ABSTRACT. The overwhelming majority of action theories have relied on a Humean model of causality and of explanation; even those theories that explicitly reject aspects of that model uncritically adopt others. The atomistic presuppositions embodied in the model are unable to account for either the dynamic and fabric-like nature of action or the features of control and meaning present therein. It is these atomistic presuppositions that give rise to the "Gettier-like vexations" that are common counterexamples in action theory. The Humean requirement that cause and effect be only contingently connected and generalizable into a covering law is also discussed with respect to the explanation of action.

Representatives of the three major approaches to the problem of action: causal (including intentional, volitional, as well as agent causation and reasons-as-causes theories), behaviorist, so-called "contextual", and teleological theories are examined.

Awareness of the distinction between human action proper and "mere behavior" so-called can be traced at least as far back as Aristotle, but it has been only about thirty years or so that the study of action became a specialized area of investigation in its own right. At least three major types of theories have been offered of the nature of human action: (1) Causal Theories; (2) Behaviorist-contextual theories, and (3) Teleological theories. The inadequacy of each of these, however, has convinced students of the subject that they are in for a long siege. When encountering what purports to be a novel approach, the distinct and disturbing impression is that the modified version is in fact an old and frayed theory in merely patched-up clothing. Like the various attempts a few years ago to mend the justified true belief analysis of knowledge in the face of ever-recurring Gettier-like objections, the inability of e.g., causal theories of action, despite periodic modifications, to counteract objections such as Chisholm's well known "murder of the rich uncle" example, suggests the possibility that these deficiencies may be due to uncritically accepted presuppositions common to all. If so, continual patchings-up of the difficulties provide only temporary, superficial relief.
I shall argue that underlying not only the causal theories but the others as well is an atomistic, Humean model of both the ontology and the explanation of action. The deficiencies of each new version of the major types of theories of action stem from the attempt to force an analysis of action as well as its explanation to fit that model. If this diagnosis is correct, a different approach is called for. At best such a theory might yield a satisfactory model of action; at worst it might serve as a different approach or way of looking at the concept of action, and might point towards new and more fruitful avenues of research.

Perhaps the classical attempts to formulate a theory of action are those which maintain that human actions are to be identified as such and individuated from both other actions and "mere behavior" by their cause. There are at least three major types of causal theories: (1) Those which maintain that the type of cause that distinguishes action is a mental or private event of some sort—wants, intentions, desires, and other such events serve as the usual candidates; (2) those that argue that "reasons" are the causes of action; and (3) those which suggest that "agents" cause action.

It should be noted that a number of philosophers disagree with the claim that reasons are causes, or that reasons-explanations are a species of causal explanation. Two such authors, A.I. Melden and R.S. Peters will be discussed below. For the sake of brevity, those theories of action which emphasize "reasons for action" and the causality of these reasons will be omitted from this critical survey of causal theories of action, for they share the same flaws as those which maintain that a private event is the causative factor in action: the logical connection problem, and the generalization problem, for example. Theories which claim that action is behavior for which there are reasons, but which do not discuss whether these reasons play a causal role in the behavior, are for the most part uninteresting. To say that an action is done for a reason is at best a truism; for the theory to be at all informative it must have something to say about the role which the reason plays in action, and how it turns mere behavior into action.

In general, causal theories adhere to a Humean model of causality according to which a cause must precede its effect, be separably identifiable from its effect, and constantly conjoined with it. The cause does not necessitate the effect and yet is constantly associated with it. In addition, causal theories of action adopt a particular view of the nature of explanation according to which explanation is essentially deductive-nomological: to explain something is to be able to deduce its occurrence from a covering law, together with initial condition statements.

I emphasize that both cause and effect are considered by this model to be discrete and separate entities; thus its atomistic character. Accordingly

[Clausal theories imply that actions and mere happenings do not differ essentially in themselves at all . . . [they are] differentiated by nothing that exists or that is going on at the time those events occur, but by something quite extrinsic to them—a difference at an earlier time among another set of events entirely.
Arthur Danto, for example, in an early work maintains that S performs a basic action, b, "directly", by which he means that "there is nothing which is itself an action of his and a component in the doing by him of b". This characterization of action, Danto maintains, is consistent with the claim that S does b because of S's intention to do so, "for the basic action is then an effect, and the intention, since a cause, is not a component of the effect, nor hence a component of the basic action itself", implying that basic actions are independent of the intentions which cause them.

Alvin Goldman maintains that wants and beliefs cause basic actions. The causally effective "particular wants and beliefs themselves, however, since they are not generated by any other basic-act tokens are not act-tokens at all"; they are simply Humean causes, separate and distinct from their effects which are the acts themselves.

This separation of the cause (whether mental event or "reason") from the action it allegedly causes, leaves the theories "unavoidably vulnerable", as Harry Frankfurt puts it, to a type of counterexample which is very similar, as Danto recognizes, to those "Gettier vexations" of recent epistemology. The counterexamples, of which Chisholm's is no doubt the best known, present a situation in which an antecedent of the required sort (mental event or reason) causes behavior of the appropriate sort, and yet, intuitively, no action has been performed. For example,

A man wants to inherit a fortune and believes that he will do so if he kills his uncle. This decision throws him into such a state of agitation that, while driving, he begins speeding and accidentally hits another car, killing a passenger who turns out to be his very uncle.

A theory that claims that an action is identified by the prior occurrence of either a mental event or a "reason-cause" must hold that in this example an act-token was performed. But even though the killing can be causally traced to the intention or reason to kill—no action took place, for the agent was not in control of the situation. The killing was accidental and not an action. Chisholm's example identifies the fundamental problem with these causal theories: because the distinguishing characteristic of action is identified as something that precedes and is other than the action itself, a wedge can always be inserted between the cause and the effect such that extraneous, typically accidental interfering factors enter. Wayward causal chains like these point to a flaw in the causal analysis. My claim is that the difficulty arises because of the atomistic, Humean presuppositions about causality which allows no room for control and guidance by the agent.

A second difficulty arises because the cause of the basic action is said to be an occurrent episode. As mentioned above, Goldman maintains that a basic action is caused by occurrent wants and beliefs. In those cases in which the agent has no action-plan and intentionally performs only a basic act, if the want or belief causing the basic act-token is an occurrent and not a standing want, there is no reason to suppose that the want or belief continues to be activated throughout the performance of even the basic action. Supposing that a given basic act spans the albeit minute interval T₁ through T₄, it is logically possible for the occurrent causal want and appropriate neurological pattern to become de-
activated at $T_2$, and another neurological pattern to take over at $T_3$. The latter phase of the behavior which takes place at $T_3$ is still causally related to the earlier neurological pattern and therefore to the original causal want, but that phase of the behavior would no longer be an action since it would not at that moment be caused by a want. The theory's failure, once again, is due to the possible disengaging of the triggering cause in medias res; this, in turn, is made possible, indeed implied by the atomicity of the occurrent cause which is being made to fit a Humean model.

Attempting to circumvent these problems, causal theories turned to volitions as the cause of actions. An action, on Prichard's view, is the mental event (the volition), which in turn causes a bodily effect; the acting is the willing. The behavioral effect, which for Prichard's would be the neurological first link in the chain of effects is just contingently connected to the action but is not a part of the action itself. Causing the neurological event may require an activity, but the neurological event is not itself an activity; so the only acts there are are the mental acts of volition. The volitional theory has sometimes been accused of lapsing into circularity: whence volitions? If they are caused, what causes them? Another volition? If so, a vicious regress ensues.

