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OMISSIONS AND OTHER NEGATIVE ACTIONS

ABSTRACT. This essay offers an action-theoretic analysis of the distinction between positively bringing something about and passively letting something happen. The analysis, based on the notion of an agent's bringing about some state of affairs, is closest to the analysis of omissions of Brand (1971), but utilizes the relatedness logic of Epstein (1979). Syntactic features bring out the idea that an action can be partially positive and partially negative, e.g., by not bringing about one thing an agent can bring about something else. An ethical implication of this analysis is that a passive course of action is sometimes less culpable than an active one, just because it is passive.

Key words: Logic, Ethics, Responsibility, Decisions, Euthanasia.

0. INTRODUCTION

The distinction between actively or positively bringing something about and passively letting something happen by not doing something is a fundamental mainstay of understanding moral reasoning where non-utilization, reduction or withdrawal of therapy is a course of action being considered. We could hardly understand many significant examples of ethical reasoning that every day take place in the hospital wards if we cannot understand this distinction. Yet recently, philosophers have not only questioned whether the distinction is a clear or coherent one, but even whether it is one that should make any ethically significant difference at all in evaluating alternative courses of action.[1] Numerous arguments have now been advanced on both sides, some urging and others denying that the distinction should carry significant moral weight.

However, none of these arguments is much help if we basically fail to have any clear conception of exactly what the distinction is supposed to mean. The object of this essay is to contribute to the needed conceptual clarification. Achieving this object will not tell us in a specific case whether or not to refrain, omit, fail to treat, cease therapy, withdraw treatments, or implement whatever course of inaction is at issue. But it will tell us what we mean when we argue, for example, that the inactive alternative is preferable to the active one on the very grounds that it is inactive.

It is the present author's view that intuitively appreciating the ethical force of the distinction in specific instances is not so difficult. If an elderly patient whose kidneys are failing decides not to undertake hemodialysis after discussing the matter with her physician and family, it may be fair enough to say that she has been allowed to die. Yet it seems equally clear that the accountability of anyone who took positive steps to see to this person's demise would be in quite

a distinctly non-parallel and more culpable situation. But many arguments have been mounted against this view, and I shall not try to rebut all of them here, except insofar as they relate to the present project of analytical clarification of the underlying distinction. Conceptual analysis cannot be the final board of arbitration for moral disagreements, but a clear and resolvable disagreement is not even possible to achieve if conceptual clarity and precision are entirely lacking. Whereof we cannot speak, we should indeed be silent.

1. LOGICAL FUNDAMENTALS

We begin with a set of propositions, p, q, r, ... When speaking of actions we think of these propositions as descriptions of events. It is worth noting that different propositions can be descriptions of what we might take in some sense to be the same event. For example, even though 'Napoleon's last battle' and 'the battle of Waterloo' are the same event, but 'Napoleon's last battle took place in 1812' and 'The battle of Waterloo took place in 1812' are different propositions. A binary relation R called a *relatedness relation* is defined on the propositions; in the case we will be interested in here, it will be reflexive and symmetrical but not transitive, and is to be interpreted as meaning 'approximate spatio-temporal coincidence in an act-sequence'. An example of an act-sequence often cited is the following: by moving his finger, Smith flipped the switch, thereby turning on the light, illuminating the room, and warning a prowler. If p is related to q, and q is related to r, we may say that p is *indirectly related* to r.
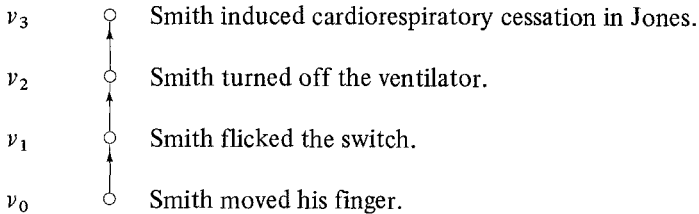
In Epstein (1979) it is shown how we can construct relatedness logics based on the above notions. The two primitive constants are $\daleth p$, to be read as 'not-p', and $p \rightarrow q$, to be read as 'if p then q'. Negation is defined just as in classical logic: $\daleth p$ is true (false) just in case p is false (true). But implication is defined differently. To define implication we first have to decide how the simple propositions are related to complex ones. The ruling we adopt is as follows: p is related to $q \rightarrow r$ just in case p is related to q or p is related to r. This will mean that 'The switch is metal' is related to 'If the switch is on, the light is on' because the simple proposition is related, by virtue of its approximate spatio-temporal coincidence, to the antecedent of the complex proposition. Now we define $p \rightarrow q$ as follows: $p \rightarrow q$ is true just in case p is related to q and it is not the case that p is true and q is false. For the simple propositions themselves, 'p is related to q' is described as a reflexive and symmetrical but non-transitive relation, interpreted as meaning that p is approximately spatio-temporally adjacent to q as points in an act-sequence.

The key thing about this way of defining implication is that we do not need to say that 'If p then q' is true simply because q obtains or p does not. Rather,

the truth of the conditional depends on the relationship between p and q. 'If Davidson turns on the light, Davidson warns a prowler' need not be always true simply because Davidson does not turn on the light. Relatedness must also be taken into account.

