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# THE REASONER

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Jobs and Studentships

11 in Philosophy at the University of Wisconsin, Madison, Sara moved to Europe to continue her doctoral studies in logic at the University of Amsterdam, where she defended a PhD thesis on *Modalities in Medieval Logic*. Besides the history of medieval logic, Sara's research also focuses on modal and dynamic logic, and onomastics (the study of names).

11 My first meeting with Sara was, indeed, through her PhD thesis. Around that point, I was either nearing the end of my undergraduate programme or just starting my MA. At that time, I was beginning to primarily focus on the history of medieval logic. A few years later, Sara and I crossed paths in person for the first time in Lisbon, at a conference on transcendentals in medieval philosophy. Apparently, I walked up to Sara and told her: "I have read your thesis!". We have been good friends ever since. We kept in touch over the years, then I arrived in Durham at the beginning of 2019, to stay for about fifteen months. It was not the beginning of a beautiful friendship – that train had already left the station ages before – but it was certainly the continuation of one. It was, however, the beginning of a closer working relationship and, overall, of a lovely time of constant and diverse intellectual stimulation.

15 Many thanks to Sara for sharing her insight on several of her research topics and on her teaching with me and with the readers of *The Reasoner*!

## EDITORIAL

Dear Reasoners,

It is with great pleasure that I introduce you to this issue of *The Reasoner*, featuring an interview with Sara L. Uckelman. Sara has been an assistant professor in the department of Philosophy at Durham University since 2014, previously having held research positions in Heidelberg, Tilburg and Amsterdam. After having majored in English and Philosophy and having completed a MA



GRAZIANA CIOLA  
Radboud University

## FEATURES

### Interview with Sara L. Uckelman

GRAZIANA CIOLA: Which one of your interests did emerge first?

SARA L. UCKELMAN: The interest in names. I was ten and bored, and my parents had a very nice two volume dictionary set – A through K and L through Z – on the shelves of the living room. I pulled the first one off and I was going through

the front matter. I think they were from 1980 or 1981 and in the front matter they had the top 100 most popular boy's names and girl's names from the year of publication of the dictionary. I read through them and they had the names' meaning and some information about their linguistic origin. It was neat and it was interesting. And it was a list – and I like organising and categorising things. So I typed that list up into a very rudimentary database. Then, over the next year or so, I got all the baby names books that I could get from the local library and put all of them into that database as well; I would put in the name and the linguistic origin and the meaning and the source I got it from. Then I stopped working on this database because I had realised that you look at five different baby name books and you can get three different meanings for the same name – or they say that this particular name is “Teutonic”. “Teutonic” is not a language, “Celtic” is not a language; there is no such thing as a “Teutonic name”. So by the time I was eleven or so, I had recognised that I wasn't really tracking something real. At that point my database had over 10,000 entries in it, so it took me a while to realise that. But that was where that started and my interest was then sustained through joining the *Society for Creative Anachronism* when I was about fourteen, because everybody in the *Society* needs to pick a medieval name and so you need to know stuff about medieval names. Then I could take my desire to categorise, and classify and make lists of names, and actually turn it into something useful that people could use. Interestingly enough, the SCA is why I ended up doing medieval logic as well. In 2005 I went to Amsterdam for my PhD and I took a class that involved history of logic. About five weeks in, we reached the middle ages and I was like: “Wait a minute! I can do logic and the middle ages at the same time?! Well, that's my dissertation sorted!”. The logic interests came at the end of high school and into university level, but the names have been there for a very long time. I can now tell people that I have been seriously studying onomastics for almost thirty years and that isn't a lie.



GC: So onomastics was your first love. Can we say that “medieval stuff”, in a general sense, bridged your interests between onomastics and logic?

SU: Yes. That actually makes sense, because I have definitely skewed away from the study of modern names and naming practices. I am still interested in that, but only insofar as I respond to things that people say about modern trends by looking at historical data. When somebody says “oh, So and So invented this name”, usually some kind of contemporary author, then I like to go and look through all of my data and say “no, they didn't, because this name already existed and was used in this time and this place”. But this is actually an interesting question, and it has to do with what names are as metaphysical objects, and also how they are discovered, how they are invented. In a sense, it is correct to say that J. M. Barrie invented the name “Wendy” or that Neil Gaiman invented the name “Coraline”. Because with names it's kind of like how Abelard and Frege can both discover propositional logic, independently. If you have no idea that this thing is out there, and you have no plausible way of knowing that this other thing is out there, and so you think that you are creating something new,

there does seem to be some justification for saying that you are inventing a name. I am of the opinion that proper names can have many independent origins. But even given that, it can be very interesting to go back and say that Barrie may have thought that he was inventing “Wendy”, but you can actually find instances of it a couple of hundred years earlier. Another example is in Sr. Walter Scott in *Ivanhoe*. Usually the name “Cedric” is a classic example of a made-up “medieval” name. But it's not: you can find examples of that spelling and variant spellings that have the same pronunciation in the 16th century. But Scott wouldn't have known that; he certainly thought that he was coining a new name. And so it still seems correct to say that he invented that name, it's just that he wasn't the first one to do so.