More recently, L.H. Davis offered a theory of action which he believed could circumvent Goldman's difficulties. An event is an action, he holds, if and only if it is the result of a volition. Following Prichard, Davis insists that since a volition—unlike Goldman's wants and beliefs—it already an action, any event caused by it is so ipso an action, even if the causal chain from the volition to the event is circuitous. If Sam, for example, wills to move his arm, but unknown to him "some diabolical neurophysiologist has... 'rewired' Sam's nerves so that as a result of the volition his leg moves" the motion of Sam's leg, Davis insists, is an action, albeit an unintentional one.

This peculiar and counterintuitive claim can be easily dismissed with a simple reducio ad absurdum: since Davis does not even require that the entity whose body moves must be the same entity to whom the volition belonged—indeed, he does not even require that it be a human's behavior at all—if one is able to reconstruct a causal chain such that my willing to move my arm can be causally traced to an event which occurs after I die then, according to Davis, I performed that event, even if it began long after I had died! On this view, any event causally linked to anyone's volition, is ipso facto an action.

Noteworthy for our purposes is the fact that volitionists require that behavior be caused by something not "other than" action for that behavior to qualify as action. But Davis (as did Goldman) fails to ensure that the volition continues in force throughout the performance of the behavior. Once again, it is the atomicity of the traditional causal view that's at fault. Where an action has been performed, the behavior must somehow belong to the agent who performed it; our intuition that the author of the behavior must somehow be in control of both the direction and the course of the behavior needs to be incorporated into a satisfactory account of action. But the notion of control implies that there is something ongoing during the course of the behavior—not prior to it—that is important to the concept of action. But the ability to direct and guide, and thus to control, is foreign to the concept of a Humean cause,
DOES ACTION THEORY REST ON A MISTAKE? 591

devour as it is of any power to necessitate change, and functioning as it
does in the hit and run fashion of mere temporal contiguity.

Richard Taylor, borrowing heavily from Wittgenstein, argues that
volitions and other private events cannot even be a necessary condition
of action, for although it is undeniable that actions are performed, it
must be possible to identify the volition as a distinct entity over and
above the action itself. But this cannot be done, he says.

Let us suppose ... that the volitional theory were true. What
then would one actually find whenever he performed a
simple act? He would, obviously, find not merely that he was
performing an act, but that he was performing two of them .
... What, accordingly, one would find or certainly should be
able to find, anytime he performs an observable act, is both
events ... [But] there are not two things I do in each
such case ... but just one; or at least, that is all I can
find.

Since he cannot find--i.e., locate as distinct entities--two separate
items, one of them must not exist. Taylor's conclusion regarding the vo-
lition theory is not that the atomistic basis of the metaphysical presup-
position may be at fault but that, therefore, there just are no volitions.

The vicious regress objection is another raised against the voli-
tion theory which rests on the assumption of the necessary "separation"
between the volition and the act it causes. Volitions, it is argued, cannot
be volitions for mere bodily happenings; they must be volitions for ac-
tions.

Of what action is this alleged motive a motive? By the hypo-
thesis this motive cannot be a motive for the rising of the
arm since this is a bodily happening, and motives whatever
else they may be, are motives for actions. Can the action of
which this constituent motive is the motive be the raising of
the arm?

Surely not, for if that were the case, motives would presuppose
actions and the alleged explanation of action would be "hopelessly cir-
cular". Once again, such considerations have for the most part led phi-
losophers to discard the notion of volitions or other mental events
rather than give up the Humean view of causality.

Causal theories of action are further undermined by the require-
ment of constant conjunction of the Humean theory. This one-to-one
pairing of intentional causes and behavioral effects required by the
mechanistic model is simply not the case in human action. As we will
discuss in greater detail in connection with the behaviorist accounts of
action, one and the same mental event or reason can cause more than
one "action"; conversely, one and the same "action" can issue from two
or more mental events or reasons. My intention to bankrupt Smith can
issue in different actions: it may, on the one hand, cause me to defame
him with the local banker responsible for his accounts, or it could lead
me to picket in front of his business in order to discourage prospective
clients.
Atomism, it should be noted, relies on constant conjunction as the only means available to establish causality. Constant conjunction, in turn, depends on repetition, which means that there are no unique (in theory) natural events. Whenever $A$, then $B$. Neither is true in action. One often does not need first to establish constant conjunction between intention and behavior to know that $A$ did $X$ because he intends $Y$. And actions unique in an agent's lifetime occur. These will be discussed in more detail below.

Unhappy with theories proposing mental events or reasons as causes of action but wishing to keep a causal model, several philosophers have suggested that it is causation by an agent that is distinctive of action.

Roderick Chisholm, for example, argues that unless some event is caused by non-events, that is, by persons, personal responsibility is impossible. There are several considerations that make this emphasis on an agent attractive. What disturbs us about all the variations of the wayward causal chain objection is, as mentioned above, that somewhere during the causal chain of events, the agent seems to lose control of the situation, at which point (which may be very difficult to identify), the behavior is somehow no longer the agent's and it no longer qualifies for the status of action. Agent theorists attempt to achieve a closer unity between cause and effect than the mere temporal contiguity required by Humean causal analysis by postulating a special relationship between a behavioral event and a non-event, the agent whose behavior it is. Richard Taylor, for example, insists on the importance of the active power of the agent. By emphasizing this closer connection between behavior and its "owner", agent theorists attempt to introduce, however, obliquely, the feature of control and guidance Frankfurt calls for. Bruce Aune, for example, argues that in order to explain action "we must take account of the reasoning that prompts [an agent's] action and guides it to completion".10

But there are serious difficulties with the notion of agent causation. Agent causation is usually contrasted, as in Chisholm's case above, to event causation. But how does an agent, as opposed to an event, cause something to happen? The question is particularly troubling, of course, in light of the fact that whether or not it is true that an agent, for example, causes his arm to rise, it is clearly the case that certain neurological events cause the arm's muscles to contract such that the arm rises. What then is the relationship between the agent and those neurological events? Does he cause them too? Or is the agent to be identified with these neurological activities?

J.J. Thomson suggests that an action belongs to (is owned by) an agent if he is "responsible in some strong sense"11 for an event $C$ (the neurological event, in this case), which in turn causes the behavior, $E$ (the arm's rising). The agent is "responsible" in this special sense for an event if he causes everything the behavior, $E$, causes.12 Aside from the question of how the causality is to be understood the trouble at this particular junction is determining who he (the agent) is! James Cornman, in an untitled commentary on a paper by Davidson, rightly complains that "part of my problem is that I have difficulty distinguishing between the agent of an event and doing it".13
Consider Richard Taylor's theory of agency, which is representative of the genre. Striking for our purposes is his insistence that the concept of cause involved in agent causation is emphatically not the impotent version of Hume, so stripped as it is of the ability to necessitate its effect. Agent causation is stronger than mere continuity; it has "active power". Despite these disclaimers, however, Taylor continues to maintain that causation as such involves a relation with two relata: the agent and the behavior he causes. So with agent causation we still need an agent and the behavior he so powerfully causes.

But it is quite easy, then, to turn the tables on Taylor and demand as he does of volitional theorists that he find the agent independently of the act he causes, i.e., to demand to be shown an entity with existence independent of and discretely separate from the behavior which it causes. "In any true causal relationship one can always, in case he knows what both events are, describe them independently of each other", Chisholm says, and Taylor agrees even while holding that one of the relata is not an event but an agent. The burden of proof is now Taylor's: he must "find" the elusive agent. And his comments about the agent not being identical with his body, volitions, intentions, or other events, processes or states "within" him are of no help. Neither are his statements that "I am a man and . . . this man . . . is the cause of those acts that are mine"; such language won't, as he claims, "avoid any reference to self or egos". A man is not identical with his body, his fears, emotions, volitions, acts of will, self or ego, Taylor insists. So what then is this "man"?

