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FILLING A TYPICAL GAP IN A REGRESS ARGUMENT

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Abstract
In the following we fix a typical regress argument, locate a typical gap in the argument, and try to supply a number of gap-filling readings of its first premise.

1. *Locating The Gap*

As Armstrong said about someone who gets stuck in an infinite regress:

> "He is like a man who presses down the bulge in a carpet only to have it reappear elsewhere." (1978: 21)

I take it that Armstrong appeals to a typical regress argument:

(1) There is a problem P.
(2) There is a theory S of how to solve P.
(3) S generates a regress R consisting of problem/solution pairs similar to P/S.[1]
(4) R is unacceptable.
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(5) Therefore: S is to be rejected.

Filling out the details of Armstrong's example:

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[1] This problem/solution pattern of regresses derives from Schlesinger (1983: 221). Cf. Gratton (1994) for discussion.

(1) There is a bulge in the carpet, and we want to get rid of it.
(2) This problem can be solved by pressing it down.
(3) If we press down the bulge in the carpet, another bulge appears elsewhere in the carpet, which in turn can be eliminated by pressing it down, so that yet another bulge appears in the carpet, etc.
(4) The regress is unacceptable.

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(5) Therefore: the solution of pressing down the bulge is to be rejected.

Impressive as it seems, the regress argument can be resisted simply by denying (4). Yes, there is a regress, but so what? We need a justification of why the Carpet Regress (say) is bad. In particular the question is: why does the regress in which we keep on pressing down bulges lead to the conclusion that we cannot eliminate the bulge by pressing it down, and that we have to search for another solution for our problem (e.g. buying a new, smaller carpet)? Put in general: how to get from regress R to the rejection of theory S? Hence, there is a gap in the argument, and it must be filled.

Two disclaimers. First, there are no doubt more gaps in the argument, but they will be left for future research. Second, examples of regress arguments can easily be multiplied, in both philosophical and everyday contexts. As my aims are metaphilosophical, we shall stick to the carpet case in the following.

2. *Filling It*

There are a number of familiar ways to get from a regress R to the rejection of theory S. For instance, if R is to be plainly unbelievable or absurd (the classic way), then S which generates R is committed to an absurdity, and to be rejected for this very reason. Likewise, if it can be shown that R is logically impossible, uneconomical, or similarly disadvantageous for some principled reason, then S can be rejected on that basis.

In the following we set such straightforward gap-filling strategies aside, and assume that the unacceptability (or *viciousness*, as it is often said) of regresses has somehow to do with failures of problem solving. More specifically, to get from R to the rejection of S, we shall take it, is to show how R prevents S from solving a relevant problem P. The unacceptability of R can be defined accordingly:[2]

[2] Or weaker (leaving open the possibility that there are other sufficient conditions under which regresses can turn out unacceptable): R prevents S from solving P $\rightarrow$ R is unacceptable (for S with respect to P).

@ R is unacceptable (for S with respect to P) $\leftrightarrow$ R prevents S from solving P

By this, the Carpet Regress is bad for our theory (i.e. that the bulge can be eliminated by pressing it down) just in case it prevents our theory from solving the problem of the bulge in the carpet. By this definition, regresses are not unacceptable full-stop; they can only be unacceptable relative to a certain relevant problem P. Thus without P there can be no unacceptable regress (and, indeed, no motivation to start the regress in the first place).

In order to see how a regressive solution S fails to meet P (if so), we should get clear on what P actually consists in. In the literature this usually remains unclear; at best one may find hints (cf. some of the upcoming footnotes). In the following we show that the problem solving task is rather ambiguous, and distinguish several readings of it. As it turns out, not all of them guarantee that the Carpet Regress is unacceptable, and hence only some of them are able to fill the gap in the regress argument.

Consider the first, most obvious, reading on the problem solving task:

(P1) Get rid of that particular bulge in the carpet.

