In Progress Research Proposal

Title: Ground of the Structure of Reality

Student: Ali Sanaeikia

A- Overview of the Research

In my research, I will approach the meta-ground question (MGQ)[1]. It asks, what, if anything, grounds the grounding relations? Approaching it, I have to clarify some interconnected debates in grounding talk on which MGQ depends.

Firstly, I should point to the disputes between irrealism and realism about grounding. In this debate, in the camp of irrealists, I will introduce structural realism in metaphysical explanations which is a borrowed term from the philosophy of science. In the philosophy of science, both the irrealists and realists agree on the structural realism, but I would argue for putting this view in the camp of irrealists.

Showing my position in the debate and usefulness of grounding talk without being a realist about it, I will go on to investigate the properties of the structure of reality which have been presupposed by most philosophers. They assume grounding is asymmetry, irreflexive and transitive. This approach put them on a position to think of a linear structure of reality with at least one foundation. This approach is foundationalism. In contrast with foundationalism about grounding, I will examine the possibility of holistic coherentism about the structure of reality, which has not been taken seriously in the literature of grounding.

By having these philosophical tools in my hand, I will try to answer the MGQ. Most of the answers to MGQ are from a realist's point of view. I will examine those approaches both as a realist and also as an irrealist. Then I would reach a positive account regarding the answer of MGQ.

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[1] Most philosopher may refer to this problem after Raven (Raven M. , 2015) named it this way; however, others might call it with different names. For example, Litland (Litland, 2017) calls this issue the problem of iterated ground.

B- Details of the Project

The Goal of the Project

When facing the structure of reality and grounding talk, philosophers always assume a directed relation which builds a linear structure, like an edifice which is built with its foundations; however, the reality could also be made like a ship. A holistic structure in which most of its parts are interdependent.

By this research, I would like to examine other approaches to grounding talk and the structure of reality.

This project has these questions to answer: 1- Is grounding real? 2- If the grounding relation is not real, should we eliminate it? 3- Is the structure of reality real? 4- Is the structure of Reality linear? 5- How the structure of reality could be structured? 6- In virtue of what the structure of reality is like this?

I will answer the question from one to three in chapter two of my project. Questions four and five will be answered in chapter three, and the answer to the last question will be in chapter four and five.

Literature review

What is grounding?

Although talk of grounding has its roots in Plato (Correia & Schnieder, 2012) and Aristotle (Schaffer J. , 2009), contemporary discussions of grounding begin with Fine (Fine, The Question of Realism, 2001), Schaffer (Schaffer J. , 2009) and Rosen (Rosen, 2010). In this literature, grounding is a non-causal dependence relation which we can use to show how the layers of reality are structured. In other words, in our ontology, which thing is dependent on which, or which is ontologically prior to which? There are some examples of these locutions in ordinary language and philosophy, such as:

- The roses are red in virtue of being scarlet.
- Normative facts obtain in virtue of social facts.
- Mental facts are depended in physical facts and not vice versa.

Some other philosophers emphasised on the priority and determinative usage of these relations, such as Audi (Audi, 2012), and they call it a non-causal determination relation.

Since the beginning, philosophy journals are flooded with many questions about the nature of these relations. Among them, some philosophers were sceptics about it, and they thought it is not a real mind-independent relation. So, talk of realism Vs irrealism began.

Realism and Irrealism

 At first, there were only two camps. Some were entirely against the grounding talk. Others accepted it, and they thought it was a real relation. Some philosophers, like Hofweber (Hofweber, 2009), thought grounding is an esoteric term used by metaphysicians. He thought it is not a real relation, and we should dismiss it and replace it with other familiar notions such as determination, supervenience, existential dependence, reduction, etc. Some other, like Wilson (Wilson, 2014), made a distinction between small-g and big-G. Small-g is the family of type identity, functional realisation, the classical mereological part-whole relation, the causal composition relation, the set membership relation, the proper subset relation, and the determinable–determinate relation, and the big-G grounding is the one that realists adhered. They argued that although we can talk about small-gs, there is no big-G relation that we should talk about. Therefore, they argue for the elimination of big-G grounding.

