountered evidence forms the basis of theories which are then used to interpret all subsequently encountered information. First-encountered information may therefore be dangerous not only because it is more memorable, but also because it impacts all subsequently revealed evidence. See R. Nisbett & L. Ross, supra note 58, at 172.

There is a theoretical link between the Rule 403 "considerations of undue delay, waste of time, [and] needless presentation of cumulative evidence" and the "danger of unfair prejudice."
Perhaps the most significant factor influencing the memorability and hence the availability of evidence is its vividness. Vividness affects the likelihood that data will be perceived, stored in memory and retrieved for use in the decisionmaking process. It also affects the priority vivid evidence is given in that process in relation to other evidence.88 Because jurors have been conditioned by television and motion pictures to expect a lawsuit to turn on some piece of vivid or dramatic evidence, the effect such evidence has when it is revealed in a courtroom may be even greater than the effect vivid evidence has in other contexts.

Evidence which, because of its vividness, is selected by the availability heuristic to influence a decision presents a danger of inferential error because vividness is normally only vaguely related to probativeness.89 Courts have long recognized the potential prejudicial impact of vivid evidence. Decisions concerning the admissibility of gory photographs, for example, are among the most common Rule 403 cases.90 What makes evidence vivid is thus central to determining what makes evidence prejudicial.

Evidence is vivid when it is emotionally interesting—that is, relevant to the jury in some personal way.91 Thus when the parties to, or subject matter of, a lawsuit are familiar to a prospective juror, her emotional involvement is obvious and may even be grounds for disqualification.92 Evidence is also personally relevant when it relates to juror values. Testimony about a defendant's sex, drug or political practices may be especially vivid, as might evidence of an exemplary war record.93 The

88. See generally R. NISBETT & L. ROSS, supra note 58, ch. 3 (examining the greater inferential impact of vivid information).
89. See id. at 59–61. Vividness may also be a factor in judging the tendency of evidence to generate inferential error through the representativeness heuristic, since the vivid or salient characteristics of objects or events are those most likely to be considered in judging the probability of relationships between those objects or events.
90. See generally 22 C. WRIGHT & K. GRAHAM, supra note 4, § 5215, at 283–84 (discussing the use of Rule 403 in assessing the admissibility of gruesome photographs).
91. See R. NISBETT & L. ROSS, supra note 58, at 45–47.
92. "Familiarity" in this context includes something more than direct personal or financial relationships. It encompasses anything about the parties or the subject matter that attracts or repels a juror in a way that would not be common to all in the community. Cf. CAL. CIV. PROC. CODE § 602(6) (West Supp. 1983) (permitting a prospective juror to be disqualified on the grounds of "interest . . . in the event of the action, or in the main question involved in the action, except his interest as a member or citizen or taxpayer of a [municipality]"). The connection between Rule 403 prejudice and the standards of fitness for jurors has been noted elsewhere. See 22 C. WRIGHT & K. GRAHAM, supra note 4, § 5215, at 278.
93. See, e.g., Harless v. Boyle-Midway Div., American Home Prods., 594 F.2d 1051, 1058 (5th Cir. 1979) (in wrongful death action, evidence that decedent once smoked marijuana excluded under Rule 403); United States v. Castel, 584 F.2d 87, 89 (5th Cir. 1978) (evidence of defendant's drinking and "partying habits" excluded under Rule 403), cert. denied, 440 U.S. 925 (1979). But see United States v. Baumgarten, 517 F.2d 1020, 1029 (8th Cir.) (evidence concerning history and
emotional interest a piece of evidence evokes may also be influenced by the degree to which it affects the parties. An example of this is the rolling car hypothetical described above in which evidence of severe physical injury resulting from defendant's act was contrasted with evidence of slight injury to property. Such evidence could have a strong emotional effect on those jurors whose experiences allow them to project themselves into the personalities of the parties. The strong connection between emotional interest and individual personality suggests that the vividness of evidence and its prejudicial effect varies from juror to juror.

The vividness of evidence is not merely a function of its emotional interest. Evidence is also vivid when it is presented to the jury in a concrete, image-provoking form. The persuasive value of photographs and other pieces of real and demonstrative evidence is well known to scholars of trial advocacy. Testimony can also be image-provoking and thus vivid. "Plaintiff was severely injured" is not likely to have nearly the impact of "Blood was gushing from the knife wounds in plaintiff's back." Finally, evidence is also vivid when it is proximate to the jury in a temporal, spacial or sensory way. Thus, opportunities to feel the heft of the murder weapon or visit the scene of the accident are likely to have a profound impact on the decisionmaking process.

Since vivid evidence is more memorable, it is more available for decisionmaking and more likely to be accepted as representative of the objects or events it describes than is pallid evidence. Vivid evidence does not,
however, necessarily result in inferential error and unfair prejudice. Some vivid evidence is highly probative, making its impact on the jury's decisionmaking roughly commensurate with its objective probative value. Courts tend to make the error of judging the prejudicial nature of vivid evidence by simply measuring how vivid it is. Gory photographs, for example, have been excluded only when they are "gruesome and horrifying." The prejudicial potential of vivid evidence, however, is not simply a function of its vividness relative to other evidence. Prejudice results only when that vividness exceeds the objective value of the evidence in question.

