

ACTIONS: THEIR CAUSES AND COMPONENTS*

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ABSTRACT

The study focuses on a central issue in action theory: The analysis of actions. Two competing analyses are critically examined and their basic logical principles are spelled out.

In the tradition of the regularity analysis of action, we first describe the causal theory of action in terms of the principles of asymmetry (C1), temporal precedence (C2) and Transitivity (C3). The purpose of the exercise is to expose the weak points used by the critics of this form of action theory. Thalberg argues that (C2) represents a major difficulty with the causal theory in the context of purposive action where an action a is performed by ϕ -ing. This contention is appraised critically by showing that Thalberg fails to distinguish between actions and their event cores.

Secondly, the component theory of action is constructed in terms of the principles of transitivity (P1), asymmetry (P2) and necessary essentialism of parts to their wholes (P3). We add a fourth principle: Temporal parthood (P4) which is necessary for the application of the part / whole relation to events and episodes. Thalberg's Positive thesis that reasons are parts of actions is described and criticised on the basis that it entails the following dilemma:

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Reasons are either mental episodes or dispositions. If they are episodes they must abide by (P4,)but they do not. If they are dispositions then they are not parts of actions or (P4) is false. But (P4) is true and therefore reasons are not parts of actions.

Thirdly, a comparison of the two analyses reveals that they share:

1. Metaphysical basis; they range over particulars and contingent relations.
2. Logical properties of asymmetry and transitivity.
3. Relevance of temporality.

The two theories differ in respect of the requirement that the terms of the relation in question are numerically distinct.

In conclusion the study calls for further research in the employment of the relation part / whole within the field of action theory.

INTRODUCTION

The causal theory of action claims that a unique distinction between human action and bits and pieces of overt behavior pertains to the former's causal relation to antecedent appropriate mental events. The plausibility of the causal analysis of action has not been weakened by the numerous philosophical arguments purporting to falsify its basic causal tenet⁽¹⁾ (Melden 1961, Taylor 1966). New formulations of the causal position by eminent philosophers (Davidson 1963 & 1967, Goldman 1970, Sellars 1966 & 1975) have invigorated a revival of the theory in recent philosophical literature. In turn, such a revival has invited freshly revised criticisms pertaining to the theory's professed inability to account for all the peculiarities of human action.

The departing point for this study is Irving Thalberg's critique of the causal theories of action and his proposal for a constituent analysis in substitution for the causal analysis in the debate over the nature of human action. Thalberg suggests that 'we give causality a rest' because it lacks the theoretical machinery for providing solutions to the special problems arising from the alleged connection between actions and reasons, emotion and cognition and most significantly the relation of actions to pieces of behavior in the context of means and ends. His strategy is designed to dismiss the causal analysis because of the above mentioned problems and

to introduce the so-called component analysis of action as a plausible theory showing that cognition is a component of emotion, reasons are components of actions, and physiological and cerebral episodes are parts or constituents of actions.

This study intends to examine carefully and critically first, Thalberg's negative thesis vis-à-vis the causal theory, and secondly, his positive thesis in defense of the constituent theory of action. In the third place, the study conducts a comparison of the two theories of action indicating the logical compatibility and philosophical feasibility of a combination theory of action which utilizes both causal and constituent elements.

In order to facilitate the achievement of our stated objectives, we shall begin with an exploration of the main logical features of the concept of causation thereby implying that analysis of the causal relation has a direct bearing on understanding the version the causal theory being criticized by Thalberg.

I

1. **Action and Causation:**

It is common practice among philosophers of action to analyse actions in terms of events (bodily movements) causally related to other sorts of events (mental episodes). Hence, actions are that group of bodily events that are caused by appropriate (relevant) mental episodes. In extreme cases the analysis is interpreted as a reduction of the concept of action to the concept of causation indicating that to act means no more than to cause something to happen.

In simple terms, the recipe for producing actions calls for two kinds of ingredients: the metaphysical entities of events both mental and physical, and the metaphysical category of causation.

Another group of contemporary philosophers have argued rather persuasively for the autonomy of the concept of action and its utter irreducibility to the category of causation (Collingwood 1941, Von Wright, 1971). In some cases, the argument has been carried to its logical conclusion indicating that the concept of causation is essentially a species of the category of action. An appeal to action terminology, the category of action is metaphysically more basic than that of causation and not vice versa.

Historical and linguistic evidences in support of such a claim are indeed abundant. Jaeger (1939), for example, shows that the ancient

Greeks moulded their idea of causation in the physical world by analogy with ideas from the realm of criminal law and distributive justice. The Greek word for cause, 'etia' means guilt and the latin 'causa' is derived from legal terminology.

If these terminological facts have any bearing, they indicate that the concept of cause has deep roots in human condition and activity. They fall short of conclusive proof for the priority of action terminology over causation terms, though they may provide some support for the priority of the concept of cause when it is analyzed in terms of bringing about some state of affairs by doing something or performing an action (Von Wright,1971). Recently, the term cause has developed a use which is true in cases where the relata are physical events as well as the sense of bringing about and is used to describe and explain purely physical and natural events as well as human actions. David Hume has effectively captured this broad sense in his celebrated regularity analysis which defines the causal relation as an invariable sequence between events such that the following most general properties c1, c2, c3 are true of this relation. It should be noted that these properties are general enough to apply equally well to the relation of causation in both senses and hence is true in cases where the relata are physical events as well as human actions'.

