Word Count 11,270

CAUSAL REALISM

(HOW THE MIND DOESN'T DO IT)

Abstract

I claim that 'cause and effect' only appears to involve distinct existences insofar as we can't adequately understand the relationship, or insofar as we are determined to look at the matters of fact involved from a logically deductive point of view. Since 'cause and effect' often represents the first stab at understanding what happens in a situation, this means it will often appear to involve distinct existences, and since logical deduction is the acme of what it is to perform adequate reasoning, for philosophers, this re-enforces this appearance, to philosophers. In contrast I claim we can try to avoid drawing conclusions beyond objects or factors in a situation, by comparing them as we attempt to trace them about. In so far as we succeed, since we have not had to go beyond the continued existence of those factors, they themselves must appear sufficient to produce that part of the situations they continue into and so construct. I also claim if somethings appear themselves sufficient to bring something about this is inconsistent with the claim it depends on something else e.g. human understanding, or language.

Two cases;

1) If we assume this object has, or continues to have some properties e.g. weight, then on this basis we can validly deduce such & such consequences.

2) The continued existence of this object with weight would (or is) itself be sufficient to bring about….

The first makes what we are up to depend on our mode of reasoning, or what we recognize as 'our way and principles of reasoning'. The second discovers the situation to be autonomous.

Preliminary examples

If we look at the case of a billiard ball hitting another we can notice several factors that seem to continue; The appearance or shape of the balls. The general amount of motion between the two balls, although it is differently distributed before and after the contact. Generally, the direction of the motion, depending on the presence or absence of other factors, remains the same. The solidity and weight of the balls, which are both types of action that have to be noticed between the balls and other objects or between themselves, on other occasions. If these things and their combinations continue as the situation develops, and this is consistent with what we see, then since we don't have to draw any conclusions beyond them, they must themselves appear sufficient to produce that part of the situation that would (have to) happen if they continue.

Similarly; a ball being pushed into a bucket of water. The water seems to continue, as does the ball, the waters fluidity, the balls solidity, their volumes, the buckets solidity, the weight of the water. All these things continuing means as the ball is pushed into the water the fluid water has to go somewhere else, but it can't go outside the bucket due to its solidity and impermeability, which continue, so its level rises in line with the combined volume of the ball and the water.

Perhaps it would also be illustrative to mention the principle of uniformitarianism in this context; The principle of explaining through the continuation of objects, properties and processes [although processes can increase, and only continue *as that process*] currently observable, in geology and in, and as background to, evolution through natural selection.

Hume page 86 Selby-Bigge; "'Tis easy to observe, that in tracing this relation, the inference we draw from cause to effect, is not derived merely from a survey of these particular objects, and from such a penetration into their essences as may discover the dependence of the one upon the other. There is no object which implies the existence of any other if we consider these objects in themselves, and never look beyond the ideas which we form of them."

But in the above I am not trying to penetrate into essences, I am not trying to deduce what may happen from the idea of any object, I am not trying to 'go beyond' the idea of any factor or object but see if or how they continue, although I am trying to see what the result would be of several such factors, or objects continuing together in a situation.

What Hume can be thought to have proved

I will start by giving a rough list of what Hume may be taken to have proved concerning relations of matters of fact or real existence to a conscientious empiricist (by this means I hope to distance myself from any mere claim cause and effect should be understood in terms of properties, or dispositions, or the relations between universals). A list that I will be mostly disagreeing with.

Hume may be taken to have proved 1) there can be no necessary connection between any matters of fact, and related to this, 2) he may be taken to have proved there can be no really

objective and independent connection between matters of fact. These two claims seem related because if there were some independent connection between matters of fact, it might be necessary. (these may result from his contention that we can always imagine the contrary of any matter of fact) He may be taken to have shown 3) there can be no connection that is known to hold between matters of fact. And so 4) no relation between matters of fact that can be known to be necessary (or visa versa). Both of which seem consistent with it being possible there is an objective connection between matters of fact, that might be necessary. (This may be proved if you take his previous point to depend on the possibility always to imagine the contrary of any matter of fact, without that necessarily showing what might be, or can't be, onto-logically the case,--which could be taken as different from what we can pin down and know to be necessary) 5) He may be taken to have shown the idea of a real objective connection between the sorts of matters of fact involved in causal relations is involved in absurdity. This is due to his contentions that "There is no object, considered in itself, that can afford us a reason for drawing a conclusion beyond it." And also, and together with, his contention that "We must certainly look beyond the idea of a causing object " in drawing the relation. This is because in order for there to be such a connection the idea of the causing object or state would have to contain the idea of the affected object or state(in some way) although these ideas are distinct, and externally distinct, from one another in experience; So the idea of the one can never contain the idea of the other; so we should have to have ideas which are both distinct from each other and not contained in each other and are contained in each other and so not distinct; which is absurd. 5a) He may be taken to have shown there can be no apparently objectively self sufficient basis upon which to understand the relationship between any matters of fact; but perhaps this would be thought

equivalent to the previous point. 6) He may be taken to have shown there is no rational basis for judging the relations between matters of fact other than experience, and that 7) experience does not give us a rational basis for judging the relations of matters of fact not yet experienced. Both these, again, due to the lack of any necessity between facts as found in experience, plus Hume's contention (5) there can be no reasoned basis for making inferences between matters of fact, suggesting 8) there is no other tie possible than found in the rules of the imagination, or coherence or simplicity as these are found useful for the minds handling of experience and the imagination. 9) There is nothing observable that could be supposed 'the being' of a cause, and no reason derivable from experience to suppose there is such a thing. (The popular response that we can feel the action of objects with our bodily experiences of them and feelings of effort and touch, seem the most conclusively refuted by 5) above, because there seems nothing more logically distinguishable, and distinct than the idea of a feeling and that of a motion, and it is hard to conceive how by concentrating on either and never going beyond the idea we form of it we could ever get to the other accompanying idea.) 10)He may be taken to have shown there is no valid reason to suppose any experienced behaviors of experienced 'objects' show there is something objectively existing in the situation that could intrinsically explain why they occur. 11) He may be taken to have shown it is impossible to make sense of a causal relation in any particular instance individually considered i.e we must always refer to a class of cases 'A' being related or found with a class of results 'B' if we are to make sense of the supposition that a particular A caused a particular B. 12)He may be taken as providing confirmation of the opinion that our understandings of matters of fact must ADD something to bare facts, because by considering bare facts, or experiences, as themselves, we could never gain any reason for supposing what

might happen. (If we are to "consider it on all sides" if some of these points are thought to be really the same thing, or not very clear, or well put, still it may be helpful if I at least list them separately, to be considered in what follows.)

