Programme

Meetings on Wednesday and Thursday will be held in the Philosophy Faculty of the University of Groningen, Oude Boteringestraat 52, Groningen, room Omega. On Friday the meetings will be held at the Academy Building of the University of Groningen, Broerstraat 5, Groningen, room A3. The format of discussion sessions is 20 + 20 + 5 minutes and 30 minutes of debate. Contributed papers are 15 + 5 minutes each.

**Wednesday August 29**

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<tr>
<td>12:30</td>
<td>Registration, coffee, opening</td>
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<tr>
<td>13:00</td>
<td>Invited speaker&lt;br&gt;Branden Fitelson “Accuracy, Coherence, and Evidence”</td>
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<td>14:00</td>
<td>Break</td>
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<td>14:15</td>
<td>Discussion session on formal epistemology&lt;br&gt;Johan van Benthem “Logical Aspects of Evidence Change”&lt;br&gt;Eric Pacuit “Dynamic Logics of Evidence and Belief”&lt;br&gt;Comments by Branden Fitelson</td>
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<td>15:30</td>
<td>Break</td>
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<td>15:45</td>
<td>Contributed papers&lt;br&gt;Martin Rechenauer “Probabilities, Subjective, Objective and Causal: some Problems”&lt;br&gt;Peter Brössel “The Problem of Measure Sensitivity Redux”&lt;br&gt;Alexandra Hill “From symmetry to induction”</td>
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<td>16:45</td>
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<td>17:00</td>
<td>Contributed papers&lt;br&gt;Jason Konek “New Foundations for Imprecise Bayesianism”&lt;br&gt;Hanti Lin “How to Make Mainstream Epistemology Embrace the Bayesian Pragmatist Challenge”&lt;br&gt;Erik Quaeghebeur “Modeling uncertainty using accept and reject statements”</td>
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<td>18:00</td>
<td>Drinks</td>
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**Thursday August 30**

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<tr>
<td>09:15</td>
<td>Invited lecture&lt;br&gt;Kevin Zollman “A systems-oriented approach to the problem of testimony”</td>
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<td>10:15</td>
<td>Break</td>
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<td>10:30</td>
<td>Discussion session on social epistemology&lt;br&gt;Luc Bovens “Predicting a True Ordering on Grounds of a Profile of Expert Orderings”&lt;br&gt;Rory Smed “The Evolution of Simple Learning Rules in Games”&lt;br&gt;Comments by Kevin Zollman</td>
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<td>11:45</td>
<td>Break</td>
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<tr>
<td>12:00</td>
<td>Contributed papers&lt;br&gt;Jennifer Jhun “Game Theoretic Rationality and Ockham’s Razor”&lt;br&gt;Emiliano Lorini “Varieties of belief in strategic interaction: a logical approach”</td>
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13:00  Lunch
14:15  Invited speaker
    Katya Tentori “The other side of inference: How evidence assessment shapes inductive reasoning”
15:15  Break
15:30  Discussion session on the psychology of reasoning
    o Catarina Dutilh-Novaes “Non-monotonicity, reasoning biases, and the theoretical vs. practical reasoning divide”
    o Annika Wallin “A peace treatise for the rationality wars?”
    o Comments by Katya Tentori
16:45  Break
17:00  Contributed papers
    o Blake Thomson “The Interpretation of Interpretation: The Scope and Limits of Its Scope and Limits”
    o Tjerk Gauderis “On Theoretical and Practical Doxastic Attitudes”
    o Ben Levinstein “What your credence tells me about whether p”
18:00  Drinks and conference dinner

**Friday August 31**
09:15  Invited speaker
    Jeff Helzner “Foundations of Individual Rationality”
10:15  Break
10:30  Discussion session on decision theory
    o Richard Bradley “Decision Rationality for Bounded Agents”
    o Conrad Heilmann “Weighting Evaluations”
    o Comments by Jeff Helzner
11:45  Break
12:00  Contributed papers
    o Toby Handfield “Going sugarless: Decision theory and negatively intransitive preferences”
    o Till Grüne-Yanoff “Preference Consolidation with Endogenous Entrenchment”
12:45  Lunch
14:00  Invited speaker
    Simon Huttegger “Low Rationality Learning in Games: Are Socially Desirable States Reachable?”
15:00  Break
15:15  Discussion session on formal ethics
    o Martin van Hees “The Inconsistency of Libertarianism”
    o Wlodek Rabinowicz “Two Intuitions about Free Will: Alternative Possibilities and Endorsement”
    o Comments by Simon Huttegger
16:30  Break
16:45  Contributed papers
    o Sebastian Lutz “On the Role of Changing Evaluations in Normative Theories”
    o Constanze Binder “Social Choice and Comparative Justice: The Intersection Rule”
    o Daniel Eckert “Towards a model theoretic meta-theorem for dictatorship results in judgment aggregation”
17:45  Conference closing and drinks
Abstracts