Now run the argument on the basis of P1. There is one particular bulge in the carpet. Call it b_1. b_1 can be eliminated by pressing it down. If we press down b_1, b_1 is completely gone. Another bulge b_2, distinct from b_1 (assuming some intuitive identity conditions of bulges), however appears elsewhere in the carpet, which in turn can be pressed down, and so on. In this case, the regress is irrelevant and does not lead to the conclusion that the problem cannot be solved by pressing down the bulge, for the problem solving task is already met. It is true that there is another bulge, but so what? b_1 is eliminated, and this was all we had to do.

But one might think P1 is too weak. If we want to get rid of the bulge in the carpet, do we really want to eliminate *one* particular bulge, as P1 says? What we really want, presumably, is to get rid of *any* bulge in the carpet whatever. So here is a revised take on the problem solving task:

(P2) Get rid of all the bulges in the carpet.

This task is clearly distinct from P1: it is stronger, i.e. harder to be met. Run the argument again. There is a bulge in the carpet, b_1. As the theory as stated in line (2) goes, b_1 can be eliminated by pressing it down. If we press down b_1, another bulge b_2 appears elsewhere in the carpet. P2 says that we have to eliminate all bulges, so b_2 is to be eliminated too. As the theory goes, b_2 can be eliminated by pressing it down. If we press down b_2, another bulge b_3 appears elsewhere in the carpet. P2 says that we have to eliminate all bulges, so b_3 is to be eliminated too. And so on: it's bulges all the way down. In this case, the regress seems relevant concerning the issue whether the solution at issue is a good one, or not, for the problem solving task is not already met by managing the first bulge. So the question is: does the regress lead to the conclusion that our solution of pressing down the bulge is a bad one? Surprisingly, perhaps, the answer is negative. The problem solving task P2 motivates the regress, rather than conflicts with it. Time and again P2 says that we are to eliminate the new bulge, and time and again the theory says we are to press it down.[3]

Hence we need a still stronger reading of the problem solving task to obtain a conflict with the theory. Consider the following:

(P3) Get rid of all the bulges in the carpet, and complete this task.

P3 is stronger than P2: it puts a constraint on how to solve the problem. In case of P2 we are allowed to solve the problem in whatever way we like, specifically: by completing it, or by never completing it. But in case of P3 it is not allowed to eliminate bulges by never completing the task. This conflicts with the regress. At no point of the regress it is possible to complete the task of eliminating all bulges in the carpet.[4] This is not just because we are too slow, or too tired after a couple of months of working on the problem, nor because we simply die at a certain point. Rather, it is structurally impossible to do it: if we have solved a problem, there is always yet another problem to be solved. We can never say that we are ready with pressing down bulges, and that the job is done.[5] Even immortality would not help us here. Hence, at no point we can meet the task P3, which warrants the conclusion that our solution is a bad one.

This may fill the gap in the regress argument, but there is at least a second possibility. To wit:

(P4) Get rid of all the bulges in the carpet at once.

[3] Cf. "There is also an obvious way of looking at matters optimistically, asserting that when the question is raised why a certain evil is permitted, we can at once come up with a solution." (Schlesinger 1983: 225)

[4] Cf. "Thus, if the regress is vicious, it is vicious because it prevents Resemblance Nominalism from accomplishing its explanatory project of accounting for all properties in terms of resembling particulars: such a project remains forever incomplete." (Rodriguez-Pereyra 2002: 108)

[5] At least, if it is denied that the notion of completed/actual infinities is applicable here.

