

SYSTEMIC INCOHERENCE IN CRIMINAL JUSTICE: FAILING TO TREAT LIKE CASES ALIKE

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Systemic incoherence – where different judges could decide the same case differently – is used by the author as a framework to examine credibility contest trials before a judge alone. The analysis applies to civil and criminal trials, although the criminal justice scenario is used as the example. By engaging with other relevant disciplines in coordinated research to reduce systemic incoherence, the legal profession could improve the performance of the criminal justice system, increase public confidence in the fairness of the system, and promote a better understanding of the limitations of criminal trials.

L'auteur s'appuie sur l'incohérence systémique – à savoir la possibilité qu'une même affaire soit tranchée différemment par des juges différents – comme cadre d'analyse pour examiner le procès devant juge seul qui revêt la forme d'un « concours de crédibilité ». Si l'analyse englobe les procès civils et criminels, le scénario utilisé en guise d'exemple relève du droit pénal. En collaborant avec d'autres champs de disciplines congruents dans le cadre de recherches coordonnées visant la réduction de l'incohérence systémique, la profession juridique pourrait améliorer l'efficacité du système de justice pénale, rehausser la confiance du public dans l'équité du système et favoriser une meilleure connaissance des limites du procès criminel.

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1. Introduction

A) Internal Coherence and Systemic Incoherence

Like cases should be treated alike. That is a fundamental principle of justice.¹ The purpose of this article is to examine that principle in the context of a criminal trial² held before a judge alone where the verdict depends on which witness is believed or disbelieved. This is not an empirical study into such judicial decision-making. It attempts to view such trials through an institutional frame rather than through considering what constitutes the right decision in any particular case. Rather than bringing forward new data or specific solutions, this article attempts to develop a systemic framework for understanding unresolved and persistent issues raised in such proceedings. It seeks to locate the right context and question, and in so doing find a new way for raising and addressing these issues that would include conducted empirical studies.

¹ This precept of justice is regularly cited as found in Aristotle's discussion of equality in the *Nicomachean Ethics*, V.3.1131a10-b15. See also MDA Freeman, *Lloyd's Introduction to Jurisprudence*, 8th ed (London: Sweet & Maxwell-Thomson Reuters, 2008) c 18 at 1534: "Behind the demand that adjudication according to rules is a rational process of decision making lies a belief in formal justice that is satisfied by giving like cases like treatment. Such a demand presupposes a standard against which 'like' can be measured and *this*, it must be admitted, is not easy to construct."

Also see HLA Hart, "Positivism and the Separation of Law and Morals" (1958) 71 Harv L Rev 593 at 623-24:

If we attach to a legal system the minimum meaning that it must consist of general rules – general both in the sense that they refer to courses of action, not single actions, and to multiplicities of men, not single individuals – this meaning connotes the principle of treating like cases alike, though the criteria of when cases are alike will be, so far, only the general elements specified in the rules. It is, however, true that one essential element of the concept of justice is the principle of treating like cases alike.

² The issues discussed in this paper apply to civil and criminal trials, and to trials with a judge and jury. However, for ease of discussion purposes, the examples here are limited to criminal trials before a single judge without a jury. The same issues arise in administrative tribunals or arbitrations where the decision turns on fact finding by the adjudicator.

It is recognized that verdicts in such credibility contests³ are uncertain,⁴ subject to reasonable disagreement,⁵ and potentially wrong.⁶ The institutional means of addressing such ambiguity and uncertainty in the justice system is through the appellate process, where appeal court

³ The application of this phrase is borrowed from Hamish Stewart, "The Trial Judge's Duty to Give Reasons for Judgment in Criminal Cases" (2009) 14:1 Can Crim L Rev 19 at 24: "Many of the cases were 'credibility contests' in the sense that there were two crucial witnesses and few, if any others: one Crown witness, usually a complainant in a sexual assault, and one defence witness, usually the accused." See also *infra*, note 24.

⁴ Most trials are not about uncertainty of the law. They are a result of uncertainty about the historical facts of a case. See e.g. Jon Elster, *Solomonic Judgements - Studies in the Limitations of Rationality* (Cambridge: Cambridge University Press, 1989) at 1, who states that the uncertainty arises because the system fails to give unambiguous prescriptions to the fact-finders, it is indeterminate and it does not yield predictable, unique decisions. See also Lloyd L Weinreb, *Legal Reason – The Use of Analogy in Legal Argument*, (Cambridge: Cambridge University Press, 2005) at 81: "It is a commonplace among trial lawyers that most legal controversies arise because the parties have different views about the facts and that once all the factual questions are resolved the case is easily decided."

⁵ George Polya, *Mathematics and Plausible Reasoning, Volume II, Patterns of Plausible Inference* (Princeton: Princeton University Press, 1988) at 110:

Two jurors who sat through the same proceedings may disagree: one thinks that the evidence introduced is sufficient proof against the defendant and the other thinks that it is not. Such disagreement may have [a] thousand different grounds Seeing the same things with different eyes, honestly and not unintelligently, the two jurors come to opposite conclusions.

See also John Rawls, *A Theory of Justice* (Cambridge: Belknap Harvard, 1971), where at 85 he described this as an instance of what he termed *imperfect procedural justice*:

Imperfect procedural justice is exemplified by a criminal trial. The desired outcome is that the defendant should be declared guilty if and only if he has committed the offense with which he is charged. The trial procedure is framed to search for and to establish the truth in this regard. But it seems impossible to design the legal rules so that they always lead to the correct result.

See also Elster, *ibid* at 102:

In legal contexts like this one, "random"... refers to the fact that different judges or juries may decide similar cases differently or that even the same judge may reach different decisions on similar cases ... John Coons argues that such inconsistency across judges is an inevitable feature of legal decisions, considered to be "systems of bounded randomness."

⁶ Jerome Frank, *Courts on Trial* (Princeton: Princeton University Press, 1949) at 16 [Frank, *Courts*]: "For whenever there is the question of the credibility of witnesses – of the believability, the reliability, of their testimony – then, unavoidably, the trial judge or jury must make a guess about the facts." Frank was a leader in the legal realism movement, discussed below at note 106; see also the discussion at note 18 and related text.

judges develop legal precedents to guide trial judges.⁷ Although the appeal courts set these precedents with a view to developing system-wide consistency, the appeal typically proceeds on a one-case-at-a-time basis and is primarily focussed on the decision's *internal coherence* – did the trial judge correctly apply the established legal precedents. This article expands that one-case-at-a-time method of legal analysis by focussing on how the same case might be decided by different judges. Would all trial judges decide the same case in the same way or does the verdict depend, at least in part, on which judge presides? Trial lawyers and others who regularly observe trial courts would likely say the verdict does depend on which judge presides.⁸ If the verdict depends on which judge an accused appears before, then *like cases cannot be said to be treated alike* and such inconsistency transgresses this core principle of justice. Admittedly this principle is a complex concept, and not everyone may feel similarly concerned when the ideal is not adhered to.⁹ In this paper, however, the belief that like cases should receive like verdicts is accepted as a non-controversial goal of justice,¹⁰ with the consequence that a failure to do so reveals a “systemic incoherence.”¹¹

⁷ For a review of current precedents that are relevant to this discussion, see Stewart, *supra* note 3. For a review of earlier cases and the historical context of these precedents, see Ronald J Allen and Gerald TG Seniuk, “Two Puzzles of Juridical Proof” (1997) 76 Can Bar Rev 65 at 67-73 and 87-89.

⁸ Those familiar with common law advocacy will be aware of the phenomenon of “judge-shopping” whereby lawyers may try to schedule or adjourn cases in order to appear or avoid appearing before particular judges. Judicial disparity has been studied in sentencing simulation exercises; see Theodore S Palys and Stan Divorski, “Judicial Decision-Making: An Examination of Sentencing Disparity among Canadian Provincial Court Judges” in Dave J Müller, Derek E Blackman and Antony J Chapman, eds, *Psychology and the Law* (Toronto: Wiley, 1984); Theodore S Palys and Stan Divorski, “Explaining Sentence Disparity” (1986) 28(4) Can J Crim 347. However, the variability can be more objectively assessed in sentencing appeals than in credibility contest issues as discussed below at note 77.

⁹ Kenneth I Winston, “On Treating Like Cases Alike” (1974) 62 Cal L Rev 1 at 20: “And so there is no reason of fairness for thinking that, as a matter of general principle, cases that are identified as alike should be treated alike.”

¹⁰ This is the view of Cass R Sunstein *et al*, “Predictably Incoherent Judgments” (2002) 54:6 Stan L Rev 1153 at 1154, 1156:

Coherence in law is a widely shared ideal. Almost everyone hopes for a legal system in which the similarly situated are treated similarly. But there are many obstacles to the achievement of coherence in the law We consider it self-evident that if it exists, incoherence in punishments is a form of injustice. We shall also assume that when the public would not believe that outcomes fit sensibly together, this is a problem that calls for social response. Indeed, how could one support a system that generates outcomes that do not make sense when taken together?

¹¹ The phrase “systemic incoherence” surfaces in a search of legal literature, for example on Google Scholar. The phrase is used to describe a variety of scenarios and

B) *Systemic Incoherence*

Systemic incoherence is defined here as meaning that different judges will arrive at different verdicts in cases that are essentially alike. The use of the term “incoherence” to describe such systemic inconsistency is borrowed from Sunstein *et al.*¹² The concept is adapted with some variation to a slightly different application in this paper,¹³ but the same fundamental question asked by those authors is also applied as a criterion here: “When two or more judgments have been made separately, and each seems to make sense on its own, do they still make sense when considered together?”¹⁴

That test cannot be applied here empirically in the manner discussed by Sunstein *et al* because in actual trial life each case is decided by only one judge, and despite similarities, no two cases are the same. As a thought-experiment,¹⁵ however, the question can be posed: What would

legal issues, including where different judges could arrive at different verdicts. Sunstein *et al, ibid*, do not use the phrase “systemic incoherence” and their use of the term “incoherence” is used in a different context than is used here. Despite these differences, this paper gives particular attention to that article because their use of the concept of “incoherence” is helpful in opening the door to the topic under consideration in this article, especially as they link “incoherence” to institutional design.

¹² Sunstein *et al, ibid*.

¹³ This paper considers the thought experiment where different judges, independently and in isolation from each other, give decisions on the exact same trial. These different verdicts resulting from such a hypothetical are the focus in this paper, whereas Sunstein *et al* considered different cases drawn from different categories of offences; see e.g. Sunstein *et al, ibid* at 1155:

When they consider an individual case of physical injury, or commercial fraud, the frame of reference for evaluation is usually a set of instances of the same kind of harm. When setting penalties for a category of cases, such as violations of regulations for occupational safety, regulators will naturally focus on instances that belong to that category. They are much less likely to concern themselves with the consistency of their determinations with punishments for other categories of harmful conduct, such as damage to endangered species. Yet, as we will show, simultaneous consideration of penalties for different kinds of infractions will often reveal that the more severe punishment was assigned to the misconduct which, in context, appears to be the less serious.

¹⁴ *Ibid* at 1145

¹⁵ Mario Bunge, *Philosophical Dictionary* (New York: Prometheus Books, 2003) at 294, defining a thought-experiment as “an experimental design that has not yet been implemented, or that cannot be carried out because it runs counter to some law of nature...Although thought-experiments prove nothing, they may have heuristic value. They may also be misleading.” This article applies a philosophical thought experiment, as distinct from a scientific thought experiment. Both types typically are based on hypothetical scenarios; see Kirk Ludwig, “The Epistemology of Thought Experiments:

happen if a number of judges acting in isolation from one another gave their individual decisions on the same case? If systemic incoherence is present, then the following outcomes are expected: each judge's decision appears *internally coherent* – each is legally and logically sound – when examined in isolation, but when the decisions are compared to each other, they are seen to be *systemically incoherent* – some verdicts are guilty and some are not guilty. While that comparative scenario cannot be replicated in any actual trial setting, there is some empirical research¹⁶ to support the thought-experiment that such systemic incoherence is predictable in credibility contest trials.

Frank arrived at this conclusion many years ago, arguing forcefully that whenever credibility of witnesses is at issue, judges or juries essentially guess at the facts.¹⁷ This article owes a significant debt to Frank's insight that judicial discretion in fact-finding means that what "... the particular trial judge thus 'finds' in a particular case may not at all be what another trial judge would have 'found' if sitting in that same case, for trial judges in fact 'finding' are not fungible in their reactions to the witnesses."¹⁸ Although there are no empirical studies to confirm that conclusion, the thought-experiment in this article is based on and accepts that insight and proceeds from there.¹⁹ In this regard, the question is why his insight, which is generally accepted as valid in the legal profession, is often treated as an "over-elaborated case about what in essence has never been far from the thoughts of the legal profession, viz., that you can never anticipate with certainty which way a court or jury will jump on issues of fact, and that innumerable factors combine to promote such uncertainty and render it ineradicable."²⁰ Frank's contribution has even been dismissed by one writer as "more amusing than indicative of fruitful thought."²¹ Although the legacy of Frank and other legal realists remains influential,

First Person versus Third Person Approaches" (2007) 31 *Midwest Studies in Philosophy* 128: "I mean to distinguish philosophical thought experiments, which aim at the elucidation of concepts ... from scientific thought experiments, whose aim is to draw out consequences of empirical theories of the world."

¹⁶ Peter J Van Koppen and Jan Ten Kate, "Individual Differences in Judicial Behavior: Personal Characteristics and Private Law Decision-Making" (1984) 18 *Law & Soc'y Rev* 225; the study found that the judges differed considerably in their decisions and commented at 239 that "on the average 23 per cent of our judges disagreed with the majority's decision."