Here's something that is quite interesting and I have a paper on this. It has a great title: it's called “Names Shakespeare didn't invent” (in *Names: a Journal of Onomastics*, 67:3, 153-159 DOI:10.1080/00277738.2018.1490518), because there are loads of names that people attribute to Shakespeare, such as “Viola” and “Olivia”. Manifestly and easily demonstrably not true. “Viola” wasn't used in England before Shakespeare, so far as I can tell. However, what was Shakespeare reading? Where was the name found? It's found in Renaissance Italy. There is every reason to think that he had access to that name through Italian literature. “Olivia” was used in England, from the 12th and 13th century on: it's just one of the latin forms of the name “Olive”; it was in common currency Britain already. What you can say about things like “Viola” is that Shakespeare invented “Viola” as an English name, by importing a foreign name and making it popular. And the only reason that this contributed to the naming pool is that people named their children after pop culture, and that is what Shakespeare was at the time.

GC: Earlier, when you were talking about your beginnings in onomastics and mapping names, you said that you wanted to grasp something real. May I ask where the reality is here and how that desire connects to your interests in logic?

SU: One of the things that I do with my big project, the *Dictionary of Medieval Names from European Sources* (<http://dmnes.org/>), when constructing entries is: all variants of the same name go in the same entry. So if you look at the entry for “John” you will find all of the English variants, all of the German variants, all of the Italian variants, all of the Dutch variants, and all of French variants, and so on. But you can only do this if you have some idea of when two names are the same name. For the identification of names, in my very rudimentary internal metaphysics that I use when I am writing dictionaries, there is a canonical name form and in some cases this is a form of a name for which I don't actually have any documentary evidence – partly because I've got two spellings of the name and I normalise them according to contemporary Modern English orthography that “y” for example would be an “i”, that sort of thing. So there are two kinds of things that are interesting when I am making an entry. First, when I choose the canonical name form, the header for an entry, it is not necessarily something that actually exists out there: I am picking something and saying that this is the canonical form of this name. The other thing is trying to handle the question of when are two different spellings instances of the same name. A particularly interesting example with this is “Isabel” and “Elisabeth”, because “Isabel” developed as a Provençal form of “Elisabeth”. In certain contexts, they were still considered variants of each other in English in the 16th century: you can find one and the

same woman at some time recorded as “Elizabeth” and sometimes as “Isabel”. I made the decision, though, with the dictionary, to separate those two, because by modern times those names have come to be considered as independent names and one of the things that I want the dictionary to be sensible for people who don’t know things about the history of names. If you don’t know that “Isabel” is connected to “Elizabeth”, you would never look for it in the “Elizabeth” entry. That is something that plays into it. But I have always been interested in the question, which is actually a metaphysical one, of when are two names the same name. It is kind of a functional metaphysics, because in this case I am not looking for what is actually the truth: what I am looking for is something that provides a reasonable grounding for decisions that I am taking, so that if somebody asks me why “John” and “Giovanni” are the same name, then I have a story that I can tell.

GC: Let’s talk a bit about your logic interests, because they have been so far peripheral in this chat, but they are quite central in your research.

SU: My logical interests started off with modal logic, because Modal Logic was the second logic class that I ever took. I took an Introduction to Logic class that taught me truth tables and syllogisms, and then my next class after that was Modal Logic. I have never actually had a class in first order logic, in particular I never had a class on first order modal theory or metatheory – which... has been interesting. But the modal logic was so interesting because it’s fun, it’s neat and it’s so widely applicable. Within the context of modal logic, what interests me most is temporal stuff. When I was an undergrad and an early grad student, my advisor ran a number of logic reading groups, logic working groups, and we worked through a lot of Arthur Prior’s materials – and it was just... amazing. I’ve always enjoyed anything along those lines. And that’s one reason why getting into the medieval stuff was so interesting, because there’s just so much on modality, on temporal logic, and it’s what inspired Prior in the first place. I actually had the really exciting experience of getting to work in his archives in Oxford. At the time, his widow, Mary Prior, was still alive and she was perfectly happy to have people working on his archives, she liked it very much, but the condition was that anybody who came to Oxford to work on them had to have supper with her. Unrelated to logic, but related to “medieval stuff”, she was actually a medievalist, at one point in her career, and she gave me her copy of Cappelli’s little book of ligatures. So my first copy of Cappelli was Mary Prior’s.

GC: You have done some research also on dialogical systems, right?

SU: I see that as an extension of modal stuff. Modality, dynamics, interaction... they are all different sides of the same phenomenon. It’s hard not to get involved into the dynamic and dialogical stuff when you’ve spent six years in Amsterdam. If I hadn’t been interested in that sort of thing before, I would have become interested in it there. But I particularly find the dynamic and dialogical stuff interesting because it is, at root, just about possibility and necessity. Given that you are in this collective, collected knowledge situation, what are the things that it is possible for you to do? What are the things that you must do? So, whether this is a coordination problem – for example, trying to figure out where to meet up with somebody – or what are the commitments you have to maintain given that you have already conceded this other thing, all of these things are all about what you are able to do and what you are required

to do. Anything interesting is going to be modal in nature.

GC: What are your ongoing and future projects, Sara?