Wednesday August 29

Invited Lecture

Branden Fitelson “Accuracy, Coherence, and Evidence”
I will begin by rehearsing the traditional story about the relationship between accuracy norms (i.e., the truth norm), coherence norms (i.e., the deductive consistency norm), and evidential norms (i.e., a weak Lockean evidentialist thesis) for full belief. Then, I will discuss Ramsey-style reasons for being skeptical about an analogous story about partial belief (viz., credence). Next, I will describe an alternative story about the relationship between accuracy norms and coherence norms for credences (due to de Finetti, Joyce, and others). Finally, I will explain how an analogous story about full belief leads to an interesting new coherence norm that is weaker than deductive consistency, but much more intimately connected with evidential norms. Time permitting, various implications and applications of this new approach will be discussed. This is joint work with Kenny Easwaran.

Discussion Session on Formal Epistemology

Johan van Benthem “Logical Aspects of Evidence Change”
Based on joint work with Eric Pacuit, I will discuss some recent attempts at modeling suitably fine-grained notions of evidence and justification in a dynamic setting. These lie at intermediate levels in between semantics and syntax that are still underexplored. I will also discuss how this picture might allow for drawing in the notion of evidence as ‘more plausible than not’, exploring a merge between logical and probabilistic approaches.

Eric Pacuit “Dynamic Logics of Evidence and Belief”
A rational belief must be grounded in the evidence available to an agent. However, this relation is delicate, and it raises interesting philosophical and technical issues. Modeling evidence requires richer structures than found in standard epistemic semantics where the accessible worlds aggregate all reliable evidence gathered so far. Even recent more finely-grained plausibility models ordering the epistemic ranges identify too much: belief is indistinguishable from aggregated best evidence. In this talk, I will discuss some recent papers by myself and Johan van Benthem where we add evidence structure to standard models of belief, in the form of families of sets of worlds. We show how these more fine-grained models support natural actions of “evidence management,” ranging from update with external new information to internal rearrangement.

Contributed Papers

Martin Rechenauer “Probabilities, Subjective, Objective and Causal: some Problems”
Degrees of belief are usually represented by probability measures; this is the basic idea behind subjective probabilities or credences. But then one has to give some account of the relationship between subjective and objective probabilities (chances). Accepting several plausible principles for credences and chances leads into trouble. These are: (1) credences obey the laws of the probability calculus; (2) the Principal Principle states the basic connection between credences and chances and should therefore be accepted; (3) at least some chances are to be understood as representations of propensities. For (2) implies that if credences obey the laws of probability, then chances do as well, so by (1) they indeed do. But chances as propensities actually do violate some laws of probability (e.g. Bayes’ Theorem), as shown by Humphreys (1985). So what to do? As I am inclined to accept (1) and (3) together with Humphreys’s arguments, I turn to variants of the Principal Principle for avoiding the central conflict.

Peter Brössel “The Problem of Measure Sensitivity Redux”
This paper shows that the problem of measure sensitivity is far more severe than has been noted so far. To date, the most forceful display of the problem of measure sensitivity is one provided by Fitelson
Fitelson shows that the validity of various central arguments within Bayesian confirmation theory depends on which Bayesian measure of confirmation is adopted. The present paper adds to the results set out in Fitelson (1999), expanding on them in two principal respects. First, this paper considers more confirmation measures; in Fitelson (1999) only a proper subclass of those confirmation measures considered here is taken into account. Second, this paper shows that the problem of measure sensitivity actually runs deeper and is far more severe than it is noted in Fitelson (1999). In particular, it shows that there is a set of important and valuable arguments within Bayesian confirmation theory and no confirmation measure that renders all these arguments valid.

Alexandra Hill “From symmetry to induction”
The mathematics of uncertain reasoning has shown that many principles of induction follow logically from considerations of symmetry in the language we use. In this paper I give two well-known examples of this as well as a new result that shows how a principle of reasoning by analogy follows from the commonly accepted requirement of language invariance. The standard starting point for inductive logic is the question

Q1 How should a rational agent assign conditional probabilities?