Testimony was similarly manipulated: Some subjects were given vivid prosecution testimony and pallid defense testimony while the other subjects were given vivid defense testimony and pallid prosecution testimony. For instance, the pallid version of the prosecution's effort to prove defendant was drunk at a party before attempting to drive home stated that defendant staggered against a table and knocked a bowl to the floor. In the vivid version, the bowl contained guacamole dip which was splattered on a white shag carpet. The pallid version of the defense effort to show defendant was sober described defendant successfully leaping out of the way of an approaching "car." In the vivid version, the vehicle was a "bright orange Volkswagen." After reading the testimony, the subjects were asked to judge defendant's guilt. The following day, subjects were asked to recall as much evidence as they could and render a new verdict. The immediate judgment showed no effect for the vividness manipulation. The delayed judgments sometimes showed a substantial effect: Some subjects exposed to vivid prosecution testimony shifted toward guilty verdicts and others exposed to vivid defense testimony shifted toward not-guilty verdicts. The memorability of evidence influenced the final judgments even though memorability had no logical connection to probative value. The delayed judgments showed the effect of the vividness manipulation only for the good character defendants, and the character manipulation had no effect on either the immediate or delayed verdicts. The authors of the experiment stated that subjects may have been suspicious that the bad character manipulation was intended to bias them, and thus probably rendered very conservative judgments concerning the bad character defendants. See R. Nisbett & L. Ross, supra note 58, at 52–53.

102. United States v. Brady, 579 F.2d 1121, 1129 (9th Cir. 1978), cert. denied, 439 U.S. 1074 (1979); see also United States v. Shuckahosee, 609 F.2d 1351, 1358 (10th Cir. 1979) (photographs showing facial wounds from point-blank shots admitted as "not overly 'gruesome'").

103. This suggests that the probative value of evidence must be considered when determining whether it is unfairly prejudicial as well as when balancing takes place.

Similarly, inferential error may result when highly probative evidence is introduced in pallid form, such as abstract statistical data. Since the manner in which evidence is offered is largely within the power of the advocates, the introduction of probative evidence in pallid form will usually not be of concern to the courts, even if inferential error may result. The courts should not, however, force counsel to use pallid data when the evidence can be expressed in more vivid form and its probative value is high. Rule 403 has been improperly used to exclude vivid, highly probative data on the grounds it would be cumulative of pallid evidence previously introduced. See, e.g., Hamling v. United States, 418 U.S. 87, 127 (1974) (defense offer of magazines and films to demonstrate community standards in obscenity prosecution rejected because expert witnesses were permitted to testify about the materials); United States v. Hearst, 563 F.2d 1331, 1349 (9th Cir. 1977) (defense offer of tape recording of "representative" post-arrest interview to demonstrate mental state in prosecution for bank robbery rejected because experts had testified concerning interviews), cert. denied, 435 U.S. 1000 (1978).
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B. Knowledge Structures

An analysis of heuristics deals with the procedures by which humans process data. But human understanding may depend less on these procedures than it does on the wealth of general knowledge stored in our brains. Objects and events are seldom evaluated as if sui generis, but are related to past experiences. People use this stored information to form general beliefs or theories about the world and the things in it, such as “trees are bigger than bushes” and “once a thief, always a thief.” These theories are called knowledge structures.  

Like heuristics, knowledge structures are vital and largely reliable tools for processing data. These tools allow for the minimization of computing time and effort by taking advantage of the redundancies of our world. They can be propositional (law professors are sarcastic, balding white males who are fond of unstylish clothing) or schematic (the knowledge underlying one’s awareness of what happens on the first day of class).  

In the complex social domain in which legal issues arise and must be resolved, however, knowledge structures sometimes lead to inferential error. Some knowledge structures are inaccurate representations of the real world. When we encounter someone who processes information through a knowledge structure we believe is inaccurate, we often regard that person as biased or prejudiced. In fact, all of us possess and are possessed by millions of knowledge structures which form preconceptions influencing how we view the world. These preconceptions tend to make us resist conflicting evidence and accept confirming evidence, coloring the way we interpret everything in between. In addition, these preconceptions may be applied unconsciously, misleading us into believing data is being evaluated objectively. When evidence stimulates a juror’s

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104. See generally R. Nisbett & L. Ross, supra note 58, at 28–42.
105. Id. at 28.
106. See generally id. ch. 8 (discussing the extent to which data forces the revision of beliefs). The power of theories or preconceptions is such that, even when evidence which was used to create a theory or preconception is discredited, the theory may still survive. Id. at 175–79. This fact calls into question the efficacy of impeachment and cross-examination, and underscores the advantage given to whichever party is allowed to put on its case first. One way to combat the impact of theories built upon potentially prejudicial evidence would be to require that the opposing party be notified that such evidence will be offered and be given an opportunity to present contradicting evidence before the prejudicial evidence is introduced. While courts have the power to structure the presentation of evidence, see Fed. R. Evid. 611, at some point the administrative cost and confusion resulting from reshuffling the evidence may be prohibitive.
107. See generally R. Nisbett & L. Ross, supra note 58, ch. 9 (examining people’s success and accuracy in self-characterization). Since inferential error resulting from the unconscious application of a bias or preconception may not be subject to the safeguard of self control, it is more dangerous than intentional abdication of responsibility by the decisionmaker, currently the principal focus of Rule 403 analysis. See supra notes 41–46 and accompanying text. Since the application of a bias or preconception may be unconscious, the ability of the advocates to point out the misleading nature of
utilization of an inaccurate or misleading knowledge structure, inferential error, and hence unfair prejudice under Rule 403, may result.