SU: My biggest ongoing project is the textbook that I am writing, because I want that to address things that other logic textbooks out there don’t. There’s two things that I would like to the text to do. There are no textbooks out there that cover both the ultra-super-basics and anything more interesting, not really. I would like to be able to teach from a single book where I can tell my introductory students to look ahead to the later chapters to see the sort of things that they can do with what they are learning. I also want to be able to take my upper level class and say: “It has been two years since we have done any propositional logic or first order logic, just go back and review these chapters”. I want something that has uniformity of notation, uniformity of vocabulary, so that I don’t have to spend part of the first couple of weeks of the class teaching them how to read the textbook that we are using. That’s one thing. But the other thing that, I think, often gets lost in the teaching of logic, is the sense of how we got to where we are. As a young student, I found the idea of doing research in logic perplexing, because what we were given was just so obvious. Truth tables couldn’t really be anything other than they are. Understanding that figuring out truth tables in their modern format only happened in the last century – this was not something that was really made clear to me as a student. This made a lot of the idea of doing research in logic opaque. I would like students to understand a little bit about how we got to where we are, because that then helps them to see what it is that research logicians are doing. I am teaching undergraduate philosophers; the vast majority of them are not going to become research logicians. But anyone that might, I want to give them the broadest possible foundation they could have. And even everybody who’s not, I think that a lot of the confusions about contemporary philosophy would just disappear if more students knew how it is that we got to where we are. Descartes would make a lot more sense, if the students had any sense of the context to which he was referring and reacting. I think that a lot of contemporary metaphysics would just go out the window, if people actually read medieval metaphysics. So that’s the biggest thing that I have been working on in the last couple of years: it’s putting something together that is not a history of logic course, but provides historical background to the modern stuff that the students need to learn in order to be able to read modern Anglo-analytic philosophy.

GC: What is the relation between the pedagogical and research sides of your work?

SU: If I had my way, every university student would have to take logic. At this point, I am still just fighting to get my logic class to be open to people who are not taking philosophy; if I can win that battle, I would be happy for the time being. But the research that I do and the teaching that I do feed into each other. Students ask me questions and that makes me think of things, and then I go off and do them. When I have the opportunity to teach philosophy-of-language-type classes, there is so much in connection with fiction that you can do, that every time I teach one of these classes I think of new things. The first year that I was in Durham and we did a Mind and Language class in the third year, I ended up cowriting a paper with one of the students in the class on the semantics of fictional languages. Good research-led teaching goes both ways. And there is also teaching-led research, when I need to learn something or do something because it’s relevant to what I am teaching. But my teaching is also very much geared towards helping students

understand what it is that I do, because we are in general really really bad at teaching undergraduate philosophy students how to do philosophy. I am not really a philosopher and I am not teaching them classes where it would be appropriate for me to teach them how to be philosophers, but I can teach them how to be researchers – these are the questions to ask, these are the ways that you go. . . In my first year logic class, we often have the discussion of: how long do you mess around on a question on the homeworks before you ask if there is an error in it, or a typo?; or if the parentheses are mismatched or there is a missing negation?; if you think that the question that’s been asked can be answered, how do you go about showing that?; what are the strategies that you can use?, and so on. Because, again, this is crucial to doing research and it’s not something that gets articulated hardly at all. So the more that I can model research practices to my students, the better off that they will be.

GC: Thank you, Sara.

## THE REASONER SPECULATES

### Bucking Expected Value: A Perpetual Money Machine?

It is possible to lose money in a positive expected value environment. Indeed, this fact is well known in the investment world. For example, in a +102 environment a person either loses 100 or wins 102 (or any multiples thereof). Begin with a current value of 100 and repeatedly bet 50% (potential loss), on fair coin flips, to win 51%. So the first coin flip either takes the value from 100 to 151 in the event of a win or from 100 to 50 in the event of a loss. Again bet 50% to win 51%, and keep iterating. The value is pulled to 0, even in a positive expected value environment. Noticing this, investment professionals often note that if you lose 50%, you have to gain 100% to get back to even. What has been largely ignored is that it is possible to get on the other side of this phenomenon and make money in a negative expected value environment. For example, in a -102 environment a person either loses 102 or wins 100 (or any multiples thereof). Begin by writing down -100 (negative 100) and repeatedly bet 51% (potential loss) of the absolute value, on fair coin flips, to win 50% of the absolute value. So the first flip either takes the value from -100 to -151 in the event of a loss or from -100 to -50 in the event of a win. Again bet 51% to win 50% (of the absolute value of the current value), and keep iterating. The value is pulled to 0, even in a negative expected value environment, but now being pulled to 0 is making money. In this new world, if you lose 50%, you have to gain only 33% to get back to even (e.g., -100 to -150 to -100). The best way to experience the certainty of making money with this strategy, even in a negative expected value environment, is to perform the experiment several times (or model it, e.g., with Excel). If bets were independent and identically distributed, then you would lose money over the long run in a negative expected value environment. But bets are not identically distributed. They are constructed so that you win more of your larger bets, even though all coin flips are fair. The important question for application is the following: Can money be made in a manner whereby even in a slightly negative expected value environment, e.g. -102, the running profit almost certainly stays above the maximum drawdown? If so, that would mean that money almost certainly grows without

bound and never goes below 0 – a perpetual money machine. Note that “almost certainly” is an important concept, as all considerations are probabilistic (that is, there is a sense of could in which you could lose 100 fair coin flips in a row). For further considerations, and a suggestion that such a perpetual money machine is possible, see Jeremy Gwiazda (2020: To the Money Tree: An Introduction to Trading the Coin Flip Environment, <https://philpapers.org/rec/GWITTM>, Manuscript).