Another notion we take as primitive here is the binary relation that obtains when some agent brings it about that q is true by bringing it about that p is true. However, we take it as a necessary condition of an agent's bringing about that q by bringing about that p, that p implies q by relatedness implication. Consequently, if some agent brings it about that q by bringing it about that p, then p and q are on the same action sequence. We may say here that q is *level-generated* from p in the sense of Goldman (1970). We think of level-generation as a tree-structure − though other kinds of directed graphs may be admitted as well − following the treatments of Goldman (1970), Åqvist (1974), and Walton (1976, 1979b). Our treatment will be compatible with, but need not always follow, the highly significant work of Pörn (1970, 1974, 1977).

A directed graph is simply a non-empty set of points called vertices, and a set of ordered pairs of those vertices, called arcs.[2] An act-sequence like the example given above can easily be represented as a directed graph where each vertex corresponds to a proposition in the sequence:[3]

v_3 Smith induced cardiorespiratory cessation in Jones.

v_2 Smith turned off the ventilator.

v_1 Smith flicked the switch.

v_0 Smith moved his finger.

At each point v_i there is a certain proposition made true or brought about by Smith. For example, at v_2 we can say that Smith brought it about that the ventilator ceased to operate. But at the pair of points $\langle v_1, v_2 \rangle$, we can say that Smith brought it about that the ventilator was turned off by bringing it about that the switch was flicked. Generally, we say that some agent brings it about that p just in case there is some proposition q such that by bringing it about that q, the agent brings it about that p.

A problem in utilizing the above analysis of act-sequence can be illustrated by trying to see how the action at v_0 could be rendered as a bringing-about. It is not correct to say that 'Jones moved his finger' is the same proposition as, or an equivalent proposition to 'Jones brought it about that a finger movement took place' because the latter, unlike the former, could be true if Jones made Smith move Smith's finger. And 'Jones brought it about that Jones moved his finger' does not seem to be quite the same as 'Jones moved his finger' either; the former

seems to imply greater deliberation. This is a serious problem, as noted by Davidson (1966), and the best we can do here is to sketch an outline of one solution from Walton (1979c).

What we do is to say that 'Jones moves his finger', for example, is a *pure action proposition* just in case that statement is equivalent to the statement 'Jones brought it about that Jones moved his finger' (and we have to add the proviso that it can be true of Jones that he moves his finger).[4] Now we can say that any proposition generally is an action proposition only if it is related in an act-sequence to a pure action proposition.

The above account is of course merely an outline of a general theory of act-sequences more fully developed elsewhere, e.g., Walton (1979b, 1980). But it should give us enough basic structure to carry forward a clarification of omissions, refrainings, and other negative forms of actions.

2. COMPLEX NEGATIVE ACT-SEQUENCES

Given the building-blocks of Section 1, we can now go ahead to see how negative and non-negative actions can be combined into certain characteristic patterns of sequences. Some instances that will turn out to be of special interest can illustrate how the basic grammar of actions can be studied.

(1) S brings it about that q.

(2) S does not bring it about that q.

(3) S brings it about that not-q.

(4) S does not bring it about that not-q.

(5)   By bringing it about that p, S brings it about that q.

(6)   By bringing it about that not-p, S brings it about that q.

(7)   By bringing it about that p, S brings it about that not-q.

(8)   By bringing it about that not-p, S brings it about that not-q.

(9)   It is not the case that S brings it about that q by bringing it about that p.

(10) By not bringing it about that p, S brings it about that q.

(11) By bringing it about that p, S does not bring it about that q.

(12) By not bringing it about that p, S does not bring it about that q.

(13) By not bringing it about that not-p, S brings it about that q.

(14) It is not the case that: S does not bring it about that not-q by bringing it about that p.

The key thing to notice about these grammatical permutations is that negation can function in various different ways in an act-sequence. Initially one might tend to think that a negative action is a simple not-doing after the pattern of (2). But that is only so because we often tend to think of actions as more or

less discrete spatio-temporally localized events, e.g., my moving my finger. But actions are not always so simple; often they can be 'spread out' over a complex and far-reaching act-sequence.

To get an initial idea of what is involved in the different varieties of negation consider the example of an intern who is considering giving a certain medication to a patient. By a positive act of administering the medication herself, she can bring it about that the patient has the medication, as in (1). Or, as in (2), she can elect to not bring it about that the patient is medicated. Suppose the nurse is about to administer that medication. Then, as in (3), the intern could by intervening see to it that the patient does not receive that medication; here we have a positive act with a negative result.

Suppose again that the nurse is about to administer the medication, as usual. Then another possibility is for the intern not to bring it about that the patient does not have the medication. That is, she can let the patient be medicated as usual. Thus we see that a letting-happen (4) is a double negative of (1), in effect a 'positive' but passive mode of action. So far we have looked at action (inaction) as a simple one-step procedure, but it is also possible to view it as a binary sequence.

Consider (5): by bringing it about that a statement is written on the patient's chart, the intern could bring it about that the patient is medicated. In other circumstances, the intern could bring it about that the patient is medicated by not writing something on the chart, i.e., by not countermanding the usual procedure. Now I think the reader can easily see how the remaining sequences could be illustrated, but one or two remarks may be helpful. First, note that in (7), a negative action is brought about by means of a positive one. So it would be easy to become confused here about whether the action is 'positive' or 'negative'. For example, is driving without a licence a positive or negative act? Similarly in (10), we have to be careful to note that a positive act is brought about by means of a negative one. The lesson is that we should never ask simply whether an act-sequence is positive or negative, but always look carefully to see the possible different ways negations function in the sequence. This lesson is one we can apply repeatedly as we proceed.