¹⁷ Frank, *Courts*, *supra* note 6.

¹⁸ Jerome Frank, "Civil Law Influences on the Common Law – Some Reflections on 'Comparative' and 'Contrastive' Law" (1956) 104:7 *U Pa L Rev* 887 at 900.

¹⁹ The indeterminacy of judicial decision has been recognized; see e.g. Van Koppen and Ten Kate, *supra* note 16 at 225-26.

²⁰ Freeman, *supra* note 1 at 990.

²¹ *Ibid* n 27.

“Over time, to many commentators, legal realism became a caricature remembered solely for the claim that the outcome of cases was only a matter of ‘what the judge had for breakfast’.”²² Partly for those reasons and partly for professional disciplinary boundaries, it is the discipline of sociology rather than law that has responded more vigorously to the challenge posed by Frank.²³ The goal of this article is to examine Judge Frank’s concerns through the additional perspective of systemic incoherence, building upon the insights provided in the article by Sunstein *et al*, to ask whether the legal profession could more actively address these concerns through the institutional context of systemic incoherence.

C) *Credibility Contest Trials*²⁴

Credibility contest trials, the focus of this paper, involve the presentation of two competing stories in which neither the evidence nor the guiding law dictates what verdict the judge must give. Although such credibility contest cases form a substantial percentage of trial dockets, many trials are concerned with other issues, such as interpretation of legal terms, constitutional requirements, evidentiary and legal technicalities, probative relevance, or the resilience of the opponent’s evidence under cross-examination. However, the issues examined in this paper are germane to credibility contest trials primarily, if not exclusively so. Furthermore, only one kind of credibility contest will be examined here. A variety of credibility contest trial scenarios are possible depending on whether the accused testifies and on how many other witnesses testify.²⁵ The issues

²² John N Drobak and Douglass C North, “Understanding Judicial Decision-Making: The Importance of constraints on Non-Rational Deliberations” (2008) 26 Wash UJL & Pol’y 131at 136.

²³ See discussion below at note 114.

²⁴ Michael Green, “Credibility Contests: The Elephant in the Room” (2014) 18 Int’l J Ev & Proof 28 at 28:

The most important task facing any court is that of separating the guilty from the innocent ... An accused should only be convicted where his guilt has been shown beyond a reasonable doubt. It is the aim of this article to argue that such a standard cannot be reached objectively ... when the court is faced with a credibility contest, where the principal evidence for the prosecution is the uncorroborated testimony of a single witness, often a police officer or the complainant...it will be argued that when taken from first principles, many convictions based on the uncorroborated evidence of a single witness will be unsound and unsafe.

The legal systems employed in common law countries are based, in part, on a fundamentally flawed principle. This is that the human beings who are charged with the task of discriminating truthful from deceptive evidence are able to do so accurately and consistently.

²⁵ There is no obligation on an accused to testify and no adverse inferences of guilt are to be inferred from the silence of the accused. The prosecution must call at

addressed in this paper arise in the scenario where the accused and the complainant are the principle witnesses and their testimonies contradict each other on matters upon which the proof of the charge depends – often termed “he said-she said” cases.

The same issues arise in civil trials where plaintiffs, either individuals or corporations, are claiming monetary or other relief from individual or corporate defendants. The standard of proof is different in civil trials (onus on the plaintiff to prove the claim on balance of probabilities) and in criminal trials (onus on the prosecution to prove the case beyond a reasonable doubt), but in other respects, the issues discussed here are generally applicable to trials in the common law, both criminal and civil. For ease of discussion, the focus will be on criminal law and the criminal standard of proof.

D) Fairness and Common Law

In part, systemic incoherence arises from the traditions of common law jurisprudence. The common law trial is based on advocacy, with each adversarial side trying to convince the judge to accept its story – or, to restate that in legal terms for a criminal case, to persuade the judge that the prosecution failed or succeeded in proving its case beyond a reasonable doubt. With the presence of reasonable competing stories and a fair opportunity for the adversaries to argue their cases, judges must be open to actual choice in rendering a verdict such that different judges could arrive at different verdicts. If these conditions are not present, the verdicts would be predictably uniform and there would be no need for a trial.

Paradoxically therefore, systemic incoherence reflects both unfairness and fairness in the criminal justice system: *unfairness* because different judges can arrive at different verdicts in like cases and *fairness* in that it reflects a “fair” opportunity in the adversarial process for the parties to show the judge why their evidence should be accepted and relied upon. Hence, systemic incoherence is a necessary and unavoidable consequence of the way the criminal justice system is organized in principles and practices. The level of systemic incoherence will vary depending on the degree of constraint imposed by the legal rules, which are primarily

least one witness to prove its case, as the charge is proven through witness testimony. Thus, four possible variations of witness combinations can arise in a trial. 1) The accused does not testify, one prosecution witness testifies. 2) Accused does not testify, more than one witness testifies. 3) Accused testifies, one prosecution witness testifies. 4) Accused testifies, more than one witness testifies. In the trial scenario used in this paper, the accused does testify, and his evidence contradicts the testimony of the complainant. This is the essence of a credibility contest trial.

derived from appellate court precedents. A review of the relevant legal precedents illustrates how the judiciary has tried to balance two goals: protecting the accused from wrongful conviction while at the same time providing complainants with a fair opportunity to have their stories heard and believed.²⁶

E) Purpose of This Paper

Given this general organizing structure of the above precedents, in practice the aspiration of the legal profession is not to eliminate systemic incoherence but to identify it, call attention to it and reduce it. In addition, examining credibility contest trials through the lens of systemic incoherence may bring into focus questions about the criminal justice system, questions that are important but are not in the foreground when the system is viewed through the lens of traditional legal analysis.²⁷

The thesis of this paper is that efforts to address systemic incoherence will improve the performance of the criminal justice system, increase the

²⁶ David M Paciocco and Lee Stuesser, *The Law of Evidence*, 4th ed (Toronto: Irwin Law, 2005) at 508:

For now the law of evidence is less technical than it once was. It is not done changing. It is being pulled in different directions by the rights of those accused of offences, and by the increased vigilance we have dedicated to protecting victims, particularly in sexual offence cases ... The law shifts back and forth under the weight of those considerations, remaining in a state of flux and uncertainty ... The competing tension between certainty and “substantive justice,” and between protection of the innocent and the rights of victims, will ensure that the law of evidence will continue to evolve.

Later editions of this text do not appear to retain this particular statement, though see David M Paciocco and Lee Stuesser, *The Law of Evidence*, 6th ed (Toronto: Irwin Law, 2011) at 554 for a restatement of the same point.

²⁷ In this way, the study of systemic incoherence acts as a lens that brings into focus otherwise hidden aspects of criminal justice. It can act almost as a *threshold concept* that brings into view new conceptual gateways and a new way of understanding. See Jan HF Meyer and Ray Land, “Threshold Concepts and Troublesome Knowledge (2): Epistemological Considerations and a Conceptual Framework for Teaching and Learning” (2005) 49 Higher Education 373 at 373-74:

[I]n certain disciplines there are “conceptual gateways” or “portals” that lead to a previously inaccessible, and initially perhaps “troublesome,” way of thinking about something. A new way of understanding, interpreting, or viewing something may thus emerge – a transformed internal view of subject matter, subject landscape or even world view ... [A]n understanding of “pain,” as a threshold concept, serves to transform the professional thinking and discourse of medical undergraduates. From earlier understandings and accounts of pain as something negative, to be removed or diminished, the clinical practitioner learns to “see” or read pain differently, as an ally that aids diagnosis and healing.

public's confidence in the fairness of that system, and promote a better understanding of the limitations of criminal trials.

2. The Trial of George John

A) Hypothetical Trial Scenario

The following hypothetical trial scenario will be used to illustrate the issues under discussion here.

George John, aged 67, is charged with sexual assault upon 14-year-old Gayle Smith. John is a war veteran with some pulmonary and cardiac disability. Through veteran's services he hired Smith to cut his lawn. John's wife was away on the day in question and only Smith and the accused were present during the disputed events. John testified that nothing happened. Smith testified that he invited her into his home to pay her, and at that time assaulted her. She said that he first asked her personal questions, offered her \$10 to take her clothes off and when she refused, he fondled her breast, stroked her thigh and grabbed her buttock when she walked away.

After Smith left the house, two other witnesses made contradictory observations as to Smith's emotional state. Her use of drugs and her criminal record are also raised by the defence as discrediting factors. The basic facts outlined above are sufficient to consider the issues discussed in this paper.²⁸ The applicable law guiding a trial judge in such a case can be found in Appendix A.

B) Basic Legal Issues

The fundamental rule in the trial is that John is presumed innocent until proven guilty beyond a reasonable doubt,²⁹ with the burden of proof upon

²⁸ While this scenario is reduced to the evidentiary essentials necessary to illustrate the issues considered here, many lengthy, multi-witness trials will turn on a credibility contest between two key witnesses, just as discussed in this simplified scenario.

²⁹ The phrase often used is that the accused is presumed innocent, but as Williams explains, what the presumption of innocence really means is that the burden of proving the accused's guilt is upon the prosecution; see Glanville Williams, *The Proof of Guilt*, 3d ed (London: Stevens & Sons, 1963) at 184. In Canadian jurisprudence, it is stated as follows: "Before an accused can be convicted of an offence, the trier of fact must be satisfied beyond a reasonable doubt of the existence of all of the essential elements of the offence." See *R v Vaillancourt*, [1987] 2 SCR 636 at para 94.

the prosecution.³⁰ In the circumstances of this case, John could not be convicted unless the judge accepts and relies on Smith's testimony. The judge believing Smith's testimony is a necessary condition for conviction, but not a sufficient condition for conviction. In a credibility contest trial such as this, the applicable legal framework provides at least seven pathways that can lead to John's acquittal.³¹ The legal framework provides only one pathway that can lead to John's conviction. The judge must both believe Smith's testimony and also disbelieve John's testimony, with nothing in the rest of the evidence raising a reasonable doubt in the judge's mind.³²

C) *Verdict Variability*

Since the prosecution carries a high burden of proof,³³ some observers might expect that such a trial would end in an acquittal because the case is basically one word against another. But if the judge believes the testimony of Smith either verdict becomes possible. The framework of the applicable law does not dictate an acquittal. An acquittal is only the default position. When there is nothing in either the evidence or in the law that dictates what the verdict should be, different observers can disagree about the appropriate decision.³⁴

There is no empirical study of actual trials to assess the extent to which judges might disagree in the manner described here.³⁵ Without such empirical knowledge, we are left speculating about the extent of systemic

³⁰ The subtle and inadvertent shifting of this burden of proof by a trial judge can be a source of legal error. See Appendix A, First Part, "Do Not" column, for examples of how this can occur.

³¹ See Appendix A where the different decision nodes in the flowchart provide occasions at which point the accused could be acquitted.

³² This formulation of the legal precedent arises from the decision in *R v W(D)*, [1991] 1 SCR 742 [*W(D)*]. It remains the primary legal precedent in credibility contest trials. See Appendix A, First Part, for the articulation of this influential precedent from the Supreme Court of Canada.

³³ It is a maxim of our criminal law that it is better for ten guilty to go unpunished than for one innocent to be condemned. This ratio of ten to one, which regularly appears as a maxim in common law criminal cases, was established by Blackstone. The ratio has varied, however. The Romans advocated that the ratio be at one guilty escape unpunished rather than one innocent condemned; Fortescue at twenty to one; Sir Edward Seymour in 1696 thought he followed the Romans at a ratio of ten to one; Hale at five to one; Blackstone established it in our minds at ten to one; and Bentham, in opposing the maxim, took it to be one hundred to one. See Williams, *supra* note 29 at 186-87.

³⁴ See sources cited *supra* notes 5 and 6, and below at note 73.

³⁵ There is some limited study and opinion to suggest such disparity; see sources cited *supra* notes 6, 8 and 16.

incoherence in trials before a single judge. However, while such studies are lacking in connection with judge-alone trials, relevant empirical studies do exist in connection with jury verdicts.³⁶ Jury verdicts are the common law's gold standard of accurate fact determination,³⁷ and jury studies can shed some light on how systemic incoherence can be addressed. It is common for jurors to initially disagree about the verdict. Despite such initial disagreement, unanimity is almost always reached by jurors³⁸ as a result of their opportunity to discuss and debate their initial differences. Judges, however, who preside over a trial without a jury, do not have such an opportunity for collegial challenges to their reasoning process. It is a thesis of this paper that the lack of some such feedback opportunity facilitates systemic incoherence in judge-alone trials.

If the trial were before a jury, the jurors could well disagree initially, splitting 6:6, or 9:3, or 4:8, before arriving at a unanimous verdict. Without a valid empirical study, it would be speculative to suggest that twelve judges independently viewing the trial could not initially split along the same ratios. Without some empirical reason to say otherwise, there is no compelling reason to assume judges are better than lay people at assessing witnesses.³⁹ The jurors can resolve their initial differences through the give and take of their deliberations, thereby reaching unanimity and eliminating any incoherence.⁴⁰ That kind of collegial assistance, however, is not available to judges.

³⁶ See Dennis J Devine *et al*, "Jury Decision Making – 45 Years of Empirical Research on Deliberating Groups" (2001) 7:3 Psychology, Pub Pol'y & L 622.

³⁷ For a thorough discussion of the jury trial, see *The Jury in Criminal Trials* (1980) Law Reform Commission of Canada, Working Paper 27. As regards public confidence in jury trials, see 5-6: "Thus, whatever other functions are assigned to the jury, it is clearly assumed to be capable of making an accurate determination of the facts. Indeed, some commentators allege that the most compelling justification for retention of the jury is that it is a better fact-finder than the judge."