Of note for our purposes is that even after denouncing the impotence of Humean causality, Richard Taylor is unable to break entirely with its atomism. He substitutes agent for events, yet keeps the requirement that there be two relata in a causal relationship instead of discarding the Humean analysis altogether and developing a new theory of causality for agency. Charles Taylor seems to be the one author who does recognize that this separation between agent and action—or that between psychological states and the actions they allegedly cause—is a leftover from the atomism and empiricism of Locke, Hume, and even Descartes. More on Charles Taylor below.

Theories of agency, then, as a species of causal theories, are vulnerable to many of the same objections. Seemingly desperate at not being able to find the volitions et al. that the traditional causal theories postulate as the causes of action, agent theorists aim their searchlight in another direction, still hoping, however, to find a logically and empirically distinct cause of action; the beam settles on the "agent" himself. But if my earlier comments are correct, unless a non-Humean theory of causation is developed that can prevent the "wayward causal chain" difficulties and the deactivation in medias res problem, all attempts to analyze agent causation in terms of the atomistic view of causation are destined to failure precisely because what is central to the insight about agency is the idea of continuing control, rather like the warp that runs through the entire fabric of action and thereby shapes it. Mechanistic causation, on the other hand, is fundamentally a relationship among externally related events. Criticism of the various theories of agency has concentrated on two questions: (1) the ontological status of the agent, and (2) the question of how agent causation works. But one should notice that these objections themselves share the assumptions of the theory they criticize. Even if these issues were resolved, the atom-
ism pervading the theory would leave it vulnerable to objections involving the interruption of the causal chain, the deactivation of the cause in *medias res*, etc. Even assuming an intuitive understanding of what an agent is and how he is able to cause behavior, questions regarding his continued control and direction of the behavior would still arise.

Lately, philosophers who wish to keep the concept of causality and yet are dissatisfied with the externality of the atomistic model, are showing signs of restlessness. I now turn to three such authors: the more recent Danto, J. Compton, and Myles Brand.

Not all philosophers have been satisfied with the Humean causal account of action and the mental events which allegedly precede it. There has been much discussion in the literature about whether the connection between the originating mental event and the action is a logical one, or a causal (and therefore a contingent) one. This disjunction is usually assumed to be exclusive, except by Goldman. Those who argue in favor of the logical connection maintain that (a) it is impossible to identify a want/desire except by reference to that of which it is a desire; and (b) causal relationships are transitive, but transitivity is often lacking in the relationship between intentions and the behavior they allegedly cause. Those who favor the causal thesis, on the other hand, argue that if the connection between want and act were not contingent, then an act would necessarily occur whenever the corresponding desire, etc., occurred. And this is patently not so.

A.I. Melden is probably the best known proponent of the so-called logical connection view. He argues that descriptions of either reasons for acting or of the volitions which are the act's alleged causes necessarily refer to the action itself: one's reason is always a reason to do X; one's volitions are necessarily volitions to do X. If we tried to determine what a volition *simpliciter* is we couldn't, he maintains. We can only characterize it in terms of the event it supposedly causes. A similar argument can be offered against the "reasons as causes" view: there is no other description one can give to a statement of reasons for action other than by reference to that event (a doing) for which they are a reason.

Melden's view has generally been in disfavor since Donald Davidson pointed out that whereas to say that "A did X because he willed to do X" would not be a satisfactory identification of a causal connection, it is possible to replace the description of the volition with another description which does bring out the causal connection and doesn't beg the question. The causal connection can be preserved if, for example, the volition to do x can be identified with a particular neuron's firing. Danto also defends the causal thesis against a Meldenian attack. After claiming that an action issues from a representational cause, Danto notes that whereas a volition or other intentional state cannot exist without reference to an object, the "state cum object" can exist without a cause corresponding to that object. My fear of flying, for example, need not be caused by flying itself, so the cause and its objects cannot be identical and causality holds. Even after defending the Humean independence between cause and effect, Danto is still not satisfied.

There seems to be something more to episodes involving representationalistic causes and effects [actions and cogni-
tion, respectively) than a frequent constant conjunction of the sort naturally supposed . . . for the representational properties of cause (or effect) tend to indicate what sort of effect (or cause) to expect, whereas nothing like this is implied by the familiar concussion of billiard balls. 21

Whether or not billiard ball B moves when constantly conjoined to billiard ball A is merely a matter of "external coincidence", Danto holds, but this externality is absent when my arm moves when I will it to. Danto proposes that this "something more" is a semantical relation that exists between cause and effect such that, in the case of action, the effect (the behavioral component) must satisfy the representational cause.

What does he mean by "semantically satisfy"? In a third article Danto suggests that agents make the world fit their representations when they act. Well aware of the possibility of objections similar to those of epistemology, which he calls the "Gettier vexations", Danto's added semantical requirement is supposed to do the job of circumventing those vexations. But can it? On the one hand it is able to do the job of ruling out cases such as: A intends to do X; X is identical to Y; but because Y does not semantically satisfy the object of A's intention A did not do Y qua action. The reason for this, of course, is that any representational cause is intensional and therefore "opaque". The semantical fit requirement also takes care of Larry Davis' example in which the alleged agent, by intending to move his arm, moves his leg because of a diabolical neurophysiologist's rewiring. On Danto's view no action occurs because of a lack of semantic fit between representation and behavior. How does this "fit" come about? The requirement, for example, cannot deal satisfactorily with the paradigm vexation: Chisholm's example in which the chain linking the representational cause and the "semantically-fitting" effect is mediated or interrupted by accidental events. "Killing the uncle" semantically satisfies the object of the representational cause which originated the chain of events. It is precisely the nephew's forming the intention to kill his uncle that causes the uncle's death. (It seems too strained to interpret Danto's language as including every detail of how the behavior is to be brought about.) The trick is not just to have the effect fortuitously "semantically satisfy" the representational cause, but rather to have that cause guide and control the behavior so that the outcome fits it.

What is important for our purposes, despite the difficulties of Danto's positive suggestions, is that even someone who wishes to defend a causal theory finds that there is something not altogether satisfactory about the classical mechanistic view of causality in which the relation between cause and effect is one of "external coincidence". Danto points the way to a possible solution. Expanding on the notion of making the world fit our representation, he says that in the same way that "knowledge . . . is a matter of bringing our representations into line with the world . . . action [is] a matter of bringing the world into line with our representations". 22 Unlike perception, however, which for all intents and purposes is instantaneous, carrying a programme of action to completion—which is implied in the gerundive "bringing the world into line"—suggests the operation of a cause which, instead of disengaging prior to the onset of the action itself, persists throughout the performance of the act and controls and guides the behavior by serving as its blue-print. The concept of "causality" would still be applicable for one is re-
ferring to the action's etiology, but it would certainly not be a Humean externalistic version of causality. The representation according to which the agent shapes the world would not be related to its behavioral effect the way a mechanistic cause is related to its effect, which functions in a "hit and run" fashion. It would not be a discrete event that precedes the action but is not itself part of the action. In any case, Danto seems to have come a long way from his earlier view on the relationship between cause and effect.

