

Constructions all the way down?

A Problem for Goodmanian Constructivism

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Conventionalists assume that the fundamental truths about some subject-matter (such as ethics or mathematics) are not reflections of the existence of some facts about this subject-matter ‘which are there anyway’ but are grounded only in explicit or implicit agreements between speakers talking about it. They are not truths about the world around us, but truths generated by a system of conventions we ourselves have set up. As such conventionalism is closely aligned with constructivism, since the constructions this appeals to are usually constructions which proceed through the setting up of conventions.

Amongst the different forms of constructivism the Goodmanian variety (also known as irrealism) is one of the most extreme, and one of the most interesting. Unlike various localized constructivist theories it does not just claim that scientific theories or social institutions are constructs but that *everything* is a construct.¹ This universal claim leads to an interesting problem.

To see what this problem is, note first that the relation ‘is constructed from’ is an existential dependence relation, like ‘is fathered by’, ‘is caused by’, or ‘is a conglomeration of parts of’. This means that if the antecedent of the relation did not exist, the consequent would not exist either: if there is no father there is no son, if there is no fuel there is no fire, if there are no lego blocks there is no lego structure. An intriguing question concerning

¹‘As nothing is at rest or is in motion apart from a frame of reference, so nothing is primitive or derivationally prior to anything apart from a constructional system.’ (Goodman, 1978, 12), ‘And this, as I have mentioned earlier, goes all the way down. Not all differences between true versions can be thought of as differences in grouping or marking off within something common to all. For there are no absolute elements, no space-time or other stuff common to all, no entity that is under all guises or under none.’ (Goodman, 1983, 107, note 6), ‘ We cannot find any world-feature independent of all versions. [...] No firm line can be drawn between world-features that are discourse-dependent and those that are not.’(Goodman, 1980, 212), ‘The line between convention and content is arbitrary and variable’ (Goodman, 1980, 214).

dependence-relations is whether they have a foundation, that is whether there is something which is only the antecedent of the relation but does not have an antecedent itself, or at least no antecedent different from it. The discussion about the foundation of the last two examples stretches back to the early days of the philosophy. Both the existence of a first cause and the existence of partless atoms have been debated ever since.

For Goodmanian irrealism at least the question of foundation is easily settled. Because constructions ‘go all the way down’ there is no unconstructed construct which could begin the chain. This, Goodman claims is no problem; worrying about the beginning of the chain of constructions he regards as both misguided and best left to theology.² Whether a downwards infinite constructive chain is philosophically problematic is not a question I set out to answer here. The dilemma I want to discuss is of a different but nevertheless

²‘We might take construction of a history of successive development of worlds to involve application of something like a Kantian regulative principle, and the search for a first world thus to be as misguided as the search for a first moment of time.’ (Goodman, 1978, 7, note 8), ‘The many stuffs – matter, energy, waves, phenomena – that worlds are made of are made along with the worlds. But made from what? Not from nothing, after all, but *from other worlds*. Worldmaking as we know it always starts from worlds already on hand; the making is remaking. Anthropology and developmental psychology may study social and individual histories of such world building, but the search for a universal or necessary beginning is best left to theology.’ (Goodman, 1978, 6–7).

related nature.

Put briefly, the problem is this. Either we assume that constructions take place in time, or they do not. If they do, we get a chain of temporal processes stretching infinitely back in time. Yet constructions are supposed to be something humans do, but humans have not always been around. So either non-human minds existed before the existence of humans or there must have been constructions without constructors. If constructions do not take place in time, however, all constructions must already exist in some non-temporal realm, independent of human constructions. This does not sit well with the claim that it is humans who do the constructing.

Let us take matters a bit more slowly. There are three premisses in play:

1. No construct is constructed from something which is not a construct itself.
2. Every construct must be constructed from something (its *basis of construction*).
3. Bases of construction temporally precede the constructs.

The first premiss just captures the fact that for Goodman there cannot be any nonconstructed objects which serve as the foundation for the constructional hierarchy.

