

## INTENTION, ENTRAINMENT AND PSEUDO-PROCESSES

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### INTRODUCTION

I am going to be talking about actions applied to physical objects where the intention is to alter the world in some way. This will rule out discussion of events such as winks, nods, insults, mistakes, recollections, etc. There are borderline actions that escape, immediate, classification, such as dancing. I set these aside. The actions I will be discussing will be a subset of processes; events will be considered constitutive of actions but not exhaustively so. A theory of actions will be sketched, one that takes the fundamental relation to be between persons and the physical world. It will be argued that our actions are processes that result from attending to ideas that may be expressive of our intentions. It is a return to some ideas basic to the researches of James and F. H. Bradley.<sup>1</sup> The theory to be proposed is dualistic: it introduces mental processes as pseudo-processes, and proceeds to relate mental process to bodily movements, taking the form of "basic actions," by way of entrainment. An analysis of the fundamental features required of world transforming actions reveals important differences between the availability of theories of action which take causation as a relation between processes and theories of action which assume event-event causation as the only causation there is. Combining the idea of a *pseudo-process* and that of *entrainment* affords us the opportunity to construct a theory that can, easily, accommodate a distinction few action theorists acknowledge, but which is essential to understanding psychological processes in the context of action theory; and, here, I mean the distinction between a volition and an intention, a distinction, commonly, rejected out of refusal to commit to the existence of volition. Our interest is in action not verbs of action; in philosophical psychology rather than the semantic analysis of reports of psychological behavior.

### ENTRAINMENT AND PSEUDO-PROCESSES

A shot is fired; the runners push off from the block and the race is on. The relation between the shot and pushing off the block is a relation of two events in a causal process. One billiard ball striking another would illustrate, even more starkly, a relation between events commonly thought of as causal. But when an agent acts on an idea, whether we understand it to be a desire or belief, the relation between having the idea and performing the action is of a different sort. If the claims to follow are correct, it is a relation between two processes: a pseudo-process and causal process. This relation is far more complex and, if we are right, a relation of processes, rather than events.

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<sup>1</sup> *Principles of Psychology* vol. II, (1890, 1950), Dover, New York; *Collected Essays*, vol. II, 1935, Oxford.

This relation of processes is causal, but it is not causal in the sense of being, merely, a compounding of relations between event pairs in a binary causal relation. What concerns us is the *structure* of the relation between the processes in this causal relation. This structure is one of entrainment, and we need to investigate its logical structure in order to appreciate its special qualities. The ideas with which we begin are ‘entrainment’ and ‘pseudo-processes’. Combining these two ideas, that of a pseudo-process and entrainment, provides the conceptual basis for a different view of the relation of thought and action.

In physics the earliest recognized occurrence of entrainment involved two moving pendulums where, from a state of differing periods of oscillation, the two eventually reach the same periodicity. This phenomenon was first reported by Christian Huygens. Until Michotte’s experimental inquiry into the perception of causation, there appears to have been little need for a special category associated with the phenomenon.<sup>2</sup> Although Leonard Talmy’s “Force Dynamics in Language and Thought” examined linguistic structures pertinent to the semantics of force dynamic verbs expressing entrainment relation, the discussion is brief. Ray Jackendoff, also, devotes a short section of his carefully crafted *Semantic Structures* (MIT, 1990) to entrainment, but few, since, have taken much interest in the concept.

## ENTRAINMENT

Entrainment is a relation between two processes and contrasts with the causal relation between two events, such as when the impact of one billiard ball causes another to move. In the case of event-event causation, there is no discernible logical structure, aside from the structure of the events in relation. Entrainment-causation, however, is quite different. Elsewhere, I have examined the structure of this relation in some detail, taking my cues from some remarks by Reichenbach on probability. But for our purposes a brief introduction will suffice.