Proofs as a challenge

This range of proofs may be taken as presenting a challenge, because, if these propositions really are proved it must be impossible to imagine any way at all what is proved impossible could be the case. If someone can come up with a way some, all, or one of these supposed impossibilities aren't impossible then they wont be proved after all. But this challenge involves an opportunity for a change of emphasis from what can be guaranteed, or be shown to be probable, or what could be brought into existence merely by the operation of having experiences, to what it is possible to suppose, on the basis of experiences. This 'supposing' may be thought to involve some intentional or mental act, but whether something is or is not objectively possible is a different state form whether someone may or may not be trying to suppose it and should not be judged by the nature of their endeavor, unless it is shown to be not possible independently of their endeavor.

Some doubts about these proofs

Some encouragement for thinking there might be something wrong with this range of proofs may be given by thinking of evolution through natural selection, which, on the face of it, seems to show how the natural world is itself sufficient, independently of humans and our understanding,

to bring about the development of life forms and their relationships to their presently observable states. But if anything can cause anything, or rather, 8) or 5) or 11) again, put in perhaps a better way) if it is impossible to see how anything could itself be intrinsically sufficient to bring about anything, how could the natural world be itself sufficient, or appear itself sufficient, as this theory seems to find it is? Also Russel points out in H. of W. Phil. page 692; "The fact is that, where psychology is concerned, Hume allows himself to believe in causation in a sense which, in general, he condemns" Which suggests being consistent on the point is not possible considering how the relations in our understanding do as a matter of fact fall out; i.e. we do not simply experience the conjunction of constant conjunctions with our understanding/failure to understand. As an example of this, it doesn't seem very plausible to suppose Archimedes could have constantly found in his experience that the volume of an object immersed in water equals that volume plus the volume of the water, let alone that the weight of a fluid displaced is equal to the weight of a body floating in it, because its not the sort of thing anyone could notice, unless they understood why it should occur. So their understanding could not depend on their previously having noticed it. And because there are enough exceptions: sponges, things that dissolve in water, things that compress, to make it inconstant, if considered independently of the understanding. But Hume needs to have it constantly found that constant conjunctions are followed by our understanding, which leads us to expect our next case of understanding will follow on a constant conjunction, otherwise he seems to be claiming if there were a constant conjunction this could be followed by an expectation, which would be sufficient to account for our apparent feeling of satisfactory understanding of the situation, and these objective conditions, or relations, would be sufficient to explain our attitude. But according to him no objective conditions, or relations are ever

sufficient to explain anything. Also it should be borne in mind, there are plenty of “prejudices” by which someone can find some relation satisfactory without it being based on experience, e.g. tealeaf reading, so our understanding does not have to follow any constant experience (although this would not be a conscientious empiricist).

Then again a naive view of science and naturalism generally (including Hume’s) might create the impression that we are gradually discovering a more and more autonomous and self sufficient world. The thickish end of this wedge was what worried Berkeley. Then there are the difficulties with the covering law model of scientific explanation. Then again, it may seem all very well to suppose that the moon is some sort of conceptually convenient way of handling ‘moon type data’, but when people can go to the moon and run around on it and kick it, like Dr Johnston, perhaps that previous ‘all very well talk’ gets an added suspicion of being inadequate. (On the other hand, quantum mechanics may give conclusive experimental evidence that ultimately we can’t make self sufficient sense of what happens in our environment, even if we may do until we reach the quantum level.)

Kant’s option

Kant came up with a way some dimensions of our experience of matters of fact would be necessary, if they were based on the way human minds necessarily generate experiences of these dimensions. But, apart from this not challenging Hume's point no.5)/5a)/8)/9) etc., according to the empiricism around natural selection, and that can be noticed independently, humans vary. There is no aspect in which they may not vary. It may be claimed that if some things must be admitted as necessary, although they are not analytic, then an explanation of this hypothetically

could be that, concerning these aspects, the mind constructs them like that necessarily (although the fact that the mind necessarily constructs them like that, would not provide an explanation of how the mind could self consciously find them necessary, unless it finds them necessary through not being able to imagine an alternative, but that could only be so far found to be the case, because we might imagine an alternative at any new moment, for all this shows). But there isn't any aspect of the mind that can't vary. If it is claimed such aspects could be necessary in something of the way a universal gramma is necessary, then the case is not fair, because there are some people who can't communicate, but there is no-one who is exempt from the laws of nature. Why is it that no-one ever experiences the beginning of a decade before the end of it? Or suppose they got their memories muddled up, still the start of the decade would come before the end, because this does not depend on how the mind constructs a decade, but is due to how things come about in the objective environment. Perhaps instead we could suppose that this is how the generality of the human community constructs decades, and although individuals might get it wrong they would be outvoted by most people, or that it would be incoherent in some way to suppose most people could get it 'wrong'. So instead let's ask how is it no-one experiences the end of a horse race before the beginning? One reason might be that its impossible to predict the end of a horse race with any certainty, even regarding one place in it. But this raises the question as to how, according to Kant we could ARRIVE AT the one and only causally determined result of a horse race at all, when its impossible consciously to arrive at the result with any certainty, or apparent causal necessity, and when (or if), according to Kant, the result must come about in a causally necessary way, which depends on the way our minds construct it? We should have to have a faculty, which is unconscious, and that is capable of actually producing the result in a