 Another view is a moderate one which takes a non-eliminative stance on the grounding talk. In recent years, Thompson made a distinction between eliminativism about grounding and non-eliminativism about it (Thompson N. , 2018). Non- eliminativists accept the attacks of sceptics to the grounding talk, but they point to some benefits of the grounding without which we cannot talk of the structure of reality.
Another irrealist view that we can have is the ontic structural realism (OSR). This account is in the philosophy of science and physics. According to it, although we have no access to the real objects of physics, the only thing that remains is the structure itself. Now considering the debates in metaphysics, which all are explanatory regarding the structure of reality, we can have the same position in it according to the persistence of the structure of reality.

Structure of Reality

According to how we might characterise grounding and the shape of the structure of reality, there are different positions on this topic. These structures can be parallel to the structures of belief and justification in epistemology. Some of these views are Foundationalism, Coherentism and Infinitism.

When grounding was first mentioned, most philosophers assumed that it is a tool by which we can explain the structure of reality. In these presupposed positions, the structure of reality is linear. Accordingly, grounding is directed (irreflexive and asymmetry) and transitive. This approach is called foundationalism. In this view, we have a bottom level of fundamental object(s). By using these/this object(s) and the grounding relation, we can make the whole reality, by going through different layers of it level by level. Schaffer (Schaffer J. , 2010), Bennett (Bennett, Making Things Up, 2017) and Sider (Sider, 2011) are amongst its adherents.

 For example, Bennett in "*Making Things Up*" introduces building relations. The building includes relations such as realisation, micro-based determination, composition, constitution, set formation, *grounding*, and causation. She argues that if the building is symmetric and reflexive, we cannot build the structure of reality with this tool. The building in a linear structure should have a directed building relation.

 One of the other discussed properties of grounding is well-foundedness. Regardless of the technical set-theoretic definitions, well-foundedness means that the grounding chains bottom out. Although some philosophers like Cameron (Cameron, 2008) count on grounding as a well-founded relation, others might find it not necessary such as Rosen (Rosen, 2010) who claims that whether grounding chains finishes or not is not something to worry about. Therefore, some philosophers are infinitists about the structure of reality, and they accept the possibility of gunky, junky and hunky[2].

 The other position is the holistic coherentism. The literature of grounding lacks an elaborate analysing of this view. There is just some works of Bliss (Bliss, 2014) and Thompson (Thompson N. , 2016) in which they only refer to some possibilities of the existence of this account. In this account, the structure of reality is non-linear; it means that grounding is non-symmetry, non-transitive and non-irreflexive. In this view, we are irrealist about grounding and realist about the structure.

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[2] Gunky: the world in which the chains never finish at the bottom level.
Junky: the world in which the chains never finish at the top level.
Hunky: the world in which the chains never finish both at the top and bottom level.

MGQ

Philosophers mostly try to define fundamentality by using the grounding relation. For example, Schaffer (Schaffer J. , 2009) says if a thing is fundamental, it means it is ungrounded. Sider in "*Writing the Book of Nature*", introduces the principle of purity. This principle says that if something is fundamental, it should contain only fundamental things. Then he asks whether grounding relations are grounded or ungrounded. By the principle of purity, we can see that they should be grounded; otherwise, the grounding relation collapse because in this case, we would have a fundamental fact which has a relatum that is not fundamental itself! For example, if A grounds B, then B is a non-fundamental entity. So, if we take [A grounds B] as a fundamental entity, by knowing that A is ungrounded, we still have B in our fact which is not fundamental. Therefore, we have a non-pure basis in the fundamental entities, and we should have B in every basis set for making the whole universe.