JEREMY GWIAZDA

### Will Boethius please stand up?

One of the characteristic contra-classical theses of connexive logic (cf. Wansing (2020: Connexive logic, SEP)) is known as Boethius’ thesis:

BOETHIUS  $(A \rightarrow B) \rightarrow \neg(A \rightarrow \neg B)$  and  $(A \rightarrow \neg B) \rightarrow \neg(A \rightarrow B)$ .

This principle surely seems rather plausible at first blush, as it seems to correspond to certain intuitions most people share about natural language instances of these statements. These intuitions have been suggested to hold for both indicative and counterfactual conditionals.

Boethius, in its standard formulation reproduced above, does not contain different kinds of conditionals. However, once distinct logical analyses for indicatives and counterfactuals are available, we think it is necessary to reexamine which kinds of conditionals we are dealing with here. A first natural thought might be that these principles break up into two versions in which conditionals are uniformly in either indicative or counterfactual mood ( $\rightarrow_i$  is here meant to be any logical candidate for an analysis of indicative conditionals, and  $\rightarrow_c$  correspondingly for counterfactuals):

“INDICATIVE” BOETHIUS  $(A \rightarrow_i B) \rightarrow_i \neg(A \rightarrow_i \neg B)$  and  $(A \rightarrow_i \neg B) \rightarrow_i \neg(A \rightarrow_i B)$ .

“COUNTERFACTUAL” BOETHIUS  $(A \rightarrow_c B) \rightarrow_c \neg(A \rightarrow_c \neg B)$  and  $(A \rightarrow_c \neg B) \rightarrow_c \neg(A \rightarrow_c B)$ .

It is not elegant, but feasible to read out the first of these and retain a sense of intuitive plausibility (the bold font is only meant to make parsing easier):

***If if A is the case, then B is the case is the case, then if A is the case, then not-B is the case is not the case.***

However, to us it seems that it is not so easy to understand what

***If if A were the case, then B would be the case would be the case, then if A were the case, then not-B would be the case would not be the case.***

means, let alone to arrive at a firm conviction whether it should hold logically. On the other hand, the issue seems much clearer if we exchange the main connective for an indicative conditional:

CIC BOETHIUS  $(A \rightarrow_c B) \rightarrow_i \neg(A \rightarrow_c \neg B)$  and  $(A \rightarrow_c \neg B) \rightarrow_i \neg(A \rightarrow_c B)$ ,

in plain words:

*If if A were the case, then B would be the case is the case, then if A were the case, then not-B would be the case is not the case.*

This is, to our minds, at least as compelling as the purely counterfactual gloss.

In case the indicative conditional is taken to be the material conditional, then this corresponds to something already discussed in the literature; Pizzi & Williamson (1997: Strong Boethius' Thesis and Consequential Implication, JPL, 569–588) call it “weak” Boethius. But, of course, many people have been sceptical about the material analysis of indicative conditionals. The generic version would lead to very different logical outcomes, depending on what instance of  $\rightarrow_i$  represents one's preferred analysis of conditionals.

Going back to the purely counterfactual versions, and allowing ourselves a looser gloss that also makes some basic assumptions about the relation between negation and falsity, we might also consider the following reading:

*Had “if A were the case then B would be the case” been true, then “if A were the case then B would not be the case” would have been false.*

This seems easier to understand, and might also be something that we expect to be valid. If we are happy with such a gloss, we might even be interested in the “dual” version of CIC Boethius:

*Had “if A is the case then B is the case” been true, then “if A is the case then B is not the case” would have been false,*

in symbols:

ICI BOETHIUS  $(A \rightarrow_i B) \rightarrow_c \neg(A \rightarrow_i \neg B)$  and  $(A \rightarrow_i \neg B) \rightarrow_c \neg(A \rightarrow_i B)$ .

There are, of course, even more combinations to consider if we don't insist on the first and the third conditionals having the same mood. We don't want to go into the question of whether any of them have any plausibility, though it seems to us that we have mentioned the most important candidates. We also don't want to prescribe which version(s) of those we have mentioned will have to be fulfilled, and which ones might be dispensable. It is merely our purpose in this small note to draw attention to the fact that anyone who aims for connexivity in a system with (at least) two kinds of conditionals should make very clear which instance(s) of Boethius they want to achieve, which ones they are willing to do without, and give reasons for making that choice.

