

How Vagueness Makes Judges Lie

A true story: An eminent vagueness theorist offered to treat everyone in his seminar to dinner. The auditors asked if the invitation extended beyond those officially enrolled. “Yes”. News spread. Some students had attended all of meetings. Others had attended a majority. Bringing up the rear were sheepish individuals who attended only once. Thus the hallway queue formed a slippery slope of attendance, the heavy attendees had set a precedent for lighter attendees who in turn served as a precedent for yet lighter attendees. One hungry outsider argued that since there was no significant difference between those who attended only one meeting and those who attended zero meetings, the dinner invitation should extend to all of the graduate students. “No”, answered the Professor, “only those who attended at least once were invited”. At that moment, the chairman emerged from his office: “May I attend the dinner?”. The Professor answered, “Yes”. From down the hallway, one of the dinner orphans objected that the chairman had not attended any of the meetings. Momentarily flustered, the exasperated Professor concluded, “There must be some principle that would justify it”.

After the Professor walked off with his platoon of students, the remainder of the garrison debated the justice of the decision. Everybody was persuaded that the Professor *could* have found some principle that *would* have justified his decision. But several students felt that the justification would only accrue if the Professor had actually based his decision on *that* principle.

Two senses of ‘vague’

The most discussed sense of ‘vague’ concerns the possession of borderline cases (understood as being absolutely irresolvable, not just irresolvable by the means at hand). For instance, ‘child’ goes through a problematic phase as offspring mature.

The second sense of ‘vague’ concerns underspecificity. If a camp counselor needs to know whether she will be billeting boys or girls, she will be frustrated by the vague news that ‘Ten ten-year old children will need rooms’.

Since underspecificity cannot drive a sorites paradox, the only study it receives is cautionary – uncovering equivocations between the senses. However, I shall argue that

both senses of 'vague' precipitate moral dilemmas. Each systematically creates predicaments in which the judge has an obligation to lie and an obligation to refrain from that lie. Often, neither obligation overrides the other. Consequently, the judge will inevitably do something wrong.

I postulate this moral dilemma to explain commentary on Colin Radford's "The Umpire's Dilemma", a puzzle that arises when an adjudicator knows an infraction has occurred but does not know the particular infraction.

One solution to the dilemma is to abandon the requirement of adjudicative specificity. I will object that the specificity is needed to satisfy a causal requirement for just verdicts. This explains why the underspecificity is *robustly* problematic for adjudication.

More broadly, the causal theory of verdicts will be used to explain legal intolerance of disjunctive indictments and the poverty of legal epistemology. Instead of being directly related to knowledge of guilt, verdicts are akin to perception or memory, and so only have an indirect connection to knowledge.

Review of the Borderline Path to Lying

Charles Peirce influentially characterized borderline cases in terms of inquiry resistance; no amount of conceptual or empirical investigation can resolve the question. Ironically, this intractability is a resource for conflict resolution. A debate can be made moot by persuading the parties that they are debating a borderline case. This insight reduces partisans to agnostics. An abstemious consensus is achieved. The problem is dissolved rather than solved.

One legacy of Peirce is that most commentators accept the Verdict Exclusion Principle: applying a predicate to one of its borderline cases yields an unknowable proposition. If three million dollars was a borderline case of 'excessive bail' for Michael Jackson in 2004, then no one can know that a three million dollar bail was excessive and no one can know that it was not. Since you should assert only what you know, you can only shrug your shoulders.

The adjudicator lacks this agnostic option. His professional obligation to be decisive conflicts with the Verdict Exclusion Principle (Sorensen 2001). Since the judge

promised to adjudicate, he has no permissible solution. He cannot say yes. He cannot say no. And he cannot quit.

Some resist the Verdict Exclusion Principle by introducing tie-breaking rules or by suggesting the third verdict “Not proven”. Recognition of why this reform is futile is primed by a proposal made by a member of the Baltimore Orioles baseball team: "They should move first base back a step to eliminate all the close plays."(John Lowenstein as reported by the Detroit Free Press, April 27, 1984, at F1)

Others resist the problem of adjudicating borderline cases by rejecting the Verdict Exclusion Principle. They say we have discretion over borderline cases. Since we are not under semantic constraint, we have a kind of negative freedom to judge the case as we wish. The idea goes back to W. B. Gallie’s “essentially contested concepts”. Gallie’s idea is that disagreement over ‘social justice’, ‘democracy’, ‘art’, ‘duty’ and ‘Christian life’ constitutes the meaning of these terms just as agreement constitutes the meaning of other terms (in the fashion emphasized by Ludwig Wittgenstein in his Philosophical Investigations). The new version of the doctrine trades relativism for disagreement (Wright forthcoming, Shapiro 2006). If same-sex marriage is a borderline case of ‘marriage’ then ‘People of the same gender can be married to each other’ is true-for-the-Nuer and not true-for-Hasidic Jews. According to the relativism, each of the parties satisfies the knowledge principle for assertion (“Assert only what you know”).