It is impossible to identify all the knowledge structures that present a significant danger of inferential error. Some, such as those based upon racial or ethnic stereotypes, are common enough and pernicious enough to be relatively easy to recognize and counteract. Most are more subtle and can be identified only on a case-by-case basis. But there is one widely held knowledge structure or theory which has special importance for the development of the law under Rule 403. This knowledge structure may lead to inferential error whenever evidence of a party's other crimes or bad acts is admitted. It is referred to as the Fundamental Attribution Error (FAE).\(^\text{108}\)

The FAE postulates that human behavior is caused primarily by the immutable, consistent disposition of the actor, as opposed to characteristics of the situation or environment to which the actor responds.\(^\text{109}\) This dispositionalist theory of behavior finds expression in a wide range of sources reflective of its broad acceptance in our culture, including western theology,\(^\text{110}\) the so-called Protestant ethic\(^\text{111}\) and American jurisprudence.\(^\text{112}\)

Despite its broad acceptance, the validity of the FAE, as its name suggests, is doubtful. Studies indicate that a person's behavior in a given situation cannot be accurately predicted on the basis of personality test scores or past behavior in a similar situation.\(^\text{113}\) Slight differences in the evidence which gives rise to a bias or preconception is limited. Admitting such evidence is thus not only prejudical but also unfair. *See supra* notes 50–53 and accompanying text. For the same reason, the efficacy of instructions to prevent such error may be limited. Many courts, however, simply assume that instructions will successfully minimize prejudice. *See, e.g.*, United States v. Dennis, 625 F.2d 782, 801 (8th Cir. 1980); United States v. Lutz, 621 F.2d 940, 944 (9th Cir. 1980), *cert. denied*, 449 U.S. 1093 (1981); United States v. DeLillo, 620 F.2d 939, 946 (2d Cir.), *cert. denied*, 449 U.S. 835 (1980); United States v. D'Alora, 585 F.2d 16, 21 (1st Cir. 1978). Obviously, if this were the case, there would be no need for Rule 403 as long as there were a rule requiring the court to give instructions. Several cases have recognized the limited usefulness of instructions to cure unfair prejudice. *See, e.g.*, United States v. Figueroa, 618 F.2d 934, 943 (2d Cir. 1980); United States v. Schiff, 612 F.2d 73, 82 (2d Cir. 1979). *See infra* note 128.


109. *Id.*

110. Free will is necessary in the theological context if people are to be held morally responsible for their acts. *See* St. Augustine, *The Freedom of the Will*, in *FREE WILL AND DETERMINISM* 269–77 (B. Berofsky ed. 1966).

111. The view of some Protestant sects that one's financial successes or failures are reflective of one's worthiness (hence character) in the eyes of God has been identified as one of the origins of capitalism. M. Weber, *The Protestant Ethic and the Spirit of Capitalism* 170–71 (1958). This view is by no means, however, restricted to Protestants but has been "diffused all over the world." Weber, *The Protestant Sects and the Spirit of Capitalism*, in *FROM MAX WEBER: ESSAYS IN SOCIOLOGY* (1946).


external situation or environment often produce great differences in most people’s behavior. This is not to suggest that evidence of prior behavior is irrelevant in the legal sense to predicting subsequent behavior. Guilt in a burglary prosecution is clearly more probable when the defendant has many prior burglary convictions than when he does not. But Rule 403 presumes that unfairly prejudicial evidence may have probative value. The point is that psychological studies show that evidence of character or prior behavior does not provide a very reliable basis for predicting subsequent behavior. Coincidentally, the law of evidence has independently reached the same conclusion.

The FAE, like many theories about how the world works, may in part be a product of heuristics. The actors in an event are usually more vivid than the pallid background situation and thus are more available in the decisionmaker’s memory when it comes time to attribute reasons for actions. Actions may be viewed as representative of an actor’s character, notwithstanding the presence of significant external forces perhaps less salient than the actor herself. Applying these heuristics results in the development of a theory about how some part of the world works. That theory, the product of incomplete and perhaps misleading data, then dictates how subsequently encountered data will be interpreted. The process of inferential error is thus perpetuated.

C. Rule 403 and the Improper Uses of Heuristics and Knowledge Structures

Humans employ procedures (heuristics) and theories about objects and events (knowledge structures) to facilitate inferential processes. While heuristics often process data accurately, they predictably lead to inferential error in some situations. Although the majority of our theories about the world may be accurate, some are not. Employing inaccurate or misleading knowledge structures biases the evaluation of data and can also lead to inferential error.

Evidence motivating a juror to employ a heuristic or a knowledge structure in a manner tending to cause inferential error should be deemed "unfairly prejudicial" under Rule 403. Applying Rule 403 in light of this conception of unfair prejudice is by no means a simple task. Since the number of knowledge structures and the number of possible applications of heuristic reasoning are extremely large, a search for prejudice under Rule 403 must still be made on a case-by-case basis. The foregoing dis-

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114. Id. at 120–21.
115. See infra note 125 and accompanying text.
cussion provides a heretofore absent theoretical framework with which to facilitate that search. In order to illustrate the application of this framework, the next part of this article focuses on how the analysis presented in this part can be used to identify the prejudicial tendencies of other crimes or acts evidence.

IV. THE PREJUDICIAL IMPACT OF OTHER CRIMES OR ACTS EVIDENCE

The admissibility of evidence of other crimes or acts of a party is the most frequently litigated issue under Rule 403,117 if not under the entire Federal Rules.118 The reported cases generally fail to consider seriously the prejudicial nature of such evidence.119 Evidence of other crimes or acts, however, presents a clear danger of inferential error.