P4 too is stronger than P2. In case of P2 we are allowed to eliminate bulges in carpets in whatever way we like, specifically: successively, or all at once. But in case of P4 it is not allowed to eliminate bulges successively. This conflicts with the regress. At no point of the regress it is possible to eliminate all bulges in the carpet at once. This, again, is not because we are too restricted in our capacities to fulfil the task. It is not that if there are, say, 16 bulges in an enormous carpet, that we lack hands to press all down at the same time. It is structurally impossible to do it: if we have eliminated b_n, there is always yet another bulge b_{n+1} which is to be eliminated (and the other way around: b_{n+1} does not exist unless b_n has been pressed down). This means that at no point our solution of eliminating bulges by pressing them down can meet the task P4, which supports the conclusion that our solution is a bad one.

In sum, both P3 and P4 can fill the gap in the regress argument. Specifically, they provide the following two gap-filling modifications of premise (1):

(1*) There is a bulge in the carpet, we want to get rid of it, we want to get rid of any other bulge in the carpet, and we want to complete this task.
(1**) There is a bulge in the carpet, and we want to get rid of all the bulges in the carpet at once.

Both modifications warrant the conclusion that the problem of the bulges (as specified in the first premise) cannot be met by pressing them down. Furthermore, the Carpet Regress (line 3) is unacceptable (line 4) exactly because it prevents our theory (line 2) from meeting the relevant problems (lines 1* and 1**).

So far so good.

3. *Emptying It Again*

In the previous section we singled out two strategies which succeed in filling the gap in the typical regress argument. In this section I nevertheless suggest that they are unmotivated, so that they are of no help to the typical regress argument.

Consider the generalizations of the problem solving tasks P1–4:

(P1*) Solve problem X of type Y.
(P2*) Solve all problems of type Y.
(P3*) Solve all problems of type Y, and complete this task.
(P4*) Solve all problems of type Y at once.

As we have seen at their instances, P2* is a strengthening of P1*, and both P3* and P4* are strengthenings of P2* (and hence of P1*). In other words: it is easier to meet P1* than to meet P2*, and it is easier to meet P2* than to meet P3* or P4*. Furthermore, P1* and P2* are too weak to fill the gap in the typical regress argument, but P3* and P4* are powerful enough for the job.

The worry about the latter two tasks naturally stems from this. The point is: surely it is possible to strengthen the problem solving tasks in such a way that they cannot be met. But why accept the strengthenings? Why accept that P3* and P4* rather than P1* or P2* are to be met? Why, in all generality, are we to complete the task of solving all problems of the same type at some point, or are we to solve all of them at once? Or again: where do these constraints on problem solving acquire their normative force?

True, in the carpet case one could suggest that the problem solving needs completion (and hence that P3 is justified), because we obtain a flat carpet in that case only. Yet presumably this motivation cannot be generalized. As Klein says on the Justification Regress:

> "The infinitist cannot accept the Completion Requirement because it is clearly incompatible with infinitism. Justifications are never finished." (1999: 314)[6]

In brief, if P3* and P4* are unmotivated, they can be resisted.

4. *Filling It Again?*

At this point there is still a gap in typical regress arguments, and this consequently undermines them. Is there something more promising available?

Consider the following, fifth take on the problem solving task:

(P5) Get rid of the bulge in the carpet, and do not shift this problem.

P5 is rather different from the other tasks P2, P3 and P4, because it is, like P1, about one particular bulge only. But unlike P1, it puts a constraint on how to deal with the problem, i.e. that we should better not shift it. Generally the constraint is this: do not solve a problem P by a solution S where S gives rise to a problem which is similar to P (there are several ways in which solutions can 'give rise' to similar problems, but we shall not go into that here). Our theory violates this constraint P5, because it does give rise to a

[6] For an important qualification of this, see Peijnenburg (2007).

problem which is similar to the initial problem. Pressing down a bulge makes it the case that another bulge appears elsewhere in the carpet, and hence the problem of getting rid of the first bulge has shifted to the problem of getting rid of the second bulge.

P5 involves the following modification of premise (1):

(1***) There is a bulge in the carpet, and we want to get rid of it in such a way that the problem does not get shifted.

