Analyzing the interactions between spaces of argumentation in different contexts

Supervisors

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Motivation

The Covid19 crisis shows us that arguments can circulate between different social worlds, as they have done between scientific and academic worlds, media, and social media, in different directions. However, the way people discuss in these different environments is very different and rely on different standards to recognize proofs.

According to Mercier and Sperber (2017), the primary function of reasoning is to argue. Reasoning would not be an individual function but a social one. Running several experiments, they have concluded that we are better off solving problems in groups rather than alone. Yet, in experiments like the Linda and Paul puzzle, participants seem to share the same notion of rationality. Typically, a strong notion of rationality, where logic is used to solve a riddle and everybody who can reason deductively, will agree that the correct answer is different from the intuitive one. In real social contexts, diverse groups of individuals share public space, each with their own beliefs, information, values, intentions, analytical capabilities etc. The world's complexity is read through the lenses of such beliefs, values, reasoning schemes, etc.

How can different groups advance in a debate when sharing information, evidence on a complex issue, refer to different notions of arguments and proof standards?

For example, in recent months we could observe some ideal-typic description of the shape of the argumentation:

1. in the mediatic world: repeat, follow, approve/disprove, exaggerate, attack *ad hominem*;
2. in the scientific world: decide paradigm, decide hypothesis, test, revise, purify, consolidate, invalidate, give examples, give counter-example.

The literature on argumentation theory has elaborated several defeasible argumentation schemes (Walton et al., 2008), which are abstract argument forms that do not necessarily fall into the classical deductive or inductive argument structures, and that capture also what traditionally is classified as a fallacy: argument from expert opinion, argument from popular opinion, argument from cause to effect, argument from pity, *ad hominem* argument, argument from bias, slippery slope argument, etc. Sometimes, fallacies are good arguments. Each scheme has a set of critical questions that an opponent can use to test the argument's acceptability (Hastings, 1963). If the proponent cannot answer such critical questions, the argument is defeated.

Is there a un/conscious threat of misconduct in such highly charged debates? The American philosopher Harry Frankfurt studied different dishonesty classes (Frankfurt, 2005): lies occur when the speaker says something s/he knows to be untrue. More interesting for our purpose appears to be the category of bullshit. Bullshit happens when we make statements about things we are not knowledgeable of, either because we have to say something about a particular (complex) topic or because we wish to appear knowledgeable about that. In bullshit, unlike in a lie, there is no relationship between the statement made and the truth value of that topic. When we lie, we are in a negative association with the truth of the statement. In bullshit, there is no consideration for the truth or falsity of the statement. A third type of dishonesty can be considered, that is deception (Adler, 1997), which occurs when a piece of correct information is given. However, the person receiving the information will likely make an incorrect inference (Caminada, 2009). Considering different ways of making unreliable statements

may be relevant if we adhere to the conviction that an argument's conclusion is as important as the premises justifying and supporting it. So, for instance, I may make a statement that happens to be correct, but for the wrong reasons (either because of not wanting to appear ignorant or because my inferential reasoning was incorrect).

Candidate profile

For this PhD, the candidate is expected to produce an analytical framework, and potentially a visualization model (using computer-supported argument visualization tools as, for instance, OVA[1] and *Carneades*[2] (Gordon, 2007)), that enables to compare/make interact different argumentation approaches. The analysis could be based on societal debates over one or two scientific controversies as in the Covid-19 pandemics. This will help us to understand and characterize how different groups use different prominent argumentation schemes, proof standards (Gordon and Walton, 2009; Prakken and Sartor, 2009), how the respective values and audiences (cf. Value-Based Argumentation Framework (VAF) [Bench-Capon, 2003; Bench-Capon et al., 2007]) they report to affect the overall debate and whether some category of 'dishonesty' is at work, though unconsciously.

The student should have a master in computer science, mathematics or philosophy, with an ability to learn and manipulate formal tool.

Bibliography

J. E. Adler. Lying, deceiving, or falsely implicating. *The Journal of Philosophy*, 94(9): 435–452, 1997.

T. Bench-Capon. Persuasion in practical argument using value-based argumentation frameworks. *Journal of Logic and Computation*, 13(3): 429-448, 2003.

T. J. Bench-Capon, S. Doutre, and P. E. Dunne. Audiences in argumentation frameworks. *Artificial Intelligence*, 171(42-71), 2007.

M. Caminada. *Truth, lies and bullshit. Distinguishing classes of dishonesty*. Proc. of the *1st IJCAI Workshop on Social Simulation*, 2009.

H. G. Frankfurt. *On Bullshit*. Princeton University Press, 2005.

T. F. Gordon. *Visualizing Carneades argument graphs*. Law, Probability and Risk, 6(1-4):109-117, 2007.

T. F. Gordon and D. Walton. Proof Burdens and Standards, Chapter 12 in I. Rahwan, G. R. Simari (eds.), *Argumentation in Artificial Intelligence*, DOI 10.1007/978-0-387-98197-0 12, Springer, 2009.

A.C. Hastings. *A Reformulation of the Modes of Reasoning in Argumentation*. Ph.D. dissertation, Nonhwestem University, Evanston, Ill, 1963.

H. Prakken and G. Sartor. A logical analysis of burdens of proof. In H. Kaptein, H. Prakken, and B. Verheij (eds.), *Legal Evidence and Proof: Statistics, Stories, Logic*, Applied Legal Philosophy Series. Ashgate Publishing, 223-253, 2009.

H. Mercier and D. Sperber, *The Enigma of Reason. A New Theory of Human Understanding*, Penguin, 2017.

D. Walton, C. Reed, and F. Macagno, *Argumentation Schemes*, Cambridge University Press, 2008.

[1] http://ova.arg-tech.org

[2] https://carneades.github.io