(C1) Asymmetry:

If A causes B, then it is not the case that B causes A. Thus, if striking a match causes that match to light, then it is not the case that a lit match causes the striking of the match. Also, if shooting S causes S's death, then it is not the case that S's death causes the shooting of the gun.

(C2) Temporal priority of causes.

If A causes B, then A temporally precedes B. To allow for cases of simultaneous causation as genuine cases of causation, we may rewrite this condition as follows:

(C2) 'If A causes B, then it is not the case that B precedes A. If striking the match causes the lighting of the match, then it is not the case that the lighting of the match temporally precedes its striking. Similarly if shooting S causes his death, then it is not the case that S's death temporally precedes the shooting of S.

(C3) Transitivity:

If A causes B, and B causes C, then A is a relevant causal factor in

the occurrence of C. Thus, if striking a match causes the lighting of that match and the lighting of the match causes a fire in a gas filled room, then the striking of the match is a causal factor in the occurrence of the fire in the gas filled room. Also, if shooting S causes S's death and S's death causes his wife's grief, then shooting S is a causal factor in the wife's grief.

Critics of the causal analysis have identified the asymmetry of causation as the most serious challenge to any causal theory of action. They argue that if causes and effects are asymmetrically related in a chain of events actions cannot be causally related. To prove that, it is sufficient to show that at least some actions cannot be accommodated by principle (C1). Thalberg uses the example of the action of clenching the fist in relation to the action of tensing the muscles for the purpose at hand. He subscribes to the causalist position that in clenching the fist, one's forearm muscles start rippling before fingers close, and since the muscular contractions and fist clenching are two spatially separable events, the conclusion follows that tensing the muscles causes fist clenching.

Having represented the causal theorists' position concerning actions and causes, Thalberg (1974:9) introduces the following counter example:

"... suppose you learn which muscle contractions occur when you clench your fist. Can't you then make them occur by closing your fingers? The preposition 'by' is crucial. You cannot 'directly' tense those arm muscles. You must close your fingers to get these contractions. If we grant all this we face a dilemma. Either we must deny that 'you make those contractions occur' means 'you cause them', or we must deny both the temporal priority of causes over their effects, and the asymmetry of causal relations. The priority and asymmetry principles must go inasmuch as we have supposed (a) that the latter event of your fist clenching brought about the earlier muscle contractions, and (b) that the contractions cause your fist to clench, which makes the causal relation reciprocal.

In the above example, Thalberg uses the following descriptions of events and actions:

- (i) Clenching the fist
- (ii) Tensing the forearm muscles
- (iii) Closing the fingers

Clearly, (i), (ii), and (iii) qualify as descriptions of full-fledged actions. (ii) unlike (iii) cannot qualify as a basic action since it is not done directly, «you tense your muscles by doing something else». (i) and (ii) are related in such a way that (ii) results from doing (i). (iii) is a means towards bringing about that (ii) is the case.

Thalberg's main point of the counter example at hand is to show that if the causal relation is assured to hold between actions described by (ii) and (iii), then the principles of temporal priority of causes over their effects and asymmetry of causal relations must be abandoned. If events described by (ii) cause actions described by (iii) – as advocates of causal theory claim, then (ii) events temporally precede (iii) events. According to the given example, however, we bring about (ii) by doing (iii) and hence (iii) causes (ii). Therefore, the causal relation loses its asymmetry and acquires a reciprocal feature. In the second place, if (iii) causes (ii) then a later event (ii) causes an earlier one (iii). Therefore, the causal relation loses its second distinctive principle; the temporal priority of causes over their effects (i.e. absurdity of backward causation).

The conclusion is plausible and seems to follow from Thalberg's assumptions. However, as soon as we realize that crucial and legitimate distinctions have not been duly pointed out regarding the reference of descriptions used in the counter example, the argument collapses and loses its validity.

First, Thalberg fails to distinguish between the act of closing one's hand and the mere event of one's hand getting or 'being' closed. That is to say, (iii) is ambiguous regarding its reference. It could be a description of the action of closing one's fingers and hence its identity with (i) which describes the act of clenching the fist. Alternately, it could refer to a mere event that does not acquire the status of an act and hence cannot belong to the same category like (i). Accordingly, the reciprocity of the causal relation need not be assumed here, because the reference of (ii) is causally related to the mere event of one's fingers getting closed, and not the reference of (i), the act of clenching the fist. Having retained the asymmetry of the causal relation by accommodating the essential distinction between the act of closing one's fingers and the event of one's fingers getting closed, the principle of the temporal priority of causes over their effects is also retainable. (Stauder, 1974).

In the second place, the intuitive distinction between the act and event of fingers closing may be systematized by introducing a philosophical distinction between results and consequences or effects of actions. (Von

Wright, 1971 and McCann, 1974). Von Wright claims that the relation between an action and its result is intrinsic: logical, but the relation between an action and its consequence is extrinsic; causal. Therefore, actions and their consequences are essentially distinct from each other and could be described independently. However, it is impossible to view actions and their results as two distinct entities describable with no reference to each other. The fact that no action is performed unless its result has materialized accounts for the intrinsic relation between actions and their results. In the action of Jones opening the window, the result of the action, the window being open (a change from its state of being closed) should materialize if it is to be true that Jones performed the action of opening the window. The same action, however, has various causal antecedents and consequences; the decreased temperature of the room, for example, is one of its consequences.