Entrainment relates processes, and in so doing it relates events constitutive of processes. Although, we affirm the primacy of processes over events for reasons of ontological simplicity and the empirical fact that we are acquainted with processes and not events, for the time being we shall proceed by accepting the orthodox view that processes “consist” in a series of events. Entrainment is to be distinguished from other sorts of causal relations between series of events. David Lewis entertained the possibility of a relation between processes but, apparently, believed that such a relation could be described in terms of relations between events, where ‘c’ and ‘e’ refer to processes:

Suppose it is not true... that *e*, taken as a whole, causally depends on *c*, taken as a whole; suppose even that they are not connected by a chain of causal dependence. It may nevertheless be that *c* and *e* are divisible into parts in such a way that every

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<sup>2</sup> *La perception de la causalité* (1946, 1954) University of Louvain, Louvain. Leonard Talmy, “Force Dynamics in Language and Thought,” *Papers from the Twenty-first Regional Meeting of the Chicago Linguistics Society*; also in *Cognitive Science*, 12, (1988).

part of  $e$  is causally dependent on (or connected by a chain of causal dependence to) some part of  $c$ .<sup>3</sup>

There are, however, numerous ways, in which every part of  $e$  may be causally dependent on some part of  $c$ . Suppose we have two series of events:  $a = (a_1, a_2, a_3 \dots a_n)$  and  $b = (b_1, b_2, b_3 \dots b_n)$ , where the members of both series are ordered in time. Suppose that every part of  $a$  is causally dependent on some part of  $b$ . One such case would include instances where an event,  $a_2$ , depends on some preceding event in  $b$ , say,  $b_1$ , but where another member of  $a$ ,  $a_1$ , depends on an event  $b_2$ . We have stipulated that the events constitutive of each process are ordered in time, but we have said nothing as to how the processes, themselves, are related in time. Suppose that the series  $b$  precedes  $a$ . In this case,  $b_2$  might cause  $a_1$ . The dependence between the two processes would, however, be discontinuous insofar as there would be no, sequential, one-one pairing of all members of the dependent set,  $a$ , on members of  $b$ . In such a circumstance,  $a$  can be a process that is the effect of the other process,  $b$ . If, however, the two series run concurrently and continuously then since, as we have stipulated,  $a_1$  is caused by  $b_2$   $b$  cannot be the cause of  $a$ . Where we are talking about entrainment-causation, in order for there to be a causal dependency there must be a continuous dependency between events constitutive of the processes. I will maintain, therefore that in certain cases a process  $b$  causes a process  $a$  when and only when there is no discontinuous dependency of  $a$  on  $b$ , but where all members of  $a$  depend on some member of  $b$ .

Entrainment is, just, such a relation of causal dependency. Event-event causation is an insufficient condition for such process-process causation, even though a process may on this occasion be regarded as a series of events. It is, however, a necessary condition. Whether all process causation is entrainment is doubtful. For example the process of rubbing my hands together may warm them, but the warming process may not be, properly, regarded as entrained by the rubbing. Entrainment is, somewhat, different from other causal relations. For the time being, I will restrict myself to the entrainment of motion, such as when force applied to a gear causes it to move, causing (in the sense of entrainment) another gear to move. I will now examine the nature of pseudo-processes and, then, relate entrainment and pseudo-processes in proposing a theory of mental causation.

## PSEUDO-PROCESSES

According to Wesley Salmon, who placed the distinction between processes and pseudo-processes at the forefront of his discussion of causation, "The difference between a causal process and a pseudo-process...is that the causal process transmits its own structure."<sup>4</sup> Let's examine the difference in a bit more detail.

Imagine a beam of white light emitted from a rotating source. One result is a, moving, spot of light cast on the inside wall of the large domed building housing the rotating light source. If I place a piece of red glass at some point close to the wall, when the white

<sup>3</sup> *Philosophical Papers* vil. II. (1986) Oxford, p. 172.

<sup>4</sup> *Scientific Explanation and the Causal Structure of the World*, (1984), Princeton, p. 144.

light passes through the glass, the spot on the wall is changed to red. As it passes the glass it, then, reverts to white. Whenever the glass intervenes between source and wall the spot, the spot turns red. If the glass is placed closer to the wall, the spot remains red. This will be the case as long as the wall is in front of the red piece of glass. Because the color red is preserved at any point along the path from the glass to the wall we can say that the signal, the color red, is "transmitted." We have a causal process; a signal is being transmitted. Now let's take a look at another path: the path along the wall of the dome resulting from the rotation of the light source. We have, here, two processes, one causal and the other a pseudo-process.