A. The Admissibility of Other Crimes or Acts Evidence Under Rule 404

The admissibility of evidence of other crimes or acts of a party presents issues under Rule 404 of the Federal Rules as well as Rule 403. The prejudicial nature of other crimes or acts evidence under Rule 403 can best be demonstrated by first discussing the treatment of that type of evidence under Rule 404.

Rule 404 precludes the admission of other crimes or acts evidence when offered to establish the character of a party as circumstantial proof of that party's conduct in the present case.120 Thus evidence that a person charged with murder has previously beaten others or has been convicted of assault is inadmissible to prove that the defendant is violent and likely to have committed the murder.

Several different policies have been advanced to support the exclusionary aspect of Rule 404. It has been suggested that evidence of other crimes or acts to prove conduct is inadmissible under Rule 404 because it is irrelevant121 or, alternatively, marginally relevant but only slightly pro-

117. 22 C. WRIGHT & K. GRAHAM, supra note 4, § 5215, at 281.
118. Id. § 5239, at 427.
119. In no area of circumstantial evidence is it so necessary as [in evidence of other crimes] to have at hand a set of basic principles providing a rational method for determining the problem of admissibility; and probably in no area of judicial administration is there greater uncertainty, due in part to . . . the substantial confusion in the cases concerning the policies of exclusion. Trautman, Logical or Legal Relevancy—A Conflict in Theory, 5 Vand. L. Rev. 385, 403 (1952).
120. Fed. R. Evid. 404.
bative. Neither of these explanations of Rule 404 is entirely convincing. If evidence of other crimes or acts were irrelevant, there would technically be no need for a specific rule of exclusion since Rule 402 of the Federal Rules excludes all irrelevant evidence. Assuming that evidence of prior crimes or acts is relevant but only slightly probative of conduct, the bias of the Federal Rules in favor of admissibility would suggest the evidence should not be excluded. Rule 404 can best be explained as a specific application of the general policy of Rule 403. Even if evidence of other crimes or acts is relevant to prove conduct, albeit only slightly probative, Rule 404, like Rule 403, excludes such evidence because it is unduly prejudicial.

The prejudicial potential of other crimes or acts evidence is commonly assumed to be the result of a jury's tendency to ignore the proper issues and convict the defendant because he is a "bad person." As suggested above, however, it is far more likely that evidence will be prejudicial because, while juries are probably diligent in their effort to decide guilt or innocence, they may still commit inferential error. Thus the most serious prejudicial danger presented by other crimes or acts evidence is the possibility that jurors might consider such evidence probative of character and conduct when it is not, or much more probative on these issues than it really is. In other words, the greatest danger is not that juries will convict because the defendant is a "bad person." It is that they will convict because their conclusion that defendant is a "bad person" leads them to draw inferences concerning his likely conduct that are not reasonable or are believed with an unreasonable degree of certainty.

123. Rule 402 provides in part that "Evidence which is not relevant is not admissible."
124. See supra notes 1-2 and accompanying text.
125. See FED. R. EVID. 403 advisory committee note: "The rules which follow in this Article are concrete applications evolved for particular situations. However, they reflect the policies underlying the present rule . . . ."
126. See supra note 40 and accompanying text.
127. See supra note 41 and accompanying text. Wigmore recognized the potential for both condemnation irrespective of guilt and miscalculation of the likelihood of guilt as justification for the rule excluding other crimes or acts evidence. 1 J. WIGMORE, EVIDENCE § 194, at 646 (3d ed. 1940).

The large majority of persons of average intelligence are untrained in logical methods of thinking, and are therefore prone to draw illogical and incorrect inferences, and conclusions without adequate foundation. From such persons jurors are selected. They will very naturally believe that a person is guilty of the crime with which he is charged if it is proved to their satisfaction that he has committed a similar offense, or any offense of an equally heinous character. And it cannot be said with truth that this tendency is wholly without reason or justification, as every person can bear testimony from his or her experience that a man who will commit one crime is very liable subsequently to commit another of the same description.
While other crimes or acts evidence is not admissible to prove character as circumstantial evidence of conduct, Rule 404(b) indicates such evidence may be admissible for other purposes. Nevertheless, if other crimes or acts evidence is offered for a proper purpose under Rule 404, it may still be ruled inadmissible under Rule 403. Because the jury might consider the evidence for the improper purpose of proving character as evidence of conduct, the danger of unfair prejudice to the defendant may be great enough to exclude the evidence under this rule.

B. The Admissibility of Other Crimes or Acts Evidence Under Rule 403

Courts have generally been insensitive to the prejudicial impact of other crimes or acts evidence. In a large number of cases, the courts simply assume that if the evidence is probative of something other than character, prejudice does not "substantially outweigh" probative value, and the courts therefore admit the evidence. As a consequence, analysis of

129. See Fed. R. Evid. 404 advisory committee note.

130. This is the so-called "reverberating clang" problem identified by Justice Cardozo in Sheppard v. United States, 290 U.S. 96, 102-04 (1933), where incriminating out of court statements were excluded on the grounds that, although arguably admissible for a proper purpose, they would certainly be considered by the jury for their improper hearsay purpose. This problem, which results from the application of the doctrine of multiple admissibility, is often dealt with by admitting the potentially prejudicial evidence while instructing the jury to regard the evidence only for its proper purpose. See Fed. R. Evid. 105. The efficacy of such instructions to relieve the prejudicial impact of other crimes or acts evidence is highly problematic. See supra note 107.