 This definition of fundamentality is not the only possible definition. For example, Raven (Raven M. J., 2016) tries to define a version of fundamentality without any foundations. This definition probably is more suitable for a coherentist who are looking for more complex structures of reality.

 Continuing Sider's objection, some philosophers, like deRosset (deRosset, 2013), took the collapse problem seriously and tried to find a ground for grounding relations.

 Others saw different motivations for arguing for the grounding fact being grounded and searching for a ground for them. Dasgupta (Dasgupta, 2014), took physicalism account as a motivation for searching for a ground for grounding relations. In formulating it by using a grounding relation, he found out grounding facts should be grounded. Bennett (Bennett, Making Things Up, 2017), rejects the principle of purity due to presupposing the idea of being grounded. Then, she introduces modal recombination principle. In this principle, every fundamental fact can be modally recombined. Therefore, in some possible worlds, we could have fundamental things without any grounding facts. So they can build other layers without them. Accordingly, they are not fundamental. So, they are grounded.

Considering MGQ, regardless of its motivations, we have three different answers, in the realists' camp, for it:

1- Straight forward account: Bennett (Bennett, By Our Bootstraps, 2011) (Bennett, Making Things Up, 2017) and deRosset (deRosset, 2013) introduce the left side of

the grounding relations as a ground for the grounding facts. For example, if A grounds B, then A grounds [A grounds B].

2- Zero grounding account: Litland (Litland, 2017) by using Fine's (Fine, Guide to Ground, 2012) distinction between factive and non-factive ground, put non-factive grounds as a ground for factive ones and then introduces zero or empty sets as the ground of non-factive grounding relations. Factive grounding is the grounding relation whose relata are true, and non-factive is the one with the possibility of being true. This account is more of a technical/logical account.

3- Essential grounding: Dasgupta's account is like the straight forward account, but instead of just using the left relata as grounds, he also adds the essence of the right relata to it, that is if A grounds B, then (A with the essence of B) grounds [A grounds B].

Although we do not have a severe work in coherentists camp, we can find some solutions in Thompson's "*Metaphysical Interdependence*". She sees the whole structure interconnected without any further grounds.

Structure of the Project

In this project, I began by writing the preliminaries of this projects. In chapter two, I analyse the debate between irrealism and realism about grounding and argue for my view on it. In chapter three, I will investigate the structure of reality and the debates between holistic coherentism and foundationalists about the structure of reality. Then in chapters four and five, I will go for searching of the MGQ answer.

1- Preliminaries

The preliminaries to this project are: what is grounding, the relation of absolute/relative fundamentality to grounding, directedness of grounding, relata of grounding, well-foundedness, modal recombination.

2- Realism, Irrealism, Structural Realism

When we look closely at the history of metaphysics, most of the time, there is a search for a structure and its mechanics. I would talk of the debates between

Realism and Irrealism, and then by probing into metaphysical explanations in the history of metaphysics, such as nominalism-realism debate, part-whole debate, etc., I would argue for the persistence of a structure in our metaphysical discussions and how it is real. In this approach, I will also examine structural realism in the philosophy of science and its usage in metaphysical explanations.

3- Properties of Structure of Reality:

In this chapter, I begin by analysing foundationalists position on the structure of reality and its properties. After showing how it could be non-symmetric, non-transitive, non-irreflexive, and not well-founded, I would analyse infinitism and coherentism, and I will argue for a holistic coherentism position. These accounts are analogous to similar accounts in the epistemology so I will borrow many debates from it.

4- Realism and MGQ

Before going for an irrealist account of MGQ, I will examine the realists answer to MGQ. Because both irrealism and structural realism are taking grounding as a metaphysical explanation. So I will examine these views by using a unionist point of view.

5- The Ground of the Structure of Reality

In this chapter, after mentioning all the difficulties that realism faces by MGQ, I will introduce a positive answer to the MGQ. I intend that regarding the different positions to the structure of reality, this answer either be in accordance with all of them and does not make any problems for any of them, or at least it works for the coherentists point of view.

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