With the application of this distinction to our main example, we say that the act of closing one's fingers has the result of one's hand getting closed. The same act has various causal antecedents and consequences; one of which is the tensing of one's muscles. Such a distinction needs further augmentation in order to account for various actions and their results and consequences. Hugh McCann (1974) provides us with the required statement when he shows that since the connection between an action and its result is intrinsic the result of an action A cannot also be a consequence of A. Frequently though, the result of A counts as a consequence of an action B of the same agent, which is in some sense "other" than A. If we consider the action of killing Jones A, and the action of shooting Jones B, the result of A (which is Jones death) is caused by B. In this case it is true to say that the agent killed Jones by shooting him. Action B, however, does not cause A, it only causes its result. The result of A, in this case, is also a consequence of B. Shooting Jones causes Jones being killed: his death. In the terminology of basicness, we may add that shooting Jones is a causally more basic action than killing Jones which is a causally non-basic action. (McCann, 1974).

In terms of this pattern of action relation, the action of closing one's fingers may be attributed the result of the fingers being closed. Similarly, the action of tensing the muscles has the result of the muscles being tense. In the case under consideration, where one tenses the muscles by closing the fingers, we may say that the act of closing one's fingers is causally related to the result of the act of tensing the muscles, and not the act itself. The muscles being tense is a causal consequence of the act of closing the fingers; the hand being closed causes the muscles to be tense. In usual

cases of closing one's fingers where the tensing of muscles is not intended, the event of the muscles tensing occurs as the result of the act of closing one's fingers. The fingers being closed is a causal consequence, the action of closing one's fingers is not a causal consequence. As a matter of fact, the act of closing one's fingers is a cause and never a consequence of another action. With such an analysis, we avoid the reciprocity of the causal relation and retain the principle of the asymmetry of the causal relation.

The principle of temporal priority of causes over their effects may be retained as well by employing formulation (C2) which states that if A causes B, then it is not the case that B precedes A. The act of closing one's fingers which is the cause of the tensing of muscles does not succeed its consequence or effect. Nor does the event of muscles being tense precede its cause. The events of the fingers being closed and the muscles being tense may occur at the same time or occupy the same temporal duration. The effect of the act of tensing one's muscles is conveniently a later occurrence in comparison with the act of tensing one's muscles. Therefore, the principle of the temporal priority of causes over their effects is still retained. Thalberg's mistake consists in his failure to recognize that the acts of closing one's fingers and tensing the muscles are never effects of other actions. The act of closing one's fingers does not occur after the tensing of muscles though the fingers being closed may be viewed as a later occurrence, though it is not a cause. Therefore, it is still true that effects or consequences do not temporally precede their causes.

II

In his positive thesis, Thalberg argues that only a component theory of action may account for the relation of actions to other items in human behavior. Unlike the causal theory, the component theory is capable of resolving many puzzles regarding the connection between actions and bodily movements, actions and their reasons, actions and emotion, and actions and cognition. Several expressions are used synonymously with 'components'. To describe the relation obtaining between behavioral and mental events, occurrent episodes and states of affairs, 'Constituents' 'Parts' 'elements' 'ingredients' are used to describe the 'new' type of relation in place of the 'old' category of causation. The conclusions that follow from Thalberg's argument are:

- a. Cognition is an **element** of emotion.

- b. Reasons are **Ingredients** of actions.
- c. Bodily movements are **parts** of actions.
- d. Cerebral events are **constituents** of actions.

In order to evaluate the merits of the component theory vis-a-vis the causal theory, it is necessary first to understand the meaning of (x is a constituent of y) and its most general logical properties. Secondly, a comparison of the logical properties of the two analyses (of cause and constituents) provides us with the appropriate categories needed for resolving the various puzzles of actions. A basic step in the argument for a component analysis of action is a clear statement as to the meaning intended by the expression, "x is a component or part of Y". Unfortunately, Thalberg does not provide us with such a statement. Only few philosophers have undertaken such an endeavour and provided some of the general properties of the relational concept (x is a part of y). Chisholm (1973), for example, lists some of the general logical properties of part/whole relation within the context of his discussion of the principle of meteorological essentialism.

Whitehead (1974) has treated some aspects of the relation in the context of his discussion of the relation of part/whole pertaining to sense – objects of perception and derivatively thought objects of perception. However, if we disregard the particular characteristics of the terms of the relation (relata), the following principles spell out the pure logical properties of the relation of part/whole:

- (p1) If x is a strict part of y and y is a strict part of z, then x is an S-part of z.
This principle says that the relation part/whole is transitive.
- (p2) If x is a strict part of y, then y is not a strict-part of x.
This principle states that part/whole is an asymmetric relation.
- (p3) If x is a strict part of y, then y is such that in every possible world in which y exists, x is a strict-part of y. This is the principle of the necessary essentialism of parts to their wholes.