131. Evidence of prior crimes or acts should not be automatically admissible under Rule 404 when offered to prove something other than character and conduct. When the likelihood that the jury will consider the evidence for the improper purpose of proving character or conduct is high and the probative value of the evidence for the "proper" purpose is negligible, the evidence could be considered inadmissible under Rule 404. In such a case it could be argued that Rule 404(b) cannot be used to make a sham of Rule 404(a) by permitting clearly prejudicial evidence to be admitted on a flimsy pretext. The language of Rule 404 permits this interpretation. Rule 404(b) states that when evidence is offered for some purpose other than a prohibited one "[i]t may . . . be admissible" (emphasis added). This language replaced the following language of the proposed rule submitted by the Supreme Court: "This subdivision does not exclude the evidence when offered [for some purpose other than the prohibited one]." Fed. R. Evid. 404 note by federal judicial center. The implication to be drawn from this replacement is that evidence offered for a purportedly proper purpose might still be excluded under Rule 404. Admittedly, however, the language "[i]t may . . . be admissible" might simply be taken as recognition of the fact the evidence could still be excluded under Rule 403.

It is important to consider which rule can be used to exclude other crimes or acts evidence that causes prejudice and is only marginally probative of a proper inference. If Rule 403 is used, the issue is whether the prejudicial impact of the evidence "substantially outweighs" its probative value. If Rule 404 is applied, the issue might be resolved without a balance tilted in favor of admissibility. As a consequence, the results might be different depending on which rule is applied. One might argue that, if other crimes or acts evidence is harmful enough to warrant a specific rule of exclusion, the veneer of legitimacy bestowed on such evidence by purporting to offer it to prove something other than character should not be sufficient to favor admissibility. See supra note 122, at 802-03.

132. See, e.g., United States v. Vik, 655 F.2d 878, 881-82 (8th Cir. 1981); United States v. Foote, 635 F.2d 671, 673-74 (8th Cir. 1980); United States v. Pry, 625 F.2d 689, 692 (5th Cir. 526
the prejudicial effect of other crimes or acts evidence is seldom under-
taken, and no real effort to balance prejudice against probative value oc-
curs. The prejudicial impact of such evidence is acknowledged,
the courts frequently assume without any stated reasons that it can be
ameliorated by instructions. Even in the absence of instructions, courts

1980), cert. denied, 450 U.S. 925 (1981); United States v. Longoria, 624 F.2d 66, 68 (9th Cir.),
cert. denied, 449 U.S. 858 (1980); United States v. Lutz, 621 F.2d 940, 943-44 (9th Cir. 1980),
cert. denied, 449 U.S. 859 (1980), 449 U.S. 1093 (1981); United States v. Doliole, 597 F.2d 102,
105-08 (7th Cir.), cert. denied, 442 U.S. 946 (1979); United States v. DeFillipo, 590 F.2d 1228,
1240 (2d Cir.), cert. denied, 442 U.S. 920 (1979); United States v. Day, 591 F.2d 861, 877-78
(D.C. Cir. 1978); United States v. D’Alora, 585 F.2d 16, 21 (1st Cir. 1978); United States v. Jack-
son, 576 F.2d 46, 49 (5th Cir. 1978); United States v. Mcgee, 572 F.2d 1097, 1099 (5th Cir. 1978);
United States v. Cady, 567 F.2d 771, 775 n.3 (8th Cir. 1977), cert. denied, 435 U.S. 944 (1978);
United States v. Weaver, 565 F.2d 129, 134-35 (8th Cir. 1977), cert. denied, 434 U.S. 1074 (1978);
Dums v. United States, 562 F.2d 542, 548 (8th Cir.), cert. denied, 434 U.S. 959 (1977); United
States v. Gano, 560 F.2d 990, 993-94 (10th Cir. 1977); United States v. Araujo, 539 F.2d 287, 290
(2d Cir.), cert. denied, 429 U.S. 983 (1976); United States v. Jenkins, 525 F.2d 819, 824 (6th Cir.
1975); United States v. Moore, 522 F.2d 1068, 1079 (9th Cir. 1975), cert. denied, 423 U.S. 1049
(1976).

The courts applying Rule 403 to other crimes or acts evidence have perpetuated a misguided
approach to the problem of determining admissibility that predates the Federal Rules. See McCOR-
MICK’S HANDBOOK OF THE LAW OF EVIDENCE § 190, at 453 (E. Cleary 2d ed. 1972):
Most of the opinions ignore the problem and proceed on the assumption that the decision turns
solely upon the ascertainment and application of a rule. If the situation fits one of the classes
wherein the evidence has been recognized as having independent relevancy, then the evidence is
received, otherwise not. This mechanical way of handling these questions has the advantage of
calling on the judge for a minimum of personal judgment. But problems of lessening the dangers
of prejudice without too much sacrifice of relevant evidence can seldom if ever be satisfactorily
solved by mechanical rules. And so here there is danger that if the judges, trial and appellate,
content themselves with merely determining whether the particular evidence of other crimes
does or does not fit in one of the approved classes, they may lose sight of the underlying policy
of protecting the accused against unfair prejudice. The policy may evaporate through the inter-
stices of the classification.