In the numerous discussions about action as behavior for which there are reasons, there often appears some reference to the *appropriateness* of certain types of behavior in light of the existence of those "reasons". Early work along these lines revolved around the relationship between reasons and *justification*, i.e., the reasons one has for an action, it was claimed, somehow show the rightness of the action. Although much of this approach was misguided for it confused the concept of *explanation* with that of *justification* (the ambiguity of "rightness" is probably responsible for much of the confusion), what prompted the discussion was, again, what Danto noticed: the lack of *external* coincidence between whatever it is that causes action and the behavioral component of that action. The shift from talking about causes *simpliciter* to talking about reasons for action reflects the growing dissatisfaction with any causal theory which relies on externally related events as *analysantes* of action. There is a much closer connection between what prompts the action and the action itself than there is among billiard balls, and it is this connection that serves as the ground for the appropriateness of some behavior given an agent's reasons or intentions. As Danto's comments show, the emphasis has shifted from *justificantes* as the basis for the appropriateness, to the semantic fit between representation and action, to--wit all the talk about behavior performed "under a description". But the advocates of causality balk at all this precisely because of its violation of separation between cause and effect, a dogma unquestioned.

J.Compton, in a recent article, argues that a strictly causal account of human behavior is not possible because of the intentional character of psychological states; he then suggests, however, that we call the *quasi-causal* connection between psychological states and action "motivation". Like Danto, a feature of action in which he is most interested is the relationship among psychological states, and between psychological states and behavior, which, he states, is not a "following of regularly, but simply externally, related elements". Thoughts flow into other thoughts; one thought does not merely follow another in a Humean, mechanistic relationship of constant conjunction between discretely separate events. The "second" thought, to be precise, cannot be truly identified numerically as being distinct from the "first", for it contains, in a very real yet unspecified sense, the "earlier" thought which it has incorporated. Similarly, when we act we do so from a selected set of motivating beliefs and desires, and "in the process, these retrospected motivating states are modified". An action "incorporates and at the same time exceeds [its] motives".

According to Myles Brand, the fundamental question in action theory is the following: "What properties must a mental event have in order for it to be the proximate cause of action, or more generally, the proximate antecedent of action"? [Note the assumption: "cause = antecedent = separate", an assumption he then proceeds to reject!] Any adequate account of action must not merely name the mental event involved; it
must specify what the properties of the particular event are such that they and no others cause or issue in action. Brand discusses Sellars' and Castañeda's suggestion of "the immediacy condition": the proximate cause of action is a special sort of intending which "has the property of here-and-nowness". In addition to Sellars' immediacy condition, the proximate source of action also involves a sort of "focusing" on the action to be performed. This focusing involves "concentration attention" on those states of affairs to be brought about. Castañeda, Brand states, also suggests a "cognitive condition": a pushing aspect. It is this pushing ability which terminates in action.

Of note for our purposes is Brand's emphasis that the pushing aspect must be one of self-pushing; that is, it cannot be external to the agent because if it were the problem of vicious regress arises. (As we have insisted so far, circularity, is not the only problem which arises from externality.) The pushing ability of the mental event cannot be "external to the agent"; what is not clear is whether he holds that the mental event (which is the agent's) pushes itself; is Brand saying that the mental event turns itself into behavior? Using his concepts of "systematic" and "extrasystemic" explanation (extrasystemic explanations are reductive, systemic ones are not), Brand hypothesizes that the concept of causality in general and the cognitive aspect of the proximate source of action in particular are systemic. The immediate cause of action, therefore, "can be explicated only by using locutions of the action family". Interestingly enough, primitiveness of "active power" is an attempt to capture this feature. Earlier, it will be recalled, I suggested something similar: that it is an attempt to capture a non-external, continuing relationship between an action's cause and its effect. Since action concepts are systemic, once the interrelationships are spelled out, Brand claims, the terminus of explanation has been reached. Why? Could it be that despite apparent rejection of an externalistic model Brand himself believes that true explanation must be extrasystemic? If so, his rejection of externality, and of the Humean model of explanation, is incomplete.

A second feature of the Humean theory of causality, the requirement that cause be constantly conjoined with effect, has been only mentioned in passing. This requirement is the bane of behaviorist theories; it is to these that I now turn.

In contrast to causal theories, which emphasize as the distinctive feature of action something that occurs prior to the behavior's onset, behaviorist theories emphasize something ongoing during the performance of the act. There is in behaviorism, therefore, implicit recognition that no prior, and therefore separate, event turns mere behavior into action. Something ongoing during the act's performance must be responsible for the behavior's status qua action. Accordingly, behaviorist theories hold that it is both necessary and sufficient, in order to determine whether a particular instance of behavior is an action, to look either at certain features of the behavior itself at the contextual setting of the behavior, or a combination of the two; it is unnecessary to postulate that anything as mysterious or ghostly as an intention or a volition is present before the agent's consciousness (itself a ghostly and suspicious entity for behaviorists). Different versions of behaviorism provide varying accounts of what sorts of behavioral events or contexts are necessary to qualify as action. I will discuss three major types of behaviorist theories; they have in common an emphasis on an empirically
detectable pattern, either socially defined, identifiable from the behavior itself, or from the environmental context in which the behavior is "located".

In the well-known article, "Two Concepts of Rules", Rawls argues that constitutive rules define "practices, which in turn specify a new form of activity". Since "the rules of practices are logically prior to particular cases", an agent cannot logically perform actions such as hitting a home run, signing a check, punishing someone, etc., unless a prior or practice exists (the practice or institution of baseball, a monetary system, a penal system, etc.) which specifies a form of action. Certain behavior (the behaviorist component in Rawls' theory) does not count as a token of a type of action and cannot even be described as such "outside the stage setting [the logico-contextual requirement] provided by these practices". Rawls' point, although well taken, won't do as a theory of action. The problem in action theory is determining whether a particular token of behavior is an act-token, not the specification of conditions defining an act-type. Rawls is correct, of course, in noting that some act-tokens logically cannot occur or even be described as such unless the corresponding act-type has been previously defined, but this is no help in establishing whether a given instance of behavior is an act-token of that type or simply "mere behavior".

Gilbert Ryle's now classic The Concept of Mind is perhaps the most characteristic advocate of a behaviorist approach. Having concluded that an appeal to a mental act as cause and distinguishing characteristic of action is no more than a vacuous appeal to a "ghost in a machine", an explanatorily fruitless concept of no content, he suggests that cognitive terms such as wants, desires, etc. and the behavior they cause be reinterpreted as dispositions to behave in specified ways. According to Ryle an attribution of e.g., ambition can be unpacked into a series of conditionals which reveal the behavior's persistence, over time, in converging towards a particular end. Whenever situations a, b, and c, arise the agent is disposed to behave in manner, x, y, and z. To know how to add is simply to exhibit a disposition to behave in particular ways given certain stimuli and circumstances. To say that an instance of behavior constitutes action is to say that it is consciously or intentionally performed, but this means only that the agent behaves or is disposed to behave in certain ways in such and such circumstances. By removing the explanans from the sphere of the private and locating it in empirically determinable patterns of stimuli-responses, Ryle believes that he can give a satisfactory account of action.