In order to distinguish between a strictly philosophical sense of part and the ordinary sense used in every day language, the above principles use the expression 'x is a part of y' instead of 'x is part "simpliciter" of y'. Such a distinction is called for in view of the fact that some of these principles may seem hardly in accordance with the intuitive ordinary notion of 'part' (P3) for example. On the other hand (P1) and (P2) are borrowed from Whitehead's discussion of this issue in the context of an

account of the primary relation of part/whole holding between sense-objects of perception and only derivatively ascribed to the thought-objects of perception. The context of the discussion justifies Whitehead's repeated observation that "the relation whole to part is a temporal or spatial relation, and is therefore primarily a relation holding between sense objects of perception, and it is only derivatively ascribed to the thought objects of perception of which they are components". (Whitehead, 1917: 153).

The three most general principles cited above as necessarily true of the relation part/whole apply to the strict philosophical sense of 'part' which is called S-part in distinction from the ordinary and loose sense of 'part'. The ordinary sense of 'part' is defined accordingly:

x has y as a part at t = Def.

Something that constitutes y at t is a strict-part of something that constitutes x at t, where "constitutes" is defined as follows:

x constitutes y at t = Def.

There is a certain place such that x occupies that place at t and y occupies that place at t (Chisholm, 1973).

Suppose that Jones, for example, has changed the tires of his car, then one may say that the car had parts last week that it does not have this week and it will have parts next week that it never had before. Such a formulation is in accord with the terminology of the ordinary sense of 'part'. The strict sense of 'part', on the other hand, implies that if anything is ever a part of the car, then it is a part of the car as long as the car exists. (This implication obtains because of (p3)). The broad sense of 'part' enables us to say that a car may have one part at one time and other parts at another time. Chisholm claims that this is consistent with saying in accordance with strict-part terminology that if x is ever a part of a car, then that x is part of the car at any time throughout the existence of the car.

According to the definition of 'constitutes',⁽³⁾ tire constitutes the right front wheel at t₁ since tire # 1 at t₁ and the right front wheel at t₁ occupy the same place. Furthermore, according to the definition of 'part', in the ordinary sense "the car at t₁ has the right front wheel at t₁ as a part", means that tire # 1 which constitutes the right front wheel is an S-part of what constitutes the car at t₁. Let us suppose that at t₂ we replace tire # 1 with a new tire, let us call it tire # 2. It follows that at t₂ what constitutes

the right front wheel is tire # 2 and not tire # 1. Hence, tire # 2 which constitutes the right front wheel is an S-part of what constitutes the car at t^2 , namely the sum of the parts that constitute the car at t^2 . What remains to be explicated is the sense of S-part of a car whereby an x is an S-part of the car as long as the car exists. As long as the car exists constitutes the history of the car, namely the car at $t^1, t^2, \dots, t^n$. Certainly this explication does not contradict our ordinary sense of part where tire # 1 is part of the car at t^1 and not part of the car at t^2 when tire # 1 is replaced by tire # 2.⁽⁴⁾

In the above explication of the relation part/whole, we have identified the most general properties of this relation. We have also identified some points of distinction, obliterated by Thalberg, between the relation of part/whole and the relation of constitutes, the former is an asymmetric and irreflexive relation, while the latter is a symmetric and reflexive relation. The latter category is more basic on the metaphysical scale in view of the use of terminology of constitutes in the definition of the former relation. The concept of part/whole shares with the concept of causality its asymmetric property and hence its vulnerability to the same kind of puzzles and difficulties pertaining to the causal relation.

In the course of his analysis, Thalberg does not distinguish between "x is part of action A" and "X is a constituent of action A", and uses the two expressions interchangeably despite their basic difference in logical structure.

To overcome the confusion, we shall use the expressions 'part', 'component' and 'element' interchangeably and avoid the use of 'constitutes' in the description of the relation pertaining to actions and various behavioral and mental events throughout the rest of this study.

In reference to the example we dealt with in section I, Thalberg's component theory analyses

- (i) Jones brings about the contractions of his muscles by closing his hand, as follows:
- (ii) The contractions of Jones muscles and closing his hand are two elements of Jones action of clinching his fist.

According to (ii), two temporally separate events are identified. Presumably the tensing of the muscles is an earlier and spatially distinct event from closing the fingers. Both events, though, are elements of the broader action of clenching the fist (Thalberg, 1974: 9). Elements of an action may be causally related, but they are not causally related to the

broader action itself; no part is a cause or effect of the whole of which it is a part. Actions are viewed as streams of events that are causally related. The relation between the 'constituting' events and the action in question is one of elements to a set or parts to a whole.

In this analysis, "causality is not given a complete rest", it represents the assumed relation between the various bits and pieces of behavior. Other qualifying elements of actions include mental events and cerebral processes taking place in the brain of an agent performing an action. Mental events are essential components of actions; occurrences must have various mental components in order to qualify our concept of action.

A major shortcoming of the component analysis of action is its grouping in the same category, ontologically incompatible entities. Mental processes, events and behavioral occurrences are parts or elements of actions on an equal basis. No sufficient justification is provided regarding the different senses of part in the description of a reason for an action as part of that action and the description of electrical discharges in the brain as parts of an action, or of tensing the muscles as a component of the action of clinching the fist. Certainly there are different senses of part that are not equally and meaningfully applicable to the metaphysical entities of events, states, processes and substances. The sense of 'part' in which a tire is a part of a car is obviously distinct from the sense of part or element in which a minute is part or element of an hour. Such issues justify Whitehead's contention that part/whole holds essentially between sense objects, a very wild imagination would view reasons as spatial parts or components of actions. Similarly reasons cannot qualify as temporal parts of actions, though the having of reasons may qualify as such.