³⁸ *Ibid* at 19.

³⁹ It might be expected that some experts are better than lay people at forming intuitive judgments related to their field of expertise – in this scenario, judges that have years of experience evaluating witnesses as compared to lay jurors – and this is sometimes the case where pattern recognition can provide shortcuts. See Daniel Kahneman, *Thinking Fast and Slow* (Toronto: Doubleday Canada, 2011) at 11-12 and 234-44. However, without feedback, experts can fall into error by not knowing the limits of their expertise. Feedback is critical to pattern recognition, and there is little opportunity to jurors or judges to receive feedback about the accuracy of their decisions to rely upon a witness. Also, judges have not been shown to be better than others at spotting liars; see Paul Ekman, *Telling Lies* (New York: W.W. Norton, 1992) at 80-123.

⁴⁰ Law Reform Commission of Canada, *supra* note 37.

Judges, of course, do not make decisions in total isolation. Unlike jurors, judges are trained in the law. By studying past decisions made by other judges in like cases, trial judges engage in a form of dialogue. Where the material facts are the same, judges always seek coherence by making the same decision as was made in earlier cases.⁴¹ Lawyers do that as well, and when these past decisions resolve the new case, lawyers will almost invariably settle the matter out of court and no trial is necessary.⁴² In the remaining cases that are not settled by earlier decisions – and these will be the bulk of those that go to trial – a judge-alone is left with discretion as to how to decide the case. In such situations, the judge will not know with certainty how other judges might decide. How uncertain the judge will be about that depends on the general legal rules. Such general rules can widen or narrow the discretion a judge has, and thus the rules can expand or reduce the variability in the system.

D) Rules and Variability

What role can legal rules play in reducing or increasing systemic incoherence? ⁴³ Some insight into that question can be garnered from changes to the law on corroboration.⁴⁴ For much of common law history,⁴⁵ a judge could not have convicted John even if the judge unhesitatingly

⁴¹ The principles of *comity* and *stare decisis* instruct judges to follow the decisions in earlier cases where the legal and material facts are the same as in the case before the trial judge; see Freeman, *supra* note 1 at 1102-15.

⁴² Van Koppen and Ten Kate, *supra* note 16 at 226: “In most private law suits the outcome is uncertain, for the litigants would have settled out of court or no suit would have been brought if the final judgment had been clearly predictable.”

⁴³ Paciocco and Stuesser, *supra* note 26 (4th ed) at 506: “The conflict between *certainty* (with its underlying imperative that like cases be treated alike) and the desire to do justice in the particular case is a timeless one. It has been with us in every context since we began to formalize legal rules.”

⁴⁴ Corroboration is only one example of changes to the law of evidence that could be examined in this manner, depending on the factual issues arising in different trials. For example, the hearsay rule, which traditionally excluded certain evidence from consideration, was changed, reducing the rigidity of the rule by giving judges more discretion to allow the evidence if it met conditions of necessity and reliability; see *R v Khan*, [1990] 2 SCR 531. These more flexible principles, when applied to other rules of evidence, gave judges more discretion in other areas of the law. For example, a witness’s statement that was made outside the trial forum and later recanted at trial could be relied upon over the sworn testimony of that witness made at the trial; see *R v B (KG)*, [1993] 1 SCR 740.

⁴⁵ A rigid corroboration rule was set out in *R v Baskerville*, [1916] 2 KB 658 [*Baskerville*] and continued in force until the Supreme Court of Canada modified the rule in *R v Vetrovec*, [1982] 1 SCR 811 [*Vetrovec*].

believed the testimony of Smith.⁴⁶ In addition to her testimony, the corroboration rule required there be independent evidence that the crime was committed and that the accused committed it. Because the judge's freedom to convict was restricted, to that extent the rule reduced systemic incoherence. Whatever the public policy reasons were for the rule, one consequence was that Smith was discredited as a witness because she was a female alleging a sexual assault. For that⁴⁷ and other policy reasons,⁴⁸

⁴⁶ The rigid corroboration rule meant that for certain categories of witnesses – for example, accomplices, children and female complainants of sexual assault – the solitary testimony of such witnesses could not alone support a conviction. A rigid rule arose from the case of *Baskerville*, *ibid*, which held that corroboration had to be evidence “which confirms in some material particular not only the evidence that the crime has been committed, but also that the prisoner committed it.” On top of that rigidity, there developed a technical body of law that further complicated such trials, as is discussed further in *Vetrovec*, *ibid* at 11.

For a discussion of the rule before it was modified after 1982, see the *Study Paper, Evidence 11, Corroboration*, The Law of Evidence Project, 1975, Law Reform Commission of Canada as Reproduced by Permission of the Minister of Public Works 2007, at 6:

As a general rule the common law has developed on the basis that the testimony of a single competent witness is sufficient in law to support a verdict. However, principally within the last one hundred years, by statute, and in part by judicial decision, a number of exceptions to this general rule have been created ... Under the present law an accused cannot be convicted on the strength of the testimony of an unsworn child or of a victim of certain sexual offences unless the testimony of these witnesses is corroborated.

⁴⁷ *Ibid* at 7:

The rules requiring that the testimony of certain types of witness be corroborated ... are particularly difficult to justify in light of the fact that the testimony of every other witness, irrespective of how badly his credit has been impeached, is left to the jury and a verdict can be returned on the basis of it alone. Furthermore it is questionable whether one can rationally provide a fixed evaluation of a witness' testimony depending simply on whether that witness fits within a certain class of person.

⁴⁸ The Supreme Court of Canada's ground-breaking decision in *Vetrovec*, *supra* note 45, dealt with corroboration as it related to accomplice evidence, but the policy considerations considered in *Vetrovec* apply to corroboration generally. On the public policy aspect, see *Vetrovec* at 10-11:

There are at least three difficulties associated with the *Baskerville* definition. The first is that it tends to obscure and, indeed, confuse the reason behind the “accomplice warning” ... The second difficulty associated with *Baskerville* is [that once] it is decided that corroboration is a legal term of art, the law in the area becomes increasingly complex and technical ... The third and perhaps most serious difficulty associated with the *Baskerville* definition is that the definition itself seems unsound in principle.

corroboration rules were made more flexible in many areas of the law.⁴⁹ Indeed, evidence law became more flexible generally since the changes to corroboration,⁵⁰ and allowed ever-more discretion to the trial judge subject to the requirement that the evidence should not be received if its prejudicial effect outweighed its probative value.⁵¹ These changes to evidence law, sometimes termed the doctrine of *free proof*, are not limited to Canada and are not without opponents.⁵²

It can be assumed that the effect of removing a rule that limited judicial discretion will increase systemic incoherence,⁵³ unless replacement rules restricted judicial discretion in some similar way.

⁴⁹ David Paciocco and Lee Stuesser, *The Law of Evidence*, 6th ed (Toronto: Irwin Law, 2011) at 522:

Strict corroboration rules are becoming less common and much less technical than they once were. They are being repealed and in some cases replaced by other rules that are intended to provide guidance to triers of fact. These rules typically require warnings to be given to the triers of fact about evidence where it is particularly dangerous, although the trier of fact remains free to act upon it.

⁵⁰ Paciocco and Stuesser, *supra* note 26 (4th ed) at 4-5. See also the 6th edition of this text, *ibid* at 8:

The law of evidence was already moving to more flexible standards as part of a general trend to make the law more functional and less technical. In Canada, however, two particular social developments accelerated and amplified the shift to a “purposive” or principled, context-based approach. The sexual offence awakening and the *Canadian Charter of Rights and Freedoms* each showed the underperformance of the law of evidence to be intolerable and led to a wholesale change in the way the rules of proof operate.

⁵¹ *Ibid* in the 6th edition at 10-11.

⁵² Alex Stein, “The Refoundation of Evidence Law” (1996) 9 Can JL & Jur 279 at 279:

This article examines and criticizes the conventional evidence doctrine and its core principle (albeit with exceptions) of legally unregulated fact-finding ... This article opposes the doctrine of “free proof.” That doctrine underlies the current flowering of discretion in judicial fact-finding and is responsible for the ongoing abolition of evidentiary rules.

And at 281:

Archaic rules, which once exerted sever constraints upon the admission of potentially probative evidence, have been abrogated ... Judicial fact-finding has become an almost uninhibited inquiry into relevant past events. Its main focus has been shifted to the “weight” or “probative value” of the evidence, and it is common sense, not Common Law, that presently functions as its principle guide.

⁵³ Paciocco and Stuesser, *supra* note 26 (4th ed) at 500:

In the law of evidence, certainty and formal justice have taken a back seat to the desire to reach a result that is substantively “just” in the case at hand. There are at least two reasons for this change. The first is the proclamation of the *Charter*. The second is the felt need to protect the victims of offences. These forces will continue to dictate the direction the law of evidence takes.

Mindful of the twin goals – protecting the accused from wrongful conviction and providing complainants with a fair opportunity to have their stories believed and relied upon – judges continued to develop relevant precedents in the post-corroboration era.⁵⁴ The focus of these later cases was upon the adequacy of the trial judge's reasons for relying upon or for rejecting the testimony of pivotal witnesses.⁵⁵ Different replacement rules have been considered but then rejected because their adoption would have the same effect as corroboration – that is, such rules would arbitrarily diminish the independent credibility of a complainant like Smith. For example, a rule could require a judge to justify his or her belief in Smith's testimony by other evidence in the trial – that is, her word alone would not be enough. Such a rule would again categorically diminish the independent credibility of Smith as a witness and treat her differently from other credibility contest witnesses.⁵⁶ No similar rule applies to most other

⁵⁴ *Ibid* at 507:

We can expect continued guidance to be provided in the application of open-textured rules. Even though some courts will resist it, this guidance will have the effect of reducing the flexibility of rules – and inevitable result in a system of precedent. This is not to say that we are going to abandon our effort to keep the rules of evidence responsive on a case-by-case basis. The more appellate decisions we have, though, the less flexibility there will be.

⁵⁵ See Stewart, *supra* note 3 at 20:

A Canadian judge presiding over a criminal trial and sitting without a jury has a duty to give reasons for his decision to convict or to acquit the accused ... In 2002, the Supreme Court of Canada held that these propositions of law, once quite uncertain, were part of the Canadian system of criminal justice, and in five decisions released in 2008...the Supreme Court's general comments about the content of the duty may well be read as requiring less explicit reasoning than many readers of the earlier decisions had thought. This possible diminution of the content of the duty is particularly clear in the Court's articulation of the trial judge's duty to give reasons for adverse credibility findings and for assessing the accused's testimony ...

⁵⁶ This possible replacement rule was inferentially discussed and rejected in *R v Gagnon*, 2006 SCC 17, [2006] 1 SCR 621 [*Gagnon*]. The Supreme Court of Canada divided in this decision, and their differences reflect a tension felt in the aftermath of changes to the rigid corroboration rule. Neither the majority nor the dissenting judges described their opinions in such stark terms as in the above text. However, within the issues relevant to this paper, the debate among judges over the adequacy of a trial judge's reasons can be seen to be within the context of corroboration law; namely, is the foundation of trust in the complainant's testimony inductively justified by the other evidence in the case. Although the judges in *Gagnon* framed their opinions in terms of legal standards of appellate review, the decision can be seen as indirectly, but intentionally, dealing with the legal repercussions surfacing after the change to the law of corroboration.

In their dissent, Deschamps and Fish JJ agreed with the majority in the Quebec Court of Appeal that the trial judge's reasons were inadequate to support her credibility

witnesses.⁵⁷ Another possible replacement rule might hold that the judge cannot disbelieve John's testimony solely on the strength of the judge's belief in Smith's testimony.⁵⁸ Since John cannot be convicted unless his testimony is disbelieved,⁵⁹ he would be acquitted under such a rule unless there was additional evidence to Smith's testimony. Since such a rule would also arbitrarily diminish the independent credibility of Smith's testimony in the same way the rigid corroboration rule did, the Supreme Court of Canada rejected this option.⁶⁰

There appears to be no legal rule that would reduce systemic incoherence without simultaneously impairing Smith's fair opportunity to convince a judge to convict on her testimony alone.

E) Balancing Rules and Discretion

As appeal courts construct legal rules, they focus on individual cases and not on systemic incoherence. Among other considerations, they concentrate on balancing the twin goals of protecting the accused from wrongful conviction and providing complainants with a fair opportunity to

findings. The majority of the court (Bastarache, LeBel and Abella JJ) found the reasons given by the trial judge sufficiently supported her guilty verdict; see e.g. *ibid* at para 11

Ignoring both this Court's dictum in *Burke* and the unique position a trial judge enjoys in being able to see and hear the witnesses, the majority chose instead to substitute its own assessment of credibility for that of the trial judge by impugning her reasons, saying she did not sufficiently explain why the evidence did not raise a reasonable doubt. We disagree ...

⁵⁷ Law Reform Commission of Canada, *supra* note 46 at 6: "As a general rule the common law has developed on the basis that the testimony of a single competent witness is sufficient in law to support a verdict." See also *Vetrovec*, *supra* note 45 at 7: "The common law, rejecting the 'numerical criterion' common to some legal systems, has traditionally held that the testimony of a single witness is a sufficient basis for a criminal conviction."

⁵⁸ This replacement rule was applied by the Ontario Court of Appeal in *R v YM* (2004), 71 OR (3d) 388 (CA) at para 30.

⁵⁹ *W(D)*, *supra* note 32.