We also have to be very careful because negative action descriptions can often be handled as if they were positive, e.g., 'They also serve who only stand and wait'. St. Anselm (see Henry 1967, p. 123) clearly pointed out that 'to do' can also have 'not to do' as an instance. Thus, great care is needed in firmly labelling an 'action' as intrinsically positive or negative; a lot may depend on how one chooses to describe the action (inaction) sequence.

Let us now turn to distinguishing between 'refraining' and 'omitting' by giving an analysis of each of these negative concepts in turn.

3. CRITIQUE OF BRAND

The most clearly worked out systematic, analytical attempt to confront the natural language of not-doing is that of Brand (1971). A major weakness is that causality is used as a basic concept, but as is well known, this problematic concept is too unclear to function as a primitive basis. Nonetheless we will begin by looking at Brand's analysis, and then try to improve on it by using relatedness as a primitive instead of causation. The key definition is that of an agent's refraining from performing an action. Like us, Brand begins by taking a notion of 'positive' action as primitive; he takes as a given undefined 'Agent S performs action a'. And he takes a binary relation (three-place if you consider the agent) also as primitive: '(a person) performs (an action) in order that (an event) occur'. This relation corresponds to our binary by-relation of Section 1.

In order to work up to the definition of refraining, Brand (1971, p. 48) then defines his preliminary notions of the causal sort:

DEFINITION 1. One event is said to be *causally relevant* to another when the former is either causally necessary or sufficient for the latter or the former is causally necessary or sufficient for what happens when the latter does not occur.

DEFINITION 2. e_1 causally prevents e_2 from occurring if, and only if, (i) e_1 occurs, (ii) the date of e_1 is not later than the date of e_2, (iii) it is causally impossible that e_1 occur and e_2 occur, and (iv) e_1 is causally relevant to e_2.

Given these definitions, we move on to define 'a person causally prevents something from happening' as follows. S causally prevents e from occurring if, and only if, there is some action a that S performs such that S's performing a causally prevents e from occurring. Finally, we reach the third of these definitions (Brand 1971, p. 49):

DEFINITION 3. S refrains from performing a if, and only if, (i) it is not the case that S performs a, and (ii) there is some action b that S performs in order to prevent himself from performing a.

This is a very systematic and careful even if problematic program for giving an account of refraining. It is one, in general outline, that we will endorse and accept, but it requires major revisions on at least two counts: first, there are problems with the preliminary causal vocabulary, and second, we find particular problems with the way 'refrain' is defined, apart from the unclear causal modal expressions used as a basis. Let us therefore turn to some criticism of Brand's approach.

It can be shown that clause (iv) is redundant in Brand's definition of 'causal prevention'. To see why, first note that Brand postulates (p. 48) that the modal prefixes 'it is causally necessary that' and 'it is causally impossible that' be thought of as parallel to logical necessity and impossibility in modal logic. It would follow that 'it is causally impossible that e_i occurs' is equivalent to 'it is causally necessary that e_i does not occur'. Given the truth-functional equivalence of 'p & q' and '$\neg(p \to \neg q)$', it follows that 'it is causally impossible that e_1 occurs and that e_2 occurs' is equivalent to 'it is causally necessary that if e_1 occurs then e_2 does not occur'. But it follows from Definition 1 that if it is causally necessary that if e_1 occurs then e_2 does not occur, then we have it that e_1 is causally relevant to e_2. In short, clause (iv) of Brand's definition of 'causal prevention' follows logically from clause (iii). Thus, clause (iv) of Definition 2 is redundant.

Clearly Brand would deny that (iv) follows from (iii), for he gives an illustration (p. 49) to show that causal impossibility does not have "built in" relevancy conditions. The reasoning is that for any q you like, even one unrelated in any way to p, if it is not possible that p then it is not possible that both p and q. The example is that if it is not possible for a certain bird to land on a certain tree in Argentina, it is not possible for the rains to come in Boston and this bird to land on that three. Brand proposes that without the requirement of causal relevance, we would have to say that the coming of the rains in Boston prevents the bird in Argentina from landing in the tree there.

However, the problem is that despite Brand's highly reasonable avowal that causal impossibility does not have "built in" relevancy conditions, (iv) does indeed follow from (iii) on the three assumptions that (a) 'it is causally impossible that e_i occurs' entails 'it is causally necessary that e_i does not occur', (b) 'p & q' implies '$\neg(p \to \neg q)$', and (c) causal relevance is defined the way Brand defines it.

The problems here stem from the general assumption that implication, negation, and conjunction of the classical truth-functional sort must be presupposed as a base logic in causal language. One way of obviating the problems that flow from this assumption is the following. In a relatedness logic, 'p & q' is not equivalent to '$\neg(p \to \neg q)$' provided we are, as seems reasonable here, thinking of conjunction as classical, i.e., not requiring relatedness of p and q, but thinking of implication as requiring relatedness of p and q. We require only that p and q be related in the sense of being approximately spatio-temporally adjacent. This does not require that we use causation as a primitive at all. But we can think of 'p is related to q' as meaning that p can cause q in the sense that p and q are adjacent points in the same act-sequence.

Thus a way to solve Brand's problems is to re-write 'causal relevance' as a relatedness relation 'e_1 is adjacent to e_2 in the sense that e_1 and e_2 are related'

as described in Section 1. We are thereby spared the necessity of requiring that it is necessary that if e_1 occurs then e_2 does not occur, if e_1 and e_2 are incompatible. For after all, e_1 and e_2 may be incompatible simply because one is by itself impossible. It need not therefore follow that if one occurs, the other by necessity does not occur, for they may be unrelated as actions in the same sequence of events.