The propagation of the light along the path from rotating source to the wall is a causal process; the movement of the spot along the wall is a pseudo process. The process from light source to wall is a causal process. We have seen that within this process a signal is transmitted. The process which is the movement of the spot along the wall is a process that did not transmit the signal, for when the spot passed by the red glass the color was not transmitted. Instead, the color reverted to its original white. This process, by contrast, is a pseudo-process. This pseudo-process has some remarkable characteristics, characteristics first noticed by Hans Reichenbach, a prominent philosopher of science.<sup>5</sup>

One such property is that the speed of the movement of the spot of light is not limited by physical law, unlike the causal process of the propagation of light from source to the wall. However, the speed of the spot of light along the wall is not constant and may exceed the speed of light as the rotating source increases its rate of rotation in apparent (merely apparent), contradiction of the Theory of Relativity. This is a strange property, one belonging to the pseudo-process we have described. Crucial to the distinction is the notion of the transmission of a signal.

This characterization requires some important revision, however owing to some important insights offered by Dowe.<sup>6</sup> Dowe speaks instead of speaking in terms of a transmission of a signal, speaks of the conservation of certain properties. This important contribution to the subject does not affect our application of the distinction, however and for reasons of simplicity I will retain the original formulation of the difference between these two sorts of processes.

There is a sense in which a pseudo-process is a non-physical physical process that has a physical explanation, somewhat in the way a shadow is not physical but has a physical explanation. However, although they are not physical I am going to maintain that pseudo-processes can have effects. A pseudo-process, according to the theory to be proposed is *not* epiphenomenal in one sense: its effects are, perhaps exclusively, on minded entities; entities capable of intelligent behavior. Entrainment, as illustrated in our example of the gears, can be a relation between causal processes; entrainment in the mental cases – of action by thought – is a relation between a pseudo-process and a causal process, the entrainment, itself, being causal.

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<sup>5</sup> *The Direction of Time*, (1956), University of California, Berkeley.

<sup>6</sup> "Wesley Salmon's Process Theory of Causality and Conserved Quantity Theory," (1992) *Philosophy of Science*, 59. pp. 195-216.

Advocates of pseudo-processes may be reluctant to accept the suggestion of a pseudo-process being part of such a relation without being, itself, a causal process. But this is to confuse the causal relation of processes with the causal relations of events constitutive of a pseudo-process. I will now attempt to provide relevant details that, hopefully, will establish this as a credible view. Central will be the fact that if the relation of the mental to the physical in the case of action is entrainment as I describe it, the structure of an idea in the agent's mind will by way of "basic actions" inform the external world. In this sense, it resembles what Salmon has called a causal, rather than a pseudo-process; but the point is that structure is not preserved; it is produced in the world via a pseudo-process. The structure of the thought and the fact brought about by intentional action coincide, but no structure is transmitted in the way an arrow is "transmitted" through the air, or its momentum conserved as it flies through the air.

I follow the lead of Wesley Salmon on a number of points. Mental causation, as I will describe it, relates processes not events. Although I will not pursue the matter, here, in any detail, I argue that processes are fundamental, whereas events are to be understood in terms of processes. For now, let's be clear on what a pseudo-process is. I will begin by making use of Salmon's paradigm, describing it in his terminology.

I will alter, only slightly, Salmon's example of a pseudo-process. It should be mentioned that Salmon owes the initial insight to Reichenbach, whom he repeatedly acknowledges. Imagine, then, that we are in a large domed building with a rotating light source at the center. The source rotates, casting a beam of light on the opposing circular wall. Light is propagated from the source to the wall at a constant speed (the "speed of light"). Current physics maintains that no greater velocity is physically attainable. But, now, consider the spot of light that appears on the wall as the light source rotates. If the wall is far enough from the source, and the rotational velocity is increased, sufficiently, then the spot of light on the wall can be made to move in excess of the speed of light. The persistence of "the spot" is an issue, and latter when we discuss the concept of a path it will be pursued at greater length, but for the time being let us suppose the circular path of the beam of light reaches a velocity in excess of what is possible for a physical object; that is, in excess of the speed of light. The propagation of the beam of light from its source to the wall is a causal process, but the movement of the spot of light is not a causal process, it is a "pseudo-process." Note that the movement of the spot of light across the wall has a causal explanation without, itself, *being* a causal process.

