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THE CONDITIONAL ANALYSIS OF FREEDOM

... determinism cannot be reconciled with our datum ... that it is sometimes up to me what I am going to do. For if it is ever really up to me whether to do this thing or that, then ... each alternative course of action must be such that I can do it in the sense that it is then and there within my power to do it. But this is never so, if determinism is true, for on the very formulation of that theory whatever happens at any time is the only thing that can then happen, given all that precedes it. It is simply a logical consequence of this that whatever I do at any time is the only thing I can then do, given the conditions that precede my doing it.

Richard Taylor¹

1

This is well said. But many philosophers do not see it that way. It is an uncomfortable view to take. It means that a fundamental assumption of our practical life — that we are continually free to determine which of several alternative courses events will take — is not known to be true, since determinism — the thesis that the entire state of the universe at any given time can be deduced from its state at any earlier time and the laws of nature — is not known to be false. It is not surprising that many philosophers believe that this assumption must be compatible with determinism. Many of them have hoped to make a convincing case for this compatibility by giving an analysis of what it means to say that a person could have brought about what in fact that person did not bring about. At least they have hoped to spell out a proposition that will necessarily be the same in truth-value as this one and also be clearly compatible with determinism.

The leading suggestion regarding such a proposition is that it, or a primary component of it, should be a subjunctive conditional of a certain sort: a person *S* could have brought about a certain thing that *S* did not in fact bring about, the suggestion goes, provided that *S* would have done so if *S*'s will had

been in the appropriate direction. It is a plausible idea that S was free to do something that S did not do if the circumstances lying outside S 's actual will and the factors motivating it would not have frustrated S 's will had it been towards doing that thing.

Concerning this suggestion Taylor has remarked that, if determinism is true, then

I could not have decided, willed, chosen, or desired otherwise than I in fact did . . . we will then want to know whether the causes of those inner states were within my control, and so on, *ad infinitum*. We are, at each step, permitted to say "could have been otherwise" only in a provisional sense . . . but must retract it and replace it with "could not have been otherwise" as soon as we discover, as we must at each step, that whatever would have to have been different could not have been different.²

To deal with this sort of objection a sophisticated compatibilist will include in the proposed analysis, in addition to the sort of subjunctive conditional mentioned above, another clause the import of which is intended to be that S could have had a different will. And the compatibilist will see to it that this added clause, besides being compatible with determinism, is not a subjunctive conditional and thus will not permit the challenge, 'But could S have made *that* proviso the case?'³ By adding such a nonconditional necessary condition the compatibilist will also avoid most of the other objections to conditional analyses of freedom that have been put forward.⁴

The compatibilist will, however, still not have an acceptable analysis of the conditions necessary and sufficient for its having been in a person's power to make the world other than it was. No matter what sort of clause is added, as long as it remains compatible with determinism, the proposed analysis will have clearly unacceptable consequences. This is the conclusion that I will try to make credible. In addition, I will make a suggestion as to what an acceptable conditional analysis of freedom should look like.

II

Our analysandum, in its most general form, can be expressed in the following way.

It was in S 's power at t to make it the case that p .

S had freedom of the sort we are concerned with only if some propositions of this form are true when the embedded proposition p is false. The proposition p may express the occurrence of an event (or events) or state of affairs (or states of affairs) of virtually any sort (or sorts). We attribute to people, not

only the freedom to determine which of several alternative actions they will perform, but also the freedom to determine which of several alternative events or states of affairs of other sorts will obtain. Such freedom implies the power to make the case what is not the case.

To make something the case is to contribute at least part of what is needed for it to be the case. More precisely, S made it the case that p just in case p is true and there was some action of S 's, S 's V -ing, such that either p entails that S V -ed or there is some proposition q such that S 's V -ing caused it to be the case that q and p entails q .

The power to make a certain thing occur at a certain time, though possessed at one time, can later be lost as matters change and the time of the thing in question draws nearer. For example, it might be that S , sitting in her office, had it in her power thirty minutes ago to be on the squash court at 4.00 P.M. but now, at 3.55 P.M., no longer has that in her power. Since the relation between the time at which S had the power to make a certain state of affairs obtain (or event occur) and the time of that state of affairs (event) is important, we will do well to make reference to the time of the state of affairs (event) explicit in our analysandum. It will also be a good idea to be fairly precise in what we mean by the occurrence at a time of a state of affairs or event. Let us use ' t ', with or without subscript, to denote an interval (which may be vaguely delimited) located at a particular place in time. Let us use ' $F(t)$ ' to abbreviate the sentence form 'Such-and-such a thing(or things) was(were) in such-and-such a state, or undergoing such-and-such a change, from the beginning to the end of t '.