⁶⁰ *R v REM*, 2008 SCC 51, [2008] 3 SCR 3 [*REM*] at para 66:

Finally, the trial judge's failure to explain why he rejected the accused's plausible denial of the charges provides no ground for finding the reasons deficient. The trial judge's reasons made it clear that in general, where the complainant's evidence and the accused's evidence conflicted, he accepted the evidence of the complainant. This explains why he rejected the accused's denial. He gave reasons for accepting the complainant's evidence, finding her generally truthful and "a very credible witness," and concluding that her testimony on specific events was "not seriously challenged" (para. 68). It followed of necessity that he rejected the accused's evidence where it conflicted with evidence of the complainant that he accepted. No further explanation for rejecting the accused's evidence was required. In this context, the

have their stories believed and relied upon. In pursuit of these twin goals, the Supreme Court of Canada can be seen to strike a balance through rules of fairness, accountability and transparency. For complainants like Smith in the above scenario, the Court ruled that judges could believe her testimony without requiring independent corroboration of it.⁶¹ Where the trial judge accepted and relied upon Smith's testimony, the Court also held that John's evidence could be rejected where it conflicted with the evidence of Smith and that "no further explanation for rejecting the accused's evidence was required."⁶² The Court fostered accountability and transparency for accused persons by requiring trial judges to provide reasons that allow for a meaningful appeal,⁶³ including giving reasons for their credibility assessments.⁶⁴ In addition, guidelines in the legal framework⁶⁵ call upon judges to exercise caution and reflection⁶⁶ before relying on Smith's testimony if her testimony was pivotal to the decision. If Smith's reliability was put into question by some evidence,⁶⁷ then the Supreme Court cautioned that it was dangerous (but not forbidden⁶⁸) to convict by relying on her testimony alone⁶⁹ unless other evidence supported

convictions themselves raise a reasonable inference that the accused's denial of the charges failed to raise a reasonable doubt.

⁶¹ See sources cited *supra* notes 48 and 56.

⁶² *REM*, *supra* note 60.

⁶³ A significant precedent in this regard was established by the Supreme Court of Canada in *R v Sheppard*, 2002 SCC 26, [2002] 1 SCR 869. See Appendix A, Third Part, for a brief summary of the requirements.

⁶⁴ *Gagnon*, *supra* note 56 at paras 19-20.

⁶⁵ See Appendix A for more detail.

⁶⁶ See Appendix A, Third Part, for the *Vetrovec* cautionary steps.

⁶⁷ See *Vetrovec* *supra* note 45 at paras 14-15:

I would only like to add one or two observations concerning the proper practice to be followed in the trial court where as a matter of common sense something in the nature of confirmatory evidence should be found before the finder of fact relies upon the evidence of a witness whose testimony occupies a central position in the purported demonstration of guilt and yet may be suspect by reason of the witness being an accomplice or complainant or of disreputable character. ... What may be appropriate, however, in some circumstances, is a clear and sharp warning to attract the attention of the juror to the risks of adopting, without more, the evidence of the witness. ... All this takes one back to the beginning and that is the search for the impossible: a rule which embodies and codifies common sense in the realm of the process of determining guilt or innocence of an accused on the basis of a record which includes evidence from potentially unreliable sources such as an accomplice.

⁶⁸ *R v Khela*, 2009 SCC 4, [2009] 1 SCR 104 at para 37 [*Khela*]. The Supreme Court of Canada approved a framework for a *Vetrovec* warning that included as its third step "cautioning the jury that it is dangerous to convict on unconfirmed evidence of this sort, though the jury is entitled to do so if satisfied that the evidence is true."

⁶⁹ Although it is rare, a conviction can result from a trial where the evidence consists of only one witness, even if the witness is potentially unreliable and subject to a

her reliability as a witness.⁷⁰ Such rules do not pre-determine the verdict to the same degree as did the former corroboration rule. As a consequence, the replacement rules likely do not reduce systemic incoherence to the previous corroboration-era levels.

The above law is a limited summary of a number of precedents that illustrate the issues raised in this paper. The precedents in this area are complex and nuanced; the legal ground can be seen to shift over time,⁷¹ making the law in this field a work in progress.⁷² The question of corroboration rules continues to be a background and contested issue, albeit often obliquely addressed under different topics, such as adequacy of reasons. The purpose of this article is not to examine the issue of corroboration in that larger policy context. I accept the underlying wisdom of the Supreme Court decisions as outlined above. The precedents are outlined in order to examine the nature of systemic incoherence, rather than to engage in the broader discussion of the need for corroboration.

F) Systemic Incoherence Out of View

Appellate judges, while aware that different judges can give different verdicts,⁷³ have not addressed that variability as a problem of systemic

Vetrovec caution; see *R v AA*, 2013 ONCA 466, (2013), 108 WCB (2d) 93 at para 7, upholding a conviction and sentence of 27 months incarceration based on a “very short one-witness trial.”

⁷⁰ For further discussion on the nature of such confirmatory evidence, see *Khela*, *supra* note 68 at paras 39-43 for the majority, and at paras 67-86 for the concerns expressed by Deschamps, J about the implications of the majority view. See also the Supreme Court’s further consideration of the topic in *R v Smith*, 2009 SCC 5, [2009] 1 SCR 146.

⁷¹ Paciocco and Stuesser, *supra* note 26 (4th ed) at 507.

⁷² Emma Cunliffe, “Sexual Assault Cases in the Supreme Court of Canada: Losing Sight of Substantive Equality?” (2012) 57 SCLR (2d) 295 at 296:

My analysis shows that substantive equality reasoning has not yet infused judicial approaches to fact determination in sexual assault cases, and that individual complainants are not yet fully protected against the operation of myths and stereotypes when consent or credibility are at stake. I suggest in conclusion that the Supreme Court of Canada has a leading role to play in moving judicial reasoning towards a more egalitarian approach to fact determination.

⁷³ See *R v Biniaris*, 2009 SCC 15, [2009] 1 SCR 381 [*Biniaris*] at para 24:

Triers of fact, whether juries or judges, have considerable leeway in their appreciation of the evidence and the proper inferences to be drawn therefrom, in their assessment of the credibility of witnesses, and in their ultimate assessment of whether the Crown’s case is made out, overall, beyond a reasonable doubt. Any judicial system must tolerate reasonable differences of opinion on factual issues. Consequently, all factual findings are open to the trier of fact, except unreasonable ones embodied in a legally binding conviction. Although reasonable people may

incoherence. One reason is that, as some appellate judges have noted, they are in no better position than the trial judge to assess the credibility of witnesses.⁷⁴ For that reason, appellate judges defer both to the trial judge's credibility assessments of witnesses and to the trial judge's over-all decision, provided the trial judge has not made a palpable error.⁷⁵ Another reason appellate judges give for deferring to trial judges is the need for finality.⁷⁶ As a consequence, legal precedents do not bring the problem of systemic incoherence – the failure to treat like cases alike – into view, unlike the situation appellate courts face when reviewing sentences imposed at the trial level.⁷⁷ In sentencing regimes, the appellate court is able to reduce sentencing disparity significantly because the relevant factors (such as nature of the crime, severity, record, remorse, rehabilitation, and victim impact) are commensurate across cases. Over time, the appeal court can review sentences for like cases from a variety of trial judges, and over time, provide guidelines and sentencing ranges that trial judges can more consistently apply in future cases. In sentencing an offender, factors like the demeanour and reaction of the witness before the court, are much less

disagree about their appreciation of the facts, a conviction, which conveys legality, authority and finality, is not something about which reasonable people may disagree. A conviction cannot be unreasonable, except as a matter of law, in which case it must be overturned.

⁷⁴ *HL v Canada (Attorney General)*, 2005 SCC 25, [2005] 1 SCR 401 [*HL*] at para 57, where the majority accepted the following proposition of the governing principles in England:

As a general principle, an appeal court must not interfere with findings of fact made by the lower court for the simple reason that the judge who saw and heard the witnesses is better placed to assess their reliability and draw inferences from their testimony. An appeal court will interfere only if it concludes that no reasonable court could have reached such conclusion, or if the lower court failed to take crucial factors into consideration.

See also *Housen v. Nikolaisen*, 2002 SCC 33, [2002] 2 SCR 235 at paras 1, 4 [*Housen*].

⁷⁵ See *Gagnon supra* note 56 at para 10.

⁷⁶ See *HL, supra* note 74 at para 67, where the Court approved of an earlier statement on the need for finality: "... [A] panoply of policy reasons command appellate deference. These include the need to limit the cost of litigation and to promote the autonomy of trial proceedings, two reasons that are unrelated to the superior vantage point of the trial judge in hearing *viva voce* evidence." See also *Housen, supra* note 74, where McLachlin CJC noted that although deference is frequently invoked in decisions, the grounds for the principle of deference are rarely explained. In paras 10-16, she explains the reasoning behind the principle under three headings: 1) limiting the number and cost of appeals; 2) promoting the autonomy and integrity of trial proceedings; and 3) recognizing the expertise of the trial judges and their advantageous position.

See also *R v Brown*, [1993] 2 SCR 918 at paras 11 and 13; *Housen, supra* note 74 at para 4.

⁷⁷ See sources cited *supra*, note 8 for some relevant Canadian studies on sentencing disparities.

relevant than they are in a trial where such factors can determine whether the trial judge does or does not believe and rely upon the witness. That pivotal opportunity is not available to appellate judges.

When the criminal justice system is looked at through the lens of legal precedents there is little scope to consider or detect systemic incoherence. In that framework of analysis, the judicial focus is necessarily on the *individual coherence* of the trial judge's reasons. By that focus of attention, *systemic incoherence* is not brought into view. The existence or extent of systemic incoherence, which becomes visible in a comparison of a number of like cases, is obscured⁷⁸ by this "one case at a time" process: each trial judge provides reasons to support and explain the reasonableness of the individual decision arrived at. Each appellate judge defers to the trial judge's verdict if the reasons are internally coherent, supported by the evidence in the trial, and free of palpable error.

Where, then, does that leave the issue of systemic incoherence? Examination of the trial of John and the applicable legal rules suggest that systemic incoherence – whatever its extent – will not be easily detected without the capability to compare like cases. Such a comparative perspective is limited in the one-case-at-a-time focus of trial and appellate judges. Therefore, for the justice system to be able to address systemic incoherence, additional study and research would be needed to focus on this otherwise obscured problem.⁷⁹

⁷⁸ Sunstein *et al*, *supra* note 10 at 1161: "...[A]ny effort to proceed 'one case at a time' will produce serious problems, because of identifiable features of human cognition."

⁷⁹ *Ibid* at 1203-1204:

Coherence is important; it seems to be a minimum requirement of rationality We have emphasized throughout that for any single person, or jury, the achievement of coherence is an exceptionally difficult cognitive task. But steps in the direction of coherence are far less difficult at the level of institutional design. We close with the suggestion that the practical remedies for predictably incoherent judgments are institutional; they involve the creation of frameworks for decision that ensure a pattern of judgments that, when taken as a whole, reflective people could endorse. Perhaps this seems an unrealistically ambitious aspiration. But something of just this sort underlies many of the most impressive institutional innovations of the twentieth century. It should not be too much to expect twenty-first century institutions to build on these precedents, bringing a measure of rationality and sense to areas of the law that now lack them.

3. *Systemic Incoherence*

A) *Paradox of Fairness*

Two fairness ideals of the adversarial trial process appear to collide in cases such as the scenario reviewed above. The fairness ideal that like cases should be treated alike (in outcome as well as process) appears to be sometimes incompatible with the fairness ideal of a judge's freedom to respond to the merits of the opposing sides' case and arguments. Systemic incoherence – that individual judges could decide the same case differently – is a by-product and consequence of an independent and impartial⁸⁰ tribunal's power to make fair decisions in an adversarial process. Such systemic incoherence is tolerable because of the need for independent judges to have sufficient discretion to decide cases fairly. The inevitable consequence of that discretion is that judges may reasonably disagree about the verdict, and consequently like cases may not be treated alike. Do these justifiable examples take account of all occurrences of systemic incoherence? Likely not, and when these other instances that serve no justice purpose are identified, they should surely be reduced where possible. But how, given the mostly invisible nature of systemic incoherence, can the justifiable instances of it be separated from the unjustifiable ones?

This article does not presume to provide specific answers to this and other difficult questions brought to the foreground when criminal justice verdicts by judges are viewed through the lens of systemic incoherence. The primary purposes here are to draw attention to the presence of systemic incoherence in criminal justice⁸¹ and to bring into focus underlying issues that are otherwise less visible.

⁸⁰ *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act, 1982*, being Schedule B to the *Canada Act, 1982* (UK) 1982, c 11, s 11 (d): "Every person charged with an offence has the right to be presumed innocent until proven guilty according to law in a fair and public hearing by an independent and impartial tribunal."

⁸¹ There are other sources of systemic incoherence besides the trial process. For example, prosecutors have a duty not to proceed with a criminal charge unless there is a reasonable likelihood of conviction. Different prosecutors may apply that test differently, with the result that like cases are not treated alike – some go forward and some are removed from the system – and so long as such decisions are made honestly and in good faith, they are protected by the doctrine of prosecutorial discretion; see *Krieger v Law Society of Alberta*, 2002 SCC 65, [2002] 3 SCR 372.

B) Mistaken Presupposed Agreement

One reason why systemic incoherence occurs is that different unstated assumptions lead different judges to apply an accepted rule differently.⁸² If systemic incoherence is to be reduced in such instances, then some means is required to bring such differing, underlying assumptions to light.