causally necessary way, although to do so may involve laws we are unaware of, we don't understand and perhaps haven't been, or which may never be, discovered. And when the result may depend on all sorts of factors few if anyone would be aware of, if at all until after the event, e.g. that the favorite had a virus, or was nobbled. This would make our conscious calculations, whether in groups, or individually, a hapless hindrance to a faculty that completely outstrips them. If on the other hand the 'reality' constructing features of our minds are helped out of this sort of difficulty by things in themselves, then since these things in themselves are independent of our minds they can't be relied on to perform this function because they are a-priori necessary aspects of our mind. If it is maintained that our minds couldn't register such bad performances by things in themselves, just as someone with blue glasses on can't see anything that isn't blue, similarly televisions can't register heat of smells, or any signal that isn't constructed as they need it to be, but that does not stop what they shew being disrupted by bad reception, or drop outs, or being destroyed by heat, chemicals, magnets or damp. But according to natural selection there should be a survival advantage in registering the characteristics those things in themselves bring to bear. But, generally speaking, what would be the survival value of replacing them with different characteristics? And this is besides supposing that variations might make people experience things without time at all. (Kant might perhaps say that if we experienced the end of a horse race before the beginning the situation wouldn't make objective sense. It is only as objects appear according to rules that they can appear, or be represented as, objective objects, rather than as illusions or imaginings. But, on the contrary, to the extent a situation does appear to make objective sense there appears no reason to suppose it depends on us.) So it seems inappropriate to try and base these things and laws that claim to be universal truths, at least

throughout this universe, on variable human nature. On the contrary, if these aspects don't depend on human nature this explains how they could be universally true (if not necessarily true), because any variations in human nature can't affect them. But this later view requires that we can make sense of 'the world at large' in a sense that is independent of individual human natures, or even of human nature. (This statement may in turn either be taken as an argument that we do have such an idea, or that we shall have to make sense of such an idea to maintain that sort of view.)

Challenging No.2

So rejecting Kant's essentialist and Utopian view of human nature, let us start again with what may be thought the simplest case, if a bit extreme. (no.2) Is it impossible to imagine any way at all that some matters of fact could be really objectively connected? I think this is not impossible, because 'they' (emphasizing the quotation marks) considered in themselves, might be literally the same original and unchanged state throughout the time that is used to distinguish 'them'. — This is because, If cause and effect is in doubt, then there might be no such thing. So, if we experience an object that appears unchanged over some period, there may be no causal chain from the object, or creating a difference between perceptions of the object over this period. Plus, from an empirical point of view, since there is no impression of time, we can have no idea of time. So we shouldn't suppose we have any idea of a dimension of existence within which changes occur and which underlies any change and makes it possible as change, and can be applied to apparently unchanged objects. On the contrary it is only subsequently to experienced changes that we can produce a notion of time, which is therefore parasitic upon such changes

and not prior to them. (This is another reason why Kant should be incoherent, because if we have no idea of time in this sense, our supposing it is a condition underlying the possibility of experience is incoherent.) In this connection Hume argues that there is no impression of time, and so we have no idea of it. So, if we try to apply such an idea to an unchanged (or as he calls it, a steadfast or unchangeable) object we are supposing ourselves to have and apply an idea that we don't have. What we have impressions of, and so ideas of, is the order in which changes are observed in and between objects. But this does not give us an idea of a dimension of existence that makes change (or the dimension of change) possible, and which must be applied to apparently unchanging objects. But such a steadfast object might, all the same, consist of a series of distinct existences, even though, the above argument is supposed to show, the facts such an existence may be hypothetically distinguished into might objectively be all the same unaltered and original existence. In which case 'they' would be really objectively connected. [1]

[1] Hume himself allows this possibility; "The supposition of the continued existence of sensible objects or perceptions involves no contradiction" [Treatise, Selby-Bigge, page 208] His reasoning is not only based on the absence of an underlying idea of time but also the logical separability of all objects, and his bundle theory of the self, where the same existent might be sometimes present and sometimes absent to the rest of the bundle. In my view, the rest of "of scepticism with regard to the senses" does not take this possibility seriously enough and is too liable to muddle in and accept the view of 'the slightest philosophy' with regard to continually changing perceptions. He should also have started with possible connections between matters of fact and progressed to considering cause and effect, rather than consider cause and effect

Another related argument showing we can't know that an apparently unaltered object can't be the original existence throughout is; if we suppose all logically distinguishable states of an object, since they are logically distinct, and we can't validly derive the existence of any such distinguished state from the idea of any other, must also be distinct existences; we would be proving a matter of fact or real existence merely from the possibility of logical distinguishing. Which would show empiricism, at least on this point, was wrong. It may be asserted that empiricism is wrong in this case, but it is hard to see what independent justification could be given for the assertion, unless once again on the assertion of the reality of time. And it would be influenced by a logical implication from 'what is logically distinguishable' to 'what must be a distinct existence', which doesn't seem at all the same thing. It is more plausible to suppose that where there appears to be some essential difference apparent through experience this gives some justification for claiming a difference of existence. But where there is no difference observable we have, so far, no justification for supposing there must be a different existence involved, even if it is possible to suppose there is such a difference. And if what appears to consist of a difference in experience, upon closer examination, appears to consist of a re-arrangement of unchanged experienced states, this could remove the necessity of supposing there is a new existence involved (e.g. a ball being pushed into a bucket of water). In this connection, Lucretius, as a representative of the ancient atom-ism, says that only atoms and the void exist, and that "time by itself does not exist" (Penguin Classics, page 40), and makes all change a re-

---

and then progressed to the potentially simpler case, which he again overcomplicates by introducing a 'double existence' too soon.

arrangement. In this connection it seems Hume's impossibility of objective cause and effect can be linked to Parmenides proof that change is impossible, and by a solution to each supposed impossibility:-

Nothing new between cause and effect—Parmenides and ancient atomism

Change is possible, according to the ancient atomists if it only involves a re-arrangement. Thus Lucretius says that only atoms and the void exist, and that time does not exist. This makes the void exist. The void is a remaining emptiness where atoms can be re-arranged, but as time does not exist, these re-arrangements aren't a succession of states that now exist and now don't exist, coming into being from non-existence and passing away to nothingness. What happens is atoms and the void always exist so there is no coming into being from nothing nor passing away into nothing, what comes to be and passes away are arrangements of atoms, but these arrangements aren't something extra that have their own independent existence in an objectively existing dimension of time, so that this extra existence comes to be and passes away. They are entirely composed of the only things that do exist, and that continue; atoms and the void. (I'm not sure if Parmenides should have been impressed by this, but I don't expect Zeno would have been.)