This represents one form of proposition that may replace p in our general analysandum. It also makes sense to say that it was in S 's power at t to make the case a certain *conjunction* of states of affairs or events, which may (but need not) be temporally scattered. Thus a more inclusive specification of the sort of proposition that may replace p is given by the phrase 'a conjunction of one or more propositions each of the form $F(t)$ '. When there is more than one such conjunct it will be convenient to have them conjointed in temporal order. So let us represent this more inclusive form of proposition in the following fashion:

$$F_1(t_1) \& \dots \& F_n(t_n),$$

where $n \geq 1$ and t_1, \dots, t_n are so ordered that for each t_i other than t_n , t_{i+1} does not begin earlier than t_i (I will use ' $t_i \leq t_{i+1}$ ' to express this relation). Let us limit the task under discussion to that of providing a necessary and sufficient condition for the truth of our analysandum in just those cases

where p is some proposition of the form just specified. (Other forms of replacements for p could be constructed by using quantification and truth-functional connectives other than conjunction, but we need not consider them here.)

We can think of the prefix 'It was in S 's power at t to make it the case that ...' as expressing an operation on the proposition expressed by the sentence to which it is prefixed. We can think of it as expressing a certain kind of possibility for that proposition, a kind that is relative to a particular person and time. Let us abbreviate it with the following:

$$\diamond_t^S p.$$

Let us say that ' $\diamond_t^S p$ ' expresses the *power possibility* of the proposition p relative to the time t and the person S .

We can, if we like, introduce the notion of the *power necessity* of a proposition, relative to a particular person and time, defining it in terms of power possibility:

$$\boxed{P}_t^S p = \text{df. } p \ \& \sim \diamond_t^S \sim p.$$

And we can define an unrelativized notion of power necessity in terms of the relative notion:

$$\boxed{P} p = \text{df. } \bigwedge S \bigwedge t \boxed{P}_t^S p.$$

Using some of our new notation, we can represent the analysisandum that we are now concerned with as follows:

$$[1] \quad \diamond_t^S [F_1(t_1) \ \& \dots \ \& F_n(t_n)].$$

This is to be read: it was in S 's power at t to make it the case that F_1 occurred at t_1 , ..., and F_n occurred at t_n .

III

A philosopher seeking a compatibilist analysis of the truth-conditions for [1] can, perhaps, do no better than to begin by working out an analysis for the simpler one-conjunct case,

$$[2] \quad \diamond_t^S F(t_1),$$

and then try to adapt that analysis to fit the more general case, [1].

It is clear that no proposition of the form of [2] can be true unless S exists at t . S possesses no powers at times when S does not exist. Further, it is clear that [2] can be true only if t is not wholly later than t_1 . Once a time is past it is no longer in one's power to make something the case at that time. Finally we can agree that [2] is true only if either S did make it the case that $F(t_1)$ by something S did between the beginning of t and the end of t_1 or S would have done so if S 's will had been suitably different from what it was between those times.

The term 'will' here refers to whatever suffices to initiate an intentional action or attempt to act that involves exertion of force by the body. If one is persuaded (as I am) that this initial component must be a *volition*, a mental act of willing to exert force with one's body in a certain way, then one will find it appropriate to replace the vague 'if S 's will had been suitably different' with 'if S had performed a volition (or volitions) of appropriate type(s)'. Many philosophers, however, are not persuaded that intentional actions or attempts to act must begin with volitions. Since none of the difficulties for the compatibilist program of analysis that I shall raise depend on taking one position rather than the other on this question, some readers will be spared unnecessary annoyance if we use a formulation of the subjunctive conditional (at the end of the preceding paragraph) that does not presuppose any particular answer to it. So instead of volitions I propose to refer to *causally basic actions* and to define the latter notion as follows. An action (e.g., my signing a check) is *not* causally basic just in case it consists of (i) an event e (e.g., there coming to be certain marks on the check) that is not itself an action, and (ii) another action of the same agent (e.g., my moving a pen in a certain way) that does not have e as a part but does contribute to causing e .⁵ Philosopher who do not accept that an action that is causally basic in this sense must be a volition can still agree that this notion offers a suitable way to make more specific the antecedent of the subjunctive conditional that is necessary for the truth of [2] when $F(t_1)$ is false.