Like deductive logic which consists in several axioms or rules of inference, inductive logic involves a variety of rules or principles. Unlike in the case of deductive logic, some of these rules are mutually inconsistent, and so do not form an axiomatic system as such. However, we also find many logical dependencies between rules, and an often found theme is this: a principle which seeks to preserve uniformity in our treatment of the language will logically entail a principle which captures a form of inductive inference. One idea often found in the philosophical literature is that induction is justified by a presumption of the uniformity of nature. The results mentioned in this paper show that induction may be justified, even mandated, by the presumption of uniformity of language.

Jason Konek “New Foundations for Imprecise Bayesianism”
Imprecise Bayesians say that when your evidence is unspecific and equivocal your opinions should be unspecific and equivocal too. This requires abstaining from judgment on certain issues. Precise models (single probability functions), however, do not allow for this. They require you to take a stand on all issues. They require that your comparative probability judgments, your preferences, etc. all form total orderings. According to imprecise Bayesians, capturing unspecific and equivocal opinions requires imprecise models (sets of probabilities), which allow for partial comparative probability orderings, preference orderings, and so on. My aim is to demonstrate how flexible precise models are. Despite first appearances, precise models do indeed allow for unspecific and equivocal opinions. I argue that whether a precise model *P* commits you to judging that *X* is more probable than *Y* (or that *A* is preferable to *B*, etc.) depends not only on whether *P*(*X*) > *P*(*Y*), but also on whether *P*(*X*) and *P*(*Y*) are based on sufficiently weighty evidence. Information about weight is spread out across the densities over chance hypotheses that determine *P*(*X*) and *P*(*Y*). I specify the formal properties of densities relevant for saying when evidence is “sufficiently weighty” for the purposes of making a comparative probability judgment in a particular context of inquiry. I then detail exactly how these properties give rise to partial comparative probability orderings, preference orderings, etc.

Hanti Lin “How to Make Mainstream Epistemology Embrace the Bayesian Pragmatist Challenge”
The notion of “believing that *p*” is usually assumed in mainstream epistemology but deemed unclear by Bayesians. Some Bayesians even pose a pragmatist challenge: clarify the notion of “believing that *p*” by explaining its role in rational decision making—with the mathematical rigor that Bayesians (e.g. Savage 1954) have applied to clarifying the notion of subjective probabilities. I take up the challenge. I assume that sometimes it is rational for human beings to deal with decision problems by simplifying them qualitatively in the beginning and, if necessary, resorting to full Bayesian rationality later. Then I show that to simplify a decision problem qualitatively is exactly to prefer as if one performed a familiar type of everyday practical reasoning with the believed propositions, whose underlying logic is classical logic plus one of the standard defeasible/non-monotonic logics in artificial intelligence. I also show that, whenever one should use everyday practical reasoning without contradicting the Bayesian
choices, she should believe a proposition only if it has high probability, where high probability is defined by a threshold that varies with the decision problem in context. That result provides a new solution to the lottery paradox and a new approach to pragmatic contextualism in epistemology.

Erik Quaeghebeur (joint work with Gert de Cooman, and Filip Hermans) “Modeling uncertainty using accept & reject statements”

Uncertainty and preference is often modeled using linear previsions and linear orders. Some more expressive models use sets of probabilities, lower previsions, or partial orders (see, e.g., the work of Seidenfeld et al. and Walley). In the discussion of these more expressive models, or even to justify them, alternative representations in terms of sets of so-called acceptable, favorable, or desirable gambles appear (cf. the work of Williams, Seidenfeld et al., and Walley). Such 'sets of gambles'-based models are attractive because of their geometric nature. We generalize these 'sets of gambles'-based models by considering a pair of sets, one with accepted gambles and one with rejected gambles. We develop a framework based on a small number of axioms “No Confusion, Deductive Closure, No Limbo, and Indifference to Status Quo” and provide an interesting characterization of the resulting models. Furthermore, we define a pair of equivalent gamble relations that generalize the partial orders mentioned earlier; the corresponding characterization result is also given.
Invited Lecture

Kevin Zollman “A systems-oriented approach to the problem of testimony”

Much of what we believe, we have learned through the testimony of other people. Of course, we do not always believe the testimony of just anyone, instead we determine who to believe on the basis of other considerations. Hume suggested that we should only believe those who have had a successful track record of past success. This paper considers the ramifications of adopting one version of the Humean strategy for believing testimony. Rather than considering the effects of adopting this strategy for a single individual, I utilize a “systems-oriented” evaluative strategy - I determine if this strategy is productive by analyzing the properties of groups who adopt the Humean method for believing testimony. This is achieved by considering simulations of artificial communities who’s members adopt this practice. This methodology enables a fine-grained analysis of the impact of the Humean strategy in various forms.