Relativism about borderline cases has trouble with the data stressed by Plato: people *genuinely* disagree, regard themselves as fallible, and defer to others on the grounds they know better. Relativism is also difficult to reconcile with the social aspect of knowledge. These aspects have been patiently enumerated by Jonathan Schaffer (2006). The crucial one is testimony. Knowledge is transmissible through testimony. But not relativistic knowledge.

Yet others take refuge in the performative nature of judicial verdicts. I have rejoinders to these proposals from an earlier article (Sorensen 2001) and Sven Rosencranz (2009) has steadily updated the defense of verdict exclusion principle. So I shall move on to a new, parallel dilemma that arises from the second sense of ‘vague’.

The Underspecific Path to Lying

In law, disjunctive indictments are forbidden. So knowing that the defendant is guilty of either A or B is not sufficient to justify a guilty verdict. If neither alternative can be proved individually, then the defendant prevails. This standard of proof, reminiscent of intuitionism in mathematics, violates an attractive moral principle 'Known criminals ought to be punished for their crimes'. Consequently, a judge is under pressure to make assertions that are more specific than the propositions he believes. So are others involved in the process: witnesses, police, experts, and prosecutors.

The law is more strict with verbs than adverbs. Jurors do not need to specify whether the defendant murdered his victim loudly rather than quietly, politely rather than rudely, cheaply rather than expensively. The what-question takes precedence over the how-question. The modality of the crime is irrelevant. U. S. Supreme Court Justice Antonin Scalia illustrates with a hypothetical case: a woman's body is found in the remains of a burned down house. The jurors disagree over whether the defendant first murdered the woman and then burned down the house to conceal the crime or knocked her unconscious and then set fire to the house to kill her. Disagreement on the modality of murder does not prevent the jury from finding the man guilty. Yet Scalia goes on to emphasize that the jury cannot convict a defendant of a vague felony: "We would not permit . . . an indictment charging that the defendant assaulted either X on Tuesday or Y on Wednesday, despite the 'moral equivalence' of those two acts. (Sch v. Arizona, 501 U. S. 624, 649 (1991) (Scalia concurring) at 651)

Law is complicated. Philosophers therefore gravitate toward the simplicity of games. Indeed, they even simplify further with a thought experiment about the game.

This was Colin Radford's (1985) strategy in "The Umpire's Dilemma". Surprisingly, his hypothetical episode of armchair cricket became actual during the first innings of the final Ashes Test of 2009. Ricky Ponting faced a ball that was deflected into the wicket keeper's hands. The bowler's side contended Ponting was therefore out. The umpire, Asad Rauf, began protracted deliberation. To avoid "dead air" the game commentator, Jonathan Agnew, began to kibitz on the rabbinical monologue that must have been going through the head of the umpire: "Either the ball hit Ponting's bat or it hit his pads. If it hit his bat, he is out caught behind. If it hit his pads, he is out lbw [leg before the wicket]. So, either way, he is out.' The hitch was that umpires must give the

benefit of the doubt to the batsman. This means the umpire must give the specific basis for the out. When asked 'How is the batsman out?' the umpire must single out the type of out from an exhaustive list of options: "bowled, timed out, caught, handled the ball, hit the ball twice, hit wicket, lbw (leg before the wicket), obstructing the field, run out, and stumped". Since Rauf did not know the specific basis for the out, he eventually ruled that Ponting was not out.

Radford's original thesis is that this dilemma reveals something deficient in intuitionism – the logic L.E.J. Brouwer extracted from Kant and then applied to proof practices in mathematics. Brouwer associates truth with constructability and constructability with provability. Radford's objection is that intuitionism is insensitive to the dilemma. If intuitionism were correct, then it would not be true that Ponting is out. Ponting would be definitely not out because there was no way to prove he is out. Umpire Rauf's verdict would have been clearly correct; he would only be guilty of answering too slowly.