134. See, e.g., United States v. Dennis, 625 F.2d 782, 801 (8th Cir. 1980); United States v.
Masters, 622 F.2d 83, 88 (4th Cir. 1980); United States v. Lutz, 621 F.2d 940, 944 (9th Cir. 1980),
322 n.6 (8th Cir. 1978), cert. denied, 440 U.S. 945 (1979); United States v. D’Alora, 585 F.2d 16,
21 (1st Cir. 1978); United States v. Sigal, 572 F.2d 1320, 1323 (9th Cir. 1978). But see United States
v. Figueroa, 618 F.2d 934, 943 (2d Cir. 1980) (footnote omitted):
In assessing the risk of prejudice against the defendant, the trial court should carefully con-
sider the likely effectiveness of a cautionary instruction that tries to limit the jury’s consideration
of the evidence to the purpose for which it is admissible. Whatever the criticism of such instruc-
tions, they remain an accepted part of our present trial system. However, while their utility is not
to be invariably rejected, neither should it be invariably accepted... Similarly, the balancing
required by Rule 403 for all evidence would not be needed if a limiting instruction always in-
sured that the jury would consider the evidence only for the purpose for which it was admitted.
Giving the instruction may lessen but does not invariably eliminate the risk of prejudice notwith-
standing the instruction. Rule 403 balancing must therefore take into account the likelihood that
the limiting instruction will be observed.

The same research described in part III, supra, suggests that instructions may be considerably less
efficacious than is commonly assumed. When people are required to conduct self analysis in order to
determine why they act a certain way or think certain thoughts, they are subject to making the same
have assumed that the admission of other crimes or acts evidence is harmless error.135

This state of the law is profoundly disturbing for a number of reasons. Not only does failing to balance probative value against prejudicial effect violate the language of Rule 403, it also frustrates the intent of Rule 404. When courts fail to acknowledge the prejudicial potential of other crimes or acts evidence, they ignore the rationale behind the rule of exclusion articulated in Rule 404. Article IV of the Federal Rules explicitly recognizes the prejudicial impact of only a handful of types of evidence from among the infinite varieties available. For the courts to ignore that recognition when applying Rule 403 is unconscionable.

The courts' improper evaluation of other crimes or acts evidence under Rule 403 may result from their initial failure to develop a coherent theory of the meaning of unfair prejudice.136 It is also possible, however, that the courts have generally assumed that other crimes or acts evidence would survive any balancing test because the courts themselves have become victims of the prejudicial impact of that evidence. Judges may attribute to other crimes or acts evidence a much greater degree of probative-ness than the evidence objectively warrants. That the courts themselves commit these inferential errors so frequently should not be altogether surprising because, as the following discussion demonstrates, other crimes or acts evidence has a great potential to induce such error.137

C. Other Crimes or Acts Evidence and the Danger of Inferential Error

Evidence of other crimes or acts of a party, particularly a defendant in a criminal prosecution, has great potential to induce inferential error. The representativeness and availability heuristics as well as the FAE might all

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136. See supra notes 33–41 and accompanying text.

137. Research generally indicates inferential error is reduced where decisions are made by a group. R. Nisbett & L. Ross, supra note 58, at 267. This suggests that judges may actually be more prone to inferential error than juries, assuming the inferential abilities of judges and jurors are relatively equal. Rule 403, of course, is inadequate to protect against inferential error by judges since it assumes the judge is able to discern the proper and improper inferences which might be derived from evidence. Gulf States Util. Co. v. Ecodyne Corp., 635 F.2d 517, 519 (5th Cir. 1981).
be improperly employed by the trier of fact in analyzing this type of evidence.

For example, evidence that the defendant has committed a prior, and perhaps even similar crime, might be considered representative of the defendant's overall character. In many cases, the defendant's economic, social, ethnic and racial background may combine with other crimes or acts evidence to make the defendant's character seem to fit a juror's stereotype of a criminal. Another application of the representativeness heuristic permits the trier of fact to reason that the crime with which the defendant has been charged is a representative act for someone with a criminal's character. The resulting inference of guilt may be resistant to conflicting base rate data concerning the low probative value of other crimes or acts evidence, or to pallid evidence that the defendant's prior act is not truly representative of her character. In this situation, the representativeness heuristic causes the admission of prior crimes or acts evidence for a permissible purpose under Rule 404(b) to have the very prejudicial impact Rule 404(a) seeks to prevent.