ANDREAS KAPSNER AND HITOSHI OMORI  
MCMP, Munich and Philosophy, Bochum)

## NEWS

### **The wisdom and madness of crowds: argumentation, information exchange and social interaction, 31 March -1 April**

Formal disciplines face nowadays the challenging task of exploring the double potential of information exchange in social interaction. On the one hand, communication in a highly connected society generates beneficial outcomes and decentralized information flow often determines optimal collective

choices and improved accuracy. On the other hand, detrimental phenomena such as polarization, informational cascades and echo chambers are constantly lurking. To stimulate exchange of ideas and contamination of different methodologies on this topic, we brought together scholars in logic, argumentation theory, epistemology and agent-based approaches to social sciences for a two-day workshop. Unfortunate circumstances of the COVID-19 pandemic prevented us to hold the workshop in Amsterdam as planned. The whole event has therefore been moved online. Despite this inconvenient, participation was very large, allowing students and academics from other continents to take part to an event they would otherwise not have been able to attend. This also gave us the opportunity to record the talks and build a repository that soon will be available to the larger scientific community. We should register that, despite the limitations imposed by online interaction, everything ran quite smoothly and natural. All these considerations, added to environmental advantages, are convincing us to perpetuate online dissemination, possibly with a mixed approach, also in future circumstances.

The workshop hosted seven invited and nine contributed talks. On the first day, Pietro Baroni (Brescia) presented a joint work with Massimiliano Giacomini and George Drivas. The work draws inspiration from the Laboratory of Dilemmas, an installation by Drivas, exposed at the Biennale dell'Arte di Venezia. The latter illustrates a fictional debate on an ethical dilemma. Moving from there, Baroni investigates whether and how formal argumentation - at its present state of the art - can provide reasonable solution methods for dilemmas where opposing conclusions derive from premises whose truth is unknowable. Many important societal decisions are of this kind, and yet the issue is largely unaddressed by formal argumentation and epistemology. Baroni provides a formal account and outlines a number of lines of approach to this problem within value-based formal argumentation.

In the following talk, Antonio Yuste-Ginel (Malaga) combines tools from formal argumentation and epistemic logic to investigate how evaluation of arguments determines belief formation and, vice versa, how basic beliefs influence the evaluation of arguments. In the third talk, David Kinney (Santa Fe) employs formal epistemology and machine learning tools to investigate the group credence problem and provide a stacking-based solution to it.

Opening the afternoon session, Henry Prakken (Utrecht, Groningen) illustrates the criticalities of a too abstract approach to argumentation theory, with a special attention to extensions of the Dung framework. Prakken reviews a number of examples - ranging from preference-based abstract argumentation to bipolar argumentation with supports and attacks and gradual and probabilistic approaches - to show that, by disregarding the internal structure of arguments and the nature of the attack relation, many of these approaches are committed to unwarranted or problematic assumptions.

Lorenzo Prandi and Giuseppe Primiero present a new logical framework for mimicking the reasoning pattern of paranoid agents (e.g. conspiracy theorists) and then implement it in a multi-agent simulation, which is meant to investigate the potential of these agents to spread false information in a network.

Marcello D'Agostino (Milan) and Sanjay Modgil (King's College) close the day by presenting their work on the formalization of distributed non-monotonic reasoning in the form of dialogue games. Their specific aim is to provide a fully rational

account of non-monotonic reasoning under resource bounds. After an overview of dialogical accounts of non-monotonic logics and their relevance for AI implementations, the authors present their formal approach and illustrate how it avoids some overidealizations of classical formalisms, e.g. the use of irrelevant premises in deduction.

Michael Mäs (Groningen) opened the second day. He provides an overview of models of social influence in networks and discusses their ability to explain processes of polarization of opinions in groups. Three different families of models are compared: models with assimilative social influence, with similarity-based influence and with repulsive social influence. Mäs then illustrates the simulative and experimental results of his work on the role of argument exchange in polarization processes. As it turns out, both repulsive social influence and argument exchange are possible causes of polarization processes, but under different scenarios. The sensible research question addressed by Mäs concerns the possible ways to disentangle the effects of the two forces in an experimental setting.

After this, Gabriele Pulcini (UvA Amsterdam) illustrates how to approach the abduction-as explanation problem via proof-theoretical tools. He shows how to implement an elegant solution via Kleene's sequent system G3. Afterwards, Mina Young Pedersen (Bergen) introduces a logic of diffusion in social networks – its syntax, semantics and main logical validities - with the ability of incorporate trolling behaviour and malicious agents.

Jean Wagemans (UvA Amsterdam) provides an analysis of the characteristics of natural argument from the point of view of general argumentation theory and rhetoric. His research builds a bridge between informal and computational approaches to argumentation. Wagemans presents his methodology for a categorization of arguments in natural language and his periodic table of arguments. The second part of his talk introduces a procedure for the identification of argument types in natural language texts.

Joseph Singleton and Richard Booth (Cardiff) show how bipolar abstract argumentation can help the implementation of truth-discovery algorithms for social media platforms and crowdsourcing systems.

Alice Toniolo (St. Andrews) provides an analysis of deliberation models in computer science. The main question Toniolo addresses is about the characteristics that are fundamental in modelling artificial deliberation. She focuses specifically on the role of information exchanged in deliberation dialogues. Then she introduces protocols and formulates a proposal for a typology to categorize different types of deliberation. Merlin Göttlinger and Lutz Schröder (Erlangen-Nürnberg) focus on the problem of argumentation mining on social media and introduce a trichotomic argumentation framework for social media argumentation representation.

Catarina Dutilh Novaes (VU Amsterdam) approaches the problem of trust in argumentation from the point of view of social epistemology. The paramount question Dutilh Novaes addresses is how and under which condition argumentation is likely to be effective or beneficial. Her current research builds upon the framework of social exchange theory to provide a three-tiered model of argumentative engagement, which articulates on the coordinates of attention, assessment of trustworthiness and engagement with content.