For example, the standard of “proof beyond reasonable doubt” as set out in Appendix A, Part Three, is sufficiently vague as to result in different judgment calls.⁸³ Such disagreements are tolerable if they are within a range of reasonable and acceptable judgement. But they would not be tolerable if such disagreements were caused by an unstated, erroneous application of the test of reasonable doubt. For example, one judge may believe Smith’s testimony and have a sense of unease about John’s testimony, leading this judge to accept her evidence and reject his. After applying the legal test of proof beyond reasonable doubt, the judge convicts John. Another judge also believes Smith’s testimony and also has a sense of unease about John’s testimony, but feels it is unsafe to convict based on such conflicting evidence. “It’s her word against his. How can I be sure and how is it safe to convict without more evidence? Would my judicial colleagues convict on this evidence? Isn’t this what reasonable doubt means?” asks the second judge, who then acquits John based on the test of reasonable doubt.

The disagreement between the two verdicts is not simply a disagreement in judgment. It is the application of two different interpretations of reasonable doubt that are hidden beneath the apparent agreement on the legal test of proof beyond reasonable doubt. The second judge is not simply left with a reasonable doubt based on the total evidence. That judge is applying a standard that would lead to an acquittal in all credibility contest cases such as in the trial of John. The second judge, as described in this example, is essentially requiring some form of corroboration whereas

⁸² John McCumber, *Reshaping Reason: Toward a New Philosophy* (Bloomington: Indiana University Press, 2005) at 5 describes situations “in which two sides disagree but cannot resolve their dispute because it presupposes hidden, but mistaken, agreement.”

⁸³ The vagueness of the test is apparent from a reading of the text of the decisions, which set a standard similar to those used throughout Common Law jurisdictions. To paraphrase the two most important Canadian cases: The reasonable doubt standard is a single, objective and exacting standard of proof. It is not the same as a proof of probability, and it is not like subjective standards of care that we apply in important everyday situations. It is not proof to an absolute certainty. It is not proof beyond *any* doubt nor is it an imaginary or frivolous doubt. It is based on reason and common sense, and not on sympathy or prejudice. See *R v Lifchus*, [1997] 3 SCR 320 at para 36 (proof beyond reasonable doubt falls much closer to absolute certainty than to proof on a balance of probabilities); *R v Starr*, 2000 SCC 40, 2000 2 SCR 144 at para 236.

the first judge is not. Both would give reasons that are internally coherent based on the agreed test of “proof beyond reasonable doubt.” The apparent agreement on the test, however, conceals an underlying disagreement that is exact, different and not vague. As such, if the hidden difference of interpretation could be brought to light, it could be corrected so that in future both judges would apply the same interpretation of the test of “proof beyond reasonable doubt.” Given the vagueness of the test, the two judges might disagree on any particular case, but it should not, however, result in a persistent verdict of acquittal by the second judge.⁸⁴

C) *Feedback Limited*

Unexamined assumptions can sometimes be exposed through dialogue that forces closer examination of seemingly agreed upon premises. Although jurors have such an opportunity to challenge each other through dialogue, that kind of feedback is not available to judges sitting alone on trials. The unanimous verdict of twelve jurors is the measure of protection in the common law system.⁸⁵ This confidence in the jury system is in part because of the opportunity for dialogue⁸⁶ and feedback among the jurors.⁸⁷

⁸⁴ It should be noted that such hidden disagreement can show up in either direction. For example, a judge may unconsciously believe all police officers unless something in the evidence shows them unworthy of trust. In such cases, the judge might convict far more often than other judges that had a more open approach to reasonable doubt.

⁸⁵ Ronald Dworkin, *A Matter of Principle* (Cambridge: Harvard University Press, 1985) at 90-91:

It is hard to resist supposing that the number actually chosen [12 jurors instead of 10 or 14] was in large part fortuitous. But the number of jurors is plainly so important a consideration in guarding an accused against injustice, when a unanimous verdict is required to convict him, that any substantial change in that number for capital cases or cases threatening severe punishments – say reducing the number to six – would count as a violation of the rights of the accused just because it would be a substantial diminution in the level of safety provided at the centre of the criminal process for so long.

For a history of the jury’s role in the development of the concept of reasonable doubt see James Q. Whitman, “The Origins of ‘Reasonable Doubt’” (2005), *Faculty Scholarship Series Paper 1*, online: <http://digitalcommons.law.yale.edu/fss_papers/1>.

⁸⁶ See Law Reform Commission of Canada, *supra* note 37 at 5-6:

... [T]he jury’s deliberative process contributes to better fact-finding because each detail is explored and subjected to conscious scrutiny by the group. In this context a group decision-making process is generally more satisfactory than that of a single person because it must be oral and audible without any issues being only mentally, and therefore silently, taken for granted.

⁸⁷ Devine *et al*, *supra* note 36 at 690:

Common sense suggests that the nature of the jury’s discussion during deliberation is a primary determinant of a jury’s verdict. This notion has been promoted in the media through films such as “Twelve Angry Men” (1957) that depict deliberation as

An accused does not always have the option of a jury trial.⁸⁸ Should more accused be given access to jury trials? Or, could some methods be devised to provide some form of feedback to a judge alone? How can a judge sitting alone on a trial unearth the unstated, typically hidden, assumptions influencing the decision? Some opportunity for feedback is provided by the discussions between the lawyers and the judge during the trial. Similarly, the nature of writing reasons provides another opportunity for reflective feedback, but this is limited because judges are at that point focussed on explaining their verdicts and not on bringing to light any hidden assumptions. With whom, and/or by what methodology, can judges engage in additional dialogue and feedback as part of their reflecting upon the case before them?

D) Institutional Design Limitations

Is it necessary in credibility contest trials to limit a judge-alone to one of only two verdicts – guilty or not guilty?⁸⁹ Although jury trials are limited to the same two verdicts, jurors are not forced to opt for one or the other. If jurors cannot agree on either one verdict or the other, the result is a mistrial with no verdict.⁹⁰ Thus, systemic incoherence is indirectly both allowed and provided for in that criminal jury process. It is not, however, recognized and/or available as an outcome in trials before a judge alone.⁹¹ In part this is because finality⁹² and closure are achieved by limiting and

the convergence of reason, eloquence, and open-mindedness. Kalven and Zeisel's (1966) surprising finding that the initial majority almost always carries the day has no doubt suppressed some scientific interest in studying deliberation, but its potential to affect the decision-making process remains.

⁸⁸ See Steering Committee on Justice Efficiencies and Access to the Justice System, *Report on Jury Reform*, May 2009, Department of Justice Canada at III. Options, Discussions and Recommendations, 3.1 "The Right to Jury Trial."

⁸⁹ See McCumber, *supra* note 82 at 40 for discussion on the limitation of bivalence, which is "the view that any assertion is either wholly true or wholly false, that there are no third possibilities and no degrees."

⁹⁰ Law Reform Commission of Canada, *supra* note 37 at 19. The number of hung juries is small, according to surveys by the Commission, amounting to 1.02% (14/1370) of all jury trials in Canada in 1976-77.

⁹¹ See Elster, *supra* note 4 at 99:

... [R]esistance to compromise must be due to the resistance to acknowledging the indeterminacy of fact or law. The elaborate system of the law presupposes that judges must and therefore can reach a clear-cut decision. The decision may be close, but it is not allowed to be indeterminate ... As arguments for this principle, Coons mentions incentive effects on litigants, juries and judges. More cases might be brought, and each case might be less carefully considered, if compromises were allowed.

⁹² *HL*, *supra* note 76.

forcing the judge to choose one of two options.⁹³ When our demands for categorical certainty, however, are carried too far we lose the opportunity to find other promising ways of dealing with the dispute.⁹⁴ Is it wise to rule out consideration of other options⁹⁵ and limit the verdicts to either guilty or not guilty? What a verdict might be is not obvious. In Scotland, the three-verdict options of “guilty,” “not guilty” and “not proven” are sometimes recommended in this regard; but that three-verdict regime was recently considered worthy of review by the Scottish government, which recommended removing corroboration requirements and abolishing the option of a “not proven” verdict.⁹⁶

If additional verdicts are not feasible, could a new process be developed that is different from the adversarial criminal trial – a new process which by agreement of the prosecutor, the accused and the

⁹³ Law Reform Commission of Canada, *supra* note 37 at 31, where a related issue of finality arises in jury verdicts that do not require unanimity:

Again, although there is no data, one cannot help but think that the accused would be more willing to accept the verdict, and less likely to attempt to rationalize his conviction, if he knew that the jurors had to be unanimous in their findings. Indeed, introducing majority verdicts would result in three kinds of verdicts: acquittal, conviction by a majority, and conviction by a unanimous jury ... [A] judge noted that if verdicts were by majority rather than unanimity] “There would remain in the accused’s mind after his trial the thought that the minority believed in his innocence and he would be dissatisfied with the system.”

⁹⁴ Nicholas Rescher, *Paradoxes – Their Roots, Range, and Resolution* (Chicago: Open Court, 2001) at 52:

However, the rigorism of rejecting all considerations of mere plausibility outright carries a price. For when we carry our demands for categorical certainty too far we do so at the price of ignorance – of losing promising answers to our questions. The main aim and purpose of the present deliberations is to show in detail that inconsistency is no fatally final flaw and that paradox need not issue in perplexity.

⁹⁵ For an example of how fuzzy logic manages bivalence, see Gerald TG Seniuk, “Credibility Assessment, Fuzzy Logic and Common Law Trials” in Barry S Cooper, Dorothee Griesel and Marguerite Ternes, eds, *Applied Issues in Investigative Interviewing, Eyewitness Memory and Credibility Assessment*, (New York: Springer Science + Business Media, 2013) 19.

⁹⁶ See Scottish Government, “Reforming Scots Criminal Law and Practice: Additional Safeguards Following the Removal of the Requirement for Corroboration: Analysis of Consultation Responses”, online: <<http://www.gov.scot/publications/2013/06/1213/5/>>. This report notes that “[t]he main theme to emerge was that most respondents, across respondent groups, would like to see the not proven verdict abolished.” Three key reasons are given for abolishing the verdict. It is difficult to explain to juries, judges equate it with not guilty, and it offends the presumption of innocence. As regards the presumption of innocence, the jurisprudence of the European Court of Human Rights has extended that central protective notion to preclude expressions of suspicion by the courts after acquittal.

complainant could be used in place of a criminal trial? If by opting for this alternative process the parties were foreclosed from a criminal trial, then the interests of closure and finality could still be served. Would systemic incoherence be reduced by making available such optional processes? The provincial courts across Canada and their equivalent jurisdictions in the United States have been especially innovative in devising new processes or specialty courts to address areas of conflict with which the usual court systems are ill-equipped to deal. These therapeutic, restorative justice and problem-solving approaches, both in Canada and the US, have included Gladue courts and sentencing circles for aboriginal matters, drug court, community court, domestic violence court, driving while impaired court, family dependency treatment court, re-entry court, gun court, homeless court, mental health court, tribal healing to wellness court, truancy court and veterans treatment court.⁹⁷

Others have suggested that panels of three judges should provide greater accuracy in fact finding. Not everyone agrees that the jury is the most accurate method of trial. Williams, for example, preferred the three-judge model: “Trial by three judges, giving reasons for their decision and subject to correction on appeal, should in all human experience be a better trial than a jury; if it is not, there must be something gravely wrong with our method of appointing judges.”⁹⁸ This suggestion has received little attention in Canada, although the Supreme Court of Canada noted that such a process is not a constitutional requirement for a fair trial.⁹⁹

E) Unconscious Thinking Errors

Psychologists inform us about hidden, unconscious thinking errors that can influence or even undermine our supposed rational decision making.¹⁰⁰

⁹⁷ Hon Sheila Whelan, “Problem-Solving and Therapeutic Approaches to Justice in Canada’s Courtrooms” (2014) 37:1 *Prov Judges’ J* 12. Judge Whelan notes: “The real challenge for the next decade is for our judges to broadly and effectively expand the use of therapeutic justice in their courtrooms, to apply wherever it is feasible the principles and effective practices we have learned, and in so doing change the way justice is rendered.”

⁹⁸ Williams, *supra*, note 29 at 299.

⁹⁹ *R v Lippe*, [1991] 2 SCR 114 at 142.

¹⁰⁰ Kahneman, *supra* note 39. Recent medical discoveries have altered our understanding of how the brain works. See *infra* note 102. We now know more about thinking than was ever known before, and partly for that reason, some see the need for new ways of thinking about thinking. See Patrick Finn, *Critical Condition-Replacing Critical Thinking with Creativity* (Waterloo: Wilfrid Laurier University Press, 2015) at 27-28:

Researchers who focus on the way we think – from neuroscience, psychiatry, psychology, philosophy, and a number of other areas – have fundamentally altered

Yet, the justice ideal of treating like cases alike is founded upon the expectation of our making rational judgments.¹⁰¹ Cognitive studies are now finding that these non-rational influences can significantly interfere in rational decision making.¹⁰² Additionally, studies of jury decision making have proliferated since the middle of the last century.¹⁰³ Similarly, political scientists have studied how personal judicial characteristics might affect decision making.¹⁰⁴ What illumination might this knowledge bring to our understanding of the factors contributing to systemic incoherence and of how such factors might be counter-acted? It has always been recognized that personal background differences – our different life experiences – can lead us to weigh evidence differently and thus to disagree about the conclusions to be drawn.¹⁰⁵ Legal scholars have expressed concern about

our understanding of how the mind works. Over the past few decades no other area of research in the academy has come as far (you may wonder about information technology, but for a variety of reasons that has been largely a private-sector revolution) ... We now know more about knowing than ever before ... One last thought experiment: ask yourself how much change has actually occurred in the world of critical thinking. Our world has changed in myriad ways, yet our operating system for engaging with it has not.