Classical logic is sensitive to the dilemma and is therefore a better reflection of our concept of valid reasoning. Intuitionism is too narrow. Most mathematicians agree that intuitionism unduly restricts what counts as provable in mathematics. In 1919 George Polya conjectured that over half of the natural numbers less than any given number have an odd number of prime factors. In 1958 C. B. Haselgrove proved that there exists a counterexample. He could not specify what it was (though he did estimate its location at around $1,845 \times 10^{361}$). But an intuitionist who refused to accept the proof on this basis would be criticized as too picky. Radford is hoping that the same condemnation will flow from sports fans and lawyers.

Defenders of intuitionism have countered that their founder, L. E. J. Brouwer, only requires truths to be *provable*. In principle, one could ascertain what deflected the ball. Indeed, Ponting probably knew.

But an alternative scenario in which the ball was a borderline case of 'deflected by a pad and caught out' can rescue Radford's critique. All the classical logician needs is a case that is borderline between deflection by the kneepad and deflection by the bat.

However, even without the repair, Radford has posed an interesting professional dilemma for adjudicators. Here is Simon Beck's formulation of the umpire's dilemma:

... he must rule either Out or Not (to do nothing is in effect to rule Not out). If he rules Not out on the grounds that he is not certain which law was broken, then he does something unfair to the fielding side since 'surely the batsman *was* out one way or the other' (110). There is no way of being out 'lbw or caught'—the laws are exclusive and exhaustive. Either 'lbw' or 'cause' must be entered into the scorebook. Since the umpire does not know which it is, if he rules Out then he will have to tell a lie and break the laws himself—the very laws it is his duty to see uphold. (Beck 2008, 321)

Ian Rumfitt distinguishes between being out and being correctly dismissed. To be out "is such that a condition specified by the Laws of Cricket as sufficient for giving a batsman out obtains". So although Rauf knew that Ponting was out, this did not put him in a position to dismiss him as out. In particular, Law 27 of the Marylebone Cricket Club 2008 says that "to be dismissed, the batsman must be out under some Law" where this understood as requirement to specify the law. Thus Rumfitt approves of Rauf's decision to call Ponting not Out even though Rauf knew that Ponting was out.

Rumfitt goes on to endorse the parallel behavior of judges who acquit criminals even when there is no question that they are guilty. In a footnote, he acknowledges some distinguished disagreement on the matter:

Joseph Raz (personal communication) believes that Rauf should have plumped for one of the grounds and given Ponting out on that ground. He points out that, in criminal appeals, the appellant loses even if the decision is shown to be faulty, so long as the fault did not cause any injustice. Justice is rarely pristine, and a no-nonsense judge might well cut through the problem in the way Raz suggests. But those of a more delicate sensibility may still admire Rauf's scrupulousness in resisting the temptation to do the right thing for the wrong reason. (Rumfitt 2010, 209 fn)

I take Raz to be strengthening the case for the option that Beck described as lying. If the

lie is not unjust and prevents an unjust outcome (acquitting a criminal who is known to be guilty), then the lie is justified.

Almost no philosopher will condemn the Raz lie by applying the premise that *all* lying is wrong (Immanuel Kant being a notorious exception to the rule.) On October 12, 2010, the Provost of Washington University lied to the former chairman of the philosophy department. The lie was a favor done for the whole department. We wanted to throw a surprise party. None of the philosophers raised any moral objection. Even the Kantians endorsed the Provost's lie by universalizing; 'Lie whenever needed to throw a surprise party'. All the philosophers viewed the Provost's lie as above and beyond the call of duty. Why not regard Razian lies with the same gratitude?

If any sternness is in order, Raz's logic points in direction of the lie being obligatory rather supererogatory. Given that judicial lying is justified (as opposed to be merely excusable) it can be done repeatedly and the judge can urge his colleagues to do the same.

Rumfitt esteems the scrupulousness of a judge who refrains from doing "the right thing for the wrong reason". But this admiration is hostage to the type of criminal. Violent, career criminals are serial offenders. Releasing such a criminal, when his guilt is common knowledge, does not stimulate admiration for judicial scrupulousness. "Acquitting the guilty and condemning the innocent—the Lord detests them both"—Proverbs 17:15. The Lord's loathing must increase when the judge acquits those he *knows* to be guilty.

