The aim of this paper is to clarify the concepts of omissions, refrainings, forebearances, and other "negative actions," and to study the relationships between these concepts and the notion of letting-happen. Of course, how one describes either of these families of concepts is very much dependent on how one understands the idea of an (active, positive) action. While trying to maintain as neutral a stance as possible on this quite general question insofar as is commensurate with a concentration on the study of omissions, inevitably we will be forced to base the analysis on particular assumptions about the logical form of positive action sentences. However, we will try to make these assumptions as clear as possible, and show how they fit into current work on the theory of action.

It is important to study the language of omissions, inactions and not-doings for many reasons amongst which the law or torts is prominent, but our main motivation here will be to throw light on certain ethical problems in the philosophy of medicine. The primary question is whether there is a significant and clearly identifiable difference between the concepts of actively doing something and passively letting it happen. Related to this are the questions of whether letting-happen is a species of omission, and if so, what sort.

The thesis of this paper is that letting-happen cannot always be treated as a species of omission, according to the most precise and favorable way of understanding these two concepts, even though sometimes, it does qualify as a kind of omission. We will distinguish between refraining and omitting, but our analysis will show both notions to be complex, and to admit of varieties.

I. PRELIMINARIES ON ACTIONS

The fundamental primitive notion will be that of some agent bringing it about that a proposition, p, q, r, . . . , is true at some time. A binary relation R called a relatedness relation is defined on the propositions-it is reflexive and symmetrical, but not transitive, and is interpreted as meaning "spatio-temporal nearness in an action-chain." A relatedness relation $R$ is defined on the molecular propositions of a propositional calculus called relatedness logic, with ~ (negation) and $\rightarrow$ (implication) taken as primitive, as follows: (1) $p$ is true (false) just in case $p$ is false (true), (2) $p \rightarrow q$ is true just in case $p$ is related to $q$ and it is not the case that $p$ is true and $q$ is false. A relatedness logic, $\mathcal{L}$, is shown sound and complete by Epstein (1979) and its applications to action theory are explored in a basic way in Walton (1979b). An action chain is defined by transitive closure: if p, q, r are points where actions may occur, and if p is related to q and q is related to r, we say that p is indirectly related to r. The key thing about this way of approaching actions is that we do not need to say that "If p then q" is true simply because q obtains if 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 if Davidson does not turn on the light.

The second 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 it about that q by bringing it about that p that p implies q by relatedness implication. Consequently, if some agent brings it about that p by bringing it about that q, then p and q are on the same action chain. We may say there 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), Aqvist (1974), Lenk (1976), and Walton (1979b).

A most fundamental point is that we need to distinguish between a unary operator "S brings it about that $p$" (for some agent, S) and a binary relation "S brings it about that q by bringing it about that p". Numerous difficulties, some of which we will encoun-
ter here, have been brought against the whole project of applying the notion of 'bringing about' to the natural language of actions, but I have tried to cope with these problems in (1976) and (1979c) and some of them are dealt with in recent work of Porn (1977).

For example, how could we render "Cass walked to the store" as a bringing about? "Cass brought it about that Cass walked to the store" is not necessarily the same statement, and "Cass brought it about that a walking to the store took place" could be true if she forced Smith to walk to the store, unlike the original statement. These are questions about the expressive capacity of a language based on a primitive notion of 'bringing about'.

My own solution to this kind of problem involves the notion of a pure action proposition defined in (1979c). "Cass walked to the store" is a pure action proposition if, and only if; necessarily (Cass brought it about that Cass walked to the store if, and only if; Cass brought it about that Cass brought it about that Cass walked to the store). Pure action propositions give us a way of showing how the element of action enters into action sequences without having to postulate the highly puzzling notion of basic action. It will also help us to study negative actions, as we will see.

In relatedness logic we do not have as theorems either $p \rightarrow (p \lor q)$ or $\neg p \rightarrow (p \rightarrow q)$, because in either case the schema can come out false if $p$ and $q$ are unrelated. We do however have disjunctive syllogism-relatedness logics are not relevance logics. And we always have modus ponens, but relatedness implication is not transitive. It turns out that classical truth-functional logic is an extension of relatedness propositional logic that exemplifies the idea that all propositions may be taken as related to each other. Thus classical logic is a good model of inference only if relatedness is not at issue.