¹⁰¹ Freeman, *supra* note 1 at 1534:

A society with judges expects them to iron out those troublesome cases it takes to them ... It expects them to solve disputes in a rational way. It would not meet these expectations if a judge were to toss a coin ... The paradigm of a rational decision is one reached according to rules, principles or standards. Adjudication according to rules, etc., means that an *ad hoc* decision-making process is deprecated.

¹⁰² Michael S Gazzaniga, *Who's in Charge? – Free Will and the Science of the Brain* (New York: Ecco-HarperCollins, 2011); Antonio Damasio, *Self Comes to Mind – Constructing the Conscious Brain* (New York: Vintage 2012); David Eagleman, *Incognito – The Secret Lives of the Brain* (Toronto: Penguin Canada, 2011). These and other books make cognitive science available to the public, and alert us to the unconscious influences in our decision-making.

¹⁰³ Devine *et al*, *supra*, note 36; this study provides a comprehensive review of the empirical research on jury decision making between 1955 and 1999.

¹⁰⁴ Drobak and North, *supra* note 22 at 135:

For over a decade, a branch of political science has attempted to explain case outcomes with empirical methodology that focuses on characteristics of judges, such as whether they are liberal or conservative or whether they were appointed by a Republican or Democrat President. This approach jars legal scholars because it completely disregards the effects of legal doctrine. What this approach does, however, is demonstrate that something other than doctrine strongly influences the outcome of many cases. It shows the importance of the hidden factors, even though it does not help us understand what they are or how they influence the results.

See Isaac Unah and Ange-Marie Hancock, “U.S. Supreme Court Decision Making, Case Salience, and the Attitudinal Model” (2006) 28:3 L & Pol’y 295.

¹⁰⁵ See Polya, *supra* note 5 at 111:

We both perceive that this circumstance renders the evidence for A stronger. Yet one of us says “just a little stronger,” the other says “a lot stronger,” and we keep on

how these background differences influence judicial decision making.¹⁰⁶ The new psychological studies now inform us in much more detail about how deep and pervasive these non-rational influences can be.¹⁰⁷ Judges,

disagreeing. We are both perfectly honest, I think, and our disagreement is not merely a matter of temperament. We disagree because his *background* is different from mine...At any rate, such differences in our backgrounds may explain the situation: we disagree concerning the strength of the evidence, although we agree in all the clearly recognizable points that should influence the strength of the evidence in an impersonal judgement according to universally accepted reasonable standards.

¹⁰⁶ Legal realists argued that the internal coherence of reasons masked deeper, unstated foundations of a decision; see Ronald Dworkin, *Taking Rights Seriously* (Cambridge: Harvard University Press, 1977) at 3:

Early in this century [various authors] published skeptical accounts of the judicial process, debunking the orthodox doctrine that judges merely apply existing rules. This skeptical approach broadened, in the 1920s and '30s, into the powerful intellectual movement called "legal realism." Its leaders...argued that orthodox theory had gone wrong because it had taken a doctrinal approach to jurisprudence, attempting to describe what judges do by concentrating on the rules they mention in their decision. This is an error, the realists argued, because judges actually decide cases according to their own political or moral tastes, and then choose an appropriate legal rule as a rationalization. The realists asked for a "scientific" approach that would fix on what judges do, rather than what they say, and the actual impact their decisions have on the larger community.

¹⁰⁷ Jonathan Haidt, *The Happiness Hypothesis: Finding Modern Truth in Ancient Wisdom* (New York: Basic Books, 2006) at 17:

The automatic system has its finger on the dopamine release button. The controlled system, in contrast, is better seen as an advisor. It's a rider placed on the elephant's back to help the elephant make better choices. The rider can see farther into the future, and the rider can learn valuable information by talking to other riders or by reading maps, but the rider cannot order the elephant around against its will. I believe the Scottish philosopher David Hume was closer to the truth than was Plato when he said, "Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them."

For an expansion and correction of this metaphor, see Joseph Heath, *Enlightenment 2.0: Restoring Sanity to Our Politics, Our Economy, and Our Lives* (New York: HarperCollins, 2014) at 22-23:

But a crucial piece of the picture is missing in Haidt's scenario. Imagine that the rider also has the ability to hop off and rearrange things on the ground, in order to redesign the environment the elephant is moving through. This opens up a whole new world of possibilities. Now if you want the elephant to go left, rather than ineffectually kicking him and yelling at him to go in that direction, you can just hop off and put something that he's afraid of on the right (perhaps a mouse?). Once you get back on, you are controlling the elephant – it's just that you are no longer doing so directly. Your control of the elephant may be environmentally mediated, but it is still control, and ultimately that is what counts.

like the public generally, are aware of this new and growing knowledge,¹⁰⁸ but this by itself cannot create the kind of institutionally sanctioned practices that judges could apply in their courts. Further study would be required to assess if and how the justice system might adapt this new knowledge.

Could the judicial system make use of computer programs – as are used in other disciplines – that can help reduce the unwanted influence on decision making of non-rational factors?¹⁰⁹ How, or can, such practical applications be developed for use by trial judges or juries? Computerized decision-making cannot replace judges or juries in the common law system.¹¹⁰ In a trial under common law traditions, each side must have a reasonable and fair opportunity to convince the decision maker, resulting

¹⁰⁸ Judges, through their private reading and by judicial educational programs, are making themselves aware of these issues described by cognitive scientists; see Pamela Casey, Kevin Burke and Steve Leben, “Minding the Court: Enhancing the Decision-making Process” (2013) *Court Review – The Journal of the American Judges Association* 76 at 76: “Scientists carefully study how our brain processes information, though judges rarely consider these studies. But this research has great potential significance to judges, who spend much of their time making decisions of great importance to others. Although the study of how the brain processes information is an evolving one, the information now available can help judges to make better decisions.”

¹⁰⁹ There is growing use of computer programs to assist decision makers in many fields where, like law, decisions are made under conditions of uncertainty. By counter-acting the influence of unconscious factors, these computer programs can often outperform experts. See Kahneman, *supra* note 39 at 233:

The number of studies reporting comparisons of clinical and statistical predictions has increased to roughly two hundred, but the score in the context between algorithms and humans has not changed. About 60% of the studies have shown significantly better accuracy for the algorithms. The other comparisons scored a draw or accuracy, but a tie is tantamount to a win for the statistical rules, which are normally much less expensive to use than expert judgment. No exception has been convincingly documented.

¹¹⁰ See Richard Susskind, *Transforming the Law* (Oxford: Oxford University Press, 2000) at 286-87:

A detailed study of this matter is sorely needed both to dispel the profusion of misconceptions and to assure the public that while computers will no doubt provide invaluable assistance to the judiciary in the future, it is neither possible now (or in the conceivable future) nor desirable ever (as long as we accept the values of Western liberal democracy) that computers assume the judicial function. In any event, computers cannot yet (if ever) satisfactorily recognize speech, understand natural language, nor perceive images. Judges can. Computers have not yet been programmed to exhibit moral, religious, social, sexual, and political preferences akin to those actually held by human beings. Nor have they been programmed to display the creativity, draftsmanship, individuality, innovation, inspiration, intuition, commonsense, and general interest in our world that we, as human beings, expect not only of one another as citizens but also of judges acting in their official role.

in vagaries that algorithms are designed to eliminate. As stated in the introductory section, it is axiomatic that some reasonable range of inconsistency among judges is one of the conditions of an adversarial system. The greater threat to the integrity of a common law trial is not inconsistency. The greater threat is a consistent decision maker who has a predisposition to one side. The lesson from cognitive psychology is that well-meaning judges and jurors can unconsciously and unintentionally hold such predispositions. Finding some method to locate and remove these unwanted influences would enhance the fairness of the trial and reduce systemic incoherence.¹¹¹

Sometimes a simple procedural change can solve a complex problem. For example, the difficulties child witnesses have in testifying in court was ameliorated by the simple introduction of screens and videos into the courtroom.¹¹² Could some procedural change address the problem of identifying and reducing the influence of unconsciously held biases that may unintentionally give some degree of preference to one side? For example, experienced trial lawyers who regularly appear before the same set of judges would be among the most perceptive in sensing any such patterns of unintended preference. Other legal institutions provide some methods for participants to address such concerns. In jury trials, both sides have some limited say in jury selection. In arbitrations, it is usual that both sides agree on who will be their arbitrator. These are institutional procedures that provide the parties with a sense of fairness. Could similar

¹¹¹ While computer programs cannot replace a judge or jury, they can be a source of feedback to both; see Ki-Young Song *et al*, “An Innovative Fuzzy-Neural Decision Analyzer” (2015) 14: 3 Int’l J Inf Tech & Decision Making 659. The article outlines a computer program designed to help group decision making. The computer program, still to be empirically tested, was developed by an interdisciplinary collaboration between the University of Saskatchewan (Law and Engineering departments) and York University (Lassonde School of Engineering). See Appendix B.

¹¹² Paciocco and Stuesser, *supra* note 26 (6th ed) at 480-81:

9.2 Testifying Outside the Presence of the Accused – *Subsection 486.2 (1) of the Criminal Code* ... this section must also be read with subsection 486.2 (7), which stipulates that the accused, judge, and jury must be able to watch the testimony by means of closed-circuit television or “otherwise,” and that the accused must be permitted to communicate with counsel while watching the testimony Under our law an accused has no constitutional right to “face one’s accuser” and the Supreme Court of Canada has consistently upheld the constitutionality of legislation that allows a witness to testify out of the physical presence or view of the accused. The fundamental purpose of a trial is to seek the truth; to that end, the legislation is designed to facilitate the obtaining of relevant evidence from children and vulnerable witnesses.

concerns in criminal trials be allayed by giving trial lawyers some say in the choice of the trial judge?¹¹³

4. Conclusion

A) The Way Forward

These are the kinds of questions that come into view when using the lens of systemic incoherence. Asking these questions is not the same as answering them. Posing them, however, points us to the need for a coordinated, inter-disciplinary study of this issue.

Two steps are needed to map out the way forward. Traditional legal scholarship and judicial reasoning cannot by themselves¹¹⁴ locate the array of pathways worth pursuing in search of ways of responding to systemic incoherence. Other disciplines need to join and enlarge the conversation. Thus, one way could be to form a collaborative, inter-disciplinary body to identify research projects, coordinate ongoing study, and provide a forum for discussion among persons from relevant disciplines. The second concurrent way would be an empirical study to identify sources of systemic incoherence and to develop and test strategies for reducing unwanted types of systemic incoherence.

¹¹³ One way to address this concern is to have a random selection of judges. For examples of this in other jurisdictions, see Elster, *supra* note 4 at 93.

¹¹⁴ Mario Bunge, *Social Science Under Debate* (Toronto: University of Toronto Press, 1998) at 378-79:

Law making and the study of the law may be regarded as a sociotechnology on a par with management science, social work, and education science. An advantage of this approach is that it encourages cooperation between law and the social sciences A virtue of the systemic approach to the law is that it is bound to shed light on all the extralegal ties of the law Any study of a legal corpus in itself, however sophisticated, is bound to be shallow. To bring understanding and efficiency, the internalist approach must be joined with the view that law, far from being a disembodied corpus of ideas, is included in the social structure.

However, as Dworkin points out, *supra* note 106 at 4, the legal profession has not adopted this approach:

The emphasis on facts [in legal realism] developed into what Roscoe Pound of Harvard called sociological jurisprudence; he means the careful study of legal institutions as social processes, which treats a judge, for example, not as an oracle of doctrine, but as a man responding to various sorts of social and personal stimuli. Some lawyers, like Jerome Frank and Pound himself, attempted to carry out this sort of study, but they discovered that lawyers do not have the training or statistical equipment necessary to describe complex institutions in other than an introspective and limited way. Sociological jurisprudence therefore became the province of sociologists.

B) Collective Knowledge

The collective knowledge and shared vantage points within such an inter-disciplinary group would make systemic incoherence more visible than would otherwise be possible. Each discipline has its own specialized vantage point with concomitant strategies for intervention. For example, cognitive scientists could bring a lens for focussing on thinking biases that covertly distort human reasoning; statisticians could focus on how stochastic bias or randomness is related to systemic incoherence; psychologists could attend to decision making and memory with strategies to counteract the influences of various thinking errors; systems control experts and design specialists could, in paying attention to institutional design, know how to facilitate or mitigate systemic incoherence; and sociologists could bring their knowledge of sociological jurisprudence.¹¹⁵ Although these individual disciplines have relevant research findings, the specialized vantage point of each provides a distinct and narrow focus that can, like a zoom lens, hone in and magnify non-legal details in the system, details that are often obscured or even lost in the background. But as important as each of these detailed perspectives is, the collaborative combined resource of the collective disciplines could form a composite picture, a kind of panorama, bringing into view the wider context for the specific details within the system. Without the integrative conversation of such an inter-disciplinary group working together, the various inter-connected aspects of systemic incoherence may never be made visible.

No such on-going, collaborative inter-disciplinary study into judicial decision making exists, to my knowledge.¹¹⁶ Thus, much of the territory to be explored remains uncharted. For that reason, the most promising way forward cannot be foreseen or recommended in advance. Such an inter-disciplinary group would itself have to define parameters for any ongoing study. The exploration itself would almost certainly yield its own discoveries, although what these would be cannot be known beforehand. Because the terrain is still unmapped, there is no guarantee that such efforts would result in practical applications to aid judicial decision making. Ways of indentifying, reducing or eliminating systemic incoherence may not be found. However, such an outcome would not mean the search would not be worth pursuing. Even if such an approach did not yield practical applications, the different perspectives could be expected to raise worthwhile questions about the purpose and functioning of the criminal justice enterprise.

¹¹⁵ Dworkin, *ibid.*

¹¹⁶ An incipient effort to study this possibility has been undertaken by the Community of Practice group at the University of Saskatchewan, with the members as noted in the acknowledgment footnote at the beginning of this article.