A careful formulation of this subjunctive conditional must allow for the possibility that making $F(t_1)$ true would have required the performance by S of more than one causally basic action. I would have made it the case that the broken step in front of my house is now repaired had I performed a fairly large number of different causally basic actions at different times, but there is (alas) no single causally basic action such that if I had merely performed it at a certain past time then I would have made it the case that that step is now repaired. More accurately, there is no type of causally basic action such that if I had merely performed a single action of that type then by doing so I

would have made it the case that that step is now repaired. So I propose the following as the form of our subjunctive conditional:

- [3] There are times $t_{1,1} \leq t_{1,2} \leq \dots \leq t_{1,m}$, between the beginning of t and the end of t_1 , and causally basic action types $A_{1,1}, \dots, A_{1,m}$, such that: if S had performed $A_{1,1}$ at $t_{1,1}, \dots$, and $A_{1,m}$ at $t_{1,m}$, then by doing so S would have made it the case that $F(t_1)$.

[3] should be interpreted in such a way that it is true if the antecedent and consequent of the embedded conditional were in fact both made true by one or more times and action types meeting the conditions laid down.)

IV

Incompatibilists can agree with compatibilists that [3] is necessary for [2]. Disagreement comes over what more is necessary. A small part of the answer is, however, unlikely to be disputed. The antecedent of the subjunctive conditional in [3] must be logically possible and it must also be logically compatible with the laws of nature, i.e., naturally possible. Otherwise, if we allow [3] as it stands to be sufficient for [2], we allow it to be in S 's power to perform actions that are logically or naturally impossible. But, of course, it can be in no one's power to make the case a logically impossible state of affairs. And it can be in no natural person's power to make the case a naturally impossible state of affairs. Part of the notion of natural necessity that attaches to laws of nature and to their logical consequences is the notion of unrelativized power necessity defined above. A proposition is naturally necessary only if it is never in any natural being's power to make true its contradictory. At any rate, the determinism that I wish to say is incompatible with our ever being free to make things other than they are is the doctrine that every state of the universe develops from antecedent states in accordance with universal laws of nature that are necessary at least in the sense that nothing in nature has the power to falsify them. So we can agree that the following elaboration of [3] is necessary for [2].

- [4] There are times $t_{1,1} \leq \dots \leq t_{1,m}$, between the beginning of t and the end of t_1 , and causally basic action types $A_{1,1}, \dots, A_{1,m}$, such that:
- (i) if S had performed $A_{1,1}$ at $t_{1,1}, \dots$, and $A_{1,m}$ at $t_{1,m}$, then by doing so S would have made it the case that $F(t_1)$, and

- (ii) it is logically and naturally possible that S performed all of the actions mentioned in the antecedent of (i).

What more is necessary? Well, these conditions do not guarantee that it was ever in S 's power to perform any of the sequence of causally basic actions mentioned in (i). For any such sequence to have been in S 's power, it must be, or be part of, a sequence whose first member was in S 's power up to the time when it would have occurred. For, if the performance of a causally basic action A at t was in S 's power up to t^- , earlier than t , but ceased to be so after t^- , then this could only be because S failed to perform at t^- some causally basic action A' that it was in S 's power up to t^- to perform then and the performance of which would have preserved, past t^- , S 's power to perform A at t . From this we can see that what is required for the truth of [2] is a sequence of (one or more) causally basic actions, $A_{1,1}$ at $t_{1,1}, \dots, A_{1,m}$ at $t_{1,m}$, such that: $\Diamond_{t_{1,1}}^S A_{1,1}^S(t_{1,1})$, if $A_{1,1}^S(t_{1,1})$ then $\Diamond_{t_{1,1}}^S A_{1,2}^S(t_{1,2})$, \dots , and if $A_{1,m-1}^S(t_{1,m-1})$ then $\Diamond_{t_{1,m}}^S A_{1,m}^S(t_{1,m})$, where ' $A^S(t)$ ' abbreviates ' S performed A at t '. We cannot, of course, include *this* condition in the analysis without rendering it circular. We must consider what is necessary and sufficient for the truth of any of its atomic components containing \Diamond , any proposition that it was in S 's power up to a particular time t to perform a certain causally basic action at t .

I am prepared to argue (and by the end of this paper will have argued) that it is necessary for the truth of such a proposition that no facts as to what occurred up to t naturally necessitate that S did *not* perform A at t . The compatibilist thinks that we need not go so far, that what is necessary is the absence, not of any sort of fact that naturally necessitates S 's not performing A at t , but just the absence of certain restricted sorts of such facts. S 's not performing A at t , the compatibilist will say, must not have been naturally necessitated by antecedent facts that were both *external* to S 's motivational self and *too close* causally to t . If determinism is true then, if one goes back far enough one will find antecedent facts quite external to S that causally necessitated S 's not performing A at t . But the compatibilist's idea is that this does not conflict with its having been in S 's power up to t to perform A at t if those antecedents necessitated S 's not performing A at t through events and states that were among those desires, beliefs, intentions, and the like with which S 'identified' himself or herself. Thus the compatibilist will like to formulate a necessary and sufficient condition for the truth of $\Diamond_t^S A^S(t)$ that will be satisfied in cases where S 's not performing A at t but performing