Ryle's behaviorism is open to objections of the Chisholmian variety mentioned earlier in connection with the causal theories: if, despite the occurrence of conditions, a, b, and c, and the performance of behavior x, y, and z, if the behavior occurs as a result of nervousness, accidental circumstances, etc., and is not the activation of the disposition, the behavior in that case is not an action even if the conditional description has been satisfied. In addition, the entailment relationship described by the conditional is not tight in the case of action. Many a time, even though the conditions a, b, and c are present, the behavior simply does not occur. "Mary slammed the door because she was angry" may be true, but it is happily not true that whenever she is angry she slams the door as Jonathan Cohen remarks.
It is this emphasis on generalization that is interesting for our purposes. The mold into which the theory is cast reflects the Humean requirement of constant conjunction: all singular causal statements imply a causal generalization. By replacing the traditional internal cause with observable and separately identifiable "situations", Hume's requirements of externality and separation between antecedent and consequent, as well as that of lawfulness, are satisfied. What we have here is a variation on Davidson's claim: there must be some law that holds. The assumption that human behavior is simply a more complicated version of billiard ball behavior is merely taken for granted but not defended. Rylean behaviorism also reflects the Humean reductionist assumptions: action must be reducible to its component movements. We will see below in our discussion of behaviorist reductions of teleology why this assumption is inadequate. It is also precisely this assumption that Melden and Peters, to their credit, deny. Like Ryle, Melden and Peters claim that action is patterned behavior; unlike Ryle, they claim that the pattern is irreducible to its component strands.

In The Concept of Motivation R.S. Peters makes a point similar to Rawls'. Action, Peters says, must be understood as rule-governed, purposive behavior. I will discuss the requirement of purposiveness below; here I wish to examine only the rule-following requirement, by which he means the lawfulness of the behavior. Human beings, Peters maintains, behave in ways that conform to social patterns, standards and conventions. Our explanations and predictions of people's behavior presuppose this. A rule-following model of explanation is quite unlike a mechanical model; to provide a causal explanation of a particular instance of behavior is to confess that an act-token has not been performed, that there has been a breakdown in the rule-following pattern. "Signing a contract", Peters insists, can never be completely explained through causal specifications of bodily movements. These movements can be explained as an action only if understood in the light of socially delineated conventions of means to an end.

Movements qua movements are neither intelligent, efficient, nor correct. They only become so in the context of an action. There cannot, therefore, be a sufficient explanation of actions in causal terms because . . . there is a logical gulf between nature and convention.33

But even if such act-tokens as signing a contract, hitting a home run, etc. logically presuppose a conventionally instituted practice defined by a pattern of rules (and must be explained by reference to these patterns and conventions), raising my arm simpliciter does not seem to involve formally or conventionally defined standards. And, qua act-token, raising my arm is as much an action as is hitting a home run--indeed, non-basic acts such as hitting a home run are parasitic upon basic actions such as raising my arm. The point, of course, is that if Peters is providing us with a model of action, he needs to give us necessary and sufficient conditions which can account for raising my arm as an action (as opposed to my arm raising), not just for one species of act-tokens, those instantiating act-types described by Rawls.

Following Wittgenstein, A.I. Melden concludes as mentioned earlier that not only can mental events not be identified independently of their behavioral effects, there is no reason to suppose that they exist as mysteriously inner events. Melden's positive contribution is that to ex-
plain and identify behavior as an action is to describe what someone does, how he does it, the circumstances in which he does it, etc. These overall conditions and circumstances in which the bodily movements occur, which are empirically identifiable, "constitute or define the bodily movement as the action it is".34 By coming to understand these conditions, which include the agent's character, interests, wants and desires as well as the social contexts in which the behavior patterns are or are not appropriate, one comes to "see" a person as an agent and a bodily movement as an action in the same way one sees marks on a piece of paper as words. To identify and explain an action, then, is merely to fill in additional information, to redescribe the behavior in terms of the context: the character of the agent and the setting in which he behaves.

But just because a particular token of behavior can be seen as instantiating a pattern, does not mean that the behavior was made to fit the pattern. The point is, of course, that for an act-token to occur, the pattern cannot just happen: the agent must make it happen. (It is, in fact, this apercu that gives theories of agency their plausibility.) On Melden's account the empirically detectable pattern is supposed to substitute for intentionality yet, as objections presented below will show, extraneous considerations pertaining to the agent's inner state can always be inserted between the conceptual pattern and the behavioral token to show that despite appearances, something very different "really happened".

It is fairly easy to give examples in which the appropriate behavior ("appropriate" being defined by the empirically identifiable context) occurs in the appropriate circumstances, yet no action could plausibly be said to have occurred. (The following objections apply as well to Rawls and Peters). Suppose a chess player, because of a sudden muscle spasm, bumps his arm against a particular chess piece, thereby moving it to another square. Suppose, furthermore, that this move was, contextually, the appropriate move to make, i.e., was the move most fitting given the development of the game. As has often been noted, on Melden's view there can be no difference between a spastic or unwitting behavior on the one hand, and so-called "normal" behavior on the other, so long as the pattern is satisfied. What makes this situation not qualify as action, as noted earlier in our discussion of causality, is the agent's lack of control and awareness of the behavior, of what he is doing. Or let us suppose it is a visitor from Mars who, despite being totally unaware of what a game is, much less what chess is, nonetheless is told to "play chess". Not having the vaguest notion of what is going on, the Martian moves each chess piece that is on the mirror-image square of that moved by his opponent. Now let us suppose that it is possible for the game to continue in this way for some time. It is intuitively obvious that the Martian is not playing chess (qua action), although he might be moving wooden statuettes qua action. A similar example might involve a hypnotized or sleepwalking person. Where there is so significant a lack of awareness, no action takes place even if the tokens of behavior happen to fit the appropriate pattern. This suggests that the pattern is at least a necessary requirement of action. But if that is so, Melden and Ryle's goal of eliminating the agent's internal (mental) states has been defeated.

The confusion here may be due to an ambiguity in the meaning of "pattern". There is (1) the pattern of socially understood behavior: most people in similar circumstances behave in similar fashion. But there is
also (2) the pattern of behavior of the particular person. It is obvious that not all acts conform to (1); if they did, maverick behavior would not exist. Totally unintelligible behavior (i.e., unable to be fit into pattern (1)) would be called "mad", Melden says. And yet it seems quite obvious that the behavior may not be mad, for even if the behavior did not fit a socially normal pattern, we could understand it and see it as an action if we could see the behavior as part of the pattern of behavior of that individual. It is for this reason that Melden refers to and incorporates the agent’s wants, desires, etc. But how are these to be discovered or determined? By looking at the overall pattern of empirically identifiable conditions and circumstances in which the person’s behavior occurs. But this gets Melden nowhere, for similar objections to the chess playing ones above can once again be raised at this point. Even granting that the pattern of behavior of the individual suffices to reveal these inner states, and granting that the chess-playing Martian counterexamples do not arise, Melden would still not be out of the woods. For if having the specific instance of behavior fit the agent’s overall pattern of behavior were a necessary condition for the behavior to qualify as action, one could never ascribe to an agent unique but quite intentional behavior. Once-in-a-lifetime, socially abnormal behavior, no matter how deliberate and carefully executed, could not qualify for the status of action since, by definition, it would not conform to a pattern, system or practice.

But one can also distinguish between patterns internal to the behavior and patterns external to the behavior depending on whether the pattern itself was involved in bringing about the behavior. Contrast idle doodling with tracing. Clearly in the latter case the movements of the writing instrument are made to fit the design being traced, and so the pattern which emerges as a result is no accident, but rather was caused to appear by the original pattern serving as template. In the case of doodling, on the other hand, whatever pattern can be externally discovered after the fact is, unless one subscribes to orthodox Freudian theory, accidental. For this reason it is senseless to characterize a sample of doodling as a “faithful rendering” of, for instance, a house.