C) *Different Focus – Different Questions*

This systemic viewpoint necessarily seeks goals which are the same as the one-case-at-a-time appellate process: truth, safe verdicts, fairness and finality. However, once the perspective is expanded to include this systemic viewpoint within the analysis, new formulations of the same goals come into view. Changing the focus from the one-case-at-a-time “precedent focus” to the “systemic incoherence focus” changes the level of analysis. For example, it is sometimes said that a trial is a *search for truth*.¹¹⁷ The formulation of this goal by a precedent focus is accomplished by articulating principles and rules to guide the search for truth at that level.¹¹⁸ Thus, appellate courts might ask a specific question such as whether it is acceptable for trial judges to infer that a complainant was truthful on the grounds that there was no evidence the complainant had any reason to lie.¹¹⁹ The systemic incoherence focus might pose a more basic and general question for discussion and study, such as what is the measure of a successful search for truth when the same evidence can result in different findings of truth? Notice the difference in the level of question and hence the level of analysis involved here. Alternatively, it is sometimes said that the purpose of a trial is a *search for proof*, not truth.¹²⁰ The

¹¹⁷ The connection of a trial and the search for truth arises in questions of admissibility of evidence and the balance between the prejudicial effect and probative value of evidence; see Paciocco and Stuesser, *supra* note 26 (6th ed) at 2: “In *R v Jarvis* the Supreme Court of Canada elevated it to a constitutional level in criminal cases, referring to the ‘principles of fundamental justice that relevant evidence should be available to the [trier of fact] in the search for the truth.’” See also *R v Levogiannis*, [1993] 4 SCR 475 at 486-87:

While the objective of the judicial process is the attainment of truth, as this Court has reiterated in *L (D.O.)*, *supra*, the principles of fundamental justice require that the criminal process be a fair one. It must enable the trier of fact to “get at the truth and properly and fairly dispose of the case” while at the same time providing the accused with the opportunity to make a full defence....As discussed at length in *L (D.O.)*, the recent trend in courts has been to remove barriers to the truth-seeking process...Recent Supreme Court of Canada decision...have been a genuine attempt to bring the relevant and probative evidence before the trier of fact in order to foster the search for truth.

¹¹⁸ See Appendix A and the cases mentioned there.

¹¹⁹ See Appendix A, First Part, “Do Not.”

¹²⁰ See e.g. *R v Allen*, 2009 NSPC 43, [2009] NSJ No 414 at para 23:

[T]he Supreme Court of Canada has said that the essential principle about a criminal trial is a search for the truth. However the primary cognitive virtue of any trial is said to be a search for proof. This is linked inextricably with the presumption of innocence. A criminal trial is therefore a search for proof more so than it is a search for doubt. A criminal trial starts with the presumption of innocence and proceeds with the proof or establishment of facts....However, it is important to remember that a criminal trial is about determining if the required proof has been established

precedent focus deals with this goal by setting the standard of proof and by articulating a safe formulation to guide judges.¹²¹ The systemic incoherence focus would look to study what it means conceptually to say a trial is a matter of proof when the same high standard of proof can support different verdicts from the same evidence? Similarly the *goal of fairness* is viewed differently when viewed through the different levels of focus. Fairness, from the precedent focus results in rules and principles which are consistently applied in all future cases. A common question on appeal is whether the judge applied the correct procedural and evidentiary rules. From the perspective of systemic incoherence, the question for study is whether these same rules and principles result in like cases receiving different verdicts. The *goal of finality* is also assessed differently by the two perspectives. The precedent focus asks whether there was a palpable error in the trial judge's reasons, and if not, the case is closed.¹²² The focus is procedural and legal, ensuring that the dispute resolution mechanism imposed by the state was followed correctly.¹²³ The systemic incoherence focus, noting that different judges could give different verdicts, asks whether both parties find closure as well as finality by the existing procedures, rules and verdicts.

beyond a reasonable doubt; that is, has the Crown shown a path of reasoning – reasonable or rational inference – from innocence to guilty, and has it established beyond a reasonable doubt that guilty is the only reasonable inference which can be made.

See also Allan Dershowitz, "Is the Criminal Trial a Search for Truth? – The OJ Verdict", online: <<http://www.pbs.org/wgbh/pages/frontline/oj/highlights/dershowitz.html>>:

In sum, the historical and scientific inquiry is basically a search for objective truth....The criminal trial is quite different in several important respects. Truth, although one important goal of the criminal trial, is not its only goal. If it were, judges would not instruct jurors to acquit a defendant whom they believe "probably" did it, as they are supposed to do in criminal cases. The requirement is that guilt must be proved "beyond a reasonable doubt." But that is inconsistent with the quest for objective truth, because it explicitly prefers one kind of truth to another. The preferred truth is that the defendant did not do it, and we demand that the jurors err on the side of that truth, even in cases where it is probable that he did do it This anomaly has led some reformers to propose the adoption of the old Scottish verdict "not proven" instead of the Anglo-American verdict of "not guilty."... Some commentators have suggested that alternative verdicts – "guilty," "innocent," and "not proven" – be available so that when jurors believe that the defendant did not do it, they can reward him with an affirmative declaration of innocence rather than merely a negative conclusion that his guilt has not been satisfactorily proved.

¹²¹ See Appendix A, Third Part as well as note 83 above and related text.

¹²² *HL*, *supra* notes 74; *Housen*, *supra* note 74; *Gagnon*, note 75.

¹²³ *Biniaris*, *supra* note 73; see also note 126 below, with respect to the view that the state imposes finality to support social peace.

D) Ultimate Purpose – Finality and Social Peace

Asking such questions does not represent nor is it intended to be a criticism of the current criminal trial process. The criminal justice system continually engages in institutional change¹²⁴ in order better to serve community needs.¹²⁵ If the study of such questions discovered better or more useful processes, then, as it has in the past, the justice system would consider their adoption. The over-arching goal of those responsible for the administration of justice is to provide the best possible trial process, both civil and criminal, to satisfy community needs. What are these fundamental community needs?

The fundamental community needs are described by some – Ricoeur for example – as *finality* and *social peace*.¹²⁶ The assumptions of such a view are accepted in this article. The act of judging is the ultimate finality, and the goal of that act is social peace. Finality requires something more than simply a decision being made.¹²⁷ Finality that leads to social peace requires a judgment shown by the judge in the specific case to be such that both sides accept the legitimacy of the system generally and the fairness of the specific decision.¹²⁸ Fairness, not predictability or systemic

¹²⁴ See Sunstein *et al*, *supra* note 10 at 1203:

We have emphasized throughout that for any single person, or jury, the achievement of coherence is an exceptionally difficult cognitive task. But steps in the direction of coherence are far less difficult at the level of institutional design. We close with the suggestion that the practical remedies for predictably incoherent judgments are institutional; they involve the creation of frameworks for decision that ensure a pattern of that, when taken as a whole, reflective people could endorse.

Also see Heath, *supra* note 107 for the need to provide institutional/environmental/technological resources to combat unconscious and unhelpful cognitive influences.

¹²⁵ Some examples are computerized random assignment of judges, diversion programs, mediation, pre-trial conferences, arbitration, sentencing circles, and specialty courts for dealing with addiction, domestic violence and mental health as these arise in criminal matters.

¹²⁶ Paul Ricoeur, *The Just*, translated by David Pellauer (Chicago: University of Chicago Press, 2000), about the short-term (finality) and long-term (social peace) goals of judging, at 127: “I shall distinguish a short-term end, in virtue of which judging signifies deciding, with an eye to ending uncertainty; to this I shall oppose a long-term end, undoubtedly more concealed—namely, the contribution of a judgment to public peace.”

¹²⁷ Binias, *supra* note 73. See also Elster *supra* note 4 at 102-103: “... [J]udges, unlike coins or dice, can be moved by argument, even if the arguments affect only the second decimal of a number whose first decimal is chosen at random.”

¹²⁸ Ricoeur, *supra* note 126 at 131-32:

Having come to this point, we arrive at the question of the ultimate finality of the act of judging. Returning to our analysis of the act of judging starting from the far-reaching operation that consisted in the State taking from individuals the direct

consistency, is the key to meeting these two related community needs of finality and social peace. In that context, the Supreme Court of Canada's decisions outlined in the second section of this article can be seen as improvements to the fairness of the system and the perceived fairness of the trial process. Similarly, the consideration of procedural innovations such as whether lawyers should have some say in the choice of their trial judges is within the context of securing acceptance by the parties involved of the legitimacy of the system and fairness of the judgment.

It is our ongoing collective responsibility to ensure and provide the best trial process possible in the larger context of the justice system. One way to work toward that over-arching goal is to continue to ask probing questions, like a good cross-examining lawyer, and to keep asking such questions until satisfactory answers emerge. When something is not obviously broken – as the trial process clearly is not – then it is not easy nor is there a motivation to discern how it might be improved. That is why, as a means to stimulate and motivate our discernment, it is important to ask certain kinds of probing questions. The use of the concept of *systemic incoherence* provides an opportunity to ask such pertinent questions—not as a negative tool by which to critique the criminal justice system but as a positive tool to aid us in understanding and improving it.

exercise of justice, and in the first place of vengeance as the means of justice, it turns out that the horizon of the act of judging is finally something more than security – it is *social peace* ... The finality of social peace makes apparent something more profound that has to do with mutual recognition. I think that the act of judging reaches its goal when someone who has, as we say, won his case still feels able to say: my adversary, the one who lost, remains like me a subject of right, his cause should have been heard, he made plausible arguments and these were heard. However, such recognition will not be complete unless the same thing can also be said by the loser, the one who did wrong, who has been condemned. He should be able to declare that the sentence that condemns him was not an act of violence but rather one of recognition.

APPENDIX A

The appended flowchart illustrates, in a case such as the trial of George John, how legal precedents guide and support trial judges in their process of formulating judgments. The flowchart is not intended to be a complete statement of all the applicable law. It is intended only as a general framework of precedents a judge considers in determining a verdict. Importantly, key decision questions in the process are left relatively unregulated in the flowchart. These are: 1) Do you believe the accused? 2) Do you disbelieve the accused? 3) Is the complainant potentially an unreliable witness? 4) Do you believe the complainant? 5) Has the prosecution proven its case beyond a reasonable doubt?

These relatively unregulated decision points are where systemic incoherence occurs. The flowchart is a graphic means to locate systemic incoherence within this legal framework of complex appellate precedents. Within that context, could the legal profession add any rule or principle that would reduce systemic incoherence at those legal junctures of the flowchart *and* do so without impairing the twin fairness goals as described in the paper? If not, could the profession collaborate with other disciplines to consider non-legal responses for addressing systemic incoherence at these critical points? If legal precedents or non-legal strategies do not address systemic incoherence, then could some alternative route be incorporated in the following flowchart such that, when the chance of systemic incoherence is high, a judge (or the parties by prior agreement) could divert the case to alternative dispute resolution mechanisms or give a verdict other than guilty or not guilty?

CREDIT MODEL OF ANALYSIS (CMA) FRAMEWORK****FIRST PART OF THREE****Presumption of Innocence**

This most fundamental rule is that the burden of proving the guilt of the accused is upon the prosecution. “Before an accused can be convicted of an offence, the trier of fact must be satisfied beyond a reasonable doubt of the existence of all of the essential elements of the offence.” *R v Vaillancourt*, [1987] 2 SCR 636 at para 94.

DO NOT:

1. View the decision as an “either/or” choice. *Nykiforuk* (1946) 86 CCC 151 (SaskCA); *W(D)* [1991] 1 SCR 742. Also, *R v Brydon* 37 CR (4th) 1, para 28: Verdict depends, not on stark choice of who was believed, but whether the charge was proven beyond reasonable doubt.