Discussion Session on Social Epistemology

Luc Bovens “Predicting a True Ordering on Grounds of a Profile of Expert Orderings”

I design a procedure to aggregate orderings by individual predictors concerning future events, such as horse races, in order to determine what will be the true ordering. The challenge for this exercise was put to me by Wlodek Rabinowicz.

Start with a set of strict orderings over \( n \) options by \( m \) experts. This is the profile \( P \). Suppose some ordering is the true ordering \( O \) over these options. Take some arbitrary ordering \( O^# \). Let the variable \( S \) be the number of reversals to get from \( O \) to \( O^# \). An ordering can be maximally \( S = n(n-1)/2 \) steps away from the true ordering. (For weak orderings, we need to make adjustments in what constitutes a step.)

I specify an exponential distribution \( f_\lambda(S) \) over the variable \( S = 0, \ldots, n(n-1)/2 \). An exponential distribution is a one parameter distribution with equiprobability for \( \lambda = 0 \), and \( Pr(S = 0) = 1 \) for \( \lambda = \infty \). \( \lambda \) is a measure of the reliability of the judge. At \( \lambda = 0 \) judge is fully unreliable (in the sense that she is a randomiser), at \( \lambda = \infty \), the judge is fully reliable.

Let \( O^# \) be an ordering that is \( S = y \) reversals removed from the true \( O \). Let the number of orderings that are \( y \) reversals removed from \( O \) be \( g(y) \). Then the chance that a judge who is \( \lambda = x \) reliable would come up with the particular ordering \( O^# \) equals \( \frac{1}{g(y)} f_\lambda(S = y) \). Now here is the procedure that is implemented in Mathematica:

1. Create the set of all possible orderings \( O \).
2. Pick the first \( O_n \) in this set \( O \) and assume that this is the true ordering.
3. Take the first ordering \( O_1 \) from the profile \( P = \{O_1, \ldots, O_m\} \).
4. Pick the \( \lambda \) value that yields the maximal probability \( \max\{Pr(O_1)\} \) that a judge would come up with \( O_1 \) on the assumption that \( O_n \) is the true ordering. Record this maximal probability.
5. Do this for every ordering in the profile \( P \).
6. Assuming independence, the maximal chance that the judges would come up with the profile is \( \prod_{n=1}^{m} \max\{Pr(O_i)\} \) assuming that \( O_n \) is the true ordering. This is the maximal likelihood of \( O_n \).
7. Now go on to \( O_n \) in \( O \) and calculate the maximal likelihood of \( O_n \). Etc.
8. Pick the ordering in \( O \) that has the highest maximal likelihood.

The motivation is as follows. Think about the closest possible world in which the profile \( P \) could have been generated on the assumption that \( O_n \) is the true ordering. It is the closest possible world because it contains the most plausible characterisations of the judges in terms of their reliabilities. And then one asks, in that closest possible world, what is the chance that this profile would be generated on the assumption of \( O_n \)? Then one uses this probability as a measure of closeness of the profile \( P \) to \( O_n \). One picks the ordering in \( O \) to which the profile \( P \) is closest as the best guess of what the true ordering is.
Rory Smead  “The Evolution of Simple Learning Rules in Games”
Recent work has suggested that social interaction can, but not always, lead to the evolution of learning. Furthermore, there seems to be good reason to believe that learning rules which seek out local optima in these settings will not be evolutionarily stable. However, little work has been done by way of exploring a broader space of possible learning rules and how social interaction might impact the evolution of learning.

To make some progress on this question, I present a framework for modeling the evolution of a class of simple trial and error learning rules. The class of learning rules investigated is a set of variations on Win-stay, Lose-randomize (WSLR), a very simple but highly successful rule in game contexts. This class of learning rules includes varieties that approximate traditional best response rules, maximin rules, rules that are sensitive to social information and others. I explore what variations of WSLR are evolutionarily successful in strategic settings.