4. REFRAINING

The upshot is that clause (iii) of Definition 2 should be rewritten to read: it is necessary that if e_1 occurs then e_2 does not occur. Here the 'not' is classical negation, but the 'if-then' is relatedness implication. Furthermore, clause (iv) should be rewritten to read: e_1 is related to e_2. So construed, clause (iii) is independent of clauses (i) and (ii). However, since relatedness implication requires that e_1 and e_2 be related where e_1 implies the negation of e_2, it turns out that the new version of (iv) follows from the new version of (iii). Consequently, clause (iv) may be dropped in the revised definition of causal prevention.

    With the above modifications, we can accept some of the basic outline of Brand's framework of definitions. Now let us proceed to our own definition of refraining.

    There is another problem, however, with Brand's notion 'a person refrains from performing an action' in Definition 3 above. Take the example of the patrolman who shouts "Stop or I'll fire" to a fleeing youth, then fires and misses. He did not shoot the youth, and he did perform some action in order to prevent himself from shooting the fleeing youth. It follows that by Brand's definition, the patrolman refrained from shooting the fleeing youth. Most of us would presumably feel that it is incorrect, however, to say in this case that the patrolman refrained from shooting the fleeing youth.

    One way out is to say that the policeman did refrain, but then when he fired he ceased refraining. If we break the act-sequence into sub-actions, we can say that the first act was a refraining, but it was followed by another action, firing the gun, which signalled that the refraining was over. Removing the temporal gap makes this strategy of dividing the actions less plausible, however. What are we to say of the policeman who fires even while shouting "Stop!"? Does he refrain from shooting even while shooting?

    Another way to deal with the problem is to add a clause (iii) to the definition: S's performing b does causally prevent S from performing a. But even this addition does not cope with the sad case of Cass.

    Suppose that Cass, in order to prevent herself from eating and thereby worsening her growing problem of the weight-watcher's sort, sees to it that she

has an operation to wire her jaws shut. But two weeks later, overcome by the sight of a chocolate cake, she pitifully attempts to gorge herself despite the wired jaws.[5] It is hardly correct to say that she refrained from eating the cake, despite the fact that she did not succeed.

One way out would be to require more than Brand that the events in question be in the same causal sequence. Accordingly, to refrain from bringing about q by bringing about p, not only must it be true that S brings it about that not-q by bringing it about that p, but p and q must be directly related in the sense of being directly related in the act-sequence. It is not enough merely that they both be somewhere in the same act-sequence. By these lights, a fourth clause must be added to the definition of refraining: (iv) what S brings about in performing a is directly related to what S brings about in performing b.

This requirement might appear to be too strong, however, in ruling out instances of refraining by means of an indirect act-sequence. Let us take the case of a person who begins to recognize he is an alcoholic. He usually begins to drink in the afternoon as a matter of habit, but decides to stop drinking on one particular afternoon. He knows that he gets a strong desire to take a drink in the afternoon. Hence, this morning he prevents himself from drinking on this particular afternoon only by locking it in the closet and arranging with his wife to hold the key and not give it up. Suppose also that he is successful and doesn't drink that afternoon. Here he refrained from drinking (by locking the alcohol in the closet and giving his wife the key). But his locking the alcohol in the closet is not directly related to his not drinking the alcohol because the act-sequence may be described as follows. Let p = 'the closet is locked and his wife has the key', q = 'the closet door is not opened', r = 'the alcohol is not taken out', and s = 'the alcohol is not consumed'. Then we may say that by bringing it about that p, he brought it about that q. By bringing it about that q, he brought it about that r. Hence, by bringing it about that p, he indirectly brought it about that r. But by bringing it about that r, he brought it about that s. Hence by bringing it about that p, he indirectly brought it about that s. The upshot is that if it is right to say he refrained from drinking the alcohol then (iv) is too strong.

Looked at more carefully with a view to specifying the time of the alleged refraining, however, the case of the alcoholic may not be so different from that of Cass. The following refutation can be mounted. In the morning, he did not refrain from drinking the alcohol in the afternoon because it was not afternoon yet, so he did not yet have the opportunity to drink it in the afternoon. But in the afternoon he did not refrain from drinking the alcohol either insofar as we are presuming that he had no choice in the matter then, the closet being locked and his wife having the key. The strategy is to split the act-sequence into sub-actions by specifying the time of the alleged refraining precisely. According to

the refutation, it is not true to say that he refrained from drinking the alcohol at any time. Rather, he put himself in a position where there was no need to refrain. If, like Cass, he had tried to smash open the closet, surely he would not have refrained, despite his earliest actions to prevent drinking. The earlier actions, according to this view of the matter, should be treated as independent of his refraining or not at the later time.

Here we are at something of an impasse. Some observers might not think of Cass or the incipient alcoholic as truly refraining because they lacked the opportunity, at the time, to indulge themselves, even if they tried. Yet possibly there is a sense in which it is correct to say that they indirectly refrained, in virtue of something they freely set into motion earlier. Whatever the final word on indirect refraining is, the lesson is to clearly distinguish direct and indirect refraining in the act-sequence.

A second problem, perhaps not quite so serious if equally perplexing, is that Brand's definition always requires that if I refrain from doing something, there is something that I do in order to prevent myself from performing it. But if I refrain from eating a pastry, it is not clear that I need have done anything in particular in order to prevent myself from eating it. Of course, a defender of this sort of definition could always retort that I did not eat the pastry in order to prevent myself from eating it. But this strikes me as being somehow question-begging or vacuous much like a reply attributed to Richard Daley when asked why somebody was not elected: "He didn't get enough votes".