The second shortcoming of the component theory regards the ambiguous relation obtaining between the mental components and the action in question. Thalberg claims that one of the advantages of his theory is its accommodation of both logical and contingent connections. Mental items are essential components of actions, cerebral processes are only contingently connected with actions. It is absurd to claim that mental constituents are logical parts of complete actions. As a matter of fact, Thalberg (1974:7) maintains that there is no relation logical or otherwise between the complete occurrence of action, and its mental constituent. The special status of mental elements vis-a-vis other components of actions remains ambiguous unless we interpret Thalberg's repeated assertions that there must be various mental elements to every kind of action to mean that mental constituents are essential parts of

actions (strict parts of actions in the sense defined by Chisholm and explicated at the beginning of this section, such an interpretation would, however, raise questions regarding the possibility of human actions without their physical event core (Sellars, 1973) an action that involves no bodily movement including cerebral processes and physiological events in the brain. If this interpretation is plausible, then Thalberg must abandon the identity thesis between mental and cerebral processes though he views it as a real possibility. He claims that mental events are essentially related to actions while cerebral processes and brain states are only contingently related to actions. The identity thesis claims that mental events are identical with cerebral processes, therefore, identical items cannot be differently related to the same action. An examination of Thalberg's argument for the special status of mental constituents reveals another confusion characterizing his theory. He (1974: 12) argues that "by definition there must be a thought component to episodes of emotion, and various mental elements to every kind of action" His proof for the claim is based on the entailment between the following pairs of statements:

- (i) He underwent the emotion that H
and
- (ii) He thought that H
- (iii) He did x,
and
- (iv) He was conscious and has some power over the bodily motion constituting x
- (v) He succeeded in doing y
and
- (vi) He intended to do y

But this argument is not sufficient for providing a proof of the entailment connection between actions and mental states and events. The argument established only the logical relation of entailment between **descriptions** of actions and some **descriptions** of mental elements. The entailment, however, disappears when these descriptions are substituted with other descriptions that do not carry such an implication. Alternative descriptions of mental states and events could, for example, refer to the temporal, spatial and causal properties of those events without referring to the 'aboutness' of such events. Under such circumstances, it would be difficult for Thalberg to maintain that mental constituents of actions have a privilege over other constituents of actions. Furthermore, given his acceptance of the identity thesis which assumes that mental events are

identical with brain processes, the privileged position of mental elements as essential constituents of actions disappears leaving us with cerebral events that constituents such as bodily movements.

Even if, for the sake of argument, we overlook this crucial difficulty with the component analysis, the ambiguity of the notion of a part or component of an occurrence raises other problems. In the action of running, for example, the motion of the legs is plausibly a part of that action. But is it also plausible to add that the beating of the runner's heart is a part of that action? How is the spatial boundary of what is an occurrence determined? It is not difficult to identify the spatial location of a physical object like a car and hence determine the parts or components of it, but the spatial location of an occurrence is a different matter. Do we include the spatial boundaries of the whole body of the agent as spatial boundaries of the occurrence of his deed? Determining temporal location of the occurrence of an action is similarly problematic. How long does one have to move his legs so as to describe his motion as running? Does the occurrence of running begin with raising the right leg? Would two liftings of the legs count as running or would one need more steps to count his action as running? Is each step he takes a part of the occurrence of the action "running" or only a succession of steps would count as running?... etc.

The relevance of the temporality of occurrences to the relation of part/whole comes into focus when we consider the thesis that reasons are parts of actions. Under the causal analysis, reasons, or more precisely "the having of reasons", which are datable mental occurrences are the causes of actions. In the component theory, no such distinction is made between the having of reasons and reasons *per se*. Reasons along with other mental episodes and physical bits of behaviour are parts of actions. In order to understand the import of the thesis that reasons are parts of actions, reasons may be considered in their capacity as both mental events and as dispositions or propensities for actions.

In the first sense, reasons are datable occurrences like other events beginning at a *t*, and ending at a *t*. Since they are related to other extended events of which they are parts, it is essential that they abide by the principles and conditions determining the relation of part/whole Principles (P1), (P2), and (P3), described at the beginning of this section spelled out the conditions of transitivity, asymmetry and necessary essentialism of parts to their wholes. Unlike the causal relation which specifies a temporal condition (C2), no specific temporal condition

pertains to the relation of **part and whole**. Such an absence may be due to the fact that the relation of **part/whole** is more native to the world of objects and substances where the immediate relevance of temporality is not apparent. Unlike object language, event-language is essentially temporal. Events begin to occur at a *t*, they endure for some period of time and they come to an end at a *t*. The logical properties of **part/whole** (P1), (P2) and (P3) are sufficiently general to apply to all items so related irrespective of the metaphysical status of such items, objects or events. In order to accommodate the essential temporal character of events, the following principle may be added to (P1), (P2) and (P3); let us call it (P4).

(P4) If occurrence A is part of occurrence B, then A cannot occur before or after the occurrence of B.

