

Misuse of Occam's razor by relativists when they discard concepts

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The method of relativists (those who believe in Einstein's relativity) seem to be to discard concepts (such as aether, absolute frame etc), but they do not make clear the sense of the discard, whether it is: (i) compulsory discard (in the sense that can't bring the concept back) or as (ii) optional discard (in sense that can bring the concept back if feel need to), and then they often make talking about the discarded concept as taboo.

As per my article "Examples of Relativists (believers in Einstein's relativity) moving goalposts" [1] I pointed out : "Moving goalposts is not supposed to be used for a theory, but relativists (believers in Einstein's relativity) seem to do it all the time because their theory/theories are not properly defined." The relativists that move the goalposts, let's call them subgroup#1 - don't explicitly seem to realize that they move goalposts, while they do this there is another subgroup#2 who don't realize about subgroup#1's goalpost moving, which all then means they misuse Occam's razor. (n.b. moving the goalposts is being used here to mean changing the theory by such methods as adding more to it)

As per Wikipedia Occam's razor [2] is: "It is sometimes misquoted in pop culture and other media by some form of the statement "The simplest solution is most likely the right one." Occam's razor instead says that when presented with competing hypotheses that make the same predictions, one should select the solution with the fewest assumptions, and it is not meant to be a way of choosing between hypotheses that make different predictions."

It is being misused by some relativists to support their beliefs about relativity, but before considering that let us point out what Philip Ball has to say [3].

Philip Ball gives the basic idea of Occam's razor: "Why make things more complicated than they need be? You gain nothing by complicating an explanation without some corresponding increase in its explanatory power. That's why most scientific theories are intentional simplifications: They ignore some effects not because they don't happen, but because they're thought to have a negligible effect on the outcome. Applied this way, simplicity is a practical virtue, allowing a clearer view of what's most important in a phenomenon."

But he then points out the idea is misused: "But Occam's razor is often fetishized and misapplied as a guiding beacon for scientific enquiry. It is invoked in the same spirit as that attested by Newton, who went on to claim that "Nature does nothing in vain, and more is in vain, when less will serve." Here the implication is that the simplest theory isn't just more convenient but gets closer to how nature really works; in other words, it's more probably the *correct one*."

"There's absolutely no reason to believe that. But it's what Francis Crick was driving at when he warned that Occam's razor (which he equated with advocating "simplicity and elegance") might not be well suited to biology, where things can get very messy. While it's true that "simple, elegant" theories have sometimes turned out to be wrong (a classical example being Alfred Kempe's flawed 1879 proof of the "four-color theorem" in mathematics), it's also true that simpler but less accurate theories can be more useful than complicated ones for clarifying the bare bones of an explanation. There's no easy equation between simplicity and truth, and Crick's caution about Occam's razor just perpetuates misconceptions about its meaning and value."

"The worst misuses, however, fixate on the idea that the razor can adjudicate between rival theories. I have found no single instance where it has served this purpose to settle a scientific debate. Worse still, the history of science is often distorted in attempts to argue that it has."

I will skip over what he says about the Copernican revolution; the point being Occam's razor didn't help with geocentrism versus heliocentrism.

"The point here is that, as a tool for distinguishing between rival theories, Occam's razor is only relevant if the two theories predict identical results, but one is simpler than the other—which is to say, it makes fewer assumptions. This is a situation rarely if ever encountered in science. Much more often, theories

are distinguished not by making fewer assumptions but *different* ones. It's then not obvious how to weigh them up."

Further on he explains about interpretations, for instance there are different interpretations of the maths of quantum mechanics:

"I can think of only one instance in science where rival "theories" contend to explain exactly the same set of facts on the basis of easily enumerable and comparable assumptions. These are not "theories" in the usual sense, but interpretations: namely, interpretations of quantum mechanics, the theory generally needed to describe how objects behave at the scale of atoms and subatomic particles. Quantum mechanics works exceedingly well as a mathematical theory for predicting phenomena, but there is still no agreement on what it tells us about the fundamental fabric of reality. The theory predicts not what *will* happen in a quantum experiment or observation, but only what the probabilities of the various outcomes are. Yet in practice we see just a single outcome."