But just as every coming to be is naturally supposed something new similarly the effect in causation is supposed to be something new brought about by the cause. Because it is something essentially new, in order to get to it, we must essentially go beyond whatever is supposed in the situation before the effect arrives. If on the other hand the effect is just a re-arrangement of already existing materials brought about by the continuing existence of the cause as it continues with its properties, nothing new need be in fact involved. This can explain how cause and effect could be objectively linked; by the continued existence of factors that, through their continued existence are

just re-arranged. An example of this would be a ball being pushed into a bucket of water. As the ball continues into the water the water has to rise, or it couldn't continue, or the balls in permeability/solidity/volume couldn't continue etc..

This may give an objective hypothetical possibility, but if the plain person is trying to understand a situation, one option is to want to see how the contents of the situation are themselves responsible and sufficient for bringing about what happens in the situation. The above attitude might fall in with the plain persons naïve realism. This would appear the case if naively we don't like sudden changes in a situation but try to trace objects through situations to see how what happens could do so .

Considering Nos 1) & 4)

So now concerning No.1; (But, there is the question of how we could know something is necessary, which is 4), even if it is possible to suppose something is necessary, which is 1))

If there is some object that remains the original existent over some period, then although perhaps at any point over that time a real change might have happened, perhaps by some cause, the original state, since it IS the 'other' states, could make 'them' necessary. For the externally distinguishable periods or times of this original state would be sufficiently established and accounted for by the original existence, since 'they' are it, and it is 'them'; these distinctions being objectively unjustified in this case. It also might be that for an alteration to occur which would put a stop to the original remaining, something sufficient is needed, in which case as long as there was nothing sufficient the remaining of the original would be necessary. But although that is just

a guessed possibility; If we further suppose, by our tendency to run what could be distinct existences together, we are inclined to treat such an object as the original state, and through our naive realism which tends to suppose we are in an self sufficient environment, that needs something sufficient in the situation to alter it, then in this way where such an external cause isn't present the 'later' periods of the state could seem necessary for us, given the original (this is 4), except that it isn't interpreted as LOGICALLY necessary, because we aren't supposing ourselves able to deduce the later states from the former, or some states from others, but are comparing 'states' to see if they could be something that continues and in that way result in what happens, or must be distinguished as novel, or separate existences). But this would also show why there wouldn't be any guarantee if this were the case that it is the case; because an original existent that merely continues wont be able to produce any guarantee to any other state that that is the case.

Nevertheless, this form of necessity, and or self sufficiency, may seem related to the way these are found with what is supposed logically analytical, because analytic necessity and sufficiency is based on not going beyond what is stated in the premises for a valid conclusion. Similarly the necessity of this sort of factual explanation (in the sense of 1)) is based on (literally) apparently not needing to go beyond states we already have experienced. The necessity (in the sense of 4)) is based on our belief that the environment we inhabit is itself sufficient to produce what we experience of it, which seems can be admitted if there is a real connection between distinguishable states, which is 2).

William Kneale

It is interesting in this connection to consider William Kneale's suggestion that necessity between factual relations (causal necessity) might be like mathematical necessity in a case where a theorem has yet to be proved true or false. In either case, it is claimed the truth of the matter is necessary, and our current ignorance of this necessity doesn't show it isn't. However, on my present analysis, some factual relations might be necessary, we may realize why and how they are necessary, but there still couldn't be any epistemological/(logical?) necessity for the case. So the case is not the same as mathematical necessity, where the starting axioms can be taken as known through their obviousness and or simplicity, or through being stipulated or defined, and similarly with the basic rules of inference, if these go beyond the axioms. And this knowledge is sufficient to establish what is subsequently proved on their basis, so it can also be known. In the case of factual relations, on the contrary, the basic rules to be followed are not established for us by the facts, because they are not, for instance, 'these things in themselves and an information bureau'.-- An apparently unaltered existence cannot rule out for us that it isn't a series of continuous similar existences. It can't establish we've got the starting point right, or that we are not making a mistake at any logically distinguishable point in the progression of what happens. But although we can never know with certainty what the objective facts are, we can still see what they appear to be, and how their relations might be necessary. And could see if the continuing facts are consistent with that, or if there is anything in them against it.

Considering again what Hume can claim to have proved

All this may seem very speculative and metaphysical, but it is to do with what Hume can legitimately claim to have proved impossible. To consider this we do not claim any certainty, or any guarantee, or even any probability. We nevertheless consider how there might be a real connection between matters of fact that can be logically distinguished as external to one another in experience, how there might be a necessity between such facts, and how our normal, unconscious attitude to such facts might find the relation necessary mirroring the reason it may objectively be necessary. This is in spite of the fact there could be no necessary, or probable relation of such facts established from a logical analysis of their separately considered ideas. This also illustrates how, if we can avoid drawing conclusions beyond the original existent of an object that original state will itself appear, which is consistent with it being, intrinsically sufficient for the existence of those states only superficially distinguishable from it. This in turn gives another reason, apparently not considered by Hume, why we might suppose, or believe in the continued (and independent) existence of body; If we can avoid drawing conclusions beyond objects the continued existence of those objects, considered in themselves, will appear to form an independent and objectively self sufficient environment, which is capable of producing and explaining our experiences of it.

It may be objected that in order to understand what happens when an impermeable ball is pushed into a bucket of water, or when a solid billiard ball approaches another at a given speed, we need to assume that these properties will continue. Then, once we have made this assumption (amongst others), on the basis of it, we may be able to deduce, and understand what happens. But this would be to explain our understanding of these situations in terms of what WE NEED TO DO to understand them. What I am concentrating on instead is how the contents of a

situation could themselves appear to bring about what happens in it. This is inconsistent with what happens needing to depend on ‘what we need to do to derive the result’, even if seeing how the objects of a situation appear themselves sufficient to bring about a result gives us a way to derive the result. Perhaps this difference can be illustrated by the case of blue and ‘grue’. How do we know when we say something is blue that we don’t mean it is blue for example up until time t, and then green? How can we define our concept so as to avoid this possibility? But we are not interested in ‘our concept’. We are trying to avoid drawing conclusions beyond factors in the environment so they themselves appear sufficient to produce what happens. Blue appears different from green, otherwise we wouldn’t be able to make sense of the above problem/possibility, but then we can’t just suppose the one continues, when the apparent change occurs. Similarly, perhaps we mean by speed ‘peed’, which means speed up until time t, and after that half the speed. By this concept we might explain many phenomena we couldn’t explain by ‘speed’, assuming we know what we mean by that. But if this were taken to show how the contents of the situation are themselves sufficient to produce what happens, because ‘peed’, it is insisted, IS such a content, if this means the ‘peed’ remains perceptually indistinguishable, then so far the problem can’t be realized, if there is a distinguishable change we have got to go beyond what was apparent before the distinction, which objectively is a problem speed didn’t have. (Of course ‘speed’ often does change, but then we have to find an explanation for it.)

Perhaps all this can be illustrated by Galileo's discussion of speed in ‘two new sciences’. It may be said that Aristotle had a concept of speed, Galileo developed another concept. On the other hand what Galileo did was to notice something in an environment where motion occurs that Aristotle missed, or did not notice so accurately. (There is an article by T.S Khun in ‘Scientific

revolutions'. Khun seems to draw the conclusion from this discussion that Galileo has a different concept from Aristotle, but what seems confusing in Galileo's treatment, is that he just sems to point out descriptions of the phenomena that are inconsistent given different scenarios.—This discussion also seems strangely to go on , as if no-one had ever heard of Aesop's fable 'the tortoise and the hare'.)

Then again it may be said that motion, by definition, is a change, so anything moving can't remain the same. This may seem an argument for Aristotle's view that objects, left to themselves come to rest, because motion, being a change requires a continual cause or explanation. This falls in with a casual view of many motions, where moving objects tend to stop. But a closer view of the situation reveals roughness of ground, or other objects in the way, wind etc, which, fairly obvious causes of reducing motion, being gradually removed moving objects stop correspondingly less quickly.

Some other possibilities

But this isn't the end of what this barest possibility of a real objective connection makes possible. Considered carefully, trying to avoid drawing conclusions beyond objects is not the same as trying to describe the objects, which description is then supposed to contain the explanatory properties linking matters of fact to others. So, following this possibility, in as far as we succeed there will be no evidence we are within 'our conceptual scheme'. It has been a popular philosophical view that we can never get outside all conceptual schemes. But while it may be true that we must have one view or another (unless we can't be bothered to consider the issues), and whichever view we take of any facts and their relationships, there are always many

others we could have taken, still it does not follow that any view we take must depend on our linguistic abilities or conceptual scheme, because it might be the case that our view depends on trying to avoid drawing conclusions beyond objects, not in describing the facts, but in trying to avoid going beyond them, and instead of placing descriptions on them, trying to get rid of descriptions which in hindsight we were placing on the subject and which we supposed necessary for handling it. Such a case is illustrated by the theory of relativity getting rid of the idea of absolute space. Or by the Copernican system getting rid of the need for so many epicycles which were previously required to describe planetary motions, or natural selection getting rid of the need for a grand designer. This, getting rid of layers of description is one species of simplicity. -- But, following Hume, it is normally supposed we must ADD descriptions TO 'facts' (if there are any such things) in order to understand them and our world. But since experience comes loaded with theoretical content, there are no theory neutral experiences, it is supposed. On the present view, by contrast, facts become clearer through pursuing objective explanation. Ideally, they will never change but will gradually become clearer just as we gradually recognize and get familiar with any new and unfamiliar situation, such as finding our way around a new building, or town (I have in mind here a certain ‘paradox’ of what it is to learn about and become more familiar with some object. The familiar object must be the same as the unfamiliar object because otherwise it would be a new object and we wouldn’t be more familiar with the old, but there must be a change, nevertheless, otherwise we couldn’t be more familiar with the old object. But it is a fact that we can become more familiar with the same situation.) --But this is just a possibility I am examining.

But consequently if we ever come to examine reduction in this spirit, we will not be dealing with deducing some phenomena from others or descriptions of them, or statements about them, but are, or will be, trying to avoid drawing conclusions beyond some states, or phenomena in order to find, or arrive at, the phenomena to be explained. This might, for example, involve the use of tally marks to check if quantities we notice before have remained unaltered.

There are at least four other aspects that may be worth mentioning in considering this mere possibility. Firstly; If we think the contents of a situation should be themselves sufficient to bring about what is experienced to happen in the situation, then this gives a basis for induction (by which I don't mean it provides a guarantee or probability of what will happen), because, if we suppose another situation, apparently identical to the first, since it appears to have the same contents, which should be sufficient to produce what happened in the first instance, they should also produce that same result in the new instance, otherwise there must be some difference between the situations after all. But if there is a difference in result after all, we will have a motive for a careful empirical re-examination of one or both instances to find a difference we have missed. And if this were our attitude it would make us think what is found in a particular instance must be the case in all similar instances (especially, but not necessarily, if we feel we understand that particular instance), which can be easily confused with supposing we have actually found it to be the case in all instances when we are not aware of exceptions, or that we are basing our induction upon an experienced fact of no exceptions implying there will be no experienced exceptions, when we are basing it on real explanation which makes it hard to see how there could be an exception in experience. It also provides a basis for distinguishing cases where it 'must' be the case from cases that are superficially similar, but which don't refute the

basis for our original generalization because they can be distinguished as having different contents from that original case. And this reasoning avoids merely 'being true by definition' because although we are restricting ourselves to particular occurrences in experience, it is the content of those experiences that produce what happens, not any reasoning from their definition. And in this way instead of universals being required to make sense of particulars, particulars may be studied and then applied more generally, because we can't see why or how any difference in other cases (such as size in geometry, or the length of sides in a right angled triangle in a proof of Pythagoras's theorem) could produce a different result.