If Jones' death is part of the action of killing Jones, then Jones' death cannot occur after or before the act of killing Jones. Similarly, if pushing the keys of a typewriter is part of typing, then the occurrence of pushing those keys does not happen before or after the occurrence of the act of typing. (P4) deals with the relation between the duration of both occurrences qualifying as parts and wholes. How about the relation between the commencement of a part to the commencement of a whole? Would (P4) prevent us from saying that A which is a part of B, begins at t^1 and endures through t^2 and stops at t^3 , t^4 , t^5 and ends at t^6 . Is there any logical absurdity about such a temporal relation between parts and wholes within the context of episodes and events. In other words, could temporal overlapping be a property of the relation between a part and the whole of which it is a part. Or is it that only that part of A which occurs at t^2 and stops at t^3 a proper part of B. These considerations are extremely relevant in the context of Thalberg's claim that reasons are parts of actions, in view of the fact that most mental events, "the having of reasons", start occurring before the commencement of actions. Not only desires and goals, but also emotions turn out to be reasons for actions. The problem with construing reason as mental event, is that "the having of reasons" sometimes occur before the commencement of actions and, according to (P4), no proper part of an occurrence takes place before the beginning of the whole of which that part is a temporal component.

The next alternative is to view reasons for actions as dispositions or long-standing states. This explication of reasons is more appropriate because of two reasons:

- (1) Reasons for actions are generally analyzed as complex items of beliefs, or attitudes or both. Beliefs and attitudes are more naturally

construed as states and dispositions. (Davidson, 1963).

- (2) Thalberg (1974: 19) mentions with approval the possibility of construing reasons that are identical with brain processes as conative dispositions that continue with the agent throughout his performance. He does not elaborate this line of thought but mentions it as a salvage attempt for his constituent analysis. In this connection, it should be noted that though dispositions are not events, the onslaught of a disposition is an event (Davidson and Sellars).

In the discussion of the possibility of construing reasons as dispositions, we shall use the example of Sirhan's action of killing R. Kennedy. Sirhan's reason for this action is to prevent Kennedy from becoming president of U.S.A. Such is his primary reason for the action, though the reason may be further explained by referring to Sirhan's belief that if R. Kennedy becomes president then unlimited support shall be provided to the Zionist state of Israel. Given that Sirhan is a Palestinian who has been expelled from his homeland by the Zionists, the primary reason for his action could be logically deduced in a practical syllogism which culminates in his action. The detailed analysis of his primary reason shows that it is identical with his wanting to prevent Kennedy from becoming president. An immediate means to bring about this desired future state of affairs is available to him. Certainly, there are other means of bringing about the prevention of R. Kennedy from becoming president such as supporting a strong rival candidate who could challenge Kennedy and win the presidency. But such a possibility is not within Sirhan's power. Accordingly, the following formulation describes Sirhan's belief together with his wanting that constitute his reason for killing Kennedy.

If Kennedy is killed, then he is prevented from becoming president.

If we construe Sirhan's reason for killing Kennedy as a disposition and not a mental event that occurs before the actual shooting, then there is an event which marks the onset of that disposition even though the disposition to kill Kennedy may have lasted during the action of killing. Suppose that the onset of the disposition occurred at a political rally where R. Kennedy was making promises of unconditional support of Israel. Accordingly the disposition took place before the occurrence of the action of killing and therefore the disposition cannot be a proper part of the action of killing according to (P4). At best the disposition shall have the property of temporal overlapping with the action of killing and not the relation of part to whole. A disposition may be compared to a heart

condition that characterize a given patient. The onset or onslaught of a disposition is the beginning or start of a disposition which an agent did not have before that moment.

The onset of a disposition is similar to the event of the beginning of heart condition with a patient who was antecedent to that event healthy with a rather normal heart functioning. To have a heart condition is electrifying the being disposed to having a heart attack under specifiable conditions. If we extend this analogy further and say that reasons are dispositions to act and hence actions are like heart attacks, it is indeed difficult to imagine the heart condition as part of the occurrence of the heart attack. It is even worse to construe the heart condition as a proper temporal part of the duration of the heart attack.

Thalberg may reply⁽⁵⁾ that to say that a disposition is a part of an action means that it is a feature of the agent's state of mind throughout the occurrence of the action. The time or manner in which a disposition begins to be a feature of the agent's mind is irrelevant to the analysis of action. The important thing is that a given disposition is there; it is characteristic of a person's mental makeup during the action he is engaged in. The criterion for a given disposition D to be a feature of an action A, is simply that it is there; it continues to characterize an agent's mind when action A occurs. In other words, Thalberg may argue that, like salt which has a disposition to dissolve in water, actions exhibit certain features regardless of the time when they started acquiring those features. Like salt that dissolves in water so long as it is a soluble entity, actions exhibit dispositional features as long as those dispositions are features of the state of mind of the performer of those actions. Such a tautological criterion for the inclusion of dispositions as components of actions commits one to the view that all dispositions which may co-exist at the time of the occurrence of the action, are features of that action by virtue of the fact that these dispositions are there. In reference to the example of the solubility of salt, we naturally find out that there are other features of salt that may co-exist with its solubility, namely its salination feature. In other words, in addition to the fact that salt dissolves when put in water, it also salinates that water. Carrying the analogy to its logical conclusion would mean that an action exhibits all the dispositions that characterize the mental state of an agent at the time of action. In Sirhan's case, his action of killing Kennedy exhibits not only the disposition of wanting to kill Kennedy, but also the disposition to run away when witnessed by an officer. Does Thalberg want to say that the latter disposition is also a

feature of the action? But such a position entails that some dispositions such as the "Freudian drive for death" characterize every action being performed equivalently.