He gets onto the issue of Many world interpretation (MWI) of quantum mechanics:

"It's a testament to scientists' confusion about Occam's razor that it has been invoked both to defend and to attack the MWI. Some consider this ceaseless, bewildering proliferation of universes to be the antithesis of William of Ockham's principle of economy. "As far as economy of thought is concerned ... there never was anything in the history of thought so bluntly contrary to Ockham's rule than Everett's many worlds," the quantum theorist Roland Omnès writes in *The Interpretation of Quantum Mechanics*. Others who favor the MWI wave off such criticisms by saying that Occam's razor was never a binding criterion anyway. And still other advocates, like Sean Carroll, a cosmologist at the California Institute of Technology, point out that Occam's razor is meant only to apply to the *assumptions* of a theory, not the predictions. Because the Many Worlds Interpretation accounts for all the observations without the added assumption of collapse of the wavefunction, says Carroll, the MWI is preferable—according to Occam's razor—to the alternatives."

"But this is all just special pleading. Occam's razor was never meant for paring nature down to some beautiful, parsimonious core of truth. Because science is so difficult and messy, the allure of a philosophical tool for clearing a path or

pruning the thickets is obvious. In their readiness to find spurious applications of Occam's razor in the history of science, or to enlist, dismiss, or reshape the razor at will to shore up their preferences, scientists reveal their seduction by this vision.

Basically, people with belief in a specific theory often appeal to support from Occam's razor, but Occam's razor seems adaptable to support any theory.

So, now to the issue of how some relativists try to support their beliefs by Occam's razor.

Back to arguing that Einstein's relativity is wrong (or that existing things said about it by many people is wrong i.e. Einstein's relativity misunderstood in many texts).

One of the things that is wrong/bad about Einstein's physics is its ambiguity; this allows its advocates to contradict themselves and think the "theory" (of relativity) means different things.

More specifically I shall concentrate on the issue of discard in this article: when Einstein discards a concept; the issue is whether that discard is to be treated as permanent or temporally; and of course, Einstein is totally unclear.

Taking as example to illustrate from arguing with an advocate of relativity:

We were talking about two rockets, where the relative velocity (speed and direction) between them was denoted by v , and then having v the result of difference between velocities v_1 and v_2 . Where v_1 and v_2 were relative to some frame called "absolute frame" (which rocket#1 and rocket#2 accelerated from).

Advocate (of relativity) says: Sorry, but I've no idea why some people seem to prefer: One rocket has velocity v_1 against the absolute frame of reference. The other rocket has velocity v_2 against the absolute frame of reference. Nobody has yet determined the absolute frame of reference, so these absolute values are undetermined, but the difference between them is v . In fact, that's the only use for v_1 and v_2 , so we can forget about them now.

i.e. by "forget" the advocate means discard, and so discards "absolute frame".

First of all, I usually don't like the term "absolute frame" and would often prefer the term "preferred frame". (Although arguing with people, I often do use term "absolute frame" when that's the way they think of it.)

But the frame that v_1 and v_2 are relative to needs some name, and for the sake of the discussion it was being called "absolute frame."

Anyway, my reply was: [we] should not necessarily forget about them [i.e. v_1 and v_2], they might contain useful information, such as rocket1 might have accelerated to get v_1 and rocket2 might have accelerated to get v_2 , so that the frame they accelerated from was the frame that did not experience acceleration.

The reply back from the advocate was that he said he had not specified that the rockets had started from the same frame.

And so, from my point-of-view had totally misunderstood the point I was trying to make.

The issue was- IF--- if rocket1 and rocket2 had both started from the same frame, and rocket1 had left that frame with v_1 rocket had left that frame with v_2 , then that information of v_1 and v_2 might still be useful to know.

So, by his distorted point-of-view: he was discarding information for the possibility that the rockets had started from the same frame, when he said: "One rocket has velocity v_1 against the absolute frame of reference. The other rocket has velocity v_2 against the absolute frame of reference." -He had the absolute frame, but he then went on to discard it when he discarded v_1 and v_2 when said "so we can forget about them now."

Part of the problem is the meaning of "absolute frame" (or as I would prefer to say "preferred frame") is unclear as to how such an advocate would want it to mean, as opposed to how I am treating it to mean. I would have defined it as a common frame from which both rockets had accelerated from, hence why information about v_1 and v_2 was being given.

So, point#1 the advocate does not specify what "absolute frame" is supposed to mean to him when he says: "One rocket has velocity v_1 against the absolute frame of reference. The other rocket has velocity v_2 against the absolute frame of reference."

i.e. what he says is totally ambiguous from his first few words.