Thinking of any process as being, merely, a "prolonged event" (D. Lewis Phil. Papers vol II. P. 173) renders it virtually impossible to describe one process as causing another in a productive way.<sup>7</sup> The notion of a process as a prolonged event is something we, also, find in earlier philosophers such as C. D. Broad.<sup>8</sup> But such a move obscures or rejects any difference between events and processes. I will not pursue the matter of how a process differs from a series of events, except to say that a series of events is understood as a process when the series has an effect that depends on the "cooperation" of two or more

<sup>7</sup> David Lewis, *Philosophical Papers*, (1986) Vol. II, Oxford, p. 173.

<sup>8</sup> *Scientific Thought*, (1923), Routledge & Kegan Paul LTD.

events in the series. P. W. Bridgman has some suggestive remarks along these lines, such as when he remarks:

I believe, however, that the assumption that such an analysis into small scale elements is possible is tacitly made by the thought of many physicists. If the analysis is not possible, we may expect to find results following the cooperation of several events which cannot be built up from the results of the events occurring individually.<sup>9</sup>

A process differs from its constitutive events in a way analogous to the difference between a set consisting of two elements and an ordered pair: the elements, alone, will not entail an ordering within the set. We can suppose one gear's turning as one event; a second gear's turning as a second, and a third gear's turning as a third *without* thinking of the process of the first gear's turning the third. But, consider, for now, our example of three gears, where one turns another which turns another. The turning of that last gear depends on two events of turning; the second gear's movement does not take place without the first gear's turning, so the third gear's turning depends on two events and not simply the proximal event of the second gear turning. This suggests that processes cannot be considered to be, merely, a series of events, but the issue is complex and difficult to resolve. Although it will not figure, highly, in describing volitional acts in terms of entrainment and pseudo-processes, the position to be taken is that events are logical constructs from processes and that while we are acquainted with processes, we are not, so, acquainted with events. We "make up" events.

Let us, at least, suppose that there is a difference between events and processes. What is essential is, having introduced entrainment as one component of the theory, we introduced a second component, pseudo-processes. We can, now, go on to provide an account of voluntary actions, one which is minimally dependent on extraneous "mental" events. For our purposes mental events will take the form of ideas and not, say, brain states "under a description," or some such thing.

#### A DUALISTIC THEORY OF ACTION

The dualism to be advocated is a modest one, but it is dualism nonetheless. A thought will be considered as shadowlike, a pseudo-process: it will have a physical explanation but it will not be regarded as physical. Entrainment will be regarded as a very special process and it will provide a relation between processes, one mental, the other physical. The *nature* of the mental and the nature of the physical is of little concern to us. Understanding the nature and structure of entrainment processes, however, is essential to our proposal. Briefly, we shall maintain that mental processes entrain action; that is, pseudo-processes—"mental processes"—will be understood to entrain a causal process without being part of the causal process entrained or the entraining process, itself. Many of the details of the theory we accept date back to F. H. Bradley's reaction to James's theory of volition, but with the mechanisms of entrainment and pseudo-processes being introduced to compensate for a number of deficiencies in Bradley's earlier mentalistic

<sup>9</sup> *The Logic of Modern Physics*, (1958) Macmillan, p. 89.

theories of the will. Bradley's theory builds on that of James, and critical to James's theory as well as Bradley's is how attention figures in the determination of action. A brief discussion of *attention* is essential to our task.