To avoid this conclusion, Thalberg's last resort is to argue that only those dispositions that are semantically related to actions are essential components of action.

Actions are analyzed via the logical relation of entailment that obtains between an action and the reason for that action which is construed as a disposition. Such an answer, however, would reduce his component analysis to a version of the entailment theory concerning actions and reasons, which is quite different from saying that reasons construed as dispositions are components of action. Such a move is not available to him in view of our reference earlier to the distinction between descriptions of actions and dispositions on the one hand, and events, actions and the onset of a disposition on the other. Entailment is a relation between descriptions and not between events or physical entities.

To recapitulate, the following dilemma is entailed by Thalberg's contention that reasons are parts of actions. Reasons are either

- (i) Mental occurrences
- or
- (ii) dispositions

If reasons are (i), then reasons must abide by (P4). But there are reasons that occur before the commencement of actions.

If reasons are (ii), then either they are not parts of actions or (P4) is true and therefore reasons are not parts or components of actions.

III

We are now in a position to compare and contrast the merits and perils of the causal theory of action versus the component theory as two rival theories in the analysis of action.

First, both theories assume that actions are particulars, datable occurrences that begin and endure over a period of time. They are not timeless abstractions, or universals.

Such an assumption is necessary for both theories since only events can be causes and effects and only particular substances could be ascribed with parts. In this respect both theories are concerned with 'real' entities as terms of the relations of causality and part/whole. Hence they are distinguishable from the logical theory of entailment where the terms of

the relation are linguistic entities & propositions. Propositions may entail or be equivalent to other propositions but it is absurd to view a proposition as part of another proposition.

Secondly, both theories imply that the terms of causation and part and whole are contingently related. Admittedly, the concept of a cause implies an effect and the concept of a part implies a whole. However, the relation between the events and substances comprising causes and effects is contingent. It is conceivable to strike a match without its lighting (in case of a wet match), and it is conceivable to clench a fist without closing the fingers (in case of a fingerless hand).

Thirdly, both theories share some of the properties necessarily characteristic of the relations of causality and part/whole respectively. Asymmetry is a logical property that characterises the causal relation as well as the relation part/whole. If 'a' is a cause of 'b', then 'b' cannot be a cause of 'a'. Similarly, if 'a' is a part of 'b', 'b' cannot be a part of 'a'. Breaching the former principle is the main reason for Thalberg's rejection of the causal theory as it would entail that an item X is both a cause and an effect of another item Y. In short, both theories seek an asymmetric relation connecting actions with other items in the world.

Both theories call for a transitive relation to connect actions with other items in the world. The condition of transitivity is especially clear in the case of the component theory, where its first principle states that "if X is a strict-part of Y, and Y is a strict part of Z, then X is a strict part of Z". Such a condition is not as readily acceptable in the causal theory of action. However, a case may be made regarding a causal order of events where a first cause is – in a sense – the cause of every other event no matter how many events intercede between them by the succession of causes and effects.

The causal theory as well as the component theory concede a temporal condition as necessarily true of the relations involved. The form of the temporal condition is determined by the relationship involved. In the causal theory, the temporal condition states that no two items are related as cause and effect unless the latter does not happen before the former. The temporality of the part/whole relation consists in the principle that a part cannot occur/exist after or before the occurrence/existence of that whole of which it is a part. This aspect of the temporal condition indicates an essentially basic difference distinguishing parts from causes.

The fact is that causality relates two properly distinct items; no two events can be causally related unless they are absolutely distinct. How-

ever, such a condition does not obtain in the case of parts and their wholes.

It is intuitively feasible to think of effects to come into being only after their causes cease to be. The conception of wholes without their parts is counterintuitive. Intuitive conceivability of causes without their effects is the most suitable criterion for metaphysical distinctness (Moore, 1977). In the Philosophical terminology, the conceivability criterion states that an adequate description of case 'a' is possible without reference to a description of the effect 'b', an adequate description of striking a match is possible without reference to a description of its effect e.g. the lighting of the match.

Adequate description of a whole without reference to its parts is more difficult to come by. In the case of Thalberg's example, the closing of fingers is part of Jones' action of clenching his fist. In order to give an adequate description of the action of clenching the fist, the following descriptive elements of the action must be spelled out;

- (1) The agent of the action; in our case Jones.
- (2) The act-type; clenching the fist.
- (3) Modality of the action; it may be that Jones clenched his fist angrily and the means or the how of clenching his fist; by closing his fingers.
- (4) Setting of the action which mentions the temporal, spatial and circumstantial aspects,
- (5) The rationale of the action including causal, purposive and international aspects of the action⁽⁶⁾. The crucial step in our description is the third element or the how of the performance. In mentioning the how, reference is naturally made to the means one pursues in order to perform a given action or the **way** in which one realizes the performance of the action in question. It is in this respect that a reference was made to the event of Jones' closing his fingers as a means by which he clenches his fist. The reference is, however, neutral with regard to the description of means in terms of action terminology (i.e. as a basic action tied to a larger action of which it is a part) or in the terminology of events (i.e. a mere event tied to other events).