2. Inadvertently shift the onus to accused, eg to require accused to show a motive for the complainant to fabricate. *Krack* (1990) 56 CCC(3d) 555 at 561-562 (OntCA)

3. Weigh the evidence piecemeal. *Morin* [1988] 2 S.C.R. 345 at para 33

4. Confuse “might reasonably true” with test of “reasonable doubt” by:

a. Shifting onus to accused to persuade you the defence evidence might reasonably be true. *Tyhurst* (1993) 79 CCC(3d) 238 at 247

b. Failing to decide whether, despite defence evidence that might be reasonably true, the Crown has proven the case beyond a reasonable doubt on the total evidence. *L (DO)* [1993] 4 SCR 419 at para 79

Principle of reasonable doubt applies to issues of credibility as well as fact. *Ay* (1995) 93 CCC(3d) 456 at 460

APPLY W(D) [1991] 1 SCR 742 AND **H(CW)** (1991) 68 CCC(3d) 146 as set out in *Ay* at 476

1. If you believe the accused

Acquit

2. If you do not know whether you believe the accused or the complainant

Acquit

3. If you do not reject the evidence of the accused

Acquit

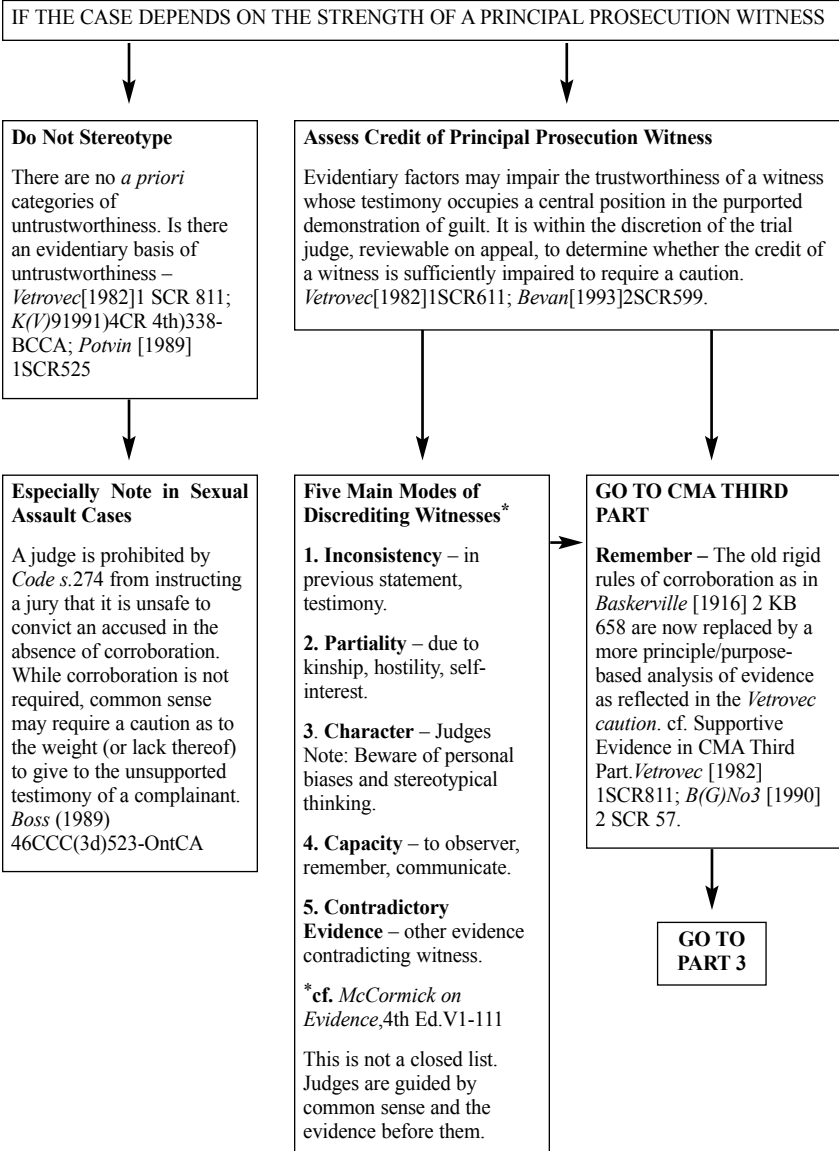
4. If you disbelieve the accused, i.e. his evidence is rejected, then before you can convict you have to be convinced beyond a reasonable doubt of the guilt of the accused on the whole of the evidence

GO TO PART 2

** Charts prepared by Gerald TG Seniuk, based on Gerald Seniuk, “Judicial Fact-Finding and a Theory of Credit” (1992) 56 Sask LR 79; Gerald Seniuk, “Judicial Fact-Finding and Contradictory Witnesses” (1994) 37 CLQ 70.

CREDIT MODEL OF ANALYSIS (CMA) FRAMEWORK

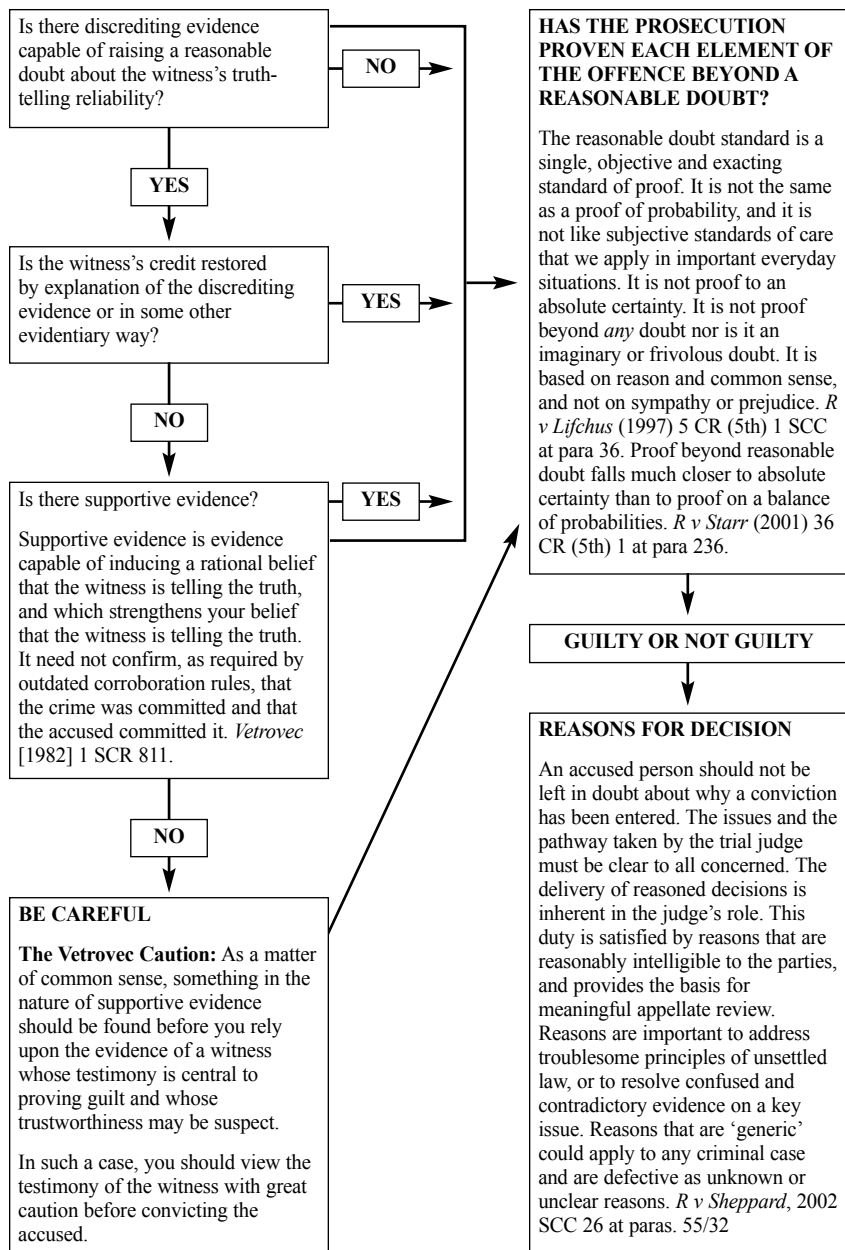
SECOND PART OF THREE



CREDIT MODEL OF ANALYSIS (CMA) FRAMEWORK

THIRD PART OF THREE

BEFORE RELYING ON A PRINCIPAL PROSECUTION WITNESS



APPENDIX B

In our hypothetical trial, John could not be convicted unless Smith was believed, and judges might disagree about whether they believed her. Because such trust in a witness is an “entire thing, not a separable one,”¹²⁹ it is difficult to distinguish the different factors that influenced the judges differently, and unconscious intuitive influences may never be distinguishable.¹³⁰ Such is not the case with the other discreet pieces of evidence, such as Smith’s criminal record or John’s personal questioning of her. These individual factors can be identified. Judges also disagree about the importance—the weights—that should be given to each of these pieces of evidence, and the different weights may help explain the different verdicts, at least in part.¹³¹ Thus, how different judges differ in the weights they give to these other factors may provide a visible means of understanding some of the causes of systemic incoherence.¹³²

The following Table 1 illustrates how six evaluators might assign weights differently to 14 evidentiary factors from the above-described trial scenario of John. A positive number supports the prosecution case, a negative weakens it.¹³³

¹²⁹ See *Vetrovec*, *supra* note 45 at 11:

This is because, as Wigmore said, the matter of credibility is an entire thing, not a separable one:

... whatever restores our trust in him personally restores it as a whole; if we find that he is desiring and intending to tell a true story, we shall believe one part of his story as well as another; whenever, then, by any means, that trust is restored, our object is accomplished, and it cannot matter whether the efficient circumstance related to the accused’s identity or to any other matter. The important thing is, not how our trust is restored, but whether it is restored at all [Vol. VII, para. 2059, at p. 424].

¹³⁰ Kahneman, *supra* note 39; Finn, *supra* note 100; Gazzaniga, *supra* note 102; Damasio, *supra* note 102; Eagleman, *supra* note 102; Haidt, *supra* note 107; Heath, *supra* note 107.

¹³¹ Polya, *supra* note 105 at 111.

¹³² Song *et al*, *supra* note 111.

¹³³ In this example the scale is from minus-10 to plus-ten, with an “x” or a “0” indicating the piece of evidence has no probative value.

Evidence (Factor, F)	Description	Evaluator (E)					
		E ₁	E ₂	E ₃	E ₄	E ₅	E ₆
F ₁	Accused calls complainant when wife away	3	1	1	5	5	5
F ₂	Complainant's use of drugs	x	-3	-2	-5	-8	-5
F ₃	Accused invites complainant into home	3	2	4	5	5	x
F ₄	Age of complainant	-3	-4	x	x	x	x
F ₅	Background and character of complainant	-3	-5	-2	-10	-5	-6
F ₆	Background and character of accused	x	-5	x	-10	x	6
F ₇	Record of complainant	-3	-2	-4	-10	-5	-6
F ₈	Observations of police officer	5	7	5	5	5	7
F ₉	Observations of neighbour	-3	-4	x	x	-7	-3
F ₁₀	Male propensity in sexual matters	x	x	3	3	x	x
F ₁₁	Demeanour of accused	2	-3	x	-5	x	5
F ₁₂	Demeanour of complainant	3	5	1	5	x	5
F ₁₃	Accused personal questioning of the complainant	4	8	5	5	3	x
F ₁₄	No apparent reason for complainant to lie	4	8	10	5	2	x
	Totals	12	5	21	-7	-5	8
	Decision	G	G	G	N G	N G	N G

Such grids could be used with study groups to provide a comparison of how individual decision makers are influenced by evidentiary factors.¹³⁴ Such a study may provide insight into the underlying causes of disagreement that are not visible without the use of numerical weights. Take Factor 14 (F₁₄) as an example. Five of the six hypothetical judges felt it had some probative value, but there are significant differences between these five that only come into view when the weights are added. Judges E₃ and E₅ superficially agree Factor 14 has some relevance, but their numerical weights reveal Judge E₃ has given it such importance (the highest weight possible) that it may be a deciding factor. It may have inadvertently reversed the onus of proof, whereas Judge E₅ gave it an

¹³⁴ For example, a video of a trial could be used with each group member deciding the case as a judge-alone, providing a verdict and a list of weights for the evidentiary factors as in Table 1.

almost minimal weight. The two judges agree in the abstract about Factor 14, but in practice they fundamentally disagree. This is only visible when quantification is used. Other factors, for example Factor 7, can be similarly studied for significant underlying differences that are only apparent with numerical weights.

The use of such comparative grids brings into focus another issue relevant to systemic incoherence. Accepting that some inconsistent verdicts in like cases are necessary given the adversarial nature of the trial, such inconsistency is premised on the fair ability of each side to convince the judge. As can be seen in Table 1, Judges E2 and E3 agree on the verdict and the positive total score in favour of the prosecution. But their totals reveal that Judge E2 is open to persuasion much more than Judge E3. For example, if both were convinced that Factor 14 should be given no weight, the change would result in a minus total for Judge E2, whereas Judge E3 would still have a high plus total. Such a change in weights could give the defence a chance to change Judge E2's verdict to 'not guilty'.¹³⁵

It may be that numerical weights could provide a means of uncovering some of the unstated or unconsciously held values and assumptions that cause unacceptable sources of systemic incoherence. Is it possible to do more than identify these deeper differences that arise because of different weights? Is it possible to provide some analytical tools to help reduce such differences to a minimum required for a fair adversarial system?¹³⁶ That is the hope of an on-going research project involving Law and Engineering Colleges at the University of Saskatchewan and York University's Lassonde School of Engineering. The inter-disciplinary project developed a computer program designed to assist group decision makers. It is a work-in-progress, and is fully explained in the paper "An Innovative Fuzzy-

¹³⁵ This assumes that it would be logically inconsistent for a judge with a minus total to return a guilty verdict. Whether this logical connection holds in practice could be tested empirically in the group workshop suggested in the previous note. At the same time, it would not be logically inconsistent for a judge with a plus total to return a not guilty verdict, such as Judge E6. This is because of the high standard of proof beyond reasonable doubt. Quantification can also facilitate deeper discussions about standards of proof, for example where Judge E2 is satisfied to convict on the strength of a plus-five whereas Judge E6 is unsatisfied at plus-eight.

¹³⁶ See Heath, *supra* note 107 at 69-70:

For the same reason, we should be perfectly comfortable calling a certain process "thought" even when portions of it are offloaded onto environmental systems. In the same way that your digestive system includes a population of bacteria, your "cognitive system" includes a lot of what Clark calls environmental "scaffolding": pencils, letters and numbers, Post-It notes, sketches, stacks of paper, internet searches, and, most importantly, *other people*. These are not merely passive storage systems; they are moving parts in our processes of rational thought.

Neural Decision Analyzer” cited earlier.¹³⁷ The program, a Fuzzy-Neural Decision Analyzer (FNDA), introduces the innovative method of using variance to develop a group weight for each factor. A group decision value combining all the weights can be computed, providing the group a more unified point of deliberation or debate. More detailed information is available in the paper above mentioned. But as an example of the result, if the six evaluators in Table 1 were deciding the case as a group, the FNDA would provide them with weight adjusted group total value of “positive 34.8”. Further study is needed to determine the practical applicability of such a program, but at a minimum, it provides an otherwise unavailable focus to help group decision makers achieve consensus and coherence.

¹³⁷ Song *et al*, *supra* note 111.