The entrainment we shall associate with volition consists in the structure of a thought being transmitted to the world as the action of the agent realizes the intention guiding behavior. The idea in a way, and here we follow F. H. Bradley, "particularizes" the idea by making it "real." Attention to a pseudo-process, taking the form of an idea, or series thereof, will have efficacy, insofar as it will result in an entrainment relation between thought and action. We attend to ideas arising out of the (cognitive) conceptual framework of the agent on some occasion of sensory or perceptual experience. What the agent does, as opposed to whether the agent does what he wants, are two different points of interest. Although, the concept of attention employed in stating the theory to be proposed originates with James, more recently the idea has attracted a number of innovative theorists. One example is H. P. Stapp:

"When an action is initiated by some thought, part of the instruction is normally to monitor, by attention, the ensuing action, in order to check the intended action."<sup>10</sup>

Stapp, like James and other in the Jamesian tradition, including myself, have and must consider the challenge presented by bridging the difference between "some thought" and "the ensuing action."

### THE CAT AND THE LIGHT

We have been discussing entrainment as if the processes involved were continuous. This is particularly true of such processes as one gear turning another. In this case, there are three processes: two processes of gear turning and, another process, that of one gear turning the other. This is not beyond controversy, as a reasonable argument can be made that there is no third process of one gear turning another. What is important is that the processes are continuous in some sense, although there are forms of entrainment that do not involve continuous processes.

Imagine a cat with nothing to do. I decide to play a game. I take a flashlight and shine its focused beam on the floor. I move the spot of light created by the beam across the floor; but I do so by intermittently turning the light on and off while moving it across the floor. The cat at first seems disinterested but, then it lunges at the beam of light. I turn off the light. He stops. I move the light slightly and turn it on; the cat lunges at the spot of light. Gradually I induce the cat to the place I want it: the corner of the room. I have entrained the cat's movement by moving the spot of light across the floor. The movement of the spot was not continuous, like the gear case; but entrainment does appear to be the nature of the relation between the two processes.

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<sup>10</sup> *The Volitional Brain: Towards a Neuroscience of Free Will* ed. Benjamin Libet, Anthony Freeman, and Keith Sutherland, (1999) Imprint Academic, p. 157.

According to Reichenbach, impressions are like shadows, and shadows, recall, are pseudo-objects; just as the movement of a shadow is a pseudo-process.<sup>11</sup> We extend this idea beyond impressions, and suggest that thoughts as well as impressions – subjectively regarded – are, similarly, pseudo-processes. A pseudo-process associated with a train of thought resulting in action is volitional. Such thoughts in the context of a volition constitute the agent's intention. The agent couples the events constitutive of the pseudo-process and basic actions over the "stretch" required to satisfy the intention. There are no more things in the brain called "ideas" than there are things called shadows on the wall. But can't I draw a circle around the shadow appearing on the wall?

Whether the entraining pseudo-process is a "stream" of awareness or requires attention is an issue we need not, presently, resolve. What is important to consider is that while a causal process can be affected by observation – such as observation at the quantum level – attention does not affect a pseudo-process. A pseudo-process, however, does have causal efficacy, such as the effect it may have on a cat pursuing a shadow; that is, an agent attending to a pseudo-process. I will conclude by relating two ideas that are essential ingredients to the theory: entrainment and basic action.

## ENTRAINMENT AND BASIC ACTION

Donald Davidson makes an astonishing and, extremely, important claim. He says that "We never do more than move our bodies: the rest is up to nature."<sup>12</sup> (*Essays on Actions and Events*, Clarendon Press, 1980, p. 59). We are faced, then, with a compelling question in this regard: where does "nature" begin on the theory we are, here, proposing? Do we begin with the idea with nature entraining the result of attending to the idea? Do we begin with the idea with the events following the bodily movement being the effects of entrainment-causation? Or, do we have bodily movements entraining worldly processes according to natural law? These are not mutually exclusive alternatives. If I throw a hammer and it strikes a window causing it to break, then according to Davidson all I do is hold the object in my hand, move my arm, and let go of the hammer. Its going through the air; its striking the window; the window's breaking, all this is done by nature. Davidson says,

When I tie my shoelaces, there is on the one hand the movement of my fingers, and on the other, the movement of the laces. But is it possible to separate these events by calling the first, alone, my action? What makes the separation a problem is that I do not seem able to describe or think how I move my fingers, apart from moving the laces.<sup>13</sup> (AE p. 51)

What, then, is the description of my finger action? Davidson retreats behind the "under a description" gambit. He says that there is a description under which the agent knows, when he ties his shoes, what he is doing: "So if I tie my shoelaces, here is a description of

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<sup>11</sup> *Experience and Prediction* by Hans Reichenbach, (1938), University of Chicago Press, p. 129.

