

# VII

## SPONTANEITY, INDIFFERENCE, AND ABILITY

Throughout the history of philosophy there have been two contrasting methods of expounding the nature of human free will. One approaches free will via the notion of wanting: we are free in doing something if and only if we do it because we want it. It is this approach which we have hitherto investigated, discussing in detail the type of want and the type of 'because' involved. The other method approaches free will via the notion of power: we are free in doing something if and only if it is in our power not to do it: to act freely is to act in possession of the power to act otherwise. There are traditional names for these two contrasting concepts of freedom: freedom defined in terms of wanting is liberty of spontaneity; liberty defined in terms of power is liberty of indifference. English philosophers are acquainted with the terms at least from the pages of Hume, who urges us to distinguish 'betwixt the liberty of spontaneity, as it is call'd in the schools, and the liberty of indifference; betwixt that which is oppos'd to violence, and that which means a negation of necessity and causes' (*Treatise*, III, II, II). The terms, as Hume indicates, are scholastic ones. Whether or not Hume was right to say that in his day 'liberty of indifference' meant a negation of causes, the expression was originally defined in terms of ability and opportunity; if it was taken to exclude causation, that was a conclusion, not part of the definition. But Hume is right that only liberty of indifference presents even a prima facie contrast with determinism; the contradictory of spontaneity is not determinism but compulsion. The two types of liberty appear to be distinct and in theory separable. If Descartes is right, a man with a clear and distinct perception of what he should do enjoys liberty of spontaneity without liberty of indifference; if Heisenberg is right some elementary particles are free from determinism without enjoying liberty of spontaneity.

The doctrine of liberty of indifference was first propounded in detail in the course of theological debates about freedom and predestination in the sixteenth century. The foremost exponent of the concept was the Spanish Jesuit Luis Molina, who defined freedom (liberty of indifference) in the following terms:

An agent is free if, given all necessary conditions for  $\phi$ ing, it both can  $\phi$  and can not  $\phi$ .<sup>1</sup>

Here the necessary conditions constitute the opportunity for  $\phi$ ing: the 'can' refers to a two-way power or ability. In the present chapter I propose to discuss the 'can's of ability and opportunity with a view to evaluating the doctrine of liberty of indifference and relating it to the earlier discussion of liberty of spontaneity.

The first philosopher systematically to study the senses of 'can' and the different types of possibility was Aristotle. He drew various distinctions between kinds of potentiality and power which were later systematized by the scholastics. Active powers (e.g. the power to heat) differ from passive powers (e.g. the power to be heated); some powers (such as the senses) are innate while others (like the ability to play the flute) are acquired by practice. The liberal and other arts which are the fruits of education belong to a particular class of powers: *hexeis, habitus* or 'dispositions'. These are powers whose exercises are the relevant scientific artistic and craft activities; but they are themselves actualizations of the capacity to learn which is presupposed by education. They can thus be called actualizations as well as potentialities: first or primary actualizations, as the scholastics said, codifying Aristotle, in comparison with the secondary actualizations constituted by the episodic employment of one's acquired skill. Thus the ability to speak Greek is a first actualization, the actual utterance of a bit of Greek, or the understanding of a particular Greek text, is a secondary actualization.

Of the distinctions which Aristotle drew between types of powers there is one of particular importance for our present concerns: the distinction between rational and irrational powers. He wrote:

<sup>1</sup> *Id liberum dicimus quod positis requisitis ad agendum in potestate ipsius habet agere aut non agere (Concordia Liberi Arbitrii 14, 13d2).*

Since some things can produce movement rationally and have the power of reasoning, and since the former powers must be in living things, whereas the latter may be in both animate and inanimate beings, it is necessary in the case of nonrational powers that when an agent and a patient are brought together the action and affect take place, whereas in the case of rational powers this is not necessary; for every one of the nonrational powers can have but a single effect, whereas the rational can have contrary effects, so that if they were under the same necessity as are the rational they would have contrary effects at the same time. But this is impossible. It is necessary, accordingly, that something else be decisive in rational action; I mean wanting or deliberate choice. (*Metaphysics* 1048a3 ff., trans. Hope, slightly adapted)

It is not clear from this passage whether the distinction between rational and nonrational powers is meant to coincide exactly with the distinction between one-way and two-way powers. This is a topic we have already encountered, and one to which we shall have to return. But if what we have said in the previous chapter was correct, Aristotle is right in locating wanting as the deciding factor in the exercise of two-way powers.

The Aristotelian apparatus of hierarchies of actuality and potentiality, the distinctions between different kinds of power, and indeed the very notion of power itself has been for centuries an object of contempt among philosophers. In recent times the distinctions have once again been studied—often quite independently of the scholastic background—and the hostility to the notion of power has been seen to rest on *misunderstanding*. One valuable, but misleadingly titled, contribution to this study is Michael Ayers' book *The Refutation of Determinism*.

In chapter four of his book Ayers identifies three distinct misconceptions of power: *transcendentalism*, *scepticism*, *reductionism*. The transcendentalist regards power as an occult entity ('How odd' he might think 'however quickly we lift the bonnet we are never able to see the horsepower'). This view far from doing justice to the reality of powers obscures the difference between judgements like 'this is red' and 'this can lift ten tons'. We don't observe powers, Ayers says, quite as we observe colours; for even if observing that a car is doing 100 mph is

finding out that it can, simply observing that it is not doing 100 mph does not constitute finding out it cannot.

At the opposite extreme from the transcendentalist we can set the sceptic about powers. The sceptic thinks that none of the evidence for the ascription of power (past performance of an agent, performance of its fellows, future observation and future tests of the agent *itself* or its fellows) is adequate to give knowledge that power exