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What are you causing in acting?

My target for attack in this paper is the fairly widespread view in the philosophy of action that what an agent is doing in acting in a certain kind of way is causing an event of some corresponding type. On this view agency is characterized by the agent's causing of events. To pick one of many manifestations of this view here are Maria Alvarez and John Hyman.

We can describe an agent as something or someone that makes things happen. And we can add that to make something happen is to cause an event of some kind. (Alvarez & Hyman, 1998, p. 221)

And a particular instance of this view might be the following:

In raising your arm you are causing the event of your arm's rising.

Such claims about the causal nature of action are sometimes presented as conceptual claims: claims about when it is correct to describe someone as performing such an action. But I am interested here in the possibility of making a constitutive claim: a claim about what such an action *is*. Actions seem to be *causings* in some sense yet to be worked out. The causal theories that I am questioning take someone's action of raising their arm to *consist in* that person (or perhaps some of their mental states or events) causing the event of their arm's rising.

Despite its widespread philosophical currency, there is something puzzling about the idea of causing an event. The relation of causing, like the property of acting, is not a timeless relation. By this I mean that when we attribute this relation or property to things we must specify or presume a time for the attribution. Gavrilo Princip was assassinating the Archduke Ferdinand at one time but not a year earlier or a year later. But events are things which are usually predicated timelessly in that sense. Standardly, when philosophers of causation talk about a causal relation between events they take it to be a timeless relation. Saying that the assassination of the Archduke Ferdinand caused the First World War, even though we employ the past tense of the verb “to cause”, is to attribute a relation timelessly. It is not that it caused it then and continues to cause it now. Rather, we can attribute this relation between the events without having to specify a time for that attribution.

So a standard approach to the philosophy of causation focuses on the timeless relation of causality holding between events. And that is why it seems appropriate to think of this in terms of the relation of counterfactual dependence for example, which holds timelessly in the same way. But when we address the constitutive question about actions we are concerned with processes that happen at one time and not at others. And if what Princip was doing was causing something, then he was doing it then but not at other times.

Given this, how are we to understand the claim that he was causing at some particular time an *event* – the event of the death of the Archduke or perhaps the event of the First World War? One way to understand his causing these events is in terms of his initiating processes, the completion of which constituted these events.¹ We can say that

as Princip was squeezing the trigger he was initiating a process in the gun giving momentum to the bullet. This process in turn initiated the process of the bullet moving under its own momentum, which initiated a process of the bullet causing a perforation of the jugular vein of the Archduke and then the process of the Archduke dying as a result of this damage. Perhaps this initiated an international relations process leading to war being declared and pursued. Princip set the ball rolling as it were by squeezing his finger. Once he had done this various mechanisms outside of him took over one after the other, resulting eventually in the Archduke being dead. In this way we can say that in squeezing the trigger he was causing the event that was the death of the Archduke. He was initiating these things at one time and not at others. And his initiating the dying of the Archduke was his action of killing the Archduke.

The idea under attack in this paper is that all actions are like this. The target idea is that in acting I am causing an event by initiating (or perhaps sustaining) a process whose completion is that event. Given this idea, my role as agent is separate from the process that is initiated. Even if we start off by identifying my action with me and some event in a causal relation, the bit that is really associated with my agency does not include that event itself. We are forced to accept the model of action in which I do my stuff and then as a result the world does its – a model that forces agency inwards.

But the example of killing someone, which leads to this idea, may have peculiarities that mean that its treatment cannot be generalised to all actions. Philosophy of action has an unhealthy obsession with murder. It also needs to have something to say about phoning someone up, saying something, going for a walk, eating a healthy lunch, writing a paper, buying a train ticket, and so on. It is not at all clear that what we should

say about killing people will generalize to these other cases. In particular, it is a peculiarity of Princip's action of killing the Archduke that it is an initiation of a series of processes.

On the face of it, this aspect of doing something and then waiting to let nature take its course is not shared by all actions. My writing a paper, buying a train ticket going for a walk or saying something are not obviously cases of initiating processes; in these cases I do not do my bit and then sit back and let nature take its course. In none of these cases is there a plausible candidate for being the event that is caused by me as I act. For example, the event of the paper being written is not the completion of some process initiated by me as I exercise my agency. It *is* the completion of the process of my exercising my agency. It is my action, not some further event caused as I act. Indeed even in the assassination case, Princip did not sit back and let nature take its course. For in reality he did not just *take a shot* at the Archduke. If he had missed he would have shot at him again. Seeing that he had hit him he went on to shoot the Archduke's wife instead.

So on the face of it many actions are not causings of events. But this initial rejection of the target idea would be too quick if you thought that every action is really a moving of parts of one's body and that every such moving is a causing of the event of those parts of one's body moving. Although there is no plausible candidate for being the event caused in writing a paper, there seems to be a plausible candidate for being the event caused when I move my body – namely the event of my body moving.

Donald Davidson famously argued for the conclusion that “we never do more than move our bodies, the rest is up to nature.” (1980, p. 59) His argument has two premises.

The first premise is that whatever we do we do by moving our bodies. The second premise (following Anscombe, 1957) identifies our actions with the things by which we do them. So, if the Queen killed the King by emptying the vial into his ear, her action of killing the King is the same event as her action of emptying the vial into his ear. And if she did that by moving her hand in a particular way then it is the same event as that movement of her hand.

One might deny either premise. In particular it is not clear that whatever we do we do by moving our body. Think of the action of checking whether the baby is asleep. There may be some moving of bodies involved in this. But there is also plenty of watching and listening. And watching and listening are not done by moving your body. Arguably all action involves some perceptual feedback of this sort. Or think of the action of walking. Only when you are relearning to walk after a major injury do you do it by moving your legs in certain ways. And even then what you do is more than just change the relative positions of bits of your body; you have to employ the friction of the surface you are walking on to propel the weight of your body forwards. This is not just putting one foot in front of the other. Equally, it seems to be the wrong answer to the question, “How do you write a philosophy paper?” to say “You do it by moving your fingers in a certain very complicated way.”

But even if we accepted that every action is a moving of parts of one’s body, to get to the target idea under attack in this paper we would also have to accept the claim that moving part of one’s body is causing the event of that body part’s moving. And I want to reject that too. In particular I want to reject the following claim:

In raising your arm you are causing the event of your arm's rising.

If such a claim is to stand a chance, the event of your arm's rising better be distinct from your action of raising your arm. An action cannot be identical with the causing of itself. In the final section of this paper I will challenge the idea that the event of your arm's rising is usually distinct from that of your raising your arm. Although there may be odd examples where we can identify a distinct event of your arm's rising which is caused by you as you raise your arm, I will argue that this is not the normal case. But first I want to question the approach to causality and processes that drives one to this sort of theory.

It does seem clear that in raising your arm you do cause your arm to rise. But we can resist the further step to saying that in raising your arm you cause the *event* of your arm's rising. The phrase 'your arm to rise' is not really a noun phrase at all and certainly does not encode some implicit reference to an entity which is the event of your arm's rising.

To echo Zeno Vendler's (1962) useful treatment of results and effects, results are fact-like rather than event-like. Vendler gives the example of a prolonged frost in which the water under the pavement turned to ice which caused the ground to swell, which caused the pavement to crack. (Vendler, 1962, p. 13) The phrase 'the ground to swell' can be nominalised to 'the swelling of the ground'. And once nominalised in this way we can describe it as a result of the water turning to ice. But here we can talk interchangeably of the result of the water turning to ice being the *fact* that the ground swelled and its being the swelling of the ground. Other ways of understanding the phrase 'the swelling of the ground' are more event-like however. For example if we say that the

swelling of the ground was gradual, it is clearly the event, or perhaps process, rather than the fact that is being described as gradual. With this distinction in mind, the result of your raising your arm looks like it must be taken to be the fact that your arm rises, not a particular event or process of rising.

The need to locate an event as the result of a causal process characterizes what we might think of as a Humean approach to the relationship between causation and particular happenings in nature. According to this approach, causation is not to be found *in* real things but *between* them. The cause and effect are taken to be real things, and are usually described as *events* in modern Humeanism. But the *causing* is not taken to be another thing.

In the Humean model, a basic happening is usually understood very simply as something being in one state at one time and then in a different state at a subsequent time – so-called ‘Cambridge change’. Happenings are sequences of states. This model perhaps reached its classic formulation in Russell’s conception of motion. Russell wrote: “Motion is the occupation by one entity of a continuous series of places at a continuous series of times”. (Russell, 1903, section 442). This claim can be extended to processes generally so that we have the claim that a process is a series of states of affairs. For each kind of process there is a characteristic type of series of states. The obtaining of a succession of such states is the Russellian conception of a process.

In this model causality is a relation *external* to happenings – not itself something that happens but lying instead between those things that do happen. Causality can only be part of a happening in this Humean model if the happening consists of a sequence of lesser happenings linked by the causal relation. But on this model if what happens is

taken to be the sum of the component happenings then causality is not really part of what happens; hence Humean scepticism about causation.

Opposed to the Humean model of causality as a relation between real things is an Aristotelian approach which allows causings to *be* real things. Causings – or causal processes - are basic constituents of our dynamic world; causality is *internal* to happenings. And unlike the Humean model, since this model takes the *causing* itself to be an identifiable particular in the world there is no need to take the result to be one as well.

Applying this to the case of human agency, the answer to the question of what you cause when you act need not be that you cause some constituent of the dynamic world – some event or process. What you cause when you raise your arm is not the process or event of your arm's rising. What you cause is your arm to rise, and that need not be taken to be an entity itself.

If causings or causal processes are identifiable elements of nature, then they are things which we can identify at one time but which have implications, conditional on nothing interfering, for what will happen at a later time. So these things incorporate natural necessity of a sort; when the causal process is happening what is present is the conditional necessity for certain results. This means that there are two aspects to its nature: what makes it identifiable at the time; and what its existence at that time requires to be the case afterwards.

If you identify one of these dual natures in an object, O, you can see that O has the property that results, R, will follow if nothing interferes. You are identifying a conditional necessity in O for R. To put it another way, you are identifying the

actualisation of a potentiality in O for R. The reason for calling it the *actualisation* of a potentiality is that there is often a need to distinguish between more or less stable intrinsic properties of the object that contribute to this dual nature and those features that can be introduced from outside but which also contribute to this dual nature. We can call O's having these relatively stable intrinsic features O's having a potentiality for R, and O's having all these features, the actualisation of O's potentiality for R. A car has the potentiality to accelerate under pressure to the gas pedal, even when the engine is not switched on. That potentiality is actualised only if the engine is also running, the gears are engaged, and so on. But since I am not concerned here with unactualised potentialities I do not need to pursue this distinction now.

We do not have to limit results to single end-points of causal processes. A causal process typically has a characteristic sequence of stages as its result. For example, we might identify the process of an object moving in a straight line at a certain velocity with the process of that object's momentum causing it to continue travelling in that line at that velocity. It would not make sense to identify what is caused here with the process of the object travelling under its own momentum, since that is the causal process itself and so cannot also be its result. But nor should we just identify what is caused with the state of the object being at a certain end point. The result is that it continues travelling in a certain direction at a certain velocity, and this requires that it be not just at the end point at a later time but also that it be at intermediate points at intermediate times according to the standard equations for motion. In other words, the result of the process of an object travelling under its own momentum is precisely the Russellian conception of what its

motion consists in. So Russell has described not what motion is but the results of motion - what must obtain for motion to have happened.

This is why the whole issue can seem so confusing. The object's *travelling* under its own momentum results in it *travelling* in a certain direction at a certain velocity. The first instance of the word 'travelling' in this sentence picks out a causal process – an identifiable particular. The second picks out the sequence of stages that characterizes this process. These stages are not the process itself but the results it necessitates – what must be the case for the process to have happened.

Aristotle's definition of motion in the *Physics*, Book 3, has seemed confusing to some commentators in just this way: "Motion is the actualisation of what exists potentially, as such" (*Physics*, 201a10-11). So the process of building is the actualisation of the buildable as buildable. Here I take the actualisation of a potentiality to be nothing more than the complete realisation of the conditions that constitute that potentiality. To say that something is buildable is to say that it has the potentiality for something. What something? Could it be the process of building itself? This would be at the cost of making the definition very thin. It would be equivalent to saying that the process of building was the actuality of something which when actual was the process of building. Should it then be taken to be the end point of the process of building – the state of a house existing or perhaps the house itself? No, because the characteristic results of the process of building are not limited to this. Building a house is more than just bringing a house into existence. The intermediate stages also belong to the process.

So we get the claim that a particular process of building is the complete actualisation of the conditions that constitute the potentiality for that structure of stages

that characterizes the result of building. An Aristotelian process of F-ing is the presence of the potential for the Russellian conception of the process of F-ing.

To summarise, a process is the realization of a potentiality for certain results in certain circumstances. You have to describe a structure of stages to specify the potentiality. These are its characteristic results; they correspond to the Russellian conception of the process itself. But calling this a process is misleading; it is just the set of things that must obtain for the process to have happened. What is required for the Aristotelian process to be happening is not just that that structure of stages obtains, but that there is present a potentiality for such a structure. When a potentiality is fully present (or actualised) the Russellian process that it is a potentiality for is not yet complete. The Aristotelian process is fully present; the conditions for the potentiality are fully realised. But what it is a potentiality for is still incomplete.²

So a potentiality has two sets of conditions. It has underlying conditions whose satisfaction means that the potentiality is actualised. And it has the conditions that characterise its results, whose satisfaction follows from its being actualised. This essentially dual nature of Aristotelian processes can be easily missed with certain readings of the idea of the actualisation of a potentiality. If we take a potentiality to be merely a possibility and its actualisation to be nothing more than the thing the possibility is a possibility of then this dual nature is lost. The possibility of there being a cup on the table in front of me is now actualised; there is a cup on the table in front of me. But nothing is happening.

In the same way if we think of the actualisation of a potentiality as the exercise of a power then the notion is trivialised. My power to be frightening is exercised as I reveal

my most hideous facial expression; but again nothing is happening. My exercising my power to be frightening is not separate from my being frightening. There is nothing gained by describing my acting as my exercising my power to act. What is crucial for the Aristotelian idea to yield a proper notion of a process is that the actualisation of the potentiality be distinct from whatever that potentiality is a potentiality for.

Why has the Aristotelian conception of processes been so unpopular? Empiricists like Hume assumed that one could not experience potentialities. The perceivable qualities that were the building blocks of experience for these early modern empiricists were supposed to be present in individual flashes of experience. Potentialities, if they are perceivable at all, can only be perceived through a process of engagement with the thing that has the potentialities. A purely passive model of perception, in which a quality in an object transfers itself to the mind of the perceiver and *imprints* itself on that mind, can make no sense of the perception of potentialities. And if it follows that we can have no idea of a potentiality then we can have no more idea of the realisation of a potentiality.

But if that is the objection to the Aristotelian model then it should be dropped since the passive model of perception as a kind of imprinting from world to mind no longer has any currency. You perceive the world by engaging with it, exploring, interrogating, experimenting, tracking. There is no reason for doubting that potentialities and their realizations can be discerned in these ways.

Davidson was opposed to introducing realizations of potentialities into his metaphysics. The real things for him were the bits at either end of the causal relation not the causing itself. He argued that an action like my raising my arm was an identifiable particular – an event – and he identified it with the event of my arm rising.³ This was

not to identify the raising of my arm with the causing of the raising of my arm since Davidson was not trying for a *constitutive* causal account of action. For Davidson, the causal history of an arm's rising is what makes it correctly describable as an (intentional) action of raising an arm, but that causal history is not somehow contained in the action of raising an arm.

But since Jennifer Hornsby's *Actions* (1980), we have learnt to distinguish between arm raisings and arm risings. Hornsby argued that actions are transitive movements of the body, events distinct from the events that are intransitive movements of the body. In moving one's body one causes one's body to move, and in doing so one causes the event which is the intransitive movement of one's body.

It is a necessary condition of the truth of ' $a \varphi_T - s b$ ' that a cause b to φ_I . In that case movements_T of the body are *events that cause body movements*_I. (1980, 13)

Alvarez and Hyman (1998) argue that I am the cause of the event of my arm's rising. Since my action of raising my arm is identified with my causing that event it cannot be identified with that event itself. They go on to say that it is not an event at all. In this respect they hold on to part of the Humean conception of causal processes: events are the effects of causal processes and sometimes the causes, but they are not the bits in the middle – the causings. If causings are not allowed any metaphysical identity we are faced with the choice of denying that actions are causings and denying that actions have any metaphysical identity.

If the event of my arm's rising is distinct from the event of my raising of my arm then it might appear to be a good candidate for being the thing that is caused when I raise my arm. But as Ursula Coope (2007) has recently argued, my arm rising, if it is taken to be an Aristotelian process, should be taken to be the very same process as the process of my raising my arm. And although this claim may seem to fly in the face of Hornsby's account of action, we can see that it is very close to something she has been arguing for too. For Hornsby rejects the idea that the event of an arm rising is something we could describe as physical rather than as mental. The event of the arm rising is then not to be identified with a series of changes in position of the arm, but as something that may essentially involve the agent.

This is expressed clearly in the Postscript to "Bodily Movements, Actions and Epistemology" (1997, pp. 102 ff.), where she considers a disjunctive approach to bodily movements. She raises the question of whether a bodily movement that is just a reflex or the result of some external manipulation could have been the sort of movement that is associated with action, and she answers that it is fairly evident that it could not (1997, p. 103). Despite the fact that one might be ignorant as to whether a movement is or is not associated with the action of an agent, whether it is or is not associated with an action is essential to its identity.

Hornsby cannot here be identifying an arm rising with a series of positions of the arm through the air. She is not thinking of the Russellian conception of a process of arm rising. For there is nothing essential to the series of states that an arm is in when it rises that links the rising with an action. The natural alternative is that an arm rising is being considered as an Aristotelian process; it is the realisation of an arm-rising potentiality. It

is a different potentiality that is realised when an arm rises as a result of the agency of the owner of that arm from the potentiality that is realised when an arm rises as a reflex or due to external manipulation. And it seems reasonable to say that the realisations of these different potentialities are also different.

It does not follow that there is no process in common between these processes. There might be a highest common factor between an arm rising as a result of external manipulation and an arm rising as a result of the arm owner's agency. If there were, then this might count as a neutral arm-rising. Where might this potentiality be? Do one's muscles have the potentiality to raise one's arm? No. They have the potentiality to shorten the distance between the points at each end of the muscles, but that is something else.

One might try to argue that the system of muscles in the arm and shoulder have the potentiality to raise the arm inasmuch as under certain circumstances of electronic nerve inputs to these muscles the arm will rise. But in fact this is not the case. Those nerve inputs only result in the arm going up if the arm is orientated in exactly one way at the start of the process – both with respect to the body and with respect to gravity - and has the precise weight it has, the muscles have precisely the responsiveness they have and so on. If any of these factors is different then that set of nerve inputs applied to the muscle mechanism will result in something quite different from the arm going up.

What makes the arm go up is a mechanism that guides that movement in response to feedback from proprioception. It is a control mechanism. So might there be a 'sub-personal' control mechanism for arm raising? When my arm rises might there be something less than me that is controlling its rise?

I think it would be very difficult to defend the idea that there was such a sub-personal mechanism raising my arm when I raise my arm. What would my relationship with that mechanism be? Would I be giving it instructions? But in that case we would say that my action was to instruct my arm-raising mechanism to go into action. And this does not seem right. This is not to deny that the process of raising one's arm involves other automatic or sub-personal processes. For example, it seems that there are stages in my arm's rising in which my arm just continues with a certain trajectory with no active involvement by me. The point is that the feedback required for the overall process to be properly guided happens at the level of the person (whether they are thinking about it or not). It is me who adjusts the movements in accordance with this feedback rather than anything less than me.⁴

So, we should accept Hornsby's disjunctive conception of a bodily movement. My arm's rising, at least in normal cases, might be *either* an arm-rising of an agent *or* be a movement that is not associated with action, and there is no process in common between them. Hornsby however rejects a way that the disjunctive conception of bodily movement might be more strictly analogous with the disjunctive conception of perceptual appearance that John McDowell is associated with. For McDowell "an appearance that such-and-such is the case can be *either* a mere appearance or the fact that such-and-such is the case making itself perceptually manifest to someone." (1982, p. 472) So a strictly analogous disjunctive approach to bodily movements would say that a bodily movement can be either a mere bodily movement or the agent doing something – an action. For Hornsby the second disjunct is not the bodily movement being an action but the bodily movement being an action-associated movement; hence the disanalogy.