<sup>12</sup> *Essays on Actions and Events*, (1980), Clarendon Press, p. 59.

<sup>13</sup> *Op. Cit.* p. 51.

my movements: I move my body in just the way required to tie my shoelaces."<sup>14</sup> There is a problem with Davidson's use of "just the way required." In the first place, there is no one action, describable as the one which is the one "required." Why not I move the air surrounding the laces in just the way required to tie my shoes? It might be replied that this is not the description under which the agent "knows what he is doing." But this is woefully insufficient. What about tying my shoes in the dark? In this case, I can't know what I am doing. I may know without looking what the orientation of my body is, but I can't know what I'm doing *with* my fingers, if I can't see them. Here is another problem: Davidson has selected an action, shoe-tying, that is habitual. But suppose I am doing something I've never done before. What description is available? There are other problems with Davidson's proposed description. The description he offers is not individuating; it pertains only to the entire action of tying the shoes. How do I describe the first couple of seconds of finger movement and, then, the next couple of seconds? Is it the same description in both cases? Then what is the significance of a description in the first place, if it fits numerous actions? But even if each and every objection can be met, what is beyond dispute is there is a *contrast* between describing basic actions, like finger movement, and non-basic actions. There may be no description of my finger movement as such.

If I cannot describe how I move my fingers, then it can never be said that I move them intentionally under one description but not *another*. We might argue, as Davidson does, that the intentionality of Hamlet's killing Polonius is relative to a description, and so not an event of a natural kind, but we cannot argue that moving our fingers in such and such a way is not of a natural kind for the same reason, simply because there is no description available for substitution! So in the case of the most fundamental of actions, by Davidson's own admission, relativity to a description is not a signature fact of attributions of intentionality. If Davidson claims there is this one description and under it the action is intentional, still there is no reason for denying that this class of actions is not a natural class.

On Davidson's account, we have the bodily movements and the movement of the laces. The bodily movements are mine; but, if nature does the rest what is the relation between the movement of my fingers and the movement of the laces? Here we have an entrainment relation between the finger moving process and the movement of the laces. But what is nature "doing" when it does "the rest"? The problem of separation, as Davidson understands it, is an epistemological problem, one of not knowing how to *describe* my own movements without describing the movement of something else. On the theory we propose, the idea –what we are thinking, the intention – is to affect the world. The action is not moving the fingers, as such, but "transmitting" the content of the thought to the world, making true the object that is our intention.

The action of shoe-tying is one of entraining the movement of the laces by means of bodily movement, and the entrainment of bodily movement by way of the idea, or intention. So what we have are two entrainment relations; one is by mental causation – that is, the entrainment of the process understood as a series of basic actions, and the

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<sup>14</sup> *Ibid.*

entrainment of a series of events in the world by a non-mental process obtaining between basic actions and the movement of the laces. The analogy of the three gears is useful.

The relation of the first "gear" – the thought or intention - to the second – the series of basic actions - is entrainment of a physical process by a pseudo-process; that of the second gear to the third – the movement of the laces - is entrainment-causation relating causal processes. What, then, is the "rest" and what is it that is not done by nature that precedes it? The right answer is that the entire process is part of nature, but that the first component of the process is not a relation between *two* physical processes (as long as we regard pseudo-processes as including mental processes). In the case of the first process, relating the idea and basic actions, nature does not enter in the way it did in the case of the hammer throw, that is, the series of events relating letting go of the hammer and breaking the window. Further, it may be argued that in the case of the hammer the direction, momentum etc. is determined by the vector sum of forces, whereas in the case of shoe tying this is not the case. But this would be to overlook the fact that torque is a vector property of a special sort. Thus both are causal processes.