Secondly, if it is possible to see how the continuation of some factor in a situation would require a particular result, then it should be possible to hypothetically consider some few factors together, as if they constituted an entire situation, to see what should happen, and then to compare what does happen in an actual situation, that potentially has an infinite number of factors affecting it. In this way we may effectively ignore many factors because we can demonstrate they have a negligible effect. We demonstrate it by showing some factors, which are obvious in a situation, how these can combine so as to sufficiently produce the result obvious in the situation, and how the theoretical result does not differ very much from the obviously experienced result. (This applies to uniform motion in a straight line defining motion that is unaffected.)

Thirdly, since the continued existence of objects is a means by which a situation may form an objectively self sufficient system, if objects didn't exist unobserved the situation couldn't be self

sufficient. So this requires objects exist unobserved, and is not at all the same as merely supposing they would appear if or when we look at them, contra Berkeley.

The fourth thing is that the extent to which contents of a situation appear objectively self sufficient, is something that could be judged without mentioning the word 'truth'. And without having to have an idea of truth that is external to this process of judging apparent objective self sufficiency, but which is 'corresponded to' by it. But still we might want to say that each judgement is itself true or false. Thereby pointing out if the above objective is or isn't gained. Alternatively, we might want to say of any particular case where a situation appears self sufficient that that is objectively the metaphysical, transcendental and ontological end of the matter, and so is in this sort of sense the absolute 'truth'. (So we use 'true' in these cases to indicate success in approaching a limit, but the limit approached isn't a pragmatic one.)

Starting again--An absolute ideal of factual explanation?

But let us start again and ask, ‘Is there any possibility of an apparently objectively intrinsically satisfactory explanatory relation between matters of fact, even though (in some sense) there is no necessity apparent?’

Again, I think there is a possibility of this, which I will illustrate by taking cases which I claim appear intrinsically UN-satisfactory, which will illustrate what would be necessary for them to appear intrinsically SATISFACTORY. (But evolution through natural selection may also be taken as a case that claims to show how the world is itself intrinsically sufficient (and so satisfactory, or ‘enough’ according to my Word grammar prompter) to account for current life forms and their

relations, because that is how it makes the need for god as a grand designer to account for these relations, redundant.)

So I will take as my example the miracle of the feeding of the five thousand. This is supposed something that is impossible to account for, except by the miraculous intervention of god. What seems obviously impossible about the case is how five loaves and two fishes could feed five thousand people and leave enough crumbs to fill twelve baskets. There is not enough to do it. There is a big difference between the amount we start with and the amount required and that we finish with. If this is the reason why this case is puzzling, this does not have to have anything to do with such hypotheses as that 'its not normally the case that we can feed five thousand people with such a small amount'. For example there may be lots of cases that appear to normal experience quite insufficient to bring about their effects, e.g. it may be quite usual for creatures to reproduce, but that does not stop new births being represented as the miracle of life. And in fact, to prehistoric ignorant peasants there may be no end of things that are quite usual; the seasons, rain, wind, tides, the whole of the natural world and their own consciousness and emotions within it, but which seem quite miraculous. So there need be no real equivalence between 'miraculous' and 'unusual'. (However it may be that the more 'religious' type of miracle combines unusualness with a coincidence of occurrence that seems too perfect not to be intentional.) But more similarly to the above example, the magicians trick of pulling a rabbit out of an empty hat may seem puzzling, no matter how many times the trick is performed, and although we expect it and are quite bored with it. This is because an empty hat is intrinsically insufficient to produce a rabbit, and this is apparent no matter how usual the case is. Or if a more directly causal example is required; the trick of interlocking rings, that are first demonstrated to

resist motion through each other, are then made to interlock, are demonstrated to be impossible to pull apart and are then parted. So, if this is the reason such cases seem miraculous or impossible, if we remove the big differences apparent in situations and show how what happens is just a re-arrangement of the same old stuff that was always there this should be felt to explain the case sufficiently.

“But, how do you know that such apparent impossibilities are objectively valid?”

I don’t know this.

“So such a principle might be found continually false in experience. So it would be daft to rely on it except insofar as it is exemplified in experience. So your principle has no a-priori validity and for all you know may just be a prejudice. So we aught to avoid it.”

Well, as I have pointed out, it IS found continually false in experience, as with the ancient ignorant peasants. But it may be that satisfactory predictions are more often, or just sometimes, found by pursuing apparently satisfactory explanation, than by trying to follow what is supposed usual in experience. Also it is not claiming to be a-priori valid, but to point out what can appear objectively self sufficient. If something appears objectively self-sufficient it makes no sense to claim it depends on our minds or on an a-priori condition of what can appear objectively self sufficient. If something is self-sufficient it can’t require or depend on something else or it wouldn’t be itself sufficient.

If something is apparently objectively satisfactory, even though this doesn't show it can't be a prejudice, this does not show it must be a prejudice. So, by treating it as a prejudice you are ignoring this possibility, which is being prejudiced.

If you really wanted to try and decide things by avoiding anything that might be a prejudice (which isn't a good plan) you aught to try supposing THIS is a prejudice. In which case you should allow sticking to what might be a prejudice, even unfairly, because you might find out there is more to it than you otherwise would have thought.

"But what probability does this principle have?"

It is not based on any probability. It is based on appearing apparently objectively satisfactory. This may result in our thinking it must (probably) be the case, but this probability or conviction is something that comes after the explanation, it's not something it's based on. It is based on experiences of the contents of a situation and trying to see how they can be themselves be sufficient to bring about what occurs in it. Even though there are plenty of situations where it seems impossible that this could be the case.

What is puzzling about magnets.

When we look at a magnet when it attracts or repels an object there only seems to be empty space between the magnet and the object. Since empty space is easily confused with nothing, the obvious thought is; "How can the contents of this situation be sufficient to produce this attraction and or repulsion? There are no contents. [like a rabbit being pulled from an empty hat]

There is nothing there!" This is the most direct and obvious aspect that is puzzling and makes the case seem impossible in spite of the fact that it obviously does happen and can be repeated to demonstrate it happens to anyone who doubts it.