Porn (1970), (1974), and (1977) bases his logic of action on the classical logic, with results questioned by myself (1979b) and (1979c). And it is hard not to see how the failure of some of the classical theorems in relatedness logics could be an advantage if we think of $p \rightarrow q$ as "p is a causally sufficient condition of q" where $p$ and $q$ are states of affairs that could be brought about by some agent. If some agent brings it about that $p$, it should not follow that he or she brings it about that $p$-or-$q$ even if $p$ and $q$ are completely unrelated. If some agent brings it about that not-$p$, it need not follow that he or she brings it about that if-$p$-then-$q$, especially if $p$ and $q$ are completely unrelated.

Moreover, if $p \not\iff q$ is interpreted as "what some agent brings about $q$ is directly related to $q"$ in the sense that $p$ is approximately spatio-temporally coincident with $q$, it is clear also that transitivity should not obtain. Even though $p$ is directly related to $q$ and $q$ is directly related to $r$, still $p$ might not be directly related to $r$.

More advantages of this departure from classical foundations will appear in the sequel. But see also Walton (1979a).

II. NEGATIONS AND NON-DOINGS

Given the basic vocabulary of I, various fundamental species of negative actions can be expressed that are of special interest.

(1) $S$ brings it about that $p$
(2) $S$ does not bring it about that $p$
(3) $S$ brings it about that not-$p$
(4) $S$ does not bring it about that not-$p$
(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 $p$.

Obviously one could go on ad nauseam here, but which forms are of basic import for the language of not-doing? (2) would seem to be the most basic form of omission, but numerous critics suggest that omissions cannot be characterized so easily.\(^3\) Brand (1971) for example distinguishes between refraining and "mere not-doing". The policeman who keeps his arm at his side refrains from shooting the fleeing youth whereas the man asleep on the couch does nothing at all with respect to answering the telephone. According

\(^1\) See also Porn (1974, p. 99).
\(^2\) The treatment of Aqvist (1974) nicely brings out the syntactical complexities of the binary bringing-about relation.
\(^3\) See Dinello (1971), Fitzgerald (1967), and Siegler (1968).
to Brand, (2) is not-doing, but only (7), or at any rate certainly not (2), can qualify as refraining. Von Wright (1963) requires that to make (2) a proper account of omission, we need to add the qualification "and S is able to bring it about that p". Brand (1971) however criticizes this account as begging the question of Free Will.

Danto (1966, p. 51) distinguishes between "S not doing action a" and "S doing action not-a" and takes the latter as a definiens for refraining. Brand (1971, p. 46) criticizes this proposal on the ground that the negation particle attaches to the singular term a, and this means that it is not classical negation, which applies to propositions. Nor is it straightforward to see what sort of negation Danto might have had in mind. The difficulty can be obviated if we can redescribe Danto's definiens as (3), for here the negation is propositional. The real difficulty with Danto's proposal, in my view, is that my bringing it about that Jones is not alive need not be a refraining. Then too, it seems more natural to think of refraining on the model of (2) rather than (3). For (3) seems to call for the more active idiom of forestalling or preventing.

It has often been noted that "omitted" commonly contains an element of expectations 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?

The upshot is that while (1)-(14) represent underlying syntactic structures for the language of not-doing, they must be enriched by adding other notions—in the theory of Brand, causal notions; in the theory of von Wright, modal notions of "can"; in the approach of Dinello (1971) and Brand (1971, p. 52f) normative notions of expectations and the like; in the legal approach of Kircheimer (1942), legal notions of contractual relationships—but since they could be so enriched in various ways, (1)-(14) are worthwhile studying as underlying syntactic structures.

In comparing the syntactic structures of (1-14) with the idioms of natural language, it is well to recognize that negation is a slippery business. Often "negative actions" can be described in a disconcertingly positive way. An actor who fails to show up for the performance is said to spoil the show. As St. Anselm, the initiator of the style of analysis above pointed out-see Henry (1967, p. 123)—he who does not love virtue, does evil. As he put it, "to do" can also have "not to do" as an instance. He who sits where and when he ought is said to do the right thing (Henry, 1967, p. 123). Thus we should be aware that because negation can be applied to propositions about actions, it need not follow that actions can be neatly divided into firm ontological categories of "positive" and "negative". Take "driving without a licence". Is this a positive or negative action? Like "negative propositions", "negative actions" can make sense syntactically, but great care is needed in trying to read in ontological lessons.