The best solution to this problem is to concede that I could prevent myself from eating the pastry by not doing something, e.g., not move my hand in the direction of the pastry. Once again, the lesson is to see that negation can enter into an act-sequence at more than one point.

We have described refraining as an essentially binary sequence like (7) or (8). We now turn to an analysis of omitting, which we see as basically a negative action of form (2).

5. OMITTING

By contrast with refraining, the analysis of omitting is very simple — omitting is simply not-doing, as in the paradigm form (2). Even this simple analysis is not unproblematic, however. What does it mean, for example, to say 'Jones does not take his medication'? Taking our cue from Davidson (1966), we should point out that 'Jones brings it about that his medication is not taken' will not do as an analysis because it is not equivalent to 'Jones does not take his medication'. The first statement could be true by virtue of Jones' seeing to it that Smith does not take Jones' medication, unlike the latter. Nor does 'It is not the case that

Jones brings it about that his medication is taken by Jones' seem to be exactly equivalent. If he took it unwillingly, the latter might be true, yet it would hardly be correct to say he did not take his medication. Are we stymied be negation?

The best way out of this impasse is by way of the concept of a pure action proposition defined in Section 1. We say that 'Jones takes his medication' is a pure action proposition just in case the following is true: Jones takes his medication if, and only if, Jones brings it about that Jones takes his medication. If 'Jones takes his medication' is indeed a pure action proposition, then its negation is simply this: it is not the case that Jones brings it about that Jones takes his medication. We see incidentally that pure action propositions contain an element of deliberate agency; that is what characterizes them. However, if the original negative proposition is not the negation of a pure action proposition then two possibilities remain: (i) we have to pursue the analysis of the structure of the act-sequence to see if the proposition in question is related by an act-sequence to a pure action proposition, or (ii) we may not be able to analyze it as an omission within the present theory.

The lesson here is that the present approach enables us to deal with omissions and actions more adequately as the element of rational deliberation in bringing about an outcome is emphasized. For any action proposition we can negate is a pure action proposition, and therefore contains an implication of deliberate action or inaction. However, this limitation is one we might expect studying the logic of actions. In short, the problem of assigning an analysis to 'Jones does not take his medication' is not insurmountable, given the requisite limiting assumptions about the analysis of non-negative action statements. 'Not' is just classical negation, something we all know and love. We now turn to formulating our proposal for the analysis of the concept of an omission.

The underlying syntax of omitting can, as we proposed in Section 2, be given by the appropriate permutations on 'bringing about' (both unary and binary) and classical negation. Thus paradigmatically, to say that S omits a is to say that S does not bring it about that p, where p is what is brought about by S's doing a.

But then as Dinello (1971) and von Wright (1963) have pointed out, the use of the expression 'S omits a' in ethical contexts suggests that omission is not purely action-theoretic, but contains an implicature of 'being able to do a' and perhaps also 'being expected to do a'. And it is indeed these usual implicatures that lead to Brand's criticism below that the von Wright approach begs the Free Will question. It seems to me that the only favorable solution to this apparent impasse is to postulate that 'omits' has an underlying action-theoretic structure of 'bringing about' and negation, but also has normative overtones of opportunity and expectation. Thus a fully adequate normative analysis of 'omit' will incorporate normative notions, and thereby appear to beg some normative questions.

It has often been noted that 'omitted' commonly contains an element of expectation. Thus even if (2) obtains and S is able to bring about p, as von Wright would require, we are still not fully satisfied to say that S omits to bring about p. We do not say of the surgeon that he omits to save his patient dying of renal failure even if it is possible to save him by extracting a kidney from an unwary passer-by in the hospital corridor. Brand (1971, p. 52) deals with this normative element by defining omission as a purely legal concept. However, are there not omissions where legality is not at issue?

But Brand also criticizes von Wright's and Danto's proposal that 'S refrains from doing a' means 'S does not do a but is able to' on the ground that it begs the Free Will question. The proposal implies, apparently oddly, that if I refrain from doing a, I can do a. For von Wright (1963) and Danto (1966), 'S refrains from a' entails 'S can perform a and S can refrain from performing a', which in turn entails 'S is free to do a'. But Brand suggests that refrainings can be the result of coercion or compulsion, the same as other kinds of action. Note that, on their views, 'S performs a' does not have the same entailments. There is a reputed non-parallelism between performing an action and refraining from performing it, and that seems odd.

So we seem to be stuck in a dilemma. If we bring in elements of opportunity or expectation, we beg some normative questions. But if we do not, we can scarcely seem to have a realistic and adequate analysis of omissions.

A theory of Åqvist (1974) shows how the structure of the act-sequence can clarify the problem. Åqvist thinks of an action h as an ordered pair $\langle q, q' \rangle$ of decision points in a game-tree where q' occurs at time $t(q)+1$. Each decision point in a tree (excluding endpoints) is assigned to exactly one agent as his 'move'. An agent x is said to omit to perform h in a world w at time t if, and only if, q is a decision point for x but $\langle q, q' \rangle \neq h$ (Åqvist, 1974, p. 78). Thus an Åqvist game-tree can be thought of as an act-sequence graph of Section 2. An act-sequence is again a sequence of binary action relations. So Åqvist's account of omissions is quite comparable to our own.