some other causally basic action instead is a matter of the actual action's arising in the normal way (whatever that is) from S 's immediately antecedent desires, beliefs, and the like. But the compatibilist will want this condition also to be such that it will *not* be satisfied in cases where external circumstances, bodily conditions, or even desires and fears of a special compulsive character, figure in the explanation of S 's not performing A at t in such a way that it is intuitively clear that for some period before t it was not in S 's power to perform A at t . Since it does not matter for the difficulties I am going to raise what is informative, and at least superficially plausible, version of such a condition is used, let us allow the compatibilist to put it vaguely, but simply, as follows:

S 's not performing A at t was not naturally or otherwise necessitated by conditions up to t that were external to S 's motivational self and too near causally to t .

(I include 'or otherwise' here in case it turns out that, for instance, the compulsion in compulsive desires and fears is not to be explicated in terms of natural necessitation.) We can take it on faith that the cash value of 'otherwise', 'external to S 's motivational self', and 'too near causally to t ' could be spelled out in plausible fashion. It will be convenient to have an abbreviation for this condition. I shall use ' $O[A^S(t)]$ '.

We can agree, then, that the following elaboration of [4] is necessary for the truth of [2].

- [5] There are times $t_{1,1} \leq \dots \leq t_{1,m}$, between the beginning of t and the end of t_1 , and causally basic action types $A_{1,1}, \dots, A_{1,m}$, such that:
- (i) if S had performed $A_{1,1}$ at $t_{1,1}, \dots$, and $A_{1,m}$ at $t_{1,m}$ then by doing so S would have made it the case that $F(t_1)$, and
 - (ii) $O[A_{1,1}^S(t_{1,1})]$, if $A_{1,1}^S(t_{1,1})$ then $O[A_{1,2}^S(t_{1,2})], \dots$, and if $A_{1,m-1}^S(t_{1,m-1})$ then $O[A_{1,m}^S(t_{1,m})]$.

[5] (ii) entails [4] (ii) on the natural stipulation that a proposition of the form ' $O[A^S(t)]$ ' is to be counted as false if $A^S(t)$ is logically or naturally impossible. It will be convenient to have an abbreviation of [5]. Since [5] expresses a certain relation among S , the times t and t_1 , and the proposition $F(t_1)$, let us use the following: $R[S, t, t_1, F(t_1)]$.

Now the compatibilist might suggest that, if one conjoins [5] with the stipulation that S existed at t , one gets a condition that is sufficient as well as necessary for the truth of [2], namely,

- [6] S existed at t and $R[S, t, t_1, F(t_1)]$.

V

This claim looks plausible. Now the compatibilist's task is to show how this result can be used to construct an analysis for the more general case, [1], where the embedded proposition can have any number of conjuncts (greater than zero). I am not aware of any attempt by a compatibilist to tackle this problem. It is where the insuperable difficulties arise. It will not do, of course, to say that

$$\Diamond_t^S [F_1(t_1) \& \dots \& F_n(t_n)] \text{ iff } \Diamond_t^S F_1(t_1) \& \dots \& \Diamond_t^S F_n(t_n).$$

It must be possible that it was in S 's power at some time to determine *whether or not* a certain state of affairs would occur at a certain time. That is, it must be possible that, for some S , t , and proposition $F(t_1)$,

$$\Diamond_t^S F(t_1) \& \Diamond_t^S \sim F(t_1).$$

But, of course, it is not possible that

$$\Diamond_t^S [F(t_1) \& \sim F(t_1)].$$

Perhaps the simplest move that is not so obviously wrong that it would never be seriously considered is to replace ' $F(t_1)$ ' in [6] with ' $F_1(t_1) \& \dots \& F_n(t_n)$ '. This would give us the following candidate for a condition that is necessary and sufficient for the truth of [1]:

- [7] S existed at t and $R[S, t, t_1, F_1(t_1) \& \dots \& F_n(t_n)]$.