This too will fill the gap in the regress arguments, and is what Armstrong must have had in mind when he invented the Carpet Regress:

> "What the [Z] regresses bring out is that the [Z-theorist] does not in fact solve his problem, he simply shifts it." (1978: 21)[7]

P5 is however not disconnected from the other tasks. P5 relates to P4 and P3 in an interesting way. First, a violation of P5 entails a violation of P4, moreover: it is *because* time and again our theory shifts the problem of getting rid of a particular bulge that we cannot eliminate all bulges in the carpet non-successively (i.e. meet P4). Second, it is *because* our theory shifts the problem of getting rid of one particular bulge, and keeps on doing this, that we can never complete the task of getting rid of any bulge in the carpet whatever (i.e. meet P3). Here, a violation of P5 entails a violation of P3; however only under the condition that the problem shifting does not terminate at some point. This condition can be guaranteed by adopting yet another task:

(P6) Get rid of all the bulges in the carpet in the same way.

P6 is an instance of the general principle of uniformity according to which similar problems require similar solutions. It establishes that we keep on pressing down bulges, and refrain from trying out other solutions at some point (e.g. cutting out a piece of the carpet, buying a smaller carpet after all, etc.). Furthermore, as long as we keep on pressing down bulges, the problem shifting will not terminate. So by P6 a violation of P5 smoothly entails a violation of P3.

All this can be generalized. Recall the generalizations of P3 and P4, and let us add the generalizations of P5 and P6:

[7] This sentence precedes, without further clarification, the carpet sentence cited at the very beginning of this paper.

(P3*) Solve all problems of type Y, and complete this task.
(P4*) Solve all problems of type Y at once.
(P5*) Solve, but do not shift, problem X of type Y.
(P6*) Solve all problems of type Y in the same way.

How about their interconnections? As said, P3* and P4* are strengthenings of P2*. P6* also is a strengthening of P2*. P5* is however a strengthening of P1*. Furthermore, a violation of P5* entails a violation of P4*, and a violation of P5* coupled with P6* entails a violation of P3*. The entailments in the opposite direction however fail: (i) a violation of P5* is not entailed by a violation of P4*, and (ii) a violation of P5* is not entailed by a violation of P3* (with or without supplementation of P6*).

Here are the counterexamples. First, consider a special carpet which is such that (for no special reason) each five seconds a bulge pops up in it. It is impossible here to press all down at the same time and to solve all problems of the same type at once, but this has nothing to do with problem shifting. This example blocks the entailment mentioned at (i). Second, consider an infinite carpet with an infinity of bulges. It is impossible here to press all down and finish the problem solving at some point, but this has, again, nothing to do with problem shifting. This example blocks the entailment mentioned at (ii).

This is important. That a violation of P5* (coupled with P6*) entails but is not entailed by a violation of P3* or a violation of P4* means that P5* can be taken as more basic than P3* and P4*. I conjecture that violating P5* captures the essence or distinguishing characteristic of a regress (and the role of P6* is nothing but guaranteeing that P5* will be violated to eternity).[8]

The question follows: can P5* and the corresponding premise (1***), then, fill the gap in the typical regress argument? It still depends. (1***) is justified only if it is bad to violate P5*, i.e. to commit to problem shifting. Perhaps in some cases it is, and in others not. But then we need a demarcation criterion. To my knowledge this has nowhere been put forward in the literature, but the results of the present section suggest that if the typical regress argument is to be saved, it is to be saved here.[9]

[8] Cf. "It is the first step in the regress that counts, [...] that if there was any difficulty in the original situation, it breaks out in exactly the same form in the alleged explanation." (Passmore 1961: 31)

[9] This and other queries raised in this paper (which was written in 2009) are extensively discussed in my dissertation entitled 'And so on. Two theories of regress arguments in philosophy.'

Be that as it may, for now we may still, among other things, eliminate bulges in carpets by pressing them down.[10]

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[10] On Sundays, of course, as Philipp Keller suggested.