What about cases where an agent decides to do something and even tries to do it, but does not do it? Are we required to rule that she omitted to do it? It would seem so, and this would seem to be a problem. If a physician decides to implant a kidney in a particular patient, but transplantation is not successful, surely it is false to say that she omitted to do the transplant. Yet according to Åqvist's condition, she decided to do it, but did not do it. And therefore it follows that by the above condition, she omitted to do it.

How could the logic of the act-sequence cope with this problem? I believe that it can be dealt with by bringing out the binary nature of (5) of Section 2 as extended and enriched by Åqvist. According to his full account, it is ruled that "by having just performed h in w at t, x caused (brought it about, saw to it) that

q was realized in w at t'" is true if, and only if, (i) x has performed h in w at t, (ii) q is realized at t', (iii) x could reasonably have omitted h in w at t, (iv) by having omitted h in w at t, x could reasonably have avoided that q was realized in w at t', and (v) the performance of h by x in w at t is historically sufficient for the occurrence of q in w at t'. This analysis can be nicely illustrated by an example in the form of a directed graph (see Figure 1).
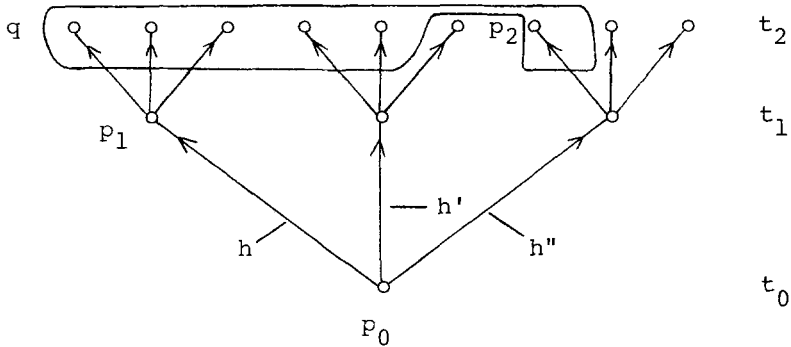

Fig 1.

We can say that an agent x by having just performed h at t_0 brought it about that q was realized at t_2, provided all five required conditions are fulfilled: (i) x has performed h at t_0, i.e., $\langle p_0, p_1 \rangle$ is an action for x; (ii) q is realized at t_2; (iii) x could have omitted h at t_0, e.g., x could have performed h' or h''; (iv) by having omitted h, x could have avoided that q was realized at t_2, e.g., if x had performed h', then p_2 might have been realized at t_2 instead of q; (v) once x had performed h, then this was sufficient for the occurrence of q at t_2.

Now we understand this analysis, we can see how it can be applied to analyze the following expression: by having just omitted h in w at t, x brought it about that q was realized in w at t'. The basic structure of this expression corresponds to (10) above in Section 2. The expression is analyzed as a conjunction of the five clauses above except that clause (i) is altered to read: 'x has omitted h in w at t'. Interestingly, clause (iii) now reads: 'x could reasonably have omitted to omit h in w at t'. This may seem subtle, but is easily understood in an Åqvist game-tree. An omission for x is simply a pair of points $\langle q, q' \rangle$ that is not a performance for x, i.e., q is a decision point for x, but $\langle q, q' \rangle \neq h$ for x. But to say that x could reasonably have omitted this omission is simply to say that there is some point $q'' \neq q'$ accessible from q. This situation can be illustrated by the graph of Figure 2. A potentially obscure notion is given a precise explication by seeing how it can be expressed as an act-sequence structure.

The significance of what has transpired here bears general comment. It has

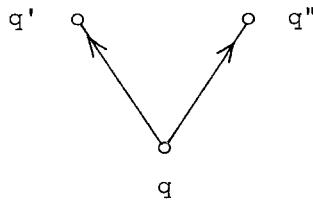q' q   q q"

q

Fig. 2.

been shown how the notion of an omission can be ambiguous, even treacherously
so. We can think of an omission in a simpler, minimal way as a negative action,
something I did not do, but by my decision not to do it. But second, we can
have an enriched notion of what an omission is that can explain its wider role as
a species of inaction that can in turn explicate its causal role in an act-sequence.
In this richer framework, we can see and understand a notion that at first seems
highly paradoxical, namely that of an omission (a negative action) bringing
about (positively) some outcome. It almost seems like an omission, so described,
is a non-negative action, and in a way it is. Accordingly, we might say that
someone's failure to treat a patient brought about the death of that patient.

The implications of this framework are highly relevant to medical ethics,
where it may be often assumed that omissions can always be equated with the
notion of a person allowing some outcome to occur. On the contrary, the binary
structure of the act-sequence shows how we can clearly understand the notion of
an omission positively bringing about some outcome. The language of inactions
is more subtle than it is commonly thought to be.

Now back to our original problem, which is solved as follows. In an artificial
and narrower sense of 'omit', it is correct to say that the physician omitted to
transplant the kidney. However, all this means is that she did not transplant it,
despite her decision to try. Hence this conclusion is only warranted insofar as we
are thinking of her failure as a negative outcome without thinking of its role as
an action in the wider causal nexus. Taking a more extended and more accurate
view of the act-sequence, what she failed to do is not correctly describable as an
omission. Reason: although she omitted to do it, it is not true that she could
reasonably have omitted to omit to do it. In other words, her conduct cannot be
described as an omission in the fuller sense insofar as we presume that she could
not have avoided the negative outcome of transplantation failure.