In After Virtue, Alasdair MacIntyre makes an interesting point applicable in this regard. He defines a practice as any

coherent and complex form of socially established cooperative human activity through which goods internal to that form of activity are realized in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity ... 35

External goods, he says, are merely contingently attached to practices. One can get a child unmotivated to play chess to play and play well by rewarding the child with a certain amount of candy if he plays, and additional candy if he wins. The good achieved by playing, the candy, is an external good, one mark of which is that there may be alternative ways of achieving it. The goal of a true chess aficionado, on the other hand, is to achieve a particular high level of skill. The good to be obtained is thus internal to the practice: one can acquire skill and proficiency at chess only by playing chess. Such internal goods, MacIntyre holds, can be specified only in terms of the practice and can be recognized only by an understanding of the practice. Now clearly the analogy is not exact here, for while MacIntyre’s child may not be inter-
ested in acquiring proficiency and skill at chess he is nonetheless playing chess knowingly. The parallel can be found in the reason for playing. For the child the reason is external to the game; it is internal for the aficionado. Similarly, if one thinks of reasons for action as specifying the contexts which Melden and Peters are at pains to emphasize, then my point is that the context must be internal to the bringing about of the behavior and not just external to it. But then, the Humean is barred from all references to internal goods; causality for him is merely a sequence of externally related, empirically observable events. One cannot superimpose a de jure or de facto practice onto a sequence of instances of behavior and thereby create the possibility of internal goods. And only those behavioral instantiations of practices to which the possibility of internal goods attaches can constitute an action proper.

It is precisely because of Melden's and Peters' failure to recognize the difference between internal and external patterns and the difference in goods attaching to each that contextual theories of action do not succeed, and that they can be labeled as implicitly Humean. MacIntyre's child may be uninterested in chess, but the fact that he knows that he is playing chess allows for the possibility that he might become sufficiently interested in the game that the lure of internal goods may become real for him. Internal goods on the other hand are unavailable to the Martian who is unaware that his physical behavior happens to satisfy the description of a particular practice. The behavior may de facto fit the practice but the Martian is not engaged in that practice; intentionality, at least in its minimal form of awareness, is a necessary though not a sufficient condition for the latter. Thus an agent must be engaged in the practice for the behavior to qualify as action, but since "to be engaged in" involves the concept of an action, it would be question begging to define the latter in terms of the former.

J.L. Austin, it will be recalled, notes that certain events qualify as actions if they consist in (1) the "uttering of certain expressions" (the behavioral component) in (2) "suitable circumstances". Austin's views need not detain us long, however, for they are vulnerable to the same type of objections as Melden's are. Just because (1) the act-type "marrying" is defined by the "uttering of certain expressions in suitable circumstances, and (2) a particular instance of behavior satisfies that description, there is no guarantee that the particular behavior token constitutes an action if, for example, it is performed by a Martian who knows nothing of the institution of marriage.

The error of Melden, Austin, and Peters, in other words, is very much like the old argument from design for the existence of God. The assumption they share is: "Where there is a pattern there is an action caused by an agent because the pattern must have been designed". And the same objections apply to the contextualists as they do to those arguing in this way for the existence of God. Neither the pattern discoverable in clouds nor the pattern that can be identified in pick-up-sticks accidentally dropped on the floor was designed. For an act-token to have been performed, however, awareness of the pattern must have been incorporated into an intention and thereby have been causally efficacious in the bringing about of the pattern identified in the behavior. There must have been a designer of the behavior (and a building contractor who used the design as his blueprint!). Where there is action proper there is the monitoring, directing, guiding and controlling of the behavior according to a blueprint. The sense of pattern required is that
of "patterning after", i.e., behavior molded or fashioned by the deliberate following of a pattern. The pattern which an act-token's behavior exhibits is thus a reflection of the intentional pattern, not constitutive of it. Otherwise there is no distinguishing the moments of the action from irrelevant contingencies (which may form a pattern) but which are in fact only background noise to the behavior's performance.

There is another area in which both Melden and Peters are guilty of assuming a Humean framework even while rejecting it. The general outline of their argument is this: if we have a genuine action, causal explanations are inappropriate. Why? Because actions are explained in terms of the reasons for which they were performed, and explanations in terms of reasons cannot be fitted into a Humean model. The possibility that a reasons explanation might be a causal explanation is discounted because of (1) the lack of spatial and temporal contiguity required for the ascription of causality by the Humean model; (2) the description of the cause is not logically separable from that of the effect; (3) generalization seems not to hold in the case of explanations of actions. All of these are Humean presuppositions which, Bernstein notes, result from a confusion of the generic notion of causation with the specific notion of mechanical causation. Recognizing that action cannot be made to fit the latter pattern, they reject the possibility of causal explanation for action and instead suggest that explanation of action is a form of redescription of the behavior in e.g., rule-following or contextual terms. Since causal explanation of action is assumed to be reducible to movements, even authors such as Melden and Peters who are at pains to emphasize the category of action as distinct from that of movement conclude that therefore a causal explanation of action is impossible.

It is difficult to overemphasize the atomism implicit in this approach: causal explanation, it is assumed, is necessarily reductive. Since actions cannot be reduced to the movements which make them up, then actions cannot be given causal explanations because causal explanations of a molar phenomenon (actions) must be a Humean reduction to its atomic constituents (movements). It is precisely this uncritically adopted presupposition that one finds behind the view that reasons are not causes.

In addition to the rule-following requirement, in Peters' theory the directedness, purposiveness, or goal-orientation of action is also stressed. It is necessary, however, to examine carefully precisely what Peters means by this feature of action. I will discuss the teleological element of action in a separate section below; here I concentrate on Peters' emphasis on plasticity of behavior. But since reference to plasticity indirectly points to a goal around which the behavior is plastic and persistent, references to teleology are inevitable.

Acts are instances of intelligent behavior, Peters maintains, but what exactly does he mean by "intelligent behavior"? "What we mean by 'intelligence' is the ability to vary movements relative to a goal in a way which is appropriate to changes in the situation necessary to define it as a goal and in the conditions relevant to attaining it". In other words, plasticity of behavior with respect to the end defines intelligent behavior. Well, not quite, for Peters it is how do goals differ from ends? By and large Peters equates goals with ends. He contrasts them, however, to "end states". By end states he means those states of quiescence and satisfaction often postulated as ultimate motivators by psychologists.
The difference between a goal and merely an end state is basic to any teleological theory of action for, as noted above, a stone or avalanche will persist in rolling downhill no matter what obstacles it encounters in its way, and a pendulum will "tend" to achieve a state of rest. Yet it seems odd to say that stones and pendula have goals and act to achieve them. And many goal-directed acts are not always followed by such end-states. Reference to these end states, then, does not explain the pursuit of a goal, it merely emphasizes that the behavior had a goal which it achieved. For Peters, then, something is a goal, "not because it is the natural terminating point of movements but because movements persist towards it and vary in accordance with perceived changes in it and in conditions that lead to it". Ignoring the implicit circularity of this argument, of note for our purposes is Peters' claim that both the acquisition of the adaptiveness and the plasticity cannot be explained in purely Humean causal terms. The salivation of Pavlov's dogs in response to the bell is not purely causal, he maintains; the response even at this level was not unintelligent, "for the dog came to change it in light of differences in the situation".

It is difficult to determine precisely what Peters means when he says the dog varies his response "in light of differences in the situation". If "in the light of" means "according to the dog's awareness", then Peters is guilty of circularity, for he has assumed cognition in his analysis of it. In any case, here, once again, Peters maintains that causality is logically unsuitable as a type of explanation of what the dog does insofar as it shows intelligence,

[For the explicandum [the salivation] can only be adequately described by means of concepts like 'relevance' and 'appropriateness' to an end. Processes . . . like the melting of ice or the movements of glass when struck by a stone do not require such concepts in their description. They just happen. They are not recognized or described in terms which relate them to some kind of means-end nexus. For they do not vary in the light of situations related in this sort of way to them. They therefore can be sufficiently explained in causal terms.]

