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Abstract

What are degrees of belief? Degrees of belief are typically thought of as numerical and conforming to the probability calculus. However, it's not clear what degrees of belief actually are- we don't literally have little numbers attached to our beliefs in our heads. So we need to give an explanation as to how numerical degrees of beliefs represent our beliefs. The interpretations of what numerical degrees of belief are differ vastly. This has important implications for how we understand, interpret and motivate imprecise probabilities or imprecise credences. In this paper I argue for a particular interpretation of imprecise credences: an intersectionist[1] interpretation by showing that given a certain interpretation of what degrees of belief are this is the natural interpretation to adopt.

I begin by covering many of the arguments give by Eriksson and Hájek (2007) in their paper 'What Are Degrees of Belief?' where they give an overview of many of the accounts of degrees of belief including de Finetti's (1970) actual operationalism, Jeffrey's (1965) measurement account, Ramsey's (1926) representation theorem account and the interpretivist accounts of Lewis (1974) and Maher (2008). They show that these accounts all fail to adequately explain the connection between our beliefs and numerical degrees of belief. I then go on to argue for a comparativist account of belief. Comparativism claims that an agents comparative belief relations are primitive and real and that we can explain numerical degrees of belief from comparative beliefs.

The major appeal of comparativism is that comparative beliefs are a more psychologically plausible explanation than numerical degrees of belief. However, for comparativism to be a convincing account there are a number of challenges it must address including explaining how we can get ratio information from comparative belief and whether we can have interpersonal belief. In this paper I address these questions and show how in addressing them we are pushed towards accepting imprecise credences.

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[1]Terminology from Elliott (2018), an example of an intersectionsit interpretation of imprecise credences is given in Kaplan (2010).

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