But we need not bring in consequences to feel the force of Raz's solution. The utilitarian has no monopoly on the slogan 'The end justifies the means'. Retributivists hunger for justice in the product sense more keenly than the process sense. Career burglars are sometimes punished for burglaries they did not commit. When the mistake is discovered, the public is consoled by the fact that the burglar was guilty of other crimes of exactly the same sort. The burglar is getting what he deserved but through a deviant path. It is rough justice.

Forced Assertion and Inevitable Lying

Both Simon Beck and Ian Rumfitt have insights that strengthen our grasp of the umpire's

dilemma. My reservation about Beck's formulation is that one horn of the dilemma is not sharp enough. I agree that the umpire lies if he insincerely specifies an infraction. But I also think he lies if he says that the batsman is not out when he knows that he is out.

I picture the dilemma as the effect of a forced assertion. It is as if the umpire is answering a multiple-choice test in which all of the answers are known to be false:

The batsman is

- (a) not out
- (b) caught out
- (c) out because his leg was before the wicket.

When Christopher Hitchens (2010, 252) was taking his citizenship test on the U. S. Constitution, he distinguished between an answer that would be marked correct and a true answer. To illustrate with an example from the sample test, the *accepted* answer to 'What did the Emancipation Proclamation do?' is 'It freed the slaves'. That is the answer which will be graded as correct even if you persuade the grader that the slaves were actually freed by the Thirteenth Amendment. What counts is the official answer key, not the truth.

The anti-religious Hitchens teeters at the edge of the Catholic doctrine of mental reservation to avoid characterizing the insincere answer as a lie. Ian Rumfitt is located along the same edge when he distinguishes between asserting Ponty is out and correctly dismissing Ponty as out. The umpire could not declare 'Ponty is out but I hereby rule that he is not out'.

On my account, people who deliberately provide false answers on their citizenship examinations are lying. That's why they are uncomfortable and search for dodges such as "My answers carry the qualification 'is the accepted answer to this question'". One reason for thinking this is a dodge is the reaction of the test-taker who gets credit for a true answer that he mistakenly believed was also the officially accepted answer. He does not think the "mistake" gives him unearned credit. The test was aimed at assessing the test-taker's knowledge about the subject matter, not the test-taker's knowledge of the grader's opinions. Test takers have a right to object to being marked wrong for the correct answer (even if it is imprudent for them to answer truthfully). They

do not have a right to object that their false answer should be given credit because it corresponds to the erroneous views of the test constructors.

As I picture the umpire's dilemma, Rauf cannot avoid lying. So I disagree with Rumfitt's assumption that there is an option that does not involve a dirty hand. Rauf's "not Out" verdict was a lie. The verdict was false and Rauf knew it. As Rumfitt, concedes 'not Out' is not a self-referential remark about the umpire's mental state. It is an objective assessment that must be based on empirical conditions and the rules of the game.

Knowledge by Fiction?

Rumfitt asserts that English law sometimes permits the disjunctive reasoning execrated by the Laws of Cricket. He cites *Giannetto* (1997: 1 Cr App Rep 1). Here a defendant was convicted despite uncertainty as to whether he personally murdered his wife or hired another party to do it. The defendant appealed on the grounds that the jury should have been instructed that they must all agree he was the killer or all agree that another person killed his wife. The Court of Appeals dismissed the appeal by relying on the Accessories and Abettors Act of 1861. It endorses the legal fiction that anyone who encourages a murder is a murderer. More precisely, anyone who shall "aid, abet, counsel or procure the commission of any indictable offence . . . shall be liable to be tried, indicted and punished as a principal offender".

The upshot is that while the grounds for attributing the murder were disjunctive, the charge was not. So what the law forbids are disjunctive indictments. Disjunctive reasoning gets smuggled in by introducing legal fictions that unify intuitively disparate crimes. The Court of Appeal in *Giannetto* did not object to the trial judge's observation that just nodding in response to someone's announcement that he was going off to commit murder makes one liable to a mandatory life sentence – even if the nod makes no causal difference.