In a wide variety of game settings, non-traditional learning rules, which do not lead to best responses, turn out to be surprisingly effective and persistent. Furthermore, evolution often leads to polymorphic states where multiple kinds of learners exist simultaneously. We present examples which illustrate the occurrence of evolutionarily stable polymorphic states, as well as apparently “paradoxical” play in games. Additionally, some successful varieties of WSLR are rules that condition behavior on an opponent’s payoff or behavior.

Though the model is idealized, it illuminates some important features of learning in social settings. Specifically, the best way to learn depends on how others are learning, and evolutionary processes may often lead to states where populations have many different types of learners. These observations have implications for social epistemology more broadly since there may be interactive effects between learning mechanisms in social settings.

Contributed Papers

Jennifer Jhun  “Game Theoretic Rationality and Ockham’s Razor”
Though considered a standard of agent rationality, backward induction faces the conceptual challenge: it is unsatisfactory as a reasoning strategy, for it is mute on how one might go about reasoning when confronted by new information. On the other hand, forward inductive approaches embody the intuition that strategic agents accommodate past observations in order to speculate about future events. By adapting the notion of Ockham’s Razor – that one ought, all things considered, to select a simpler theory of a more complex one in order to explain observed phenomena – we can justify a particular formalization of forward induction as the grounds for a reasoning strategy that we could argue is one a rational agent would use. Not only this, but we will at the same time be able to provide a fuller normative story for backward induction.

Emiliano Lorini  “Varieties of belief in strategic interaction: a logical approach”
This paper proposes a logical framework for representing static and dynamic properties of different kinds of individual and collective attitudes. A complete axiomatization as well as a decidability result for the logic are given. The logic is applied to game theory by providing a formal analysis of the epistemic conditions of iterated weak dominance. The main difference between the analysis of the epistemic conditions of iterated weak dominance given in this paper and other analysis is that we use a qualitative approach to uncertainty based on the notion of plausibility first introduced by Spohn, whereas other analysis are based on a quantitative representation of uncertainty in terms of probabilities.

Martin Peterson  “Non-Probabilistic Pasadena Puzzles”
By modifying the Pasadena game introduced by Nover and Hájek we show that the sum total of value produced by an act can be made to converge to any value, even if the scenario faced by the decision-maker is non-probabilistic and fully predictable. Previous solutions proposed for the original (probabilistic) version of the Pasadena puzzle are unable to solve this new version of the problem.
Invited Lecture
Katya Tentori “The other side of inference: How evidence assessment shapes inductive reasoning”
Any inductive inference hinges on two key elements: evidence and hypothesis. Research in cognitive science has focused almost exclusively on the latter, and, in particular, on how people judge the probability of a hypothesis in light of the given evidence. Assessment of the impact of new evidence on the credibility of hypotheses has not received equal consideration. As a consequence, numerous basic questions still await an answer: When does an inference sound convincing? How should the weight of evidence be quantified? Are human reasoners good at these tasks? What are the cognitive operations involved in the computation of evidence assessment? What are the relations between evidence assessment and other domains of reasoning? These questions require both normative and descriptive levels of analysis. In my talk, I will present some studies that my collaborator and I carried out by combining the refinement of Bayesian confirmation measures set out in the epistemology literature with the development of a new experimental paradigm for eliciting assessments of evidential impact. One of our main recent findings is that people’s inferences are more accurate and consistent when they concern evidential impact rather than hypothesis credibility. We have also found that it is possible to use evidential impact to reinterpret puzzling phenomena traditionally pertaining to probabilistic reasoning. These results raise the possibility that evidence assessments have greater normative merit than do probability judgments, which are often observed to be deficient.

Discussion Session On The Psychology of Reasoning
Catarina Dutilh-Novaes “Non-monotonicity, reasoning biases, and the theoretical vs. practical reasoning divide”
Stenning and van Lambalgen (2008) have suggested that much of what is described in the psychology of reasoning literature as ‘reasoning biases’ can more accurately be accounted for by means of the concept of defeasible, non-monotonic reasoning. In my talk, I apply the semantic framework for non-monotonic logics presented in Shoham (1987) specifically to the so-called ‘belief bias’ phenomenon, and draw some tentative conclusions on the theoretical vs. practical reasoning divide.

Annika Wallin “A peace treatise for the rationality wars?”
If we know that certain ways of making decisions are associated with real life success, is this then how we should decide? In this paper the relationship between normative and descriptive theories of decision-making is examined. First, it is shown that the history of the decision sciences ensures that it is impossible to separate descriptive theories from normative ones. Second, recent psychological research implies new ways of arguing from the descriptive to the normative. The paper ends with an evaluation of how this might affect normative theories of decision-making.