Patrick Skeels (UC Davis) tackles the logical problem of epistemic contradictions and offers a dynamic semantics, based

on the notion of process inconsistency, to predict and explain such contradictions. Denis Fedyanin (Moscow) concludes the workshop by presenting a new model of opinion dynamics that takes into account the logical relations between beliefs and the specific mechanisms they induce in opinion change of agents. Acknowledgements. The workshop was organized as part of the project EDAPOL - The Epistemic and Dynamic Aspects of Polarization, a Marie Skłodowska-Curie Individual Fellowship (H2020-MSCA-IF-2016, nr. 748421) and was financially supported by the European Commission.

Workshop website <https://sites.google.com/view/workshop-arginfoexchange/home>

CARLO PROIETTI AND SONJA SMETS

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## Calls for Papers

**PHILOSOPHY OF MEDICINE:** special issue of *teorema*, deadline 10 July.

**SIMPLICITY OUT OF COMPLEXITY? PHYSICS AND THE AIMS OF SCIENCE:** special issue of *Synthese*, deadline 31 July.

**FOUNDATIONS OF DATA SCIENCE:** special issue of *Machine Learning*, deadline 30 September.

**EVIDENTIAL DIVERSITY IN THE SOCIAL SCIENCES:** special issue of *Synthese*, deadline 15 November.

## WHAT'S HOT IN . . .

### Medieval Reasoning

These last couple of months have been a strange and difficult time for everyone, what with the global pandemic and all. Whether you were forced to switch to online teaching basically overnight or found yourself having only very limited access to archives, libraries, labs, or simply to those reference texts that you forgot to grab from your office and you can't easily access (more or less legally) in any format from your couch, it is undeniable that our daily lives have been profoundly affected, professionally as much as personally. Despite our best attempts to carry on our business as usual, there is no amount of online teaching, online meetings, and online research that can make this be normal, nor should there be. The whole of Higher Education has been profoundly affected, along with the rest of the world. This is, unsurprisingly, not the first time and, regrettably, it likely won't be the last. If you take a look at the many studies on the impact of the mid-14th century Black Death on medieval Universities, the historical data you will encounter will look oddly familiar now – from the occasional initial hesitations to interrupt a university's regular activities, to the widespread shutdown of teaching along with the fleeing of students and scholars from affected urban areas. Not to mention the body count. Medievals, of course, didn't have Zoom, but overall there don't seem to be many differences as striking as that.



And Zoom (or Skype, or any other platform you have been using to keep in touch with your colleagues and students, and to obtain some albeit adulterated semblance of human contact) does help. Imagine being in 1347 or 1348 instead of 2020 and not having even that; imagine having to send painfully handwritten letters to your colleagues, hoping that someone will go their way to deliver them, and then against all odds, if said colleagues are still alive at that point – which of course you wouldn't get to know practically in real time. Such thoughts certainly put at least my own sense of isolation into perspective. Between the online St. Andrews' Medieval Logic Reading Group in the morning and departmental chats of the Radboud Center for the History of Philosophy and Science in the afternoon, Fridays have been the highlights of my week for the last month or so. Besides classes, courses, summer schools and scheduled conferences being moved online, online initiatives of this type, on various scale, have been increasingly popping up and they have been a comfort.

If you are interested in medieval philosophy tout court, or even if you are just lonely and in need of some intellectual stimulus, an appointment not to miss is the Virtual Medieval Colloquium, on Thursday afternoons at (usually) 18:00 Paris time, organised by Bob Pasnau. You can find the details on how to join, along with the recordings of the previous meetings (featuring, at the date of this writing, lectures by: Eleanore Stump, Peter Adamson, Dominik Perler, Irène Rosier-Catach, Peter King, and Nadja Germann ) on In Medias Phil (<https://inmediasphil.wordpress.com/>).

GRAZIANA CIOLA  
Radboud University

## Science Policy

One of the main ideas in social epistemology of science is that the group knowledge of experts, when properly aggregated, can surpass the knowledge of the individual experts. To understand this concept, let us entertain the idea of proper aggregation. Many studies and historical examples show that groups frequently do not agree on the best solution known by any member. Phenomena such as information cascades or pluralistic ignorance are common in the social epistemology literature. Information cascades occur when people sequentially follow false information. An example of such a group knowledge aggregation problem is tonsillectomy that was frequently performed in some regions without reliable evidence. Pluralistic ignorance is the phenomenon when people ignore their private beliefs and act in accordance with what they (wrongly) assume is the view of the majority.

Another important hypothesis in social epistemology is that cognitive diversity is epistemically beneficial for the scientific community. Diverse ideas and approaches should lead to new and exciting discoveries. The exchange of research experiences should add something new both to the people who visit a foreign scientific environment or going back to their own after a visit. For these and similar reasons, mobility has been emphasized as an important component of modern academic systems.



Even though epistemic diversity and academic exchange are praised in modern society, there exists a large difference between theory and practice. For example, a study in China showed that researchers who worked abroad needed longer to receive a prestigious fellowship than researchers that stayed in China (Feng L., Li T., *Science and Public Policy*, 46(4), 2019). Despite such examples, the prominent idea is that international experience elevates one's expertise. But what exactly happens, what are the factors that make it harder for academic migrants to succeed in their careers?