Some might say that this view compels us to equivocate by giving us two
meanings of 'omit' at least one of which is not by itself completely adequate. I
would counter that this is no equivocation, but rather the discovery of a deeply
important ambiguity that genuinely pervades the subtle language of inactions

and not-doings. Here the by-relation shows by its binary aspect that negation play a complex role in causal chains of actions. I can bring about q' by not bringing about q, but I can also bring about not-q' by bringing about q, and so forth. The binary aspect of the act-sequence gives us a clear basic structure for dealing with these complexities of negations.

Does not the richer definition of omission still seem to beg Free Will questions? The nice feature of adopting the definition is that it provides an edifying answer to this puzzle by its stance that omission can be ambiguous. If we are thinking of omission in a narrower, purely action-theoretic sense that abstracts from the indirect relatedness of the act-sequence, then there may be no need to bring in questions of whether the agent could reasonably have done otherwise, and other accoutrements of Free Will. Yet if we do wish to consider a richer notion of omission, more adequate to the wider act-sequence framework, then assumptions about historically possible alternatives need to be brought in.

The question of Free Will is not *begged* because the theory indicates precisely where and how the parameter of historical alternativeness can be introduced. The question is not begged because we do not always have to introduce Free Will. But we can introduce it if we wish to adopt a richer and more complex definition of 'omission' that is in turn more adequate to the language of actions, possible alternatives, and responsibility. The question is not begged, but divided.

6. CONCLUSIONS

To sum up, the relationship between omitting and refraining, as we have analyzed these notions can be generally put as follows. If I omit to do a, this means that I do not bring it about that p, where p describes what is brought about in a. Thus an omission is a not-doing. But if I speak normatively, then I omit a only if additionally, I can do a and I am expected to do a. However, we have seen that the syntax of omitting can be complex, once we bring in the binary notion of bringing-about. In this sense, I may omit to do something by doing, or not doing, something else. A refraining is a kind of omission where the by-relation incorporates not-doing by self-prevention. I refrain from doing a where something else I do, b, makes it happen that I do not do a, and b is related directly to a. Finally, a letting-happen is a variety of refraining whereby S refrains from preventing something from happening. Letting an outcome happen may be compatible with that outcome's not happening. And a letting-happen need not always be simply described as an omission. Importantly, the complications we have uncovered suggest that not every letting-happen can be non-misleadingly described as an omission.

7. SOME ETHICAL IMPLICATIONS

A significant argument of recent literature in medical ethics is the *no-difference thesis*, i.e., whether the mode of action is that of positive acting or negative letting-happen should make no significant difference to the ethical evaluation of a situation. The argument is that the mode of action makes no difference in itself, provided all other factors, e.g., motives, consequences, etc., are held constant. In a pivotal article, Rachels (1975) considers two parallel cases. In the first, Smith sneaks into the bathroom and drowns his small six-year-old nephew, in order to gain an inheritance. In the second, Jones enters his nephew's bathroom with the same malevolent intention, but sees the child slip, hit his head, and fall face down in the water. The child drowns by itself, to Jones' evident delight and convenience. Rachels argues that this case shows that since both Smith and Jones are equally reprehensible, the difference in the mode of action is of no moral significance.

Clearly Rachels' argument turns on the distinction that Smith's case is a positive action of form (1), whereas Jones' inaction is an omission of form (2). But could this way of viewing the contrast overlook the overall structure of the act-sequence? True, Jones does not do anything, at least anything that directly kills the child. But is that the real difference at issue? No, as we can now see.

What is the syntactic structure of the act-sequence in either case? First, Smith brings it about that the child is dead by something he does (pushing it under the bathwater). So it seems that by contrast, Jones lets his nephew die by something he does not do — we must have a letting-happen by an omission. But is this the only possible interpretation of Jones' act-sequence as Rachels describes the case? No; we might say with equal or greater accuracy that Jones brings about the death of his nephew by something he fails to do. This interpretation could be quite correct provided that the death of the nephew was just as truly historically inevitable,[6] relative to what Jones failed to do, as was the death of Smith's cousin, relative to what Smith did do.

A key question is whether or not what Jones failed to do is compatible with the survival of the child. The particular account of the case given by Rachels suggests not; according to that account, Jones stands by, ready to push the child's head under if necessary. Thus it is more accurate to say that he brings about the child's death by something he does not (but might) bring about.

Rachels' contrast can be misleading. It tends to be plausible at least partly because it masks a syntactic ambiguity of the act-sequence. To make the case more complete, he should contrast the cases of Smith and Jones with that of a third uncle, Robinson, who does not intervene but who would not push the child's head under if it should come to the surface. Note that the ethical picture is very different when this third possibility is brought in. Robinson let the child

die by something he did not do. But we judge him on a different moral basis than Smith (or for that matter Jones). Robinson is truly passive, a bystander perhaps more weak than malicious. So the difference in the mode of action itself does make a moral difference in how we evaluate thse situations.

Omissions can have consequences that are just as serious and culpable as positive actions, as Rachels' hypothetical case indicates. But that does not mean that an omission would be as culpable as a positive action in every case, even if the outcome is the same. Let us take the following case.

The patient is a female in her seventies with a long history of muscular dystrophy. She has been confined to a wheelchair and treated for stasis edema in one leg. Admitted, after becoming unresponsive at home, she became unconscious, cyanosed, and responsive only to painful stimuli. Bilateral leg edema with ecchymosis was present. Patient was admitted to Intensive Care, intubated, due to increased carbon dioxide retention, and ventilated. Patient collapsed her left lower lobe and developed pneumonia, which was treated. Attempts to wean from the ventilator were unsuccessful. After discussions with family, the patient was weaned and extubated, and it was felt that tracheotomy or further aggressive therapy was not warranted. She died approximately eighteen hours after extubation.