This candidate must, however, be rejected. In some cases it gives wrong results. Consider a two-conjunct case,

- [8] $\Diamond_t^S [F_1(t_1) \& F_2(t_2)]$,

and suppose the following: $F_1(t_1)$ is true, $F_2(t_2)$ is false but $\Diamond_t^S F_2(t_2)$ is true, and t_1 is wholly earlier than t . It is consistent with these suppositions that [8] is true. Yet [8] could not be true if the appropriate instance of [7] were necessary for [8]. The appropriate instance of [7] is not satisfied by the case supposed because there are no times between the beginning of t and the end of t_1 , owing to the fact that t_1 is wholly earlier than t (see [5] above, p. 178). One might be tempted to deny that the truth of [8], or of any instance of [1], is compatible with the supposition that t_1 is wholly earlier than t , and

to insist that if it is in S 's power at t to make it the case that p then p cannot entail any proposition as to what happened before t . And one might think to argue for this from the assumption that relative power possibility, like logical possibility, is preserved by deduction, that if relative power possibility attaches to a given proposition then it must attach to any logical consequence of that proposition. But this assumption is false. Consider the proposition:

[9] Today is the 87th consecutive day that S has run a mile.

It could be that it is in S 's power now to make [9] the case. That is, it is logically possible that

[10] \Diamond_S^{now} today is the 87th consecutive day that S has run a mile.

Proposition [10] might be colloquially expressed by saying, ' S could make this the 87th straight day she has run a mile'. [9], however, has among its logical consequences the proposition that

[11] S began to exist at least 86 days before today.

In no possible world where [10] is true, indeed in no possible world at all, is it true that it is in S 's power now to make [11] true. Thus it is false that if relative power possibility attaches to a proposition then it attaches to any logical consequence of it.

So the claim that [8] or [1] can be true only if t_1 is not wholly earlier than t cannot be defended in that way. And it is easy to see that it cannot be defended at all, for the logical possibility of [10] also offers the basis for a direct counterexample to this claim. Proposition [9] is equivalent to a conjunction of the form $F_1(t_1) \& \dots \& F_n(t_n)$ having as its first conjunct the proposition that

on the 86th day before today S ran a mile.

Thus [10] is equivalent to an instance of the form [1] where t_1 is wholly earlier than t .

VI

How might [7] be revised to avoid the counterexample to the claim that it is necessary for [1]? Probably the most obvious suggestion is the following: in the case where $F_1(t_1) \& \dots \& F_n(t_n)$ contains both true and false conjuncts, only the false conjuncts need to be treated along the lines of the second

conjunct of [7]; and the times of the causally basic actions on S 's part that would have made all of those false conjuncts true should be required merely to fall between t and the latest time in those false conjuncts. In other words, the suggestion would be that, if $F_1(t_1) \& \dots \& F_n(t_n)$ contains some false conjuncts and $F_k(t_k), \dots, F_l(t_l)$ are all of its false conjuncts, then [1] is true if and only if S existed at t and $R[S, t, t_k, F_k(t_k) \& \dots \& F_l(t_l)]$.

What about the other case, where $F_1(t_1) \& \dots \& F_n(t_n)$ contains no false conjuncts? Obviously [1] is not always true in that case; but it seems plausible to suppose that in that case [1] will be true if and only if $F_1(t_1) \& \dots \& F_n(t_n)$ contains at least one conjunct $F_k(t_k)$ such that $\Diamond_t^S F_k(t_k)$. So it might be suggested, plausibly, that, if $F_1(t_1) \& \dots \& F_n(t_n)$ is true, then [1] is true if and only if S existed at t and $F_1(t_1) \& \dots \& F_n(t_n)$ contains at least one conjunct $F_k(t_k)$ such that $R[S, t, t_k, F_k(t_k)]$ — remember that we interpret the subjunctive conditional in the proposition that $R[S, t, t_k, F_k(t_k)]$ in such a way that that proposition is true if S did make it the case that $F_k(t_k)$ by something S did between t and t_k .

If we put these suggestions together, we get the following candidate for a condition that is necessary and sufficient for the truth of [1]:

[12] S existed at t ; if $F_1(t_1) \& \dots \& F_n(t_n)$ contains some false conjuncts and $F_k(t_k), \dots, F_l(t_l)$ are all of the false conjuncts it contains, then $R[S, t, t_k, F_k(t_k) \& \dots \& F_l(t_l)]$; and if $F_1(t_1) \& \dots \& F_n(t_n)$ contains no false conjuncts, then it contains at least one conjunct $F_k(t_k)$ such that $R[S, t, t_k, F_k(t_k)]$.

