Vernünftiger Umgang
mit unscharfen Grenzen

Deciding under Non-epistemic Uncertainty

Freiburg, 11-13 October 2012

Abstracts of the Talks

James Hampton: The Reliability of Being 100% sure. Differences between Epistemic and Non-epistemic Uncertainty

When you judge that you are 100% certain about something, are you less likely to change your mind about it two weeks later? Evidence suggests that while this is true for epistemic knowledge (e. g. facts and memories), it is not true for a range of non-epistemic judgments (e. g. categorization, likes and dislikes, desires and aspirations). Judgments are just as unstable about what is 100% certain to be a fruit, as they are about what is or is not a fruit. The key difference is the existence of meta-knowledge in the former case – knowing that you don't know.

Mandeep Dhami: On Measuring the Fuzziness of Reasonable Doubt

Legal standards of proof such as 'beyond reasonable doubt' represent the degree of certainty required before making a decision in a case (e.g., deciding to convict in a criminal case). In the past, researchers have used direct rating scales or indirect utility functions to measure standards such as reasonable doubt. However, their validity in predicting decisions (e. g., verdicts) is rarely tested. In addition, these methods do not capture the inherent fuzziness of standards of proof. Wallsten and Budescu's (1995) theory of linguistic probabilities states that phrases such as 'very likely' can be represented as fuzzy subsets of the probability interval. According to the theory, the "membership function" (MF) of a phrase has a peak and spread of probabilities. I argue that in a manner akin to probability phrases, legal standards of proof represent values along the probability interval and so ought to be measured using the MF method. I present the findings of a programme of research that: (1) validates the use of the MF method as opposed to commonly used methods for measuring people's interpretations of reasonable doubt. (2) Measures the effect of judicial

instructions and case context on the fuzziness of reasonable doubt. And, (3) examines the relatively utility of interpretations of reasonable doubt as opposed to juror attitudes in predicting verdicts. This research has implications for how we measure people's interpretations of legal standards of proof, and how jurisdictions can use an evidence-based approach to designing judicial instructions that define these standards.

Robert Williams: Decision Making under Indeterminacy

This paper develops a model for decision-making under indeterminacy or vagueness. It is an "inconstancy" approach, where uncertainty due to indeterminacy is to be resolved arbitrarily and randomly. Applications to two versions of the sorites paradox show its power. A puzzle for the framework, involving the consistency of decisions over time, is exhibited and evaluated.

Robert van Rooij: Deriving Meaning from Language Use: From Equilibria to (Fuzzy?) Meanings

More-valued logics are used a lot in philosophy to account for paradoxes related to vagueness, self-refential truth, etc. Though these analyses are appealing from a formal point of view, they typically give rise to conceptual problems: where do the values/meanings come from? Some proposals to solve this problem have been made, but none of them has been very convincing. Proponents of fuzzy logic, for instance, have proposed that the ordering between truth-values of sentences of the form 'x is tall' are in direct correspondance with people's lengths. But there are well-known problems with this approach. Others (e. g. Williamson) simply claim that use gives rise to fixed two-valued meanings, but how the meanings are supposed to be dependent on this use is left completely in the dark. In this talk I will propose to correlate meaning with use, or better, with use in equilibrium. First, I will use game theory, coupled with some ways of implementing bounded rationality, to determine equilibrium play. Second, I will propose various definitions of meaning that can be derived from the strategies used in the equilibirum. Finally, I will relate these different meanings with different theories of vagueness, and discuss the pro's and con's of the various theories in the light of these relations: from super/subvaluationism, via many-valued logics, to the epistemic analysis of vagueness.

Christoph Engel: Probably Wrong. Getting the Law Right as an Exercise in Probability Calculations

Arguably, uncertainty about the facts of a case, and uncertainty about the canonical interpretation of the law are fundamentally different. The former are the realm of scientific methods, the latter pertain to normative argument. With this supposition in mind, the paper revisits one of the core issues of the law of evidence. Many argue that, at least as a regulative idea if not in practice, courts facing uncertain facts should use Bayes rule. The paper shows why, in principle, this is attractive, but how this approach, and starting from the base rate of the disputed fact in particular, may clash with decisions the legal order has taken elsewhere.