Rumfitt's Disjunctivist Proposal

Rumfitt laments this contrived indifference to whether one is a principal or an accessory. He recommends that disjunctive indictments be permitted:

For in a case where there was insufficient evidence to convict A of the principal offense, and insufficient evidence to convict him of being an accessory, the prosecution could still put to the jury the question 'Is the following disjunction true: A is either the principal offender or an accessory? . . . Disjunctive indictments would need to be used with caution: it would be oppressive if prosecutors could lay a charge that disjoined all the offences in the criminal code. (Although perhaps article 6(3)(a) of the European Convention on Human Rights, which requires that a defendant be informed 'in detail of the nature and cause of the allegation against him', already precludes that.) Moreover, judges would need special rules for sentencing those convicted of such disjunctive charges: a plausible rule is that the sentence handed down should not exceed the lower of the maxima that Parliament will have specified for each disjunct. (Rumfitt 2010, 208-209)

Rumfitt's proposal is most plausible for disjunctive indictments that are not too disjunctive. Best are cases in which a single individual is involved with two qualitatively identical possible crimes. For instance, if someone has testified in two trials in such a way as to make it plain that he committed perjury at least once, then Rumfitt's reform will easily let us convict--despite ignorance of which trial involved perjury.

Rumfitt's solution also let us convict in cases involving distinct individuals. Consider identical twins who simultaneously rob two banks. Each twin brazenly waves at his respective videotape camera – confident that the camera will not be able to discern which twin committed which robbery. Rumfitt's reform will let us convict them both.

Further down the slippery slope are wildly disjunctive crimes. If we have decisive evidence that one twin embezzled while the other committed a murder, but cannot tell which twin committed which crime, then we may indict them of murderzezlement.

Criminal Natural Kinds

W. V. Quine defended our aversion to 'grue' on the grounds that it is no where close to being a natural kind. 'Green' is closer. Better yet are suggestions by the color scientists. If crimes formed natural kinds, perhaps on analogy with diseases, then one might have a

basis for insisting that indictments be non-disjunctive. Natural kinds let us, with the same breath, predict and convict.

The inventor of the “new riddle of induction”, Nelson Goodman, was a conventionalist who instead appealed to the greater entrenchment of ‘green’ over ‘grue’. Goodman regarded belief in natural kinds as a projection of familiarity on to nature.

Intuitions about naturalness are affected by familiarity. At first glance, a crime such as theft appears to “cut nature at the joint”. But legal scholars object that the appearance of unity disappears under closer inspection. For instance, Leo Katz challenges the reader to define ‘theft’. Is it any crime against property? No, that is too broad because it would include arson. Is theft any involuntary transfer of property? No, that would overextend the term to foreclosure. We also need to rule out robbery, blackmail, the passing of bad checks. Katz asserts that no one has succeeded in defining ‘theft’.

Katz grants that common law has successfully defined more specific crimes: Larceny is “the trespassory taking and carrying away of personal property of another with intent to steal it”. Embezzlement is “the fraudulent conversion of the property of another by one who is already in lawful possession of it”. False pretenses: is “a false representation of a material present or past fact which causes the victim to pass title to his property to the wrongdoer who knows his presentation to be false and intends thereby to defraud the victim”. (Katz 1987, 90-92) So Katz does not share Wittgenstein’s pessimism about definition. He is worried about the contrast between some well-defined crimes and crimes that lack an essential definition.

So where did ‘theft’ come from? Katz traces it back to *Commonwealth v. O’Malley* (1867). A Boston family paid Bridget McDonald her wage of thirty-eight dollars. Since she was an illiterate servant, Martin O’Malley asked her to let him take the money to be counted. When she acquiesced, he refused to return the bills. She locked a door to prevent his escape. But he threatened to burn the money. Bridget opened the door and off O’Malley went. When Martin O’Malley was prosecuted for larceny, the trial court said he should have charged with embezzlement. After all, he had not taken the money from Bridget. He merely kept it against her will. O’Malley was acquitted. A jury then convicted O’Malley of embezzlement. He appealed on the ground that he actually had committed larceny. Since there is no further record of O’Malley he apparently went

free. As a remedy for this injustice, some legislatures combined larceny, embezzlement, and false pretenses into a single disjunctive offense called theft. Katz objects:

Under the common law, fairness requires that a defendant be told whether he or she is charged with larceny, or embezzlement, or false pretenses in order to prepare the appropriate defense and that he or she be convicted only if a jury can agree upon which of the three was committed. Doesn't fairness require that a defendant be told with which kind of theft he or she is charged?

The defender of disjunctive charges can reply that the charge is clear enough: the defendant committed at least one of the deeds on the specified list. Once the disjunctive legislation is in place, the problem is not fair warning. The problem is that the defense's burden has been greatly increased.