Though one might be coming with diverse and epistemically beneficial ideas and expertise, in practice it is questionable whether these ideas will be welcomed by the host research group. In order to assure the proper aggregation of diverse knowledge, an inclusive epistemic environment is necessary. Asai (*Nature* 565, 2019) claimed that diversity without inclusion is an empty gesture. In science, we immediately notice two layers of inclusion: the social and the epistemic layer. The social inclusion has been studied both in the context of education and in political theory. However, this was not the case with its epistemic counterpart.

While integration stands for the incorporation of a minority into an existing majority, an inclusive environment should dynamically change to accommodate its members. In contrast, in many cases, scientists from minorities are frequently only welcome if their behaviour fits into the group. Analogously, epistemic inclusion is a process in which knowledge aggregation happens with a dynamic change and reciprocity. This means that agents participating in the process of epistemic inclusion update their prior beliefs in a way that incorporates novel inputs that they got from their diverse environment. In this way, cognitively diverse ideas and approaches become a relevant advantage of a research group.

Different epistemic virtues such as open-mindedness and epistemic tolerance can facilitate the process of epistemic inclusion. These virtues can be trained. Another interesting topic, yet to be explored, is whether some other factors such as personality traits or socio-political views influence our epistemic stances. Until driving forces behind epistemic inclusion get empirically investigated, we can all work on ourselves to be more epistemically open towards new ideas by actively engaging in provocative dialogs.

VLASTA ŠIKIMIĆ  
Belgrade University

## EVENTS

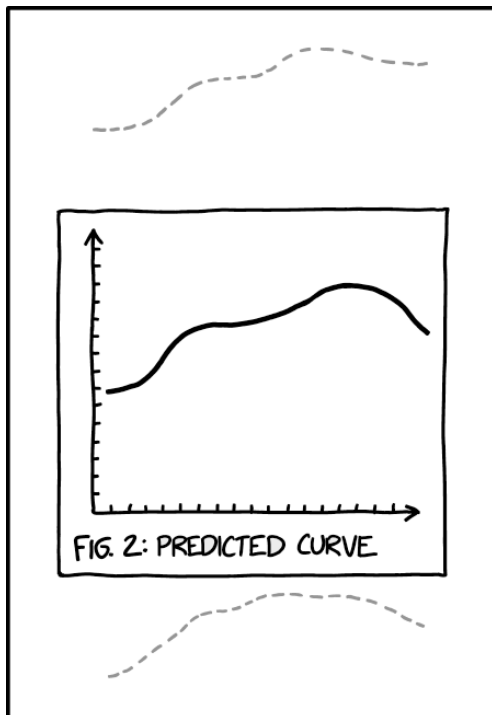
### JULY

**AAL:** Australasian Association for Logic, Sydney, Australia, 2–3 July.

### AUGUST

**SVar:** Set Visualization and Reasoning, Tallinn, Estonia, 24–28 August.

**ConLogi:** 6th Workshop on Connexive Logics, Mexico City, 27–28 August.



SCIENCE TIP: IF YOUR MODEL IS BAD ENOUGH, THE CONFIDENCE INTERVALS WILL FALL OUTSIDE THE PRINTABLE AREA.

## SEPTEMBER

**DMAH:** Data Management and Analytics for Medicine and Healthcare, Tokyo, Japan, 4 September.

**NMR:** Workshop on Nonmonotonic Reasoning, Rhodes, Greece, 12–14 September.

**PoKRR:** Principles of Knowledge Representation and Reasoning, Rhodes, Greece, 12–18 September.

**WUML:** Workshop on Uncertainty in Machine Learning, Ghent, Belgium, 14–18 September.

**VoAS:** varieties of Anti-Skepticism, University of Navarra, Spain, 16–18 September.

**N-CL:** Non-Classical Logics, Poland, 26–28 September.

## OCTOBER

**ARGSTRENGHT:** Workshop on Argument Strength, Koblenz, Germany, 12–14 October.

## COURSES AND PROGRAMMES

### Courses

**SSA:** Summer School on Argumentation: Computational and Linguistic Perspectives on Argumentation, Warsaw, Poland, 6–10 September.

### Programmes

**MA IN REASONING, ANALYSIS AND MODELLING:** University of Milan, Italy.

**APHIL:** MA/PhD in Analytic Philosophy, University of Barcelona.

**MASTER PROGRAMME:** MA in Pure and Applied Logic, University of Barcelona.

**DOCTORAL PROGRAMME IN PHILOSOPHY:** Language, Mind and Practice, Department of Philosophy, University of Zurich, Switzerland.

**DOCTORAL PROGRAMME IN PHILOSOPHY:** Department of Philosophy, University of Milan, Italy.

**LOGICS:** Joint doctoral program on Logical Methods in Computer Science, TU Wien, TU Graz, and JKU Linz, Austria.

**HPSM:** MA in the History and Philosophy of Science and Medicine, Durham University.

**MASTER PROGRAMME:** in Statistics, University College Dublin.

**LoPHiSC:** Master in Logic, Philosophy of Science and Epistemology, Pantheon-Sorbonne University (Paris 1) and Paris-Sorbonne University (Paris 4).