The second premiss, a modern incarnation of the Parmenideian maxim *ex nihilo nihil* may appear to be controversial. Does not the empty set constitute a counterexample? Is not pure set theory a clear case of an intricate structure built literally from nothing at all? I think not. Set formation should not be thought of as a composition operation which makes one thing out of many things. After all it can also make a new thing out of a single thing by forming its singleton.³ The composition of a thing with itself appears to be either ill-defined or just identical with that very thing. It is more plausible to think of it as a collecting operation (David Lewis calls this the ‘lasso hypothesis’),⁴ collecting together things in a container (in the widest possible sense of the word). On this understanding it is evident that a thing in a container is different from the thing itself, and that we can have containers containing nothing at all. Since we can also stuff empty containers into other containers we have the resources of building very complex structures with nothing but containers. But in this case the containers cannot be conceived of as mere operations, so that we could proceed from an empty world to a world with an object in it just by applying the set-forming operation to that world. Rather, taking set theory ontologically seriously commits us to an infinity of

³Jan Westerhoff: ‘A taxonomy of composition operations’, *Logique et Analyse*, 2004, 375–393.

⁴(1991).

containers, and it is from these containers that the structures of set theory are built. They are not created from nothing at all.

The third premiss is where the bifurcation of the dilemma starts. If we look at the examples Goodman himself gave to illustrate his notion of construction it is obvious that they all take place in time. He gives examples of making chairs, books, planes⁵ and assembling stereo-systems⁶. Making a stereo-system takes time, and before we have assembled its components we have the parts of a stereo-system, but nothing we can use to play our music with. All of this does not contradict the valid observation that Goodmanian making is not just the assembly of material components.⁷ But worldmaking is what humans do, and all things humans do take time, whether it is the making of a physical objects, such as a cake or a castle, or a non-physical one, like a game or a theory.

Let us consider the case of a theory, such as a theory of the physical world. Such a theory contains concepts, which are constructs. These concepts have been constructed from other concepts which have been around before the theory was around. By the first premiss these latter concepts have been constructed too, and so on. If we assume that these constructions take

⁵Goodman (1980, 213)

⁶Goodman (1983, 103–104)

⁷‘The worldmaking mainly in question here is making not with hands, but with minds, or rather with languages or other symbol-systems.’ (Goodman, 1980, 213).

even the smallest amount of time the history of constructions will go back infinitely.

Note that we do not have to assume that a construct is always more complex than what it is constructed from. Doing so would commit us to the claim that we could retrace the history of construction, and thereby reduce the complexity of the constructs we encounter, but that we would never reach anything which was simple. Matters connected with the infinite divisibility of constructs need not worry us. A construct does not have to be more complex than each member of its basis, as it is if e.g. we merge two libraries. We can equally construct a new library by splitting one into two, or create a new one by splitting off parts from two old libraries and merging these.

The history of constructions may go back infinitely, but human beings do not. Humans split from apes some time between five and seven million years ago, while biological life has not been around for much more than 3.5 billion years. Our three premisses entail that nine billion years ago, before there even was an earth some constructions were around. Supposing there were constructions without anybody to construct them appears inconsistent. Of course we can assume that since worldmaking is what minds do there must have been non-human minds around at that time who carried out the constructions. Assuming that worldmaking is an activity only carried out by fairly complex minds this would also entail that complex minds could exist

(or at least could have existed) independent of human bodies. While all of this is no *reductio* of our three premisses it is at least a somewhat unexpected proof that physicalism is wrong, and might make us wonder we really want to hold on to these premisses.

So let us consider the second horn of the dilemma, which claims that at least in some cases bases of construction do not temporally precede the constructs. I do not think that this is the notion of construction Goodman had in mind, but perhaps he should have had.

It is also evident that the constructs cannot temporally precede the bases, otherwise there would have been nothing to construct the constructs from, since the bases did not exist at that time. But if there are two objects such that neither temporally precedes the other there are only two options: either the objects are simultaneous, or they do not stand in temporal relations relative to each other, or to any other objects (according to the Platonist understanding mathematical objects exist in this way).