## PERSONS AND ACTIONS

In the shoe tying case (actually untying is a more revealing example) we have an instance of entrainment; changes in the world, that is, changes in the configuration of the shoe laces. Now we may ask whether moving our fingers is a "change in the world." G. E. Moore, famously, used a human hand as his common sense example of an object in the "external world."<sup>15</sup> ("Proof of an External World") But Moore was interested in visual perception, not action. Understood action-theoretically the border which separates the world and the self is not so easy to define, and I think Davidson's shoe tying case provides ample illustration of this difficulty.

If we take the fingers to be part of the agent and the agent is distinguished from the world, then we must distinguish, contra Bradley, two sorts of actions. In a sense, most basic actions that change the world do so in part by way of entrainment, letting go of a hammer, however, may provide a possible counterexample to this claim. But, restricting ourselves to Davidson's shoe tying example, the question can be raised this way: What does the agent *do*? And what is "the rest" that is *done* by nature? Any answer must take into account the separation between a change in the world and a change in the agent. If we take a basic action as a change in the agent and regard his arm as part of *him*, then a basic action is a change in the agent, not the world. If, however, we view the basic action as a change in the orientation of a physical body, then the change is a change in the world. Here we countenance a distinction between self and the world, between the agent and what is acted upon by means of basic action.

Suppose it takes me twelve seconds to tie my shoes. Is this the same description under which I perform every basic action of the process? The same for both shoes on every occasion? One would think not. The problem is that Davidson, and others, have based their theories of action on belief; the reasons are complex, linked as they are to the

<sup>15</sup> "Proof of an External World," (1939) *Proceedings of the British Academy*, Vol. XXV.

semantics of opaque domains, theories of meaning, etc. The problem is that there is no dynamic and the idea of a “description” is tethered to language. Ideas, as we shall regard them, are dynamic, cognitive, and not dependent on language in order to get an intentional action “going.” Does the person tying shoes retain the description as he entrains by his finger action the movement of the laces? If I am untying a complex knot, is the description none other than “I move my body in just the way required to untie my shoelaces”? If basic actions are guided by ideas, and these ideas are supplied in part by observing (or feeling) the consequences of immediately preceding basic action, then how can it be that the same description persists in the course of the numerous basic actions involved in the untying process? What Davidson’s account, and that of others, lacks is what is required in order to describe actions as processes, rather than events. Davidson’s is an event, not a process, ontology.

Actions are dynamic processes; the concepts of ‘belief’ and ‘under a description’ are too “brittle” (to use a term from engineering) to adequately characterize human action. A person may tie his shoes; a body does not. The difference is that a person becomes, as F. H. Bradley says, “identified” with an idea; a body does not. A body does not entrain action; bodily movements do - when those bodies are bodies of persons. As the intention of tying my shoes becomes realized, the ideas that guide basic actions change. I may do with my hands what I do willfully, but I do not make each constitutive movement as an act of will. My hands are guided by an evolving idea of what I have just accomplished; they are entrained by such ideas of the person.

We have proposed a theory of mental action that gives special status to processes over events. It has been argued that mental causation involves a relation of processes and not, merely, events. One particular causal processes is introduced, defined, and characterized. This process is entrainment and it relates either of two sorts of processes: causal processes and pseudo-processes. Combining the ideas of a pseudo-process and entrainment we have provided an alternative theory to the standard theories. Our theory is mentalistic in recognizing ideas as fundamental and, perhaps, irreducible to physical events. We embrace these ontological elements in lieu of a theory based on linguistic considerations that lead us, ultimately, to problems of opacity and the ontological status of descriptions. The theory we propose is a theory in philosophical psychology, not semantics. There is, however, we have yet to describe an additional strength of our proposal.