But this candidate will not do either. The supposition that [12] is sufficient for [1] has the disastrous consequence that it can be in S 's power to make true a logically impossible proposition. Suppose the following: $F_1(t_1) \& F_2(t_2)$ is logically impossible; S made it the case that $F_1(t_1)$; t is wholly earlier than t_1 . Consistently with these suppositions, we can also suppose that, for some time $t_{1,1}$, not ending earlier than t or later than t_1 , and some causally basic action type $A_{1,1}$, (i) if S had performed $A_{1,1}$ at $t_{1,1}$ then by doing so S would have made it the case that $F_2(t_2)$, and (ii) S 's not performing $A_{1,1}$ at $t_{1,1}$ was not naturally or otherwise necessitated by conditions before $t_{1,1}$ that were external to S and too near causally to $t_{1,1}$. For example, let $F_1(t_1)$ be S 's head now faces to S 's right, $F_2(t_2)$ be S 's head now faces to S 's left, t be 3 seconds before now, and S performed $A_{1,1}$ at $t_{1,1}$ be During the interval from 3 seconds ago until now S turned S 's head from facing forward to facing to S 's left. If [12] were sufficient for [1] then it would follow from

our last supposition that $\Diamond_t^S F_2(t_1)$; and, since $F_2(t_1)$ is the only conjunct in $F_1(t_1) \& F_2(t_1)$ that is false, it would follow further that $\Diamond_t^S [F_1(t_1) \& F_2(t_1)]$.

VIII

There is a simple way to amend [12] to avoid the consequence just demonstrated. Add the stipulation that it be logically and naturally possible that $F_1(t_1) \& \dots \& F_n(t_n)$. That this is required for the truth of [1] is obvious as soon as one thinks of it. Indeed, it is obvious that something stronger must be required, namely, that it be logically and naturally possible that *S made it the case* that $F_1(t_1) \& \dots \& F_n(t_n)$ by something *S did* at t or later. So let us add this stronger stipulation to [12]. Do we now have a condition that is necessary and sufficient for the truth of [1]? I am afraid not. There remains the following difficulty. If our revised [12] were sufficient for [1] then the inference rule of *modus ponens* for relative power necessity would not be valid. This rule is the following:

$$\boxed{P}_t^S(p \supset q) . \boxed{P}_t^S p : \boxed{P}_t^S q.$$

This is equivalent to

$$(p \supset q) \& \sim \Diamond_t^S(p \& \sim q) . p \& \sim \Diamond_t^S \sim p : q \& \sim \Diamond_t^S \sim q.$$

Surely this is a valid form of inference, on any reasonable understanding of 'It was in *S*'s power at t to make it the case that' (or 'At t it was open to *S* to make it the case that' or 'At t , *S* could have made it the case that'). Suppose, for example, that (first premise) if (p) it rained this afternoon then (q) the fresh paint on the house is ruined, and it was not in *S*'s power this morning (t) to make it the case that it would rain this afternoon but the paint would not be ruined. Suppose also that (second premise) it did rain this afternoon and it was not in *S*'s power this morning to make it the case that it would not rain this afternoon. Surely it follows that (conclusion) the paint is ruined and it was not in *S*'s power this morning to make it the case that the paint would not be ruined.

If, however, the revised [12] were sufficient for [1], and if determinism were true, then there would be an instance of this form of inference with true premises and false conclusion. Let t_2 be a time later than t at which *S* performed a normal action of causally basic type A . That is, there is some

contrary causally basic action type A^* such that *S*'s performing A^* instead of A at t_2 was logically and naturally possible and *S*'s not performing A^* at t_2 was not naturally or otherwise necessitated by conditions before t_2 that were external to *S* and too near causally. Let t_1 be a time wholly earlier than t . If determinism is true then there was a state of affairs obtaining at t_1 , $F(t_1)$, such that it was not naturally possible both that $F(t_1)$ and that *S* performed A^* at t_2 . The following two propositions are clearly true in this case.

$$[13] \quad \sim \Diamond_t^S \sim F(t_1)$$

$$[14] \quad \sim \Diamond_t^S [F(t_1) \& S \text{ performed } A^* \text{ at } t_2]$$

Proposition [13] is true because t is wholly later than t_1 and once a time is past it is no longer in anyone's power to make something occur at that time. Proposition [14] is true because ' $F(t_1) \& S$ performed A^* at t_2 ' is naturally impossible. The truth of [13] and [14] is entailed by the claim that the revised [12] is necessary for [1] and, as far as I can see, there is nothing wrong with this claim. Given that [13] and [14] are true, it is obvious that the following are true.

$$[15] \quad F(t_1) \& \sim \Diamond_t^S \sim F(t_1)$$

$$[16] \quad [F(t_1) \supset \sim S \text{ performed } A^* \text{ at } t_2] \& \sim \Diamond_t^S [F(t_1) \& S \text{ performed } A^* \text{ at } t_2]$$

By *modus ponens* for relative power necessity (and double negation) [15] and [16] yield the following:

$$[17] \quad \sim S \text{ performed } A^* \text{ at } t_2 \& \sim \Diamond_t^S S \text{ performed } A^* \text{ at } t_2.$$