III. REFRAINING

Refraining is a binary notion in the mould of (7)—what it means to say that I refrain from bringing about q is that there is some p such that by bringing it about that p I see to it that I do not bring it about that q. Moreover, for a (direct) refraining to have taken place, it must be that p and q are directly related. Nonetheless we might allow that I indirectly refrained from drinking a sherry on Saturday by giving my wife the key to the cabinet the week before. We can still vindicate this sequence as a refraining by virtue of the indirect relatedness that is established between the two separated events. We offer the following general definition: a person refrains from bringing it about that q if, and only if, for some p, p implies q by relatedness implication and the person brings it about that ~p. Thus the logical basis of our approach is the quantified relatedness logic developed by Epstein (1979).

It would be nice to strengthen the above definition by adding some causal notions, by stipulating that it should be causally necessary that if p obtains then q does not obtain. Incidentally, we might also want to require that the time at which p obtains should not be later than the time at which q obtains. Brand (1970) adopts both requirements, and we will follow along, provided however that it is clear that we must base...
causal modalities on a propositional calculus of relatedness logic. From "it is impossible that \( p \)" we cannot deduce "\( p \) implies \( q \)" if \( p \) and \( q \) are not related. Moreover, in the context of causation and action, \( p \land q \) should be thought of as classical and, not requiring relatedness. Thus \( p \land q \) might be impossible, say because \( q \) is impossible, even if \( p \) and \( q \) are unrelated, but it does not follow that it is causally necessary that if \( p \) obtains then \( q \) does not obtain. It is causally impossible both that some man in Peru snaps his fingers and my desk here in Winnipeg turns into a pumpkin, simply because it is impossible for my desk to turn into a pumpkin. But it does not follow that it is causally necessary that if a man in Peru snaps his fingers my desk will not turn into a pumpkin, for there need be no relatedness between these two states of affairs.

Brand (1971) stipulates that an agent \( S \) refrains from performing an action \( a \) if, and only if, \( S \) does not perform \( a \) and \( S \) performs some action \( b \) in order that \( S \)’s performing \( b \) causally prevents \( S \)’s performing \( a \). But there are two problems. The patrolman who shouts "Stop or I’ll fire!" to a fleeing youth, then shoots but just misses, must be said to have refrained from shooting. But that is hardly correct. Second, if having given my wife the keys to the liquor cabinet, I unsuccessfully attempt to break it open two weeks later to get a glass of sherry, it is hardly accurate to say that I refrained from drinking the sherry.

Another difference between our analysis and Brand’s-the latter appears to require a positive performance in order to prevent \( S \)’s doing what he refrained from doing. Our analysis allows that one can refrain from doing \( p \) by not doing \( q \), after the form (12). By our analysis, I can refrain from eating a pastry by not moving my hand in its direction.

IV. LETTING HAPPEN

Brand (1971, p. 52) defines letting-happen as follows: \( S \) lets event \( e \) happen if, and only if, there is an action \( a \) such that \( S \) performs \( a \) and justifiably believes that it is causally necessary that if it performs \( a \), then it is not the case that \( e \) occurs. This is not quite right, however. If \( S \) shoots Jones justifiably believing that it is causally necessary that if he shoots Jones, Jones will not be alive, it hardly follows that \( S \) lets Jones be alive. Rather I propose that we define letting-happen as follows: \( S \) lets \( e \) happen if, and only if, \( S \) refrains from causally preventing \( e \) from happening.

What does this definition imply about the underlying action-theoretic form of letting-happen? In the case of a unary bringing about like (1), it means that letting-happen can be defined by two negation signs as in (4). Thus to say that \( S \) lets \( p \) happen is to say that \( S \) does not bring it about that not-\( p \). If we think of omitting as a species of not-doing-as we can, I suggest, because we can think of (2) as expressing the underlying syntactic action-theoretic form of omitting, from which a fuller notion of omitting can be gotten by adding the requisite causal and normative notions after the manner studied in III-then letting-happen, represented by (4) is a special case of (2), the structure of omitting.