Contributed Papers
Blake Thompson “The Interpretation of Interpretation: The Scope and Limits of its Scope and Limits”
The subject of this presentation will be the proper interpretation of the interpretivist stance on intentionality, appealing to a system of Davidsonian commitments that will act as a constraint on that interpretation. What motivates this task is that, under one interpretation, interpretivism falls prey to the charge of vicious regress-or-circularity. This interpretation, and the charge that comes with it, has recently been put forward by Uriah Kriegel in his essay “Interpretation: Its Scope and Limits”, which appeared in New Waves in Metaphysics (ed. A Hazlett, 2010). My presentation will be a critical response to his general line of argument. I will lay out the interpretation of interpretivism for which the vicious regress-or-circularity is a problem and explain how this regress-or-circularity takes hold. I will also lay out an alternative to that interpretation. I will then defend this alternative on the grounds that it manages to escape the regress-or-circularity charge that its counterpart falls prey to. Most importantly, I will show that this alternative is consistent with other central interpretivist commitments in ways that its counterpart is not. The thesis of this presentation will be that the interpretation of
interpretivism employed in the regress-or-circularity charge is uncharitable, that there is a more chari-
table interpretation of interpretivism available that does not fall prey to the regress-or-circularity, and 
thus that the charge of vicious regress-or-circularity is unfounded.

Tjerk Gauderis “On Theoretical and Practical Doxastic Attitudes”
Doxastic propositional concepts, i.e. concepts that express an agent’s doxastic attitude towards or, 
in other words, her opinion about a certain proposition, come in a wide variety: believing, accepting, 
doubting, assuming, having a certain degree of confidence, suspending, giving some credit, being 
ignorant etc. The exact relations and distinctions between these different concepts have been an 
important research topic in epistemology for many decades. Still, these relations have not yet been 
clarified in a satisfying way.

This paper presents the thesis that some of these difficulties originate from the fact that it is 
generally disregarded that two doxastic attitudes can be discerned. This disregard is understandable, 
as several natural language concepts such as ‘belief’ describe both doxastic attitudes. This paper 
will show that clarification of this difference will enable us to draw the distinction between belief 
and acceptance and the distinction between plain belief and degrees of belief more precisely.

Ben Levinstein “What your credence tells me about whether p”
We first examine the following three related notions: sensitivity, accuracy, and epistemic deference. An 
agent is sensitive to whether p insofar as her credence tracks p’s truth value. From my point of view, 
your sensitivity is what matters most to me. The more sensitive you are, the more I can expect to have 
an accurate credence after talking to you, i.e., the more epistemic utility I think you’ll provide. The 
amount of deference I give you measures the extent to which one agent adopts the credence of another. 
As Degroot and Fienberg show, an advisor’s total expected inaccuracy (under some measure) is simply 
the sum of her expected sensitivity and the amount the agent expects to defer to her. As this result 
suggests, inaccuracy measures generalize the traditional notion of information and allow us to quantify 
the evidential value of an advisor’s credence. Now suppose an agent is interested in whether p and has 
judgments about the antecedent level of expected accuracy of her collaborators. How should she revise 
herself own credence after learning what they think? In any specific case, we argue there isn’t much to 
say. However, we obtain much stronger results when we look at what should happen in expectation or 
on average. We argue that under weak-but non-mandatory-assumptions about her advisors, an agent 
should tend to be quite conciliatory. When she expects them antecedently to do as well as she herself 
does, she should expect to give them equal weight. We go on to show, however, that ‘equal weight’ 
means something quite different from how it’s usually understood. Start with a special case. Call an 
advisor A with credence function $\Cr_A$ a $p$-expert according to $\Cr_0$ if $\Cr_0(p|\Cr_A(p) = x) = x$ for all 
x. If an agent has multiple $p$-experts for collaborators, then regardless of whether they share evidence 
or what $\Cr_0(p)$ is or which (strictly proper) accuracy measure is used, any method of linear averaging 
no matter the weights will tend to result in overly agnostic posterior credences, i.e., credences that are 
too far from 0 and 1. We show further that when an agent takes her advisors to be roughly equally 
as accurate as she is but non-experts, she’ll end up with even greater opinionation than in the expert 
case. In turn, equal weight can’t be identified with anything like difference splitting in general, and our 
form of conciliationism is bolder and avoids the spinelessness objection-as far is appropriate-that both 
Equal Weight theorists and their opponents often worry about. We’re careful to make sure that all of 
the results and arguments in this paper apply regardless of the extent to which background evidence 
is shared or how much is known about the credence function of any of the parties. Therefore, we can 
apply them both in the extreme case with common knowledge of evidence that’s often discussed in the 
disagreement literature but also in more practically relevant and realistic cases.
Invited Lecture