Coope (2007) has argued for the stronger claim – that the event of an arm’s rising can itself be the event of an agent raising their arm. She endorses what she takes to be Aristotle’s view that the process of raising my arm is the very same process as that of my arm rising. If we accept, with Hornsby, that the agent may be essentially involved in the process of their arm rising, then at least one objection to Coope’s identification is lost. The process of my arm rising is for neither of these writers a series of stages of my arm’s position in space. So, why not identify it with my action of raising my arm?⁵

It might be thought that the process of my arm rising must be different from the process of my raising my arm since they have different agents. One is the process of me doing something; the other is a process of my arm doing something. But my arm is the patient rather than the agent in this process. It is not raising itself; it is being raised by me. My arm rising under my agency is the same process as my raising my arm, just as the butter melting under the sun’s agency is the same process as the sun melting the butter. This appears to be Aristotle’s view (*Physics*, Book 3, chapter 3 and see Coope, 2007, 123-4). So the process of my arm rising is the process of my arm rising under some agency. There are not two processes occurring here; there are not two potentialities being realised or two mechanisms working.

If this is right then what is caused when I raise my arm is not normally the process of my arm’s rising. Although I cause my arm to rise I do not normally cause the process of my arm’s rising. And if my raising my arm is correctly construed as the realization of some potentiality in me, then this potentiality is not the potentiality for the process of my arm rising, also construed as the realisation of some potentiality.

So, what is the potentiality whose realisation is my raising my arm (or my arm rising) a potentiality for? Coope (2007, p. 114) argues that it is not the potentiality for another process, but the potentiality for a state to obtain. In particular it is the potentiality for my arm to be up. But this is too simple. For it is essential to my raising my arm that my arm pass through all the appropriate stages of a rising. The complete realisation of the potentiality cannot be characterized just by an end state. Suppose that I get my arm to be up by pulling it in close to my body and then shooting it out again at a higher angle. I haven't in this case raised my arm though I have done something which results in it being up.

What seems to be the natural candidate for the job of being the thing that my arm raising potentiality is a potentiality for is the Russellian conception of the process of my arm rising. It is not just the end state of my arm being up but a particular kind of structure of stages between my arm being down and my arm being up. There is a structure of stages characteristic of an arm rising, and my raising my arm is the realisation of a potentiality for a series of states that match that characteristic structure.

So I propose to extend Coope's account by saying that the process of my raising my arm or my arm rising is the realisation of a potentiality for the arm to be in a series of states characteristic of arm rising, rather than just being the realisation of a potentiality for the arm to be up. In raising my arm and realising that potentiality I am causing my arm to be in that characteristic series of stages. But I am not initiating a separate process of my arms' rising and nor am I causing the event of my arm's rising.

NOTES

1 Another way to understand this might be in terms of *sustaining* processes - by removing obstacles to these processes or by ensuring that the necessary underlying conditions of the processes are in place. What I have to say about initiating processes would by and large transfer to sustaining processes.

2 This might make sense of Aristotle's claim that processes are incomplete actualisations of potentialities (201b31-33). What is incomplete is not the degree to which the potentiality is actualised but the structure of stages that characterises what the potentiality is for.

3 In "Agency" (1980, essay 3), he makes no distinction between my raising my arm and my arm rising. And, in "Problems in the Explanation of Action" (2004, chapter 7), he explicitly identifies them. "If I raise my arm, then my raising my arm and my arm rising are one and the same event." (2004, p. 103)

4 Even if there are deliberate bodily movements that do just consist in instructing sub-personal mechanisms to do their stuff, it would be absurd to generalise this to all bodily movements including controlled movements like raising one's arm. I may be able to make my arm move, though not in a very controlled way, by initiating some process of arm moving. But this, like the example of Princip's assassination of the Archduke, would be a rather special case.

5 Adrian Haddock (2005) also argues in this way, and recommends that Hornsby adopt the stronger disjunctive approach to body movements.

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