But if the revised [12] were sufficient for [1] then there would be true in the case hypothesized something that contradicts [17], namely, that

$$\Diamond_t^S S \text{ performed } A^* \text{ at } t_2.$$

VIII

The importance of the validity of *modus ponens* for relative power necessity goes considerably beyond showing that our revised [12], although necessary, cannot be sufficient for the truth of [1]. It shows, in fact, that no condition that is sufficient for [1] could be satisfied in a world where $F_1(t_1) \& \dots \& F_n(t_n)$ is false and determinism is true. That is to say, suppose we are given a truth of the form

- [18] For any $S, t, F_1(t_1), \dots, F_n(t_n)$, where $n \geq 1$ and $t_1 \leq \dots \leq t_n$:
 if $C[S, t, F_1(t_1) \& \dots \& F_n(t_n)]$ then it follows that $\Diamond_t^S [F_1(t_1)$
 $\& \dots \& F_n(t_n)]$.

and we are also given an instantiation of the form $F_1(t_1) \& \dots \& F_n(t_n)$ that is false in some world W where determinism is true. Then, for the same instantiation of that form, the proposition that $C[S, t, F_1(t_1) \& \dots \& F_n(t_n)]$, which according to [18] is sufficient for [1], must be false in W if *modus ponens* for relative power necessity is valid.

To see this, suppose the contradictory. Suppose that the proposition that $C[S, t, F_1(t_1) \& \dots \& F_n(t_n)]$ is true in W . Now, since determinism holds in W , there is true in W some proposition $F_0(t_0)$ such that t_0 is wholly earlier than t and $F_0(t_0) \& F_1(t_1) \& \dots \& F_n(t_n)$ is naturally impossible in W . If [18] is true, then $C[S, t, \sim F_0(t_0)]$ must be false in W ; because $\Diamond_t^S \sim F_0(t_0)$ must be false in W : t_0 is wholly earlier than t and once a time is past it can no longer be in anyone's power to make the case at that time what was not in fact the case at that time. And if [18] is true, then $C[S, t, F_0(t_0) \& F_1(t_1) \& \dots \& F_n(t_n)]$ must be false in W ; because $\Diamond_t^S [F_0(t_0) \& F_1(t_1) \& \dots \& F_n(t_n)]$ must be false in W : in no possible world can a natural being have the power to make the case what is naturally impossible in that world. Therefore, if [18] is true, $C[S, t, F_1(t_1) \& \dots \& F_n(t_n)]$ is true in W , and other things are as hypothesized, then $\Diamond_t^S \sim F_0(t_0)$ and $\Diamond_t^S [F_0(t_0) \& F_1(t_1) \& \dots \& F_n(t_n)]$ are false in W , while $F_0(t_0), \sim [F_1(t_1) \& \dots \& F_n(t_n)]$, and $\Diamond_t^S [F_1(t_1) \& \dots \& F_n(t_n)]$ are true in W . But this assignment of truth-values in W entails that a certain instance of *modus ponens* for relative power necessity has true premises and false conclusion in W , namely the following instance:

- [19] $\Box_t^S [F_0(t_0) \supset \sim (F_1(t_1) \& \dots \& F_n(t_n))] \cdot \Box_t^S F_0(t_0)$
 $\therefore \Box_t^S \sim [F_1(t_1) \& \dots \& F_n(t_n)]$.

Therefore, if *modus ponens* for relative power necessity is valid and [19] is true, then $C[S, t, F_1(t_1) \& \dots \& F_n(t_n)]$ must be false in any world where $F_1(t_1) \& \dots \& F_n(t_n)$ is false but determinism is true; and this holds no matter what condition C may be supposed to be. This conclusion is, of course, the thesis of incompatibilism.⁶

IX

The exercise of working out our revised [12] was not in vain, however. As I said, there is nothing wrong, as far as I can see, with the suggestion that our revised [12] is necessary for the truth of [1]. So the task of finding an analysis of the truth-conditions for [1] is partly accomplished. What remains is to determine what we can add to our revised [12] that will make it sufficient while keeping it necessary.

At the moment I can see nothing wrong with the following answer to this: we can replace the condition $O[A^S(t)]$, used in the definition of the relation R , given in [5], with something stronger, namely, the following:

S 's not performing A at t was not naturally or otherwise necessitated by *any* conditions up to t .

