Metaontology of Dependence

Maciej Sendłak*[1]

[1]University of Warsaw – Poland

Abstract

The aim of my talk is to propose a novel approach to understanding dependence relations, introducing the Superior Better Best System Account (SBBSA). Inspired by Best System Account (e.g. Lewis 1973; Loewer 1996) and Better Best System Account (Cohen & Callender 2009; Schrenk 2014; 2023) of laws of nature, SBBSA aims to provide a unified framework for various types of dependence relations while preserving their distinct natures.
What might be an obstacle in the exploration of dependence is the variety of its types. Accordingly, while there is an abundance of outstanding works dedicated to causation, supervenience, grounding, mereological/ontological dependence, etc., few consider the broader picture, i.e., the question of what these notions have in common.

While it might be difficult to indicate what *universal* formal properties of dependence relation are (e.g., Bliss and Priest 2018). we may shed some light on this notion via one of its popular exemplifications, i.e., Humean supervenience. This is the view (often called 'the Best System Account,' or 'BSA') concerns the nature of the laws of nature. Its core can be expressed as the conjunction of three claims:

1) All there is to the world is a vast mosaic of local matters of particular fact, just one little thing and then another (Lewis 1986, ix).

2) Laws are the general axioms of whichever summary best balances simplicity and strength (in describing the mosaic) (Lewis 1973, 73).

3) The balance is determined by how things are in the world (Lewis 1994, 478).

What is often a concern for BSA is the question of what the nature of the mosaic is. To this, Lewis responds that the mosaic is built out of perfectly natural properties, i.e., the most fundamental physical properties, such as magnitude or mass. Accordingly, a law concerning perfectly natural properties is a description that (i) takes into consideration the distribution of these within a world, and (ii) satisfies the standards of goodness (i.e., it balances simplicity and strength in a better way, than alternative descriptions do). As some argue, this can be expressed as a function fL, where 'P' stands for natural properties, 'd(w)' stands for the distribution of these properties in the world w, and 'b' for the standards of goodness. The image of this function is the law concerning the distribution of natural properties within a world, L(P, w):

fL:(P, d(w), b)=L(P, w) (Schrenk 2023).

*Speaker

Importantly, some argue that since laws of nature are not limited to merely the fundamental laws of physics, one ought to introduce a change within what counts as the mosaic. Thus, to explain the laws of biology or chemistry, a change within P in the fL is required. Such extended analysis of laws is often called the Better Best System Account (BBSA). This – as advocates argue – allows to avoid the debate over the naturalness of properties and turns the original account into one that is not limited to merely fundamental laws, for it allows P being e.g., biological, or chemical properties. Whereas BSA assumed that the mosaic is built out of fundamental properties, BBSA allows also for mosaics to build out of non-fundamental yet still natural (i.e., chemical, biological, etc.) properties. While both BSA and BBSA focus on natural laws, I believe that the Humean motivations can be extended to further kinds of dependence. The only change that is required is to allow for different types of 'mosaics.'

To illustrate how BSA can be generalized, let's consider how its core ideas can be applied to grounding. Paraphrasing the above Humean assumptions we can say, that

1*) All there is (in the metaphysical sense) to the world is a vast mosaic of facts/states/situations/..., just one little thing and then another.

2*) Grounding provides the general axioms of whichever summary best balances simplicity and strength (in describing the mosaic).

3*) The balance is determined by how things are in the world.

In this case, the 'mosaic' becomes metaphysical in nature, encompassing facts, states, situations, or any other relata of grounding.

By abstracting from these specific cases, we can formulate a general picture that encompasses various forms of dependence relations:

1D) The world is a vast collection of elements of mosaic (M-elements).

2D) A given dependence relation (D) summarizes the mosaic by providing general axioms of whichever summary best balances, simplicity, strength, and chance.

3D) The balance is determined by how things are in the world.

This generalization, which I call the Superior Better Best System Account (SBBSA), maintains the essence of BSA while providing flexibility to account for different types of dependence relations.

In this sense, the core of the Humean approach toward laws of nature can be generalized to other examples of dependence. The proposed extension ought to allow for the mosaic to be built out of other kinds of entities as well, these being distributed in different ways, which would result in different formal properties of various types of dependence relations. Thus, the fL function can be generalized into:

fD:(M, d(w), b)=D(M, w).

On account of the above, the dependence (D) holds between elements of the mosaic (M) if D is the best description of the distribution of elements of M within a world w.

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