When a sequence of events exhibits plasticity and persistence towards an end condition, concepts like 'relevance' and 'appropriateness' apply to the relationship between the mediate and final events; the former can then be described as the means and the latter as the goal of the sequence. Such behavior, cannot, therefore, be sufficiently explained in causal terms. The means-end relationship, in other words, cannot be reduced to Humean causality. The notion of correctness, Peters maintains, is involved in what is to count as a goal. A correct response depends on a pattern of norms and means-end relationships which in turn are explained in terms of plasticity. And plasticity can be completely specified in terms of a behavioral pattern over time.

What Peters attempts to do, then, is to provide an explanation of goals in terms of plastic and persistent behavioral patterns. Instead of a ghostly and private notion of having a goal, empirically determinable, persistent and plastic convergence of behavior towards an end result constitutes a goal. But as has often been pointed out in connection with theories that rely on plasticity of behavior as a mark of goal-directedness, when the goal is close at hand, the appropriateness of varying the
behavior as it closes in on the goal becomes virtually nil. Yet the behavior continues to exhibit intelligence; in fact, the behavior is goal-directed precisely because it is, at the appropriate moment, no longer plastic. Clearly the end towards which the behavior converges need not be actually attained; an agent may attempt to try to reach that goal and yet not achieve it.

In any case, such treatment of persistence reveals an implicit mechanism and atomism, Woodfield argues. "The concept of diachronic persistence [is] constructed out of a series of synchronic plasticity conditionals," yet it is logically possible that whereas the organism's behavior is goal-directed at t₁, t₃ and t₅, it is not goal directed at t₂, t₄, and t₆ if, say, the behavior that took place on these even times occurred accidentally, even though the organism's accidental behavior was appropriate to the goal. Goal-directedness would no doubt be attributed by an observer because of the overall pattern, but he would be mistaken: extraneous factors can always be inserted between the atomic units into which persistence has been analyzed, thereby producing a variation on the wayward causal chain objection, which disqualifies the analysis.

Although the specifics may be off the mark, it is important for our purposes to emphasize what there is of value in the work of Melden and Peters, and, to a lesser extent, in the work of Ryle. Both Melden and Peters are dissatisfied with the traditional causal, reductive approach; both emphasize concepts such as "context" and "pattern". Peters perhaps comes closest to explicitly stating what is wrongheaded about the causal approach when he contrasts actions with ice melting and glass breaking. These, "just happen". The language cannot fail to bring to mind Danto's description of the movement of billiard balls as being just a matter of "external coincidence". Peters' talk about "appropriateness", "correctness" and "relevance" also remind one of Compton's comments about actions not being just a matter of "externally related" events. It is the awareness of "connectedness" found in action that provides the insight of Melden's and Peters' contextual approach. Action, unlike mere behavior, involves a web of events which cannot be unwoven. Hence, reductive attempts to analyze the web into its constituent strands inevitably result in the unraveling of the web.

To summarize: the objections that can be raised against these contextualist theories all involve intentionality, or at the very least a minimal awareness by the agent of what he is doing, and the directing of the behavior in light of this awareness. Just because behavior can be found to fit a pattern does not guarantee that requirements; the pattern may just have happened accidentally.

When one examines closely the description of "volitions", "reasons", Peters' "rule-following", or even Ryle's "dispositions", despite the different roles these play in each theory, one cannot help noticing a teleological component in their descriptions: one is said to will to do x, or to have reasons for y, or to have done a in order to b. Ryle's dispositions can be similarly unpacked into teleological form. All action, in striking contrast to mere behavior is vectorial, and this is clearly the feature that those theories which emphasize plasticity around a goal (such as Peters') attempt, unsuccessfully, to capture. Let us then turn to the theories which emphasize the purposiveness found in action.
Much has been made of the difference in the ways actions and mere behavior are characteristically explained. This difference was behind much of the impetus carrying the non-reductionist motivation of Melden and Peters. Whereas mere behavior is usually explained in terms of its causes, act-tokens are usually explained in terms of the agent's purposes, his ends and the means used to achieve them. This directionality of the flow of events must immediately be contrasted to that found in the Humean account of causality, according to which the possibility that the sequence of events might flow backwards as well as forwards is ever present. It is as possible for A to be regularly followed by B as vice versa. Causality on the Humean model (as on the Newtonian model) is in principle reversible. The phenomenology of action, on the contrary, vehemently denies such as possibility. Whether one speaks of intentions, dispositions, agents or reasons, it is these that issue in behavior, emphatically not vice versa.

Teleological theories intend to capture this vectorial quality of action: behavior flows unidirectionally towards a particular terminus or end condition, a goal which, moreover, is sometimes said to be prefigured at the start of the behavior. This prefigurement is noted in the intentionality of action and causal theories describing it. The goal-directedness must be of a particular sort. (As noted above, a pendulum tends towards a resting state, and avalanches persist in reaching the valley; although both phenomena exhibit plasticity and persistence towards an end, neither pendula nor avalanches have goals).

With few exceptions, advocacy of non-reductive teleology has all but disappeared from mainstream Anglo-American philosophy. Associated with Aristotelian cosmology, the demise of teleology coincided with the rise of Newtonian physics and its related mechanism. Nagel and Braithwaite are just two of many well known philosophers who argue that teleology can ultimately be explained in non-teleological terms. Reductive analyses of teleology can be traced to the rise of classical dynamics in the nineteenth century, according to which all change can be reduced to and thereby explained in terms of point masses. "Indeed, through a clever change of variables, all interaction could be made to disappear. It was believed that integrable systems, reducible to free particles, were the prototype of dynamic systems". The relationship between Hume's epistemological atomism and Newton's is obvious.

Larry Wright attempts to provide a behaviorist reduction of the teleological feature of action.

S does B for the sake of G, iff

(i) B tends to bring about G;

(ii) B occurs (i.e., is brought about by the fact that) it tends to bring about G.

Wright admires the empirical testability of this analysans, which he calls (T). By varying conditions one can test the truth of (i). More importantly, a determination of the presence of plasticity in B with respect to G establishes (ii), he argues. In other words, one can demonstrate that the behavior occurred in order to bring about G by showing that it is plastic with respect to G. The similarity to Peters' idea is obvious. If the earlier section on behaviorist theories of action is correct,
however, success in reducing teleology to conditionals would merely bring us face to face with the problems mentioned earlier: constant conjunction, separate identification between cause and effect (or antecedent and consequent), and so on.

Wright realizes, of course, that proving that a particular behavior occurred because it tends to bring about G requires "the elimination of alternative accounts" of the etiology of the behavior. Once again, however, uncharacteristic (unique) but very deliberate, purposive behavior would not be detectable. Wright, in other words, falls into the same trap as do Ryle and Peters. No amount of empirical detection of plasticity and/or persistence towards G could in principle rule out that the intended goal is not G. Externally detectable patterns cannot substitute for intentionality.

As Woodfield notes, any attempt to reduce the teleology of actions to behavioral components is fundamentally unsound, for the notion of a system having a goal cannot satisfactorily be explained through external criteria as behavior and the contexts in which that behavior occurs.

\[ \text{Having a goal G at t cannot consist in S's tendency to behave appropriately at t given that it explains why S has the tendency. Plasticity is itself something that can be explained teleologically, by reference to the fact that S has a goal. The explanans must be distinct from the explanandum; so S's having a goal G must be a distinct state of affairs from S's being plastic with respect to behavior-function G.} \]

Note that despite Woodfield's criticism of the externality of the explanandum, he nonetheless subscribes to the Humean tradition that the "explanans must be distinct from the explanandum."