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138. See generally supra notes 77–78 and accompanying text.
140. See supra notes 71–74 and accompanying text. While it has been generally assumed that other crimes or acts evidence is of low probative value, see Fed. R. Evid. 404 advisory committee note, citing California Law Revision Commission, empirical support for this assumption is largely lacking. The assumption appears to be based upon a belief that our knowledge of what makes people act the way they do is too insubstantial to permit the conclusions that a prior act by a person might accurately reflect his character and that his character provides a basis for predicting how the person acted in a particular case. See J. Wigmore, THE SCIENCE OF JUDICIAL PROOF §§54–55 (3d ed. 1937). There are, however, some statistics in studies of recidivism rates that may suggest other crimes or acts evidence has limited probative value. See, e.g., U.S. DEP'T OF JUSTICE, SOURCEBOOK OF CRIMINAL JUSTICE STATISTICS 522, table 6.47 (1980) (only 0.5% of parolees released during 1977 who had been convicted of murder or nonnegligent manslaughter had been convicted of new murder or nonnegligent manslaughter during the first year after release).
141. The chances that the representativeness heuristic will be improperly applied are probably increased when the other crimes or acts evidence involves a crime or act similar to that with which the defendant is presently charged. In such a case, the crime with which the defendant is presently charged may appear very strongly representative of or similar to its generating process, the defendant's character, because that character is itself evidenced by a similar crime or act. Several cases have recognized the especially high prejudicial impact of evidence of other crimes or acts similar to that with which the defendant is now charged. See, e.g., United States v. Bejar-Matrecios, 618 F.2d 81, 84 (9th Cir. 1980); United States v. Jimenez, 613 F.2d 1373, 1377 n.5 (5th Cir. 1980); United States v. Preston, 608 F.2d 626, 639 n.18 (5th Cir. 1979), cert. denied, 446 U.S. 940 (1980); United States v. Burkley, 591 F.2d 903, 921 n.37 (D.C. Cir. 1978), cert. denied, 440 U.S. 966 (1979). A number of cases, on the other hand, have observed that when the other crime or act is similar to that with which the defendant is now charged, evidence of that crime or act may be highly probative of the intent, motive or some other matter for which such evidence is admissible under Rule 404(b). None of these cases, however, acknowledges that these same similarities enhance the prejudicial impact of such evidence. See, e.g., United States v. Black, 595 F.2d 1116, 1117 (5th Cir. 1979); United States v. Albert, 595 F.2d 283, 288 (5th Cir.), cert. denied, 444 U.S. 963 (1979); United States v. Leonard, 524 F.2d 1076, 1091 (2d Cir. 1975), cert. denied, 425 U.S. 958 (1976). Thus it would appear that in
Evidence of other crimes or acts might also lead to inferential error because of the availability heuristic. Other crimes or bad acts usually offend jurors. The emotional interest and image-provoking quality of other crimes or acts evidence is likely to be strong, at least when compared to the possibly pallid explanations offered by the defendant. As a consequence, other crimes or bad acts make vivid evidence which will remain readily "available" in the juror's memory.142

Finally, the FAE will likely be triggered by the admission of other crimes or acts evidence. The FAE postulates that one's actions are the result of personal disposition.143 Evidence of other bad acts presumably will encourage the conclusion that the defendant has a bad character, which in turn will encourage the inference that the defendant has acted in conformity with that character in the instant case. Instructions warning the jury not to draw this conclusion may be futile.144 As a consequence, jurors may not only draw exactly the inference Rule 404 attempts to avert, but may also form a theory about the defendant through which they view all the other evidence in the case.145 The presumption of innocence may then become a presumption of guilt.146 Ironically, efforts by the defense to combat the effects of the FAE by introducing evidence bearing positively on the defendant's character will open the door for the prosecution to rebut that evidence,147 reducing the trial to a fight over whether the defendant is a "good" or "bad" person.148 The psychological principles discussed above demonstrate the obvious dangers of this scenario.

some cases the prejudicial impact of evidence of other crimes or acts may increase as the probative value of that evidence increases.

If the prejudice and probative value simultaneously rise to roughly commensurate levels, Rule 403 could not be used to exclude that evidence since that rule requires that prejudice "substantially" outweigh probative value. But there are arguably certain high levels of prejudice requiring exclusion even if probative value is not substantially outweighed. For example, prejudice that threatens constitutional rights should probably be considered to have reached that level. See, e.g., Weit v. Continental Ill. Nat'l Bank & Trust Co., 641 F.2d 457, 466-67 (7th Cir. 1981) (evidence of defendants' lobbying activities, while relevant to charge of conspiracy, might cause jury to incorrectly infer that the activities themselves were illegal when in fact they were protected by the first amendment), cert. denied, 455 U.S. 988 (1982).

142. See supra notes 91-96 and accompanying text. One study suggests that other crimes or acts evidence may have no special prejudicial impact when decisions concerning guilt or innocence are made soon after the evidence is introduced. When there is delay, the availability of other crimes or acts evidence relative to other evidence may increase and have a prejudicial impact. See Borgida, Character Proof and the Fireside Induction, 3 Law & Human Behav. 189, 201 (1979).

143. See R. Nisbett & L. Ross, supra note 58, at 31.

144. See supra note 107. See also United States v. Puco, 453 F.2d 539, 542 (2d Cir. 1971) ("The average jury is unable, despite curative instructions, to limit the influence of a defendant's criminal record to the issue of credibility."). cert. denied, 414 U.S. 844 (1973).

145. See supra note 106.

146. See supra notes 27-30 and accompanying text.

147. FED. R. EVID. 404(a)(1).

148. Introducing evidence of other crimes or bad acts predictably evokes from the defense evi-
V. CONCLUSION: RELATIONSHIPS BETWEEN PSYCHOLOGY AND THE LAW OF EVIDENCE

Psychology can offer useful tools for understanding problems of evidence. While there may be reasons for the law to be wary of these tools in certain contexts,149 the science of psychology can fruitfully be applied to evaluate the potential of evidence to induce inferential error by the trier of fact.

The law of evidence exists because there are at least two gaps between the “truth” and the legal judgment which seeks to reflect that truth. Both gaps are primarily mental.150 The first gap is created when a human agent intervenes between the occurrence of a fact or event and the courtroom. That human agent is the witness. Witnesses create this gap because their testimony sometimes does not accurately relate what occurred. The second gap is created when another human or group of humans, the trier of fact, becomes involved. Judges and juries create a gap between the truth and the judgment because the inferences they draw even from accurate testimony are sometimes in error. The science of psychology offers the law of evidence the tantalizing prospect of closing these gaps. Since these gaps are largely the result of the human mind’s involvement in this process, we may be able to detect or even eliminate them by studying and understanding the mind.