Jeff Helzner “Rethinking the Foundations of Decision Theory”
Rationality is a term that is employed in a variety of contexts. The positive economist is content to assume that the agents in the economic system are rational. The psychologist warns of cognitive realities that might cast doubt on such assumptions. The decision analyst offers services that are intended to counteract the influence of cognitive biases and to bring actual decision making in line with the demands of rationality. But just what are these demands? An examination of the relevant literature in economics, psychology, and statistics reveals that the demands of individual rationality are generally taken to include optimization, i.e., a principle that requires the agent to restrict its selection to an available alternative that is optimal with respect to the agent’s preference ordering. In the first part of my talk I will review some of the reasons for rejecting optimization as a demand of rationality and will consider some of the challenges that result from such a move. In the second part of my talk I will discuss some of the foundational work that has been done along these lines and will close with by considering some directions for future research.

Discussion Session On Decision Theory

Richard Bradley “Decision Rationality for Bounded Agents”
Rationality neither requires agents to be aware of all relevant prospects nor that have determinate opinions about those that they are aware of. But what does rationality require of agents who are bounded in the sense that they are neither fully aware nor fully opinionated, and are conscious of this fact? Because of the idealising assumptions of standard Bayesianism to address these question within this framework. In this talk I will try to do two things: firstly, evaluate the possibilities for extending the Bayesian framework to allow representation of non-opinionation and unawareness and secondly, to see what kinds of answers to the question about rationality these extensions support.

Conrad Heilmann “Weighting Evaluations”
This paper discusses two approaches to weighting numerical evaluations. We start by assuming that we have obtained numerical evaluations of some type of object, such as a utility function that represents preferences over acts. We then ask how we can weight these evaluations and identify two approaches. One approach, called the probability approach, derives a separate measure on the domain of objects on which the value operation was defined. The other approach, called the discounting approach, enriches the description of the domain so as to amend the value operation directly, which yields an implied measure. We analyse and compare the two approaches along four lines, asking how they (i) can be motivated conceptually, (ii) derive and elicit the measures, (iii) can apply the respective measures, and (iv) update the measures. The upshot of this discussion is that the probability approach should be favoured over the discounting approach on all four accounts.

Contributed Papers

Toby Handfield “Going sugarless: Decision theory and negatively intransitive preferences”
Orthodox decision theory gives no advice to agents who hold two goods to be incomparable in value, because such agents will have negatively intransitive preferences. According to standard treatments, such agents are irrational, despite widespread evidence of incomparable goods in ordinary life. Prospectism is a recent proposal, due to Caspar Hare, to extend standard decision theory so as to cope with incomparability in general, and negatively intransitive preferences in particular. In this paper, we argue that prospectism is inadequate, on three grounds. First, prospectism conflates decision scenarios that, intuitively, rational agents may permissibly treat as different. Second, prospectism leads to violations of a principle of rationality closely related to dominance. Finally, we suggest that what little intuitive appeal prospectivism has can be diagnosed as arising from a psychological heuristic that has no normative status.
Till Grne-Yanoff  “Preference Consolidation with Endogenous Entrenchment”
This paper presents a model of preference consolidation that restores a preference base’s consistency by performing a minimal contraction. Previous preference contraction models yield highly non-unique results, and therefore require exogenous information in the form of an entrenchment relation. I propose to derive information about such an entrenchment relation from the semantic properties of the alternatives ranked in the preference relation itself. The model thus endogenises information contained in the entrenchment relation. While such a model does not necessarily yield a unique result, it considerably reduces the amount of exogenous information needed to arrive at a contraction with a unique result.

Amir Konigsberg  “Consequential and decision value and the irrelevance of irrelevant alternatives in choice problems”
In this paper I propose a distinction between consequential and decision value in the rational assessment of choice. By making this distinction I provide an alternative taxonomy for dealing with rational choice problems. I introduce the notion of decision value, and show that it can explain a wider spectrum of choice problems than can be explained using consequential value alone. Perhaps more importantly, I show that decision value can make sense of choice problems that are considered irrational when assessed only by their consequential value. In doing so, I show that the consequentialist standard of rational choice, which I take to be the consensual means of addressing choice problems, is too strong, as are the internal consistency standards of rationality that are closely related to it.