The above argument has sufficiently established that unlike causally related events, the relation of part/whole does not connect distinct items. Such a conclusion entails some philosophical commitment with respect

to the problem of the individuation of actions⁽⁷⁾. To be consistent, the advocate of a component theory of action is required to maintain that the action which is the whole and that which is a part are not two numerically distinct actions. On the other hand, he cannot argue in defence of the identity of the references of

- (a) Jones closing his fingers
and
- (b) Jones clenching his fist
as one and the same action because he maintains that one of these descriptions refers only to a part of the action. In terms of spatio-temporal dimensions, Jones closing his fingers is only a spatial part of the location of Jones act of clenching his fist which may have other components, such as tensing his muscles.

In short, the fact that wholes and parts may have different relational properties does not sufficiently justify their numerical distinctness. The fact of Jones doing nothing in addition to his closing his fingers, does not establish its identity with the action of clenching his fist.

On the other hand, the causal theorist's position regarding the nature of actions does not commit him to a single and unique stand with respect to the individuation of actions. Davidson, Sellars and Goldman defend causal theories of action, though the first advocates an identity thesis while the other two have produced numerous counter-examples to falsify it (Sellers, 1969 and Goldman, 1970).

CONCLUSION:

Indeed, actions may be caused by some items in the world, but they may as well relate to still other items as part and whole.

Causality and part/whole may co-exist as two kinds of relations characterizing actions. Such has been the conclusion from our study of the nature of the two relations. The only problematic issue regarding the conceptual compatibility of the two relations pertains to the philosophical significance of the individuation of actions and the various criteria for distinctness until the time when the problem of action individuation is resolved one way or the other. The points of comparison between the logical status of causal and part/whole relations shall point towards the twinhood rather than the incompatibility of the two concepts.

The given justification for the above conclusion may prove inconclusive, but then no philosophical justification.

The merit of this study consists in revealing the need for a closer examination with regard to the meaning of ("X" is part of "Y") where the relata are human actions. Many philosophers have suggested that the relational property of parthood applies in the context of actions (Sellars, Thalberg, Von Wright and McCann). None, however, has given a detailed analysis of the concept in that context. The treatment of the concept by Whithead and Chisholm in the context of sense-impressions and physical objects respectively has been helpful but limited because what is appropriate for a language of things and substances may not be suitable for a language of events and states. We have borrowed from the language of things what is true of the relation of parthood when applied to the language of actions and events. In the course of the transformation, other particular properties of the relation of part/whole came into focus, enabling us to compare it with the causal relation which is native to the language of events and actions.

Our purpose has been to reach a better understanding of actions, what they are and what statements referring to them mean. Hence, any interpretation of our endeavour as explanatory is mistaken. Understanding is not explanation (Von Wright, 1971), the latter being exclusively reserved for the disciplines of science such as psychology, physiology etc, that may employ laws in the explanation of actions. Such laws may or may not be reduced to causal and/or functional regularities. Within the domain of philosophy, on the other hand, we pursue a deeper understanding of the nature of human action through analysis of the linguistic utterances referring to the metaphysical entities we call 'actions'. In view of the above distinction, we have not addressed ourselves to the problem of the notion of causation being employed in the sciences and its critique by subsequent scientists, which could be a subject for another study.

We are aware of the peculiarities of human actions separating them from physical events and episodes. However, it is one of the strong tenets of the causal theory of action that, all things considered, the logical principles pertaining to the causal relation are equally applicable to pure – events as well as to actions. The author shares that view and hence argues for a causal analysis of action that defies objections of the kind raised by Thalberg.

NOTES:

1. This condition may suggest that the causal concept **being employed** is built on a mechanistic model, i.e. a queue of billiard balls pushing and hitting each other. Thus, N.R. Hanson's critique of this approach in "Causal Chains" *Mind* Vol. 64 (July, 1955), would be applicable to our concept of causation as well. However, this condition is one of the most general properties of the concept which is relevant to the analysis of action and not only in its scientific employment. Furthermore, this condition is useful in the distinction between causes and sufficient conditions in cases of causal over-determination. This advantage of the notion of causal chains is brilliantly employed by M. Scriven in "The Structure of Science", *Review of Metaphysics*, Vol. 17 (1963-64) p. 410, where he says that "The Conditions (perhaps unusual excitement plus constitutional inadequacies) may be present at 4:00 p.m. that guarantee a stroke at 4:55 p.m. and consequent death at 5:00 p.m., but an entirely unrelated heart attack at 4:50 is still correctly called the cause of death which, as it happens, does occur at 5:00 p.m. Essentially, the heart attack was and the excitement was not the cause of death because the "causal chain" between the latter and death was interrupted, while the former" went to completion".
2. To my knowledge no advocate of the causal theory of action holds these assumptions.
3. Note that "constituents" is a symmetrical relation.
4. This is my own explication of what Chisholm tries to show. His defense is needlessly long and irrelevant to our main concern here.
5. I am grateful to Prof. Sellars for alerting me to these possibilities.
6. This classification of the descriptive elements of actions is given by Rescher in "On the characterization of Actions" in M. Brand's (ed.) *The Nature of Human Action*, pp. 247-254
7. See Thalberg's position on this issue in his "Singling out Actions", *Journal of Philosophy* (1971) pp. 281-7.

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