## VOLITIONS AND INTENTIONS

The history of philosophy insofar as it pertains to volitions and intentions is difficult to trace. Philosophers who talk about one, typically, do not talk about the other. James, rarely, refers to intentions; Anscombe and Davidson avoid discussing volitions, altogether. On the theory we propose, both exist; they are related; and neither can be understood without the other. Here I will, merely, provide a sketch of how the theory addresses their relation.

I will not enter into how ‘volition’ is to be defined, except to say that on our proposal, among other things a volition is an event (or that part of an intentional action) that owes its causal efficacy to an agent’s attending to a pseudo-object. That pseudo-object is the idea, psychologically construed.

Davidson observes that there is no easy way to describe a basic action without using some description of a non-basic action. These actions are of different sorts. Not being able to describe non-basic actions in terms appropriate to the type of actions they are illustrates an important fact about action as a process. The important fact is this: there is a difference between an act of will and a willful act. A willful act is an action that is done with an intention but not necessarily without attention to the idea of the intention. James distinguished ideo-motor actions and actions requiring attention to an idea. Suppose, contrary to fact, that I am a neat person. I walk into a room, see a scrap of paper on the floor, and reach down to pick it up. Here we have a classic example of what James meant by an ideo-motor action. I have an intention, but no awareness of either the intention or of what I am doing. Another example we might draw from Moore: I pass no attention to a puddle of water in my path; I step around it “without thinking.” This, too, would be an example of an ideo-motor action, or willful act. But there is another class of actions identified by James.

The other class of actions is what I have called “acts of will” as opposed to “willful acts.” Here the classic example, also, comes from James. This example is the getting out of bed on a cold morning. Another example might be entering the cold water of a swimming pool. The distinction has gone, largely, unnoticed although some ethicists have been aware of it at the fringe of their primary interests.<sup>16</sup> (*Reason and Morality* by Alan Gewirth. University of Chicago Press. 1978. p. 39). The theory we propose integrates these two sorts of actions into a single picture of intentional behavior. Gewirth speaks of purposive action and voluntary action. The distinction is that “...purposiveness consists in the agent’s aiming at an end or goal, whereas voluntariness consists in the agent’s controlling his behavior.” (*ibid*).

There are three fundamental processes involved in deliberate human action: first, the series of events associated with bodily behavior (“basic actions”); second, there is the series of brain states associated with the causes of those basic actions; and, third, if we are right, a series of “ideas” that represent the present state of our body and what we wish to accomplish by means of bodily action. The events of the brain constitute a series entrained by the pseudo-process consisting in the ideas (thoughts, intentions); the events which are our bodily actions are entrained by the series of brain states which cause them. If a pseudo-process is not physical, it nonetheless may possess a physical explanation, like a shadow. The nature of attending to an idea is more complex. In addition to these three processes there are contributory events which are not arrangeable in any serial order, in particular the events which our cognitive faculties provide as we commit and execute actions. Thus intentional action is, essentially, dynamic. The dynamic feature is under the control of what cognition provides, consequential upon our immediately

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<sup>16</sup> *Reason and Morality* by Alan Gewirth, (1978) University of Chicago Press, p. 39.

preceding action and the strategy of satisfying the intention by making the idea a reality.

## CONCLUSION

Where the objective is to provide an account of voluntary action guided by the agent's intentions, a theory incorporating non-causal processes, pseudo-processes is one possible alternative to theories that require that all processes be causal. An account of voluntary action as a process, rather than an event, affords us a coherent way of distinguishing volitions and intentions while, at the same time, explaining how they are related. Agent causation as a process is not event-event causation in any obvious sense; it involves a causal relation between processes. That relation is entrainment, a seldom discussed causal concept. Volitions, roughly speaking, are the immediate causal antecedents of bodily movement; an intentional action is not a volition but is more adequately characterized as a series of volitions entrained by the evolving idea of what is required in order to complete the satisfaction of the intention. The cognitive faculties are integral to the implementation of the strategy directed towards this satisfaction, insofar as each change we impose upon the world has an affect upon our senses and the interpretive mechanism of perception. We have, then, a sketch of a complete theory of behavior as a conscious, voluntary, process in terms of pseudo-processes, entrainment, and attention.