Invited Lecture
Simon Huttegger  “Low Rationality Learning in Games: Are Socially Desirable States Reachable?”
Every organism faces the problem of learning from experience. This problem becomes particularly difficult when one has to learn in highly non-stationary environments as is usually the case in game theoretic contexts. I will discuss some implications of this for social philosophy by using three case studies where social learning, causal learning, and minimum-rationality learning play a role. In each of these examples there will be pretty uncontroversial socially desirable outcomes. The basic question is whether players can those outcomes by applying simple undemanding learning procedures.

Discussion Session On Formal Meta-Ethics
Martin van Hees  “The Inconsistency of Libertarianism”
Libertarianism, whether in its “left” or “right” variety, is about the allocation of individual rights. We argue that there are four requirements that any rights structure should meet in order to be called purely libertarian: completeness, conclusiveness, non-imposition, and symmetry. Completeness means that we cannot add extra rights to individuals without yielding inconsistencies; conclusiveness states that agents can always ensure that all issues are decided through the exercise of rights; non-imposition ensures minimal richness of the options about which individuals have to make a decision; and symmetry implies that all agents have the same rights. We show that no rights structure exists that satisfies all four of these conditions: pure libertarianism is an inconsistent political theory.

Wlodek Rabinowicz (joint work with Christian List)  “Two Intuitions about Free Will: Alternative Possibilities and Endorsement”
Free will is widely thought to require (i) the possibility of doing otherwise and (ii) the making of choices that are more than undetermined ‘flukes.’ According to (i), a necessary condition for free will is agent-level indeterminism: At some points in time, an agent’s prior history admits more than one possible continuation. (As argued by List in another paper, agent-level indeterminism is compatible with physical determinism.) According to (ii), however, this absence of determination may threaten freedom: If each of several alternative actions could have been done, none of them is necessitated by the agent’s prior history, and so the agent’s actual action seems nothing more than a fluke. We argue that this tension is only apparent by distinguishing between actions an agent can possibly do and actions she can do with endorsement (which might, but need not, mean actions she can rationally do). It is consistent to say that someone who made a particular choice could have done otherwise -
several actions were possible for her, in line with agential-level indeterminism - and yet that, far from having made a fluke choice, the agent chose an action she endorsed. The paper develops a general formal framework for this double-pronged approach to free will. An important implication is that if the possibility to act otherwise and endorsement are taken to be jointly sufficient for acting freely, then free will cannot consistently require the possibility of freely acting otherwise.

Contributed Papers

Sebastian Lutz “On the Role of Changing Evaluations in Normative Theories”
Many teleological normative theories, rational, prudential, and ethical, depend for the evaluation of outcomes of actions –and hence for the inference of their normative statements– on features of the world like preferences, happiness, or achievements. An action that changes these features thus leads to a change of the evaluation that determines the normative status of the action itself. I generalize rational decision theory to deal with this complication and argue that the generalization can be used to criticize specific evaluations from within the normative theory that relies on them. The generalization furthermore solves problems with internalized oppression and some utility hogs, and can in some cases counter the alienation objection against impartial moral theories.

Constanze Binder “Social Choice and Comparative Justice: The Intersection Rule”
This paper explores approaches to comparative justice by drawing on Social Choice Theory. In a first step we characterize the well-known intersection rule over a domain of profiles of possibly incomplete individual preferences. The intersection rule terms state A to be more just than state B if, and only if, no person in the respective society considers state B to be more just than state A. In a second step, it is proven under which conditions the set of maximal elements, induced by the partial ordering the intersection rule yields, coincides with the set of maximal elements in case the domain of the intersection rule is restricted to profiles of complete preference orderings. In a final step we examine a multi-stage intersection rule to comparative justice and investigate under which conditions (imposed on the change of individual preferences from one decision making stage to the next) a unique maximal element emerges after a finite number of stages.

Daniel Eckert “Towards a model theoretic meta-theorem for dictatorship results in judgment aggregation”
In classical Arrovian social choice theory the close relation between Arrow’s original dictatorship result and the Gibbard-Satterthwaite theorem on the impossibility of a non-dictatorial strategy-proof social choice function is well known and has given rise to meta-theorems encompassing both dictatorship results. In this paper we use a model-theoretic framework to establish a meta-theorem for analogue dictatorship results in the recent literature on judgment aggregation.