**MASTER PROGRAMME:** in Artificial Intelligence, Radboud University Nijmegen, the Netherlands.

**MASTER PROGRAMME:** Philosophy and Economics, Institute of Philosophy, University of Bayreuth.

**MA IN COGNITIVE SCIENCE:** School of Politics, International Studies and Philosophy, Queen's University Belfast.

**MA IN LOGIC AND THE PHILOSOPHY OF MATHEMATICS:** Department of Philosophy, University of Bristol.

**MA PROGRAMMES:** in Philosophy of Science, University of Leeds.

**MA IN LOGIC AND PHILOSOPHY OF SCIENCE:** Faculty of Philosophy, Philosophy of Science and Study of Religion, LMU Munich.

**MA IN LOGIC AND THEORY OF SCIENCE:** Department of Logic of the Eotvos Lorand University, Budapest, Hungary.

**MA IN METAPHYSICS, LANGUAGE, AND MIND:** Department of Philosophy, University of Liverpool.

**MA IN MIND, BRAIN AND LEARNING:** Westminster Institute of Education, Oxford Brookes University.

**MA IN PHILOSOPHY:** by research, Tilburg University.

**MA IN PHILOSOPHY, SCIENCE AND SOCIETY:** TiLPS, Tilburg University.

**MA IN PHILOSOPHY OF BIOLOGICAL AND COGNITIVE SCIENCES:** Department of Philosophy, University of Bristol.

**MA IN RHETORIC:** School of Journalism, Media and Communication, University of Central Lancashire.

**MA PROGRAMMES:** in Philosophy of Language and Linguistics, and Philosophy of Mind and Psychology, University of Birmingham.

**MRES IN METHODS AND PRACTICES OF PHILOSOPHICAL RESEARCH:** Northern Institute of Philosophy, University of Aberdeen.

**MSc IN APPLIED STATISTICS:** Department of Economics, Mathematics and Statistics, Birkbeck, University of London.

**MSc IN APPLIED STATISTICS AND DATAMINING:** School of Mathematics and Statistics, University of St Andrews.

**MSc IN ARTIFICIAL INTELLIGENCE:** Faculty of Engineering, University of Leeds.

**MSc IN COGNITIVE & DECISION SCIENCES:** Psychology, University College London.

**MSc IN COGNITIVE SYSTEMS:** Language, Learning, and Reasoning, University of Potsdam.

**MSc IN COGNITIVE SCIENCE:** University of Osnabrück, Germany.

**MSc IN COGNITIVE PSYCHOLOGY/NEUROPSYCHOLOGY:** School of Psychology, University of Kent.

**MSc IN LOGIC:** Institute for Logic, Language and Computation, University of Amsterdam.



**MSc IN MIND, LANGUAGE & EMBODIED COGNITION:** School of Philosophy, Psychology and Language Sciences, University of Edinburgh.

**MSc IN PHILOSOPHY OF SCIENCE, TECHNOLOGY AND SOCIETY:** University of Twente, The Netherlands.

**MRES IN COGNITIVE SCIENCE AND HUMANITIES: LANGUAGE, COMMUNICATION AND ORGANIZATION:** Institute for Logic, Cognition, Language, and Information, University of the Basque Country (Donostia San Sebastián).

**OPEN MIND:** International School of Advanced Studies in Cognitive Sciences, University of Bucharest.

**RESEARCH MASTER IN PHILOSOPHY AND ECONOMICS:** Erasmus University Rotterdam, The Netherlands.

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**RESEARCH MASTER IN PHILOSOPHY AND ECONOMICS:** Erasmus University Rotterdam, The Netherlands.

## JOBS AND STUDENTSHIPS

### Jobs

**POSTDOC:** in Philosophy of Science/Causal Inference, Purdue University, open until filed.

**DOCTORAL PROGRAMME IN PHILOSOPHY:** Language, Mind and Practice, Department of Philosophy, University of Zurich, Switzerland.

**DOCTORAL PROGRAMME IN PHILOSOPHY:** Department of Philosophy, University of Milan, Italy.

**LOGICS:** Joint doctoral program on Logical Methods in Computer Science, TU Wien, TU Graz, and JKU Linz, Austria.

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**MA IN RHETORIC:** School of Journalism, Media and Communication, University of Central Lancashire.

**MA PROGRAMMES:** in Philosophy of Language and Linguistics, and Philosophy of Mind and Psychology, University of Birmingham.

## JOBS AND STUDENTSHIPS

### Jobs

**POSTDOC:** in Philosophy of Science/Causal Inference, Purdue University, open until filed.

**POSTDOC:** in Logic, University of Milano, deadline 3 September.

**POSTDOC:** in Philosophy of Science, Munich Center for Mathematical Philosophy, deadline 9 July.

**POSTDOC:** in Philosophy of Time, Durham University, deadline 5 July.

**RESEARCH ASSOCIATE:** in The Epistemology of Wellbeing, University of Glasgow, deadline 7 July.

**POST DOC:** in Theoretical Philosophy, University of Greifswald, deadline 15 July.

**LECTURESHIP/PROFESSORSHIP:** in Statistics, Maynooth University, Ireland, deadline 17 May/30 September.