Although we don't understand magnets this does not stop us understanding situations in terms of magnets either found, or supposed, in them.

But this repeating of the magnetic phenomenon is not the same as our understanding of magnetism being used in a situation needing to be based on the universal, or even usual repetition of magnetic phenomena because A) there are lots of metals, that are capable of being magnetic, but which aren't experienced to be magnets, B)Even if something came in a box marked 'magnet' it still wouldn't be very surprising if it wasn't a magnet. Perhaps there is an instinct to check it is a magnet before we start using it. But even then, if it stopped exhibiting magnetic properties, this might be annoying, but wouldn't really be impossibly surprising, because its being a magnet may still be surprising, and electro-magnets can easily stop and start being magnets, with there being no obvious experienced difference in the immediate situation.-- At this point the absurdity of requiring a Hempelian type covering law model may become clear. According to that view scientific factual explanation requires a universal or covering law, which is used together with initial conditions to deduce either a prediction as to what will happen, or is supposed to provide a scientific explanation of what has or will happen in the situation. But normally there will be no directly experienced difference in a situation to mark something out as a magnet or not a magnet, so we should have to find out if it is a magnet first, by observing how it acts, and what strength it acts at, before referring this to the covering law, in order to deduce,

with initial conditions, what should happen. But instead of this we can just compare how this object is found to act in a particular type of situation, with how it reacts in another situation of a similar type. If its reactions are similar, then the second situation can be explained by the object and its properties being supposed to continue into it. Or we can suppose what WOULD happen, or COULD be explained if that object, or an object like it were placed in, or found in some other, similar situation, on the basis that if this were found to be the case, by making a comparison with a present, or supposed present case, such an object, found with such properties would be, or is, sufficient to produce, such and such results. So we don't need to refer a situation to a covering law if it is necessary to find out what sort of reactions are found in a situation first in order to justly refer it to the covering law. But if we find out what sort of reactions are found in a situation we can use them to explain what happens in situations. Comparisons are what is required, not a referral to a covering law, which requires the comparisons anyway, and so which may often seem superfluous. --The difficulty we seem to have got into appears to result from thinking any explanation that is going to be based on experience must get a necessity or probability either legitimately, or illegitimately from experience, and that it couldn't be apparently objectively adequate without this. Then we also have a determination to make any attempt at proper reasoning involve a case of logical deduction. Since we can't deduce any matters of fact from the idea of any other externally distinguishable facts, we have to view the facts as intrinsically general in some way first, in order to then make our deduction. This is either done by making them involve universals, or by referring them to general experience. But, it seems to me, we are not trying to make any logical deduction. We are comparing particular objects and effects in situations to see if they do, or could continue to be found there and be sufficient for what occurs,

or apparently can't be so sufficient. This may then become generalized on the basis of 'real explanation', or by more wishy washy analogies and similarities, or by linguistic attempts to describe various things in the same terms.

Some other things puzzling about magnets;

There appears to be no observable difference between the poles of a magnet except in how they react with poles of other magnets.

Most objects don't behave like a magnet without there being any apparent difference between such objects, except that they act differently in this way.

Both these are puzzling on the basis that if the contents of a situation produce what happens, then if we have an indistinguishable situation, it should produce the same result.

With compass needles, not only can you see (or feel) that there is nothing surrounding that could move the needle, they normally come surrounded by a solid (if partially transparent) case, but this is normally an effective way to stop any external influences to a situation.

If we suppose the contents of a situation explain what happens in it, and this must broadly be done by involving a re-arrangement, then we should find some few types of content, that, by re-arrangement produce the great variety of situations and states observed. Like letters to form a word. But in that case, if we have two basic types of stuff we will be unable to explain why there are two if we can’t find or suppose one type of stuff that can be re-arranged into either. (this is another species of simplicity, and suggests Thales, and ‘the one and the many’.) This makes it puzzling if there appears any state that appears distinct, and at bottom not the same as

everything else. But magnets don't seem to be the same as gravity or heavy, or solid objects, to more or less normal observation, or even to electrical phenomena, although they seem intimately involved with electrical phenomena and visa versa.

Cause and Effect

Hume's classic example of a cause effect relationship is that involving the collision of two billiard balls. This example has the consequence of emphasizing logical differences between the causing and effected objects and prior and subsequent motions of these objects. But it is possible to find examples that de-emphasize such logical distinctness's and consequent supposed distinct existences apparent across a causal situation. (But if we look at factors continuing through a billiard ball collision, instead of concentrating on the logical distinctness of the balls and motions from each other, this will have the same effect.) For example; If we take a ball being pushed into a bucket of water:

The ball appears to continue along with its apparent property of being impermeable to water and its volume, the water seems to continue along with its volume and properties of being fluid which consists in its shape being easily altered. It also seems to have weight which continuing with its fluid property of continuing volume but easily altered shape makes it tend to spread out at the bottom of its container, or across an area: the bucket seems to continue together with its property of being impermeable to the water and its volume: the consequence of the continuation of these factors together in the same situation is that as the ball is pushed into the water the water has to go somewhere else, otherwise its liquid property and volume couldn't continue, but the continuation of the buckets properties means it can't go through or outside the bucket, so

the water level rises inside the bucket in line with the extra volume of the ball as it enters the water.

> So the result, or effect, in this case seems to be naturally understood, as what must happen in a situation if the various objects and properties found (by experience) at the start of it are to continue through the situation. So we do not appear to be drawing conclusions beyond any of these objects and properties in our understanding of this situation, but are seeing what does (or would) happen if we didn't have to draw conclusions beyond any of them, as they all continue in that situation together. And if this is how we can adequately understand factual situations , how could we equally adequately understand a situation where one of these objects or factors changed without the change also coming about through a re-arrangement of constituents within IT?