But in the case of the binary bringing about represented by (5)–(14), the situation is more complex, and it can be shown in the binary cases that letting-happen is not a species of omitting. First, notice that an instance of (10) might well be said to be an omission or not-doing, but not a letting-happen. For example, if one of us must do something, by my not doing it I may bring it about that you do it. My not doing it may be described as an omission, but that doesn’t mean I just let it happen, or even that I let it happen that you did it. On the contrary, by not doing it I made it happen that you did it. That is, the mere fact that my not bringing about \( p \) may be described as an omission does not determine whether or not the binary sequence is a bringing about or a letting-happen. If it is of the form (10) then it is a bringing about. But in other circumstances it might be a
V. ACTIVE AND PASSIVE IN MEDICAL ETHICS

A fuller case for the distinction between making happen and letting-happen in medical ethics is made in Walton (1978), but here I would simply like to indicate how the action-theoretic relationship between omitting and letting-happen that we have studied above can throw some light on current problems in the ethics of medical decision-making.

The pivot point of recent discussions of letting-happen in medical ethics is a highly significant article of Rachels (1975). Consider the following pair of cases (1975, p. 79).

In the first, Smith stands to gain a large inheritance if anything should happen to his six-year-old cousin. One evening while the child is taking his bath, Smith sneaks into the bathroom and drowns the child, and then arranges things so that it will look like an accident.

In the second, Jones also stands to gain if anything should happen to his six-year-old cousin. Like Smith, Jones sneaks in planning to drown the child in his bath. However, just as he enters the bathroom Jones sees the child slip and hit his head, and fall face down in the water. Jones is delighted; he stands by, ready to push the child's head back under if it is necessary, but it is not necessary. With only a little thrashing about, the child drowns all by himself, "accidently," as Jones watches and does nothing.

According to Rachels, the only difference is that Smith killed the child whereas Jones "merely" let the child die. Rachels concludes that since both are equally reprehensible, this "mere" difference could be of no moral significance. In both cases, the outcome is equally bad, so the modality of the action cannot make a moral difference.

We observe however that Rachels is impressed by the fact that Smith's case is a positive action of the form (I) whereas Jones' is an omission of form (2). Nonetheless, it does not follow, as we have seen, that an omission always constitutes a letting-happen. The key question is whether what Jones fails to do is compatible with the survival of the child. The account of Rachels suggests not, because according to the description above, Jones stands by ready to push the child's head under if necessary. In this case then it is correct to say that by something he does not bring about (and also perhaps by some things he might bring about) Jones brings it about that the child is dead. It is misleading therefore to imply, as Rachels does, that Jones lets the child die by something he fails to do. In our terms, the distinction is to be made between the following two forms: By not bringing it about that \( p \), \( S \) brings it about that \( q \); By not bringing it about that \( p \), \( S \) brings it about that not-\( q \) (\( p \) =the child's head is raised out of the water; \( q \) =the child is dead). Rachels' inference conceals a syntactic ambiguity.

A true case of letting-happen would be the third case of Robinson, who does not intervene to save the child—in this respect he is like Jones—but who would under no circumstances push the child's head under if it were to regain consciousness. Note that we tend to judge Robinson on a different moral basis than Smith or Jones. Robinson is truly passive, perhaps morally weak more than malicious. Robinson lets the child die, but it is by no means clear that his letting-die mode of action is of not a morally significant difference by comparison to Smith's positive mode of action.

Let us try to make clear the relevance of these action-theoretic categories to the practice of medical ethics. The no-difference thesis of Rachels appears to sanction the stance that if death is to be an outcome of the withdrawal or non-utilization of treatment, it could be equally morally tolerable to terminate life by active means. If the intention and consequences are the same in either case, it may seem reasonable that no morally significant difference in the mode of action is to be found.

Indeed, it is not in the distinction between a positive action and omission itself that an ethically significant basis for distinguishing can apparently be found. For
both giving a lethal injection and removing a machine are actions in the sense that physical movement is involved in both. A closer inspection of the binary syntactical form however reveals the difference.

This difference is that we tend to think of giving the lethal injection as a bringing about because in the event that the injection were not fatal, presumably one would have in mind taking further steps—say a second injection—that would result in death. However, in the sort of case we have in mind in which we might think it permissible to remove, or not to introduce, the machine, our action or inaction might be compatible with the continued survival of the patient. For example, when Karen Ann Quinlan was taken off the respirator, as it happened, she continued to breath without the machine. Accordingly, if she had "died", it might have been truly said that those who removed the machine let her die.

The basis for the moral significance of the distinction between bringing about and letting-happen in medical decision-making is of practical importance because medical prognosis is never certain, and is often of a highly probabilistic nature. Removing a patient from an intensive care unit and providing only basic requirements may or may not result in the death of the patient. Sometimes such patients live on, contradicting the physician's prognosis, and apparently defying the prognosis. It is even possible occasionally that such a patient might make a full recovery. The point is that active killing could be a harm to a person in this sort of case. By contrast, the passive course of withdrawal of aggressive treatment is an alternative that can allow for the uncertainties of a probabilistic prognosis.