Enough details of this particular type of case are given to show that it could represent an actual situation in certain respects in many large hospitals today. Not enough medical details are given to individuate the case precisely for purposes of medical prognosis, or perhaps even for specific ethical judgments to be made. But it is realistic enough to illustrate circumstances in which it could be thought reasonable to discontinue aggressive therapy. How should we describe what happened in the language of negative actions?

First, notice that positive actions were involved in extubating the patient, and that the patient expired shortly thereafter. So it is not at all clèar that the act-sequence can be described as an omission on the part of the attending physicians. Yet it was a negative action to the extent that therapy was discontinued. Moreover, it could seem reasonable to suggest that the patient was allowed to die. In other words, the sequence of actions could be described as follows: by not continuing aggressive therapy, the physician (in conjunction with the family) let it happen that the patient died. Or equivalently, the physician, by not continuing aggressive therapy, did not bring it about that the patient remained alive.

The lesson is that in medical decision-making the overall structure of the act-sequence must be clearly analyzed. Just because an omission is involved, it need not follow that the sequence represents a letting-happen or other form of conduct exclusively characterized by negative actions. Conversely, non-omissive conduct does not always imply that the outcome was made to happen.

Indeed, in many instances it is not the distinction between action and omission that is ethically a main factor. Both giving a lethal dose of medication and removing a machine are actions in the sense that physical movement is involved in both. Yet the difference is ethically serious. So much depends on how you describe the fuller sequence of action (omission). An even more significant factor may be whether what is done or not done is compatible with the non-occurrence of the actual outcome. We tend to think of giving a lethal dose of medication as a bringing about because we have in mind the taking of additional steps to ensure the outcome of death, e.g., giving another dose, should the initial action not ensure the fatal outcome. By contrast, in the kind of case we outlined above where it could be permissible to remove a machine, our action (inaction) might be compatible with the continued survival of the patient. For another example, when Karen Ann Quinlan was taken off the respirator, she continued to breathe. Thus, even if she had not survived, it might truly be said that those who removed the machine let her die.

Why then in the case above do we think it reasonable to argue that the patient was allowed to die, even if positive acts were involved and the outcome was the death of the patient? I think there are a number of factors at work. First, the family was consulted, and we may presume that the wishes of the patient were not contravened in any way. Second, the prognosis suggests that it it not clear that the patient would have lived significantly longer even if aggressive therapy were to have been continued. Third, even if some survival time could have been gained, it would hardly seem to be serving the interests of the patient to gain it. Fourth, aggressive treatment would not be curing the patient's disease and would seem pointless. At least we might assume that the case can be interpreted consistently with a prognosis based on medical expertise that would support the fourth point. Fifth, cessation of therapy is not a deliberate bringing about of the death of the patient. If recovery began to seem imminent or possible, we would normally presume that aggressive therapy would quickly be reinstituted and the course of treatment changed to deal with a changed prognosis.

In short, looking at a more realistic type of case suggests that there are indeed ethically significant differences implicit in how we describe the act-sequence as positive or negative in different respects. Rachels suggests that the issue of whether or not a physical movement is involved in the act-situation is not of overruling ethical significance. And on this point, we agree. But Rachels is wrong to equate the positive *versus* the negative factors of the act-sequence simply with the factor of physical movement. The larger perspective we have taken on the whole sequence of instrumentalities that are involved in the decision situation indicates that the issue is much more complex.

Medical prognosis is never certain, and is often of a highly probabilistic nature.

Removing a patient from intensive care, for example, may result in the death of that patient. But for many reasons, we do not correctly say that this death was brought about by what was done or not done. For such a patient could live on, even in apparent defiance of a poor prognosis! One key point of moral import is that a passive course of withdrawal or reduction of aggressive treatment is an alternative that leaves open possible avenues for unexpected developments. Whereas active killing, being by its nature a foreclosure incompatible with alternative possible developments, is a course of action that could be a harm to the person whose life is at issue.

Of course, that is not the only ethical basis of the distinction between bringing about and letting happen. But it is one that is clearly highlighted by the very analysis of the concepts themselves. Although it is perhaps the exception, we have seen in this instance that analysis of concepts does make a difference to our ethical evaluations relative to specific instances. The point is that however we feel about the ethical issues of justifying withdrawal of therapy, we cannot even arrive at clear formulations of our arguments unless we come to some more clear and consistent understanding of the key terms on which the dispute hinges. Our analysis is by no means complete, but by clarifying the grammatical structure of act-sequences, we have at least shown how to confront some elementary ambiguities and confusions.

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NOTES

[1]   See Rachels (1975) and other articles in Bonnie Steinbock (ed.), *Killing and Letting Die*, Prentice-Hall, Englewood Cliffs, 1979.
[2]   For more on act-sequences as directed graphs, see Lenk (1976).
[3]   Numerous examples of this sort are outlined by Goldman (1970).
[4]   A fuller account of this definition is given in Walton (1980a), and a similar proposal is made by Pörn (1974, p. 99 f.).

⁵ Apologies to the reader for using this unpleasant example. Diets furnish many an illustrative example of refraining.
⁶ In Åqvist's sense. Another way to put it is to require the following condition: it is necessary that if Jones does not do anything then the nephew dies.

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