Notwithstanding the possible rewards, evidence law has historically been distrustful of psychology.151 Since the earliest days of that science, its proponents have attempted to call attention to the relevance of human perception, memory and recall studies to the task of closing the gap between what actually occurred and what the witness describes.152 The law has largely rejected these studies on the grounds that the problems of understanding the mental processes of a witness are so complex and variable that valid generalizations cannot be made.153 The debate continues to this day. A principal focus of the scientist is now the unreliability of evidence intended to explain or deny those crimes or bad acts, thus enhancing the prejudicial effect of the whole exercise by confusing the jury about the act for which the defendant is on trial.

149. See infra notes 153–55 and accompanying text.
152. See, e.g., H. Muensterberg, ON THE WITNESS STAND (1908).
153. See J. Wigmore, supra note 150, § 249, at 634 (2d ed. 1931):

But how could it be otherwise? The task is next to insuperable. . . . The conditions required for truly scientific observation and experiment are seldom practicable. The testimonial mental processes are so complex and variable that millions of instances must be studied before safe generalizations can be made. And the scientist in this field is deprived (except rarely) of that known basis of truth by which the aberrations of witnesses must be tested before the testimonial phenomena can be interpreted.
eyewitness testimony. Many courts still reject research in this area as unscientific.

Whether or not it makes sense to reject psychology as a means of closing the gap between the truth and what witnesses say, psychology should not similarly be rejected as a means of closing the gap between the truth and what the trier of fact infers. It is admittedly true that the psychology of inferential processes of jurors is also enormously complex, and that generalizations about it must be subject to scrutiny. But it is also true that whenever the law of evidence considers the danger of inferential error by the trier of fact, it must rely upon such generalizations.

The cases applying Rule 403 make many broad assumptions about how a jury will make its decisions. For example, courts assume that evidence of other crimes or acts will not induce an “emotional” reaction; pallid testimony is an adequate substitute for vivid evidence; instructions to the jury will be scrupulously followed; a point-blank photograph of facial wounds is “not overly ‘gruesome,’” and many other equally dubious conclusions based upon uninformed judicial efforts at amateur psychology. If these generalizations are to be made, they should be based upon studied experimentation and research. The sparse and general language of Rule 403 invites the use of psychology or any tool useful in detecting inferential error. In contrast, the traditional law of evidence generally purports to fill the gap between the truth and what the witness says with detailed rules calculated to eliminate unreliable testimony.

154. See, e.g., E. Loftus, supra note 68.
156. See supra notes 19 and 33.
157. See supra note 33.
158. See supra note 103.
159. See supra note 107.
160. See supra note 102.
161. See, e.g., FED. R. EVID. 801 (the hearsay rule); FED. R. EVID. 602 (the rule requiring personal knowledge of witnesses). A further distinction may be made between the use of psychology research to determine the reliability of witness testimony and the tendency of evidence to induce the jury to commit inferential error. Research revealing the perceptual defects of an eyewitness, for example, may be offered to impeach the credibility of such a witness. When that research is offered into evidence, usually through an expert witness, it must be subject to the laws of evidence. When psychology research is offered to demonstrate the existence of heuristics and their potential to induce inferential error, that research is not being offered into evidence but is offered only to help decide the admissibility of other evidence which may be unfairly prejudicial. Psychology research offered for this latter purpose is not subject to the laws of evidence. See FED. R. EVID. 104(a).

Thus a less exacting standard may be required of psychology research considered for the purposes of making a Rule 403 decision. An analogy might be drawn to Professor Davis’ distinction between adjudicative facts, which go to the jury and relate to the specific parties, and legislative facts, which involve the development of the law for future litigants. See Davis, Judicial Notice, 55 COLUM. L. REV. 945, 952 (1955). While adjudicative facts must be strictly supported by the evidence, legislative facts need not be. Id. at 952–53. It might be convincingly argued, however, that since creating a
Never before have the courts had a greater need to understand psychology. Attorneys have not been reluctant to apply modern psychological techniques to advance their goal of persuading the jury.162 The courts must understand the psychological principles underlying these techniques in order to recognize when their application distorts the truth. Without this knowledge, the courts may be unable to prevent the process from dissolving into trial by marketing strategy.163

Modern evidence law favors admissibility based upon the assumption that the truth will be advanced if all relevant evidence is considered.164 Following the same principle, the law of evidence should not be reluctant to consider research in psychology relevant to the problems of evidence. As long as the conclusions of that research are recognized as generalizations, and the specific applicability of those generalizations is considered in each case, the "danger" presented by psychology to evidence law will be minimal. While psychology may not guarantee a neat formula for resolving every Rule 403 problem, it does provide a heretofore absent framework for approaching those problems.


163. See Dancott, Hidden Persuaders of the Courtroom, Barrister, Winter 1982, at 8, 17, quoting a consultant in the business of helping lawyers plan for jury trials:

Our role is to help the attorney in defining the \textit{behavior} component of overall trial strategy and tactics, to understand people and the social and psychological processes that take place during a jury trial. ... all in all, we help lawyers position their cases to juries in much the same way you would sell a bar of soap ... even down to charts and graphs, which we think should come across to a jury like billboards on a freeway.

164. See supra note 1 and accompanying text.