Leo Katz: The Moral Precipice: Why Most Legal Concepts Aren't Scalar

Law draws sharp, discontinuous boundaries seemingly without justification, since the underlying phenomena it ostensibly seeks to mirror appear to be scalar rather than discontinuous. Law pretends that a fetus suddenly becomes a human being, when a certain line is crossed, or that consent suddenly becomes invalid, when it is coerced, even though it would appear that personhood or coercion are matters of degree. This essay argues that personhood, coercion, and countless other important legal and moral phenomena are **not** matters of degree: The law does not treat them as scalar because they are in fact discontinuous – which prompts the question of where exactly the line is to be drawn between, say, persons and non-persons, or between coerced and voluntary choices. That question turns out to be unanswerable, but its unanswerability does not imply what many would take it to imply: that there must not be such a line, and that the transition from persons to non-persons or from coerced to voluntary consent must be therefore be scalar.

Adam Kolber: Smooth and Bumpy Laws

Modest differences in conduct can lead to wildly different legal outcomes. A reasonably prudent driver who causes an accident owes nothing, but if the driver had been just a bit less cautious, he might have owed millions of dollars. A man who has sex with a woman reasonably believing she consents likely commits no crime, but if he had just a bit more reason to doubt that she consented, he might have committed rape. In both cases, small changes to a legal input (level of caution or level of reasonable belief) can lead to dramatically different outputs. While the law must draw difficult lines, it is puzzling why the lines have such startling effects. After all, we can fine-tune damage awards and the duration of prison sentences anywhere along a spectrum.

A legal input and output have a "smooth" relationship when a gradual change to the input leads to a gradual change in the output. The prior examples are not smooth but "bumpy": gradual changes to an input sometimes have dramatic effects on the output and sometimes have no effect at all. The law is full of these bumpy relationships that create hard-to-justify discontinuities. In this brief essay, I discuss the relative advantages of smooth and bumpy legal relationships and how to choose between them. (The current draft is available at http://ssrn.com/abstract=1992034.)

Frederick Schauer: Contingent Vagueness and the Alleged Open Texture of Law

"Open textur" is a widely used term in philosophy, and a widely mis-used one in law and legal theory. "Open texture" is not a synonym for "vagueness", but rather refers to the contingent vagueness of even the most precise terms. Drawing on Friedrich Waismann's idea of open texture, H. L. A. Hart and others have argued that law is open-textured. It is in the nature of law, they say, that it necessarily possesses an open texture going beyond the open texture of the language in which legal rules are written. But when we examine the question of open texture in light of Hart's claim that the open texture of law entails the necessary defeasibility of legal rules, we discover that Hart and his followers are mistaken. Both the alleged open texture of law qua law and the defeasibility of legal rules are contingent features of certain legal rules in certain legal regimes, but neither are necessary components of the nature of law or the nature of rules.

Jan Sieckmann: Uncertainty as a Problem of Balancing

In this paper I will argue that non-epistemic uncertainty is a matter of balancing normative arguments. Thus, I interpret non-epistemic uncertainty as uncertainty with respect to the resolution of normative problems. Such problems presuppose a conflict between normative arguments. The method of balancing provides a device for resolving normative conflicts in a rational manner. It helps to remove uncertainty in two respects. First, it makes clear that a decision is required, that is, the result of the balancing does not follow from given criteria. Second, the method of balancing offers criteria that this decision must comply with in order to be rational. As to the issue of legal interpretation, which is the focal case of non-epistemic uncertainty, I will argue that, whilst linguistic interpretation might be understood as an empirical matter, legal interpretation presents a normative problem. Therefore, the method of balancing normative arguments applies.