In other words, the practical circumstances of medical prognosis and the attendant uncertainties of possible recovery are a background against which the action-theoretic modalities play an important role in the ethical evaluation of decisions. What is ethically significant is the binary relation that underlies the modality of making-happen versus letting-happen. The mere fact that an omission is involved is not by itself overruling.

VI. OMISSIONS

Brand (1970, p. 47) criticizes the analyses of von Wright and Danto that omitting is a species of not-doing by objecting that we are not told what "does not do something" means. What does it mean to say that Jones does not eat green cheese? Taking our cue from Davidson (1966) we should point out that "Jones brings it about that green cheese is not eaten" will not do as an analysis because it is not equivalent to "Jones does not eat green cheese". The first statement could be true by virtue of Jones' seeing to it that Smith does not eat green cheese, unlike the later. Nor will "It is not the case that Jones brings it about that green cheese is eaten by Jones" seem to do as a non-circular analysis, because the agent "Jones" appears again within the scope of the bringing about by Jones. Are we stymied by negation?

The best solution is to propose that the statement to be analyzed is the negation of the pure action proposition "Jones eats green cheese". Recalling the definition from I, we say that "Jones eats green cheese" is a pure action proposition if and only if the following is true: Jones eats green cheese if and only if Jones brings it about that Jones eats green cheese.

Then "Jones does not eat green cheese" is just the negation of this pure action proposition. And classical negation is something we all know and love.

The distinction between refraining and omitting has now clearly emerged. Refraining is an essentially negative and binary act-sequence which has the form of (7), (12) or similar schemata. Omissions are better thought of as simple unary negations after the form of (2). Thus it is appropriate to speak of refraining from doing something by doing something else, or even by not doing something else. A refraining need not be an omission, nor need it be carried out by an omission. This is not the final word on omissions or refinements, however.

As Dinello, von Wright and others 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 "being expected to do a". And it is indeed these usual implicatures that lead to Brand's criticism that the von Wright approach begs the Free Will question. For if omitting—or for that matter refraining—the is the result of coercion, how can it be right to stipulate that my omitting—or refraining—to do something entails that I can do it? On the other hand, if I try to pull the sword from the stone and fail, can I be said to have omitted or refrained? It seems to me that the best 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.

In the narrower sense of "omit", it is correct as far as it goes to say that I omitted to pull the sword from the stone. But this conclusion is only warranted insofar as we are thinking of my inaction as such, without thinking of its role in the wider causal nexus.
Taking a more extended view of the act-sequence, what I failed to do is not correctly describable as an omission. Reason: although I omitted to do it, it is not true that I could reasonably have omitted to omit to do it. In other words my conduct cannot be described as an omission in the wider sense because I could not have avoided not pulling the sword out. Nor, as we saw in sect. 1, can it be described as a refraining.

Some might say that this view compels us to equivocate by giving us two meanings of "omit" neither of which is by itself satisfactory. I would counter that this is not 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 omissions play a complex role in causal sequences of actions.

Others would say that any move towards the richer definition of omission begs the Free Will question. I would reply that the question of Free Will is not begged because the theory indicates precisely where and how the parameter of possible alternatives to actions or omissions can be introduced. And we can introduce this factor if we wish to adopt a richer and more complex definition of "omission" that is in turn introduce this factor if we wish to adopt a richer and more adequate to the language of actions, causality, and responsibility. The question is not begged, but nicely divided.

To sum up, the relationship between omitting and refraining, as we have analysed 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 negative actions can be complex, once we bring in the binary notion of bringing-about. In this sense, I may refrain from doing something by doing, or by omitting something else. A refraining is a kind of negative action where the by-relation incorporates causal self-prevention. I refrain from bringing about q where something else I bring about, p, causally prevents my bringing about q, and p is related directly (or indirectly) to q. Finally, a letting-happen is a variety of refraining whereby an agent refrains from preventing something from happening. Letting an outcome happen may be compatible with that outcome 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, and not every omission is merely a letting-happen. It seems to be true that not doing anything can sometimes be a way of doing something.

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10 How the binary relation of the act-sequence can be extended to take into account possible alternatives to a given sequence is nicely illustrated by the treatment of Aqvist (1974).

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