Katz's appeal to the principle of fair notice can be seen as linkage with the "void for vagueness" doctrine. We object to vague laws because they fail to give due notice of what is prohibited, they are capriciously enforced, and they usurp the role of legislators.

However, these reservations could be circumvented by a long list of precise disjuncts. The precedent could be the physician's Diagnostic and Statistical Manual. It achieves greater precision and consensus in diagnosis by operationalism; the disease is ascribed exactly if it satisfies a quota of verifiable symptoms.

The defendant's concern with long but specific disjunctive indictments would not be with the unclarity. It would be with the broadening of guilt. The law errs on the side of acquitting the guilty. But once guilt is established, the defendant can only rely on the weaker bias against over-punishing the guilty.

Vagueness does affect sentencing. Hegel concedes that

Reason cannot determine . . . whether justice requires . . . (1) a . . . punishment of forty lashes or thirty-nine, or (2) a fine of 5 dollars or four dollars ninety three, or (3) imprisonment of a year or of three hundred sixty four days. And yet injustice is done if there is one lash [or dollar or day] too many . . . Here the interest . . . is that something be actually done, that the matter be settled, and decided somehow,

no matter how (within a certain limit) Philosophy of Right, sect. 214 and Zusatz to 214

Over-punishing the guilty is not nearly as bad as punishing the innocent. So broad indictments, by making guilt much more probable, reduce the bias favoring defendants.

Katz's emphasis on real definition suggests a more metaphysical objection to disjunctive indictments. There is no natural kind corresponding to theft.

Disjunctive indictments resemble "gerrymanders". In 1812 a cartoonist criticized the state senate redistricting instigated by Massachusetts Governor Gerry's by blending his name with 'salamander':



Gerrymander Cartoon

Notice that the gerrymandered districts score well on the criterion of precision. The district lines are not blurred. There are plenty of clear boundaries. The concern lies in how the lines are drawn. Instead of following natural contours, the governor has contrived to categories to maximize his political representation.

Only gerrymandering will capture *all* the crimes that concern Rumfitt. If we

decide to only pursue some of the disjunctive crimes, then which? If there is no principled basis then our solution will share much of arbitrariness that it sought to remedy.

Criticism of Minimax Sentencing

Rumfitt's utilitarian concern about the oppressiveness of disjunctive indictments is in tension with his Rawlsian minimax rule for sentencing (minimize the maximum penalty). Belief that the punishment should fit the crime supports a disjunctive penalty with chance dictating which disjunct becomes actual. In "The Punishment that Leaves Something to Chance" David Lewis uses this idea to explain why we punish successful crimes more severely than failed attempts. The crime sets up a lottery between two punishments. The more reliable the means used in the crime, the higher the probability that one will end up with the more severe punishment.

Very general crimes do not require minimizing the maximum for the least bad species of the crime. For instance, 'rape' is highly general because of the great variety of ways in which there can be sex without consent. Since disjunctiveness is just another form of generality, why apply a minimax rule for some species of generality rather than others?

There is no minimax rule for the other sense of 'vague'. If a term is vague, judges do not search for the most lenient precisification. Whereas ambiguity in contracts is interpreted against the drafter, vagueness in legislation is interpreted by the intent of the legislators. Since the legislators aim to penalize known criminals, judges do not gravitate to the lightest sentence.

Indeed, many judges open exert ingenuity to impose heavier sentences. Consider a case concerning the extra penalty drug dealers suffer for selling within a thousand feet of a school. In March 2002, James Robbins was arrested on the corner of Eighth Avenue and 40th Street in Manhattan for selling drugs to an undercover police officer. The nearest school, Holy Cross, is located on 43rd Street between Eighth and Ninth Avenues. The distance is more than 1000 feet by foot because buildings block the direct path. However, the law enforcement officers said the correct measure was "as the crow flies". Accordingly, they calculated the straight-line distance with the Pythagorean theorem,

yielding 907.63 feet. The New York Court of Appeals unanimously upheld Robbins' conviction: "Plainly, guilt under the statute cannot depend on whether a particular building in a person's path to a school happens to be open to the public or locked at the time of a drug sale" -- Chief Judge Judith S. Kaye.