The first option seems to be preferable, since the examples of constructs Goodman gives (the Big Dipper, chairs, books, planes, stereo-systems), as well as their bases ("matter, energy, waves, phenomena") are located in time. In the case of the stereo-system this either implies the false claim that the stereo-system exists while its components exist or the obscure claim that it exists in some form in which it cannot fulfil its functional rôle (such as

playing music). Considering non-material constructs such as physical theories we would be forced to assume that the conceptual construction of quantum mechanics was already present at the time of Newton. Moreover it is not clear what the reason would be why certain bases do not precede the corresponding constructs while others do. In the absence of such a reason it is preferable to assume that the precedence relation between basis and construct is the same for all basis-construct pairs. In this case it would follow that since new bases cannot come into existence apart from being constructed themselves⁸ all constructs must exist simultaneously in the present together with their bases.

All of this is not very satisfactory, but matters do not improve if we assume that constructs and their bases do not exist in time. For now we have to assume some atemporal simulacra of the stereo-system and its components which stand in a relation of temporal dependence, and which are the proper subject-matter of Goodman's theorizing. If we go down that road irrealism is transformed beyond recognition and loses all attractive features it might

⁸We start, on any occasion, with some old version or world that we have on hand and that we are stuck with until we have the determination and skill to remake it into a new one. [...] Worldmaking begins with one version and ends with another.' (Goodman, 1978, 97); 'All we have available is scrap material recycled from old and stubborn worlds.' (Goodman, 1980, 213).

have had.

Possible responses

One response to the above dilemma is to say that the expression "all the way down" is just a metaphor for the claim that what holds for one concept holds for all. The claim "All A are B" does not entail an infinite regress or an infinite number of As. When one says that a company is corrupt all the way down what we mean is that what holds for one employee holds for all, i.e. that all employees are corrupt. We are not committed to saying that the company has infinitely many employees.

The reason why we do not get a regress in this case is that the mereological relation 'is a part of the company' has a foundation, that is, the company has atomic parts. It has parts which do not have parts which are parts of the company too. But we cannot assume the same for the existential dependence relation between a construct and what it is constructed from without falling into the kind of substantivalism Goodman rejects.

Note that it would not help to relativize atomicity to an area of discourse. Someone might say that the people in the company are atomic only insofar as we speak of 'parts *of the company*' and not, for example, when we speak of '*material* parts'. Similarly, one could argue, the basis of some constructs

is constructed only relative to one perspective, not relative to another one.

But then we still have to ask ‘is there something which has no parts under *any* understanding of parthood’ (an absolute atom)? This would be like asking ‘is there something not constructed no matter how we construe the notion of construction (an absolute constructional atom)?’ Goodman cannot allow these, but if there are no absolute atoms the mereological case generates a ‘regress’ as well.

A second response concentrates on the notion of time involved. Surely time is a construct too, and in fact Goodman pointed this out when faced with the criticism that things existing before human beings existed (such as the Big Dipper) could not possibly be human constructs.⁹ According to Goodman we construct time, and part of our construction of time is that there are certain things which are placed temporally prior to us.

This is a good response, but it does not really help with the present problem. The point of the dilemma is not to come up with something which is not a construction but to assess the consequences of the ‘constructions all the way down’ approach relative to the notion of time we have constructed. As matters stand now we have the conception of time we have, and relative to this construction both the assumption that constructions take place in time,

⁹‘Does he ask how we can have made anything older than we are? Plainly, by making a space and a time that contains those stars.’ (Goodman, 1980, 213).

as well as the assumption that they do not appear to lead to unacceptable consequences. These consequences do not disappear or become any more palatable even if we agree that time is a human construction too.

Where does all of this leave us? The easiest way of avoiding the dilemma is surely by rejecting the first premiss, that is by affirming that there is, after all, "something stolid underneath"¹⁰, thereby rejecting universal constructivism. But this is of course no option open to the Goodmanian. Moreover, since neither the second nor the third premiss seem easily assailable it appears to be the most viable option to affirm the existence of constructors before the existence of humans or indeed before the existence of the universe. This of course entails that at least at one time immaterial minds must have existed.

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¹⁰Goodman (1978, 96).