Let this be abbreviated by ' $O^*[A^S(t)]$ '. Call the relation defined by the result of replacing O with O^* in [5], R^* . Then the suggestion I am now venturing can be expressed as follows: necessarily, [1] is true if and only if:

S existed at t ; it is logically and naturally possible that S made it the case that $F_1(t_1) \& \dots \& F_n(t_n)$ by something S did at t or later; if $F_1(t_1) \& \dots \& F_n(t_n)$ contains some false conjuncts and $F_j^*(t_j), \dots, F_k^*(t_k)$ are all of the false conjuncts it contains, then $R^*[S, t, t_k, F_j^*(t_j) \& \dots \& F_k^*(t_k)]$; and if $F_1(t_1) \& \dots \& F_n(t_n)$ contains no false conjuncts, then it contains at least one conjunct $F_i(t_i)$ such that $R^*[S, t, t_i, F_i(t_i)]$.^{7, 8}

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NOTES

¹ Richard Taylor, *Metaphysics*, Prentice-Hall, Englewood Cliffs, N.J., 1963, p. 49.

² *Ibid.*, p. 44.

³ See, for example, Wilfrid Sellars, 'Fatalism and Determinism', in Keith Lehrer (ed.), *Freedom and Determinism*, Random House, New York, 1966, pp. 141-174, esp. pp. 171-174.

⁴ In papers such as those of J. L. Austin, 'Ifs and Cans', *Proceedings of the British Academy* 42 (1956), 107-132; Lehrer, 'Ifs, Cans, and Causes', *Analysis* 20 (1960), 122-124; R. Chisholm, 'J. L. Austin's Philosophical Papers', *Mind* 73 (1964), 20-25; and Lehrer, 'An Empirical Disproof of Determinism?', in Lehrer (ed.), *op. cit.*, pp. 175-202.

⁵ This definition of causally basic action is essentially the same as that proposed by

H. McCann in 'Volition and Basic Action', *Philosophical Review* 83 (1974), 451-473, where it is also argued that causally basic actions in this sense are always volitions.

⁶ The argument of this section resembles those in P. van Inwagen, 'The Incompatibility of Free Will and Determinism', *Philosophical Studies* 27 (1975), 185-199; and C. Ginet, 'Might We Have No Choice?', in Lehrer (ed.), *op. cit.*, pp. 87-104.

⁷ Even if this suggestion is right as far as it goes, it leaves unfinished the job of giving the informative analysis of the truth-conditions for [1] that we want. Beyond alluding to compulsive desires and fears, I have said nothing to explain what relations other than natural necessitation may be referred to in the definition of O* by the phrase 'naturally or otherwise necessitated'. I think that there are various cases in which other relations are the basis of intuitively compelling judgments that the subject was rendered powerless to perform a certain action.

⁸ I am grateful to Sydney Shoemaker for helpful comments on an earlier version. I wish to thank the National Endowment for the Humanities for fellowship support during part of the time that I was working on this paper.

PREFERENCES, CONDITIONALS AND FREEDOM*

Richard Taylor directed my dissertation on the subject of freedom and determinism, and we amiably and constructively disagreed about the subject then. I was a compatibilist, he was not. I still am; he is not. So be it. I cannot however, resist another effort. In this paper, therefore, I wish to provide a condition which is sufficient for saying that a person could have done otherwise and which is compatible with the truth of determinism.

I. THE TRADITIONAL ANALYSIS

The attempt to analyse 'could have' statements in terms of conditionals has usually been in terms of some such conditional as 'S would have if S had wanted to' or 'S would have if S had tried to' or 'S would have if S had wanted to' and so forth. As Taylor once noted, these conditionals all seem to be equally suitable candidates for the analysis, and all of them seem to be defective. That they were *equally* suitable suggests that no one of them is the correct analysis, but the truth of such conditionals may yet be relevant to the truth of the 'could have' statements. Each of the conditionals might entail that the person could have done otherwise. Suppose a conditional statement *H* entails a 'could have' statement *C*. If, as is assumed, the conditional statement *H* is logically compatible with the truth of determinism, then it follows that the 'could have' statement *C* entailed by *H* is also logically compatible with determinism. For, it is a general theorem about consistency that if *Q* entails *P* and *P* is compatible with *S*, then *Q* is compatible with *S*.

Thus, if any single conditional statement of the sort in question entails 'could have' statement, that would suffice to establish the compatibility of freedom and determinism on the assumption that the conditional is compatible with determinism. However, the arguments against the conditionals suggest the analysis fails because the 'could have' statement might be false when the conditional statement is true. This means that the conditional statement fails to entail the 'could have' statement. What is worth noting however, is that a *conjunction* of a set of conditionals might yet entail the 'could have' statement. If the conjunction of conditionals did entail the 'could have' statement and if that conjunction was also compatible with