To the disappointment of the mathematical community, the case was not taken to the Supreme Court. The mathematicians had to content themselves with a hypothetical appeal published in the Mathematical Intelligencer. Lawyer Jane Hausdorff representing the state:

Hausdorff: The nub of the question is how the legislators intended us to measure distance. Did they intend the Euclidean metric, which measures distance in a straight line from point A to point B, often described as "how the crow flies", or were they intending the taxicab metric, also known as the Manhattan metric, which measures the total distance traveled as you walk from point A to point B if you are required to stay on the streets that meet at right angles and are not allowed to take the diagonal?

Justice Thomas: Couldn't they have intended some other metric all together?

Hausdorff: I'm sorry, your honor. I'm not sure what you mean.

Justice Thomas: For all we know, they intended the Weil-Peterson metric.

Justice Ginsburg: Clarence, I believe the Weil-Peterson metric only applies to Teichmueller space.

Justice Thomas: Okay then, how about the Hermitian Yang-Mills-Higgs metric?

Justice Breyer: That applies to complete Kahler manifolds. Can we stick to metrics for measuring distance in the plane? . . . (Colin Adams "Mathematically Bent" column of the Mathematical Intelligencer)

Disjunctive Performatives?

My second objection to Rumfitt's proposal is that a disjunctive indictment would be a disjunctive performative. All disjunctive performatives violate an overtness requirement. A performative works by the speaker showing what he had in mind.

With performatives such as promising, saying so, makes it so. Anyone who says he promises, promises – even if he breaks the promise. Other performatives can only be

performed by those in a position of authority. A teacher can dismiss a class by saying, “Class dismissed!”. A student cannot. A mother can name her child. Her congressman cannot.

I can turn my toaster into garbage by declaring it garbage and handing it to the trash collector. However, I cannot repair my toaster by declaring ‘I hereby repair my toaster’. Garbage is a state of mind. Functionality is not.

An indictment is an act of self-expression by an appropriate authority. “You are hereby charged with either murder or embezzlement” fails to evince a legally relevant state of mind. It is like ‘I hereby insinuate that you embezzled’.

Oaths show the same resistance to disjunction. When I was called to jury duty, I wanted to take a secular oath. I had been warned that judges in Brooklyn process large numbers of potential jurors. A reticent atheist might wind up swearing to God by default. Working up my nerve, I interrupted the judge with a highly premeditated shout from the crowd: “I want to Affirm!”. As feared, a hundred pairs of eyes passed from the judge to me and then back at the judge. The judge was momentarily stunned. But, regaining his composure, he continued, “Very well, *everybody* repeat after me: I hereby either swear to God or affirm that” The judge had stunned me right back! I had assumed I would be separately sworn in. Flustered, I meekly repeated the oath or “oath”. But I was not sure what had just happened. Had I sworffirmed?

The Causal Theory of Verdicts

My third and main objection to Rumfitt’s proposal is that disjunctive verdicts are never just – even if they are expedient and even if we should sometimes act unjustly. A crime justifies a verdict only by being a cause of that verdict. There are no disjunctive causes. So disjunctive verdicts are never just.

The causal requirement explains why judges cannot find wrongdoers guilty *prior* to their crimes. The problem of pre-verdicts is not the unpredictability of the crime. The problem is that the verdict is not an effect of the crime (Sorensen 2005).

When a baseball pitcher decides to intentionally walk a batter, the umpire cannot give the verdict “Walk” on the basis of his knowledge of the pitcher’s very reliable intention. He must wait until after the pitcher actually throws four balls. The umpire

foresees that the batter will walk. The catcher stands well to the right of the strike zone so that the pitches are out of reach of the batter.

Verdicts, as “findings of guilt” sound very epistemological. These precede the conviction (the stage at which legal status changes, a stage normally delayed to permit legal maneuvers for the defense). Verdicts do not entail punishment (which routinely precedes conviction thanks to the practice of giving credit for time served awaiting trial).

However, verdicts stand to knowledge only as perception stands to knowledge. Perception is a means of generating knowledge but it does not entail knowledge. I might infer someone committed a crime by a guilty verdict. But a guilty verdict can be justified without itself being an instance of knowledge.

You perceive an object by virtue of having an appropriate causal connection with it. That is why no one in 2006 could see the Prime Minister of Poland Jarosław Kaczyński by seeing his identical twin, Lech Kaczyński, the President of Poland. When Jarosław skipped the inauguration ceremony of his brother (to avoid visual confusion), the audience had all they needed to know what Jarosław looked like. But they did not see Jarosław.