And next point#2 he is throwing away information when he says “forget” (or discard) v_1 and v_2 .

So taking it now further:

The issue becomes is it:

(a) compulsory to throw away information about v_1 and v_2 ,

or

(b) are we allowed the choice of not throwing away that information?

i.e. what the relativists doing when they discard, they don't properly explain.

If information is thrown away, it would seem reasonable to be allowed to bring it back when needed.

The advocate did not seem interested in what frame (if any) the rockets accelerated from and was only concerned as to what the relative velocity was between the rockets.

This issue of is it (i) compulsory or (ii) optional extends to other issues in relativity, such as quote of what is usually said by relativists [4]:

“The implication of this theory [relativity] is that we need to give up the idea that there is a universal time, and accept that the time registered by a clock depends on its trajectory as it moves through the universe.”

But is the discard of “universal time” - (i) compulsory or (ii) optional?

The (i) versus (ii) option is two different theories entirely! IF a concept is only being discarded when considering scenarios where that concept is not needed with the option of being allowed to bring it back later (IF you do deem it useful later), it is different to a theory that permanently deletes concept(s)!

I am continually frustrated with relativists where I find that some relativists believe a type of Lorentz theory and others believe Einstein 1905 theory, and both will say they believe special relativity. But there is a difference, besides one group accepting Lorentz ether and the other not; one group accepts a type

of universal time, while the other has permanently deleted it. While both groups might claim the other group has got it wrong.

Relativists are of course never clear on important issues like this, because of the confused mess they are in of different opinions (i) versus (ii).

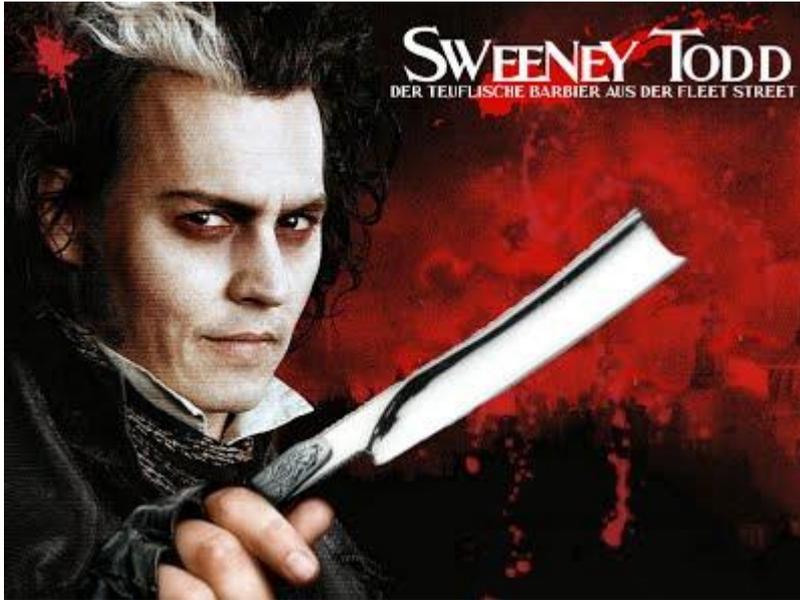
For the aether issue that many relativists have discarded, they avoid making it clear whether - it is (i) compulsory discard or (ii) optional. Rather than state clearly whether it was (i) or (ii) the relativists then often respond by making the subject taboo; such as - Wladimir Guglinski on this says: "The Aether is a taboo in Physics, and it seems the community of physicist is ashamed of admitting its return, because the adoption of the empty space is perhaps the greatest error of the times, and it is always hard for the physicists to admit errors, which tarnish the reputation of the physicists."

Now, the justification these relativists have for discarding concepts give is that they appeal to Occam's razor; but they don't really understand what they are doing when they use Occam's razor. They should only be discarding concepts when they don't need them, and when need them they should bring them back. But by the way these people (who misuse Occam's razor) talk they sound like they have permanently discarded concepts like absolute/preferred frame, aether ... etc. They are dangerous with the razor and don't know what they are doing with it.

Conclusion

Those who discard the many concepts (absolute frame, universal time, aether et al) never make it clear whether that was a (i) compulsory discard or an (ii) optional discard, and then they make talking about such concepts taboo.

So, far all they do is: discard concept(s) without saying whether you need them or not, and without specifying whether you will be allowed to try bring the concept(s) back if you think you need it.



Sweeney Todd was also dangerous with a razor.

References

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