Woodfield, I believe, is correct in claiming that plasticity and persistence are not constitutive of teleology, but merely serve as criteria for the ascription of teleology. Rather than telling us what "goalhood consists in, i.e., what 'goal' means", persistence and plasticity are the evidence we use to determine that behavior was teleological. In contrast to the reductionist approach Woodfield offers an "internalist" account of teleology. On this view "no behavior of a system could be goal directed unless it was the result of the system's being in a certain kind of internal state", a mental state of belief or desire. Thus, "a goal just is the intentional object of the relevant kind of conception." Teleology thus takes us back "inside" the agent. It is in virtue of a state of the person, and the non-Humean causal efficacy of this state in issuing in and controlling behavior that the behavior qualifies as action.

Let us turn now to one of the few contemporary philosophers who claim that teleology is sui generis. According to Charles Taylor, to say that human behavior is purposive is to say that "the events productive of order in animate beings are to be explained not in terms of other unconnected antecedent conditions, but in terms of the very order they produce". What determines whether I am performing an action proper, and what action I am performing, therefore, is whether there is a goal or purpose and what role it played in bringing about the behavior. It is characteristic of human action, he says, that the goal the behavior is designed to bring about is involved in the production of the behavior itself. Teleological explanation accounts for behavior "by laws in terms
of which an event's occurring is held to be dependent on that event's being required for some end". The event's being required to achieve the goal is a sufficient condition for its occurrence. It is to this condition of requiredness that Larry Wright correctly objects. Given that a particular goal such as escaping from a predator can be achieved as well by hiding under a desk as by bolting through the door between you and the predator, or ...; no one of these is, strictly speaking, required to achieve the goal.

Most interesting for our purposes, however, is Taylor's claim that teleology is "anti-atomistic", since it identifies the antecedent condition of the event to be accounted for, B, as the state of affairs in which B will lead to G. Thus the antecedent is identified in terms of its law-like connexions with two other events, B and G, i.e., as the state of affairs in which, when B occurs, G will follow.53

(G ➔ B) ➔ B

He maintains that attempts to reduce the connection within the antecedent will transform the law into a non-teleological one. Since the antecedent of the overall law (the state of affairs in which B will lead to G) can occur independently of the consequent, and vice versa, Taylor explicitly states that his teleological law satisfies the mechanistic requirement that teleological law satisfies the mechanistic requirement that antecedent and consequent be distinct. What teleological laws cannot satisfy is the mechanist's other requirement: that the identification of each of the two terms mentioned in any explanatory law in which they figure be separately identifiable.54 Taylor insists that the uncritical acceptance of this stronger, logical requirement arises out of the tradition of atomism and rests on the notion "that the ultimate evidence for any laws we frame about the world is in the form of discrete units of information".55 While maintaining the ontological separation between antecedent and consequent, Taylor disavows the possibility of a logical separation in their descriptions. Teleological explanation, he says, is holistic precisely because no description of the antecedent can be given without referring to the consequent.

What is notable is that criticism of Taylor's theory has often ignored its anti-atomistic claims. Perhaps this is Taylor's own fault, and yet it is interesting that despite his criticism of the stronger requirement of mechanism, Taylor seems almost relieved to be able to satisfy the other, mechanistic requirement, that cause be separate from effect. Like Kant before him, although he insists on the need for a connection between the description of the relata in the causal relationship, he wants to ensure that antecedent and consequence can each occur independently of the other. We still detect, therefore, in Taylor, an atomistic flavor: cause and effect must be discrete units which "cause" by being constantly conjoined; it is only into their description that holism enters. (It is beyond the scope of this paper to speculate what Taylor's final thesis would have been like had he remembered that the eighteenth century's understanding of teleology was "self-organization", that non-linear relationship between part and whole that so troubled Kant in his Critique of Teleological Judgment).56
Despite its avowed purpose to the contrary, Taylor's theory has also been criticized as being implicitly behavioristic. Recall his explanation of a teleological description as a conditional in which antecedent is characterized as "B being required for G". Taylor acknowledges that the antecedent could also be described in terms of the mechanical state of the system plus the state of the environment (let us call this alternative description "E"). His point, though, is that whereas \((G \rightarrow B)\) may always be followed by B, E may not be. Taylor asserts, that is, "that it is possible that two cases may obtain, in which the system and environment \([E]\) are in precisely the same state, intrinsically characterized, but in one the teleological description . . . holds, in the other it does not". But if so, how can we know, "given that the two [intrinsically characterized] situations are identical, whether the teleological description . . . applies to one of them? The only evidence that the [teleological] description was justified would be the occurrence of B, the event we seek to explain".

It is Taylor's reply to this objection that lands him in a quasi-behaviorist position. We must look, he says, not at single \((E \rightarrow B)\) and \([(G \rightarrow B) \rightarrow B]\) connections, but at sets of such connections over time, and choose between them according to their scope and explanatory power. The teleological description will sometimes be lawful even though the causal description is not. But if lawfulness is the mark of teleology, then teleological descriptions turn out to be implicit generalizations! If so, Taylor has resorted to a criterion of consistency over time (lawfulness) in order to choose a teleological explanation over a causal one. And, if I am right, this is once again a variation on the Humean assumption that a causal instance implies a causal generalization; for Taylor, a teleological instance implies a generalization. The repetition implied in \((G \rightarrow B)\) is the Humean requirement of constant conjunction which would disallow unique teleological act-tokens.

The major claims of this essay have been (1) that most contemporary theories of action to date have uncritically adopted a Humean approach, and that (2) that even though several theorists explicitly recognize the unsatisfactoriness of some of its tenets for action theory, these same authors ignore their adherence to other, similarly problematic, Humean assumptions.

The purpose of this essay has been exclusively diagnostic; it is outside of its scope to prescribe an alternative, although it should be clear from its thrust that what is needed is an account of causality for which mental cause and behavioral effect are internally related to each other, possibly in the way genotype and phenotype are related. But given the inability of contemporary philosophy to provide a satisfactory account of this type of non-linear causality, current efforts in action theory reflect this flaw and therefore continue to find the going rough indeed. It would be ironic if solutions to the problem of action came out of the scientific study of non-linear, dynamic systems. But that is another paper.
ENDNOTES


3 Ibid., my emphasis.


6 For a more detailed presentation of this argument see my "Does Level-Generation Always Generate Act-Tokens"? Philosophy Research Archives IX (1983), 177-92.


12 Ibid., 150 and 216.


15 Ibid., 137.

16 Ibid.


DOES ACTION THEORY REST ON A MISTAKE?

21 Ibid., 16.
23 J. Compton, Tulane Studies in Philosophy, 55.
24 Ibid., 56.
25 Ibid.
27 Ibid., 140.
28 Ibid., 147.
29 Ibid., 148.
38 Ibid., 112.
39 Ibid.
40 Ibid.
41 Ibid., 113.


46 Ibid., 41.

47 For a more detailed examination of Larry Wright's theory, see my "Dispositions, Teleology, and Reductionism" in Philosophical Topics XII (May, 1983), 153-65.


49 Ibid., 201.

50 Ibid., 205.


52 Ibid., 9.

53 Ibid., 12.

54 Ibid., 11-12.

55 Ibid., 11.

56 See my "Self Organization: Kant's Concept of Teleology and Modern Chemistry" The Review of Metaphysics 39 (September 1985), 107-35.

57 Woodfield, op. cit., 76.

58 Ibid., 77.