But if we return to supposing the volume of an object added to the volume of a fluid should give their combined volume; we can on the one hand understand why this should be the case. And we can distinguish cases such as sponges, compression and solubility, so that we are only interested in cases where it should happen—this makes it seem definitional. But it is not definitional that an object, with certain properties, continues at all, or continues to have them. And the definition doesn't bring anything about. It is the objects and properties that have to bring something about, But it might nevertheless be the case that something kept its volume, doesn't dissolve or compress or soak up but may be found in combination to have much less volume than

the addition would allow. Perhaps like light through a transparent substance. This, on the face of it would be another case to distinguish.

In this we are not deducing the combined volume from the individual volumes but are appreciating what the combination would be if both were to continue together. This in turn may be described as a constructive, or synthetic way of reasoning, but this does not show that it must be faulty in any way and need some other support.

But let us start a new once again and ask; Is it possible to see how any states of affairs could intrinsically be supposed adequate to bring about some alteration?

This question does not ask for an ACTUAL connection between the state explained and the state upon which the explanation is suggested or based. Perhaps it is made clearer if I ask, "do we always need a logical deduction, or usual experience, or general background theory in order to see how something, some states of affairs, could come about, in terms of some other states of affairs?"

This seems quite possible (as was already illustrated by magnets) because we can suppose, just like someone putting parts together to invent a new mechanism, what would happen in a situation if a particular type of causal characteristic, previously found conjoined with some object, were placed in it. This sort of case may be distinguished from the cases of reasoning by analogy, or from induction based on real explanation, as well as from any actual connection

between what is explained and the exampled experienced properties used to do the explaining. This is because, if we suppose we put particular types of effect, with associated objects, together in a particular order to make a mechanism, we are not supposing the case is like an example we have experienced. We are supposing what WOULD happen if such and such objects and effects WERE, or ARE found in such and such a particular order. Fiction and myth are full of such imagined possibilities and their effects, or results. For example, winged horses, spider men, Twizzle. But instead of supposing in a loose way what could happen if there were a winged horse, or if a boy could ratchet his body parts to become longer and longer, we can restrict ourselves to some measurable effects, and their objects, and suppose what would happen if those precise effects and objects were put together in such and such an arrangement (like letters to form a word). In this way we can see what effects would follow, or can be sufficiently accounted for, if such objects and actions were or are found in a situation. And also, what must happen if they are found in such a situation, without anything else to interfere.

This does not require that we know of the "final being", if there is any such thing, that produces the effect we are explaining with. And the motivation for this procedure need not be supplied by what usually happens, instead it is supplied by trying to see how what could be the contents of a situation i.e. properties an object could be found to exhibit in a situation can be sufficient to bring about what occurs.

Some basic arithmetic.

Suppose you are using numbers to give addresses, in that case it doesn't make any sense to ask what two numbers added together make. Telephone, or house numbers added, or subtracted, or divided, or multiplied together don't make anything, because that isn't their purpose.

Suppose instead you are using numbers to keep a track of your sheep. You want to know if you've lost one, or gained one. According to this use you might count 5 sheep, later count 3 or 7. That is a way of finding out if you've gained or lost sheep. So just because you had 5 sheep this does not mean you must still have 5 sheep or else there is something wrong with arithmetic. The purpose has worked perfectly well by discovering you have an altered number of sheep.

Instead of this, suppose you have two groups of sheep in different fields and you want to keep track of them together. You count 2 sheep and then count another bunch of sheep with the result that you come to the number 5. Your local shepherd is always mixing these sheep together. So sometimes one field had one sheep and the other 4. As a more direct way of keeping a track of our sheep we could just replace numbers by tally marks. This might avoid questions of 'what numbers are?'

IIIII would in that case have to equal II III Otherwise the method wouldn't work. For instance, it wouldn't work if II's appeared or disappeared at random. But the SHEEP might disappear or reappear at random and the method could still work effectively. Since we are avoiding numbers, all that's needed is that for each sheep we make a mark, and we can on another occasion, mark each sheep off against the previous marks. This seems quite compatible with sheep coalescing, or dying, or breeding, or disappearing or appearing for no reason. If we now revert and replace the marks with an ordered series of words. We could use them for the same checking, but we'd avoid the possibility of marks disappearing etc. We also can jump

directly to a position in this series without having to laboriously build it from the required marks. Although we might gain the possibility that we miss remember the order, or the place in the order of the words. But, as a replacement for the tally marks, 2+3 must equal 5, just as II III must equal IIIII if this way of checking is going to be effective. As before, the objects the new series is applied to don't have to match this check.

So it isn't a necessary physical truth that two objects plus two must equal four, but it is necessary that two plus two equal four, according to this use. --Although it seems clear that the putting together involved with the tally marks above will be thought of as 'synthetic' what is necessary about the case results from the use we are putting this procedure to, so the necessity seems analytic upon our purpose in this procedure; that is-- if the result came out so there was a reasonable doubt about whether what is combined remained the same or had become different, this would be no good as a way of checking whether actual things have remained the same or are different. But all this is further confused, or rather the result that 2+2 must equal 4 is re-enforced, because in order to appear to have a satisfactory objective understanding of situations, objects and their quantities must continue through them, and so this will seem physically necessary, because otherwise we can't see how something can happen, even when it isn't logically necessary that this result obtains, and although there are plenty of cases which do happen but which we can't understand on this basis.

References

David Hume

A Treatise Of Human Nature

An Enquiry Concerning Human Understanding (L.A.Selby-Bigge)

George Berkeley

The Principles of Human Knowledge (Fontana Press)

Bertrand Russell

A History of Western Philosophy (Unwin 1946)

Martin Curd & J.A. Cover

Philosophy of Science, the Central Issues (Norton 1998)

W.V. Quine

The Ways of Paradox and other Essays (Harvard University Press 1977)

Immanuel Kant

Critique of Pure Reason (translated by Norman Kemp Smith, The Macmillan Press 1976)

Sebastian Gardner

Kant and the Critique of Pure Reason (Routledge 2003)

Scientific Revolutions (Oxford readings in Philosophy 1981)

Saul A. Kripke

Wittgenstein On Rules and Private Language (Blackwell 1982)

Ludwig Wittgenstein

Philosophical Investigations (Blackwell 1978)

The Blue and Brown Books (Blackwell 1972)

Jonathan Barnes

The Presocratic Philosophers (Routledge 1982)