Perception does not require knowledge. Consider Carl Ginet’s fake barn scenario. A father is driving along pointing out barns for the edification of his son. Unbeknownst to him, the pair has entered a county in which it is the practice to erect barn facades. Fortunately, the barns singled out by the father are genuine. But there was too much luck involved for the father to have known the building was a barn. So the fake barns undermine knowledge and are thus a counterexample to the causal theory of knowledge. Nevertheless, this is not a counterexample to the causal theory of perception. There was an appropriate causal connection. The father saw the barn. He just did not get perceptual knowledge from the experience.

Fake barn scenarios also preserve the justice of verdicts. If a verdict is obtained in the normal way in a region that happens to harbor many fake trials, then the verdict is just despite the fact that no one involved in the trial knew they were participating in a genuine trial.

An Analogy with Episodic Memory

The same point holds for personal, episodic memory. The father remembers the barn even though he did not know it was a barn.

Memory can survive epistemic reversals. If a psychologist deceives a research subject into thinking he confabulated a conversation with his secretary, then subject does not know the conversation took place. But he still remembers the conversation.

People sometimes are remembering when they think they are imagining. This leads them to overestimate their creativity with respect to melodies and stories. A painter who thinks he imagines a house may come to suspect he remembered if the depicted house bears a remarkable resemblance. But sheer resemblance is not enough. There must be a causal path from the house to the painter.

Personal, episodic memory is the basis for autobiographical narrative constructions. Recognition of the causal connection requirement forces us to respect chronological order. For the subject to conceive of himself as remembering, he must trace “a continuous spatio-temporal route through all the narratives of memory, a route continuous with the present and future location of the remembering subject” (Campbell 1997, p. 110).

The justification of a verdict imposes the same plot requirements. As in memory, the judge can be aware that the narrative is gappy and selective. But this modesty evinces the presupposition of connectedness. Those trying to influence the verdict will naturally develop competing narratives.

The story-telling aspect does not mesh with knowledge-based accounts of verdicts. Memory is narrower than knowledge in some respects, broader in other others. Thus there can be justified verdicts without knowledge of guilt and justified verdicts of non-guilt despite knowledge of guilt.

Knowledge of guilt and innocence is only indirectly relevant to verdicts. Just as inquiry can show that the causal connection condition was not satisfied for memory, it can show that it was not satisfied for a verdict.

In some ways, memory is easier than knowledge. In those cases, the verdicts will appear unjustified to those who think verdicts are primarily epistemic.

Whereas the simple causal theory of knowledge mistakenly implies that we have no knowledge of the future or of general statements or mathematical statements, the

simple causal theory welcomes the implication that there can be no just verdicts about future events or abstract entities or generalities.

The causal theory of verdicts enjoys the same success as causal theories of perception and memory. Each of these theories states a necessary condition, not a sufficient condition. Specifically, judges strive to make their verdicts *appropriate* effects of past crimes.

All of these causal theories exclude deviant causal chains. For instance, veridical frame-ups do not generate just verdicts.

The demand for causal evidence excludes several forms of attractive reasoning. Consider appeal to duplicates. The revelation that we have convicted the identical twin of the real perpetrator forces a whole new trial for the new suspect. The prosecution cannot avoid the expense by proving the first trial would have had the same outcome if the correct twin had been tried.

According David M. Armstrong, the point of perception is acquiring knowledge – reliable true beliefs. But most theorists think perception is only indirectly related to knowledge. Perceptual processes are modular. Modular systems are designed to deliver quick, reliable judgments on a narrowly circumscribed evidential basis. As illustrated by the tenacity of optical illusions, perception is cognitively impenetrable. It does not obey the total evidence requirement.

In 1966 the U.S. Supreme Court wrote, “The basic purpose of a trial is the determination of truth.” Larry Laudan cites this as the guiding premise of his book Truth, Error, and Criminal Law: An Essay in Legal Epistemology. But the legal aversion to disjunctive indictments suggests that verdicts only have as much relationship to knowledge as perception.

Summary

I have argued for four theses. First, the two senses of ‘vague’ generate parallel moral dilemmas for judges about lying. Second, the umpire’s dilemma cannot be resolved by permitting disjunctive indictments because they are systematically unjust. Third, this injustice is explained by the causal theory of verdicts. Fourth, the causal theory correctly characterizes verdicts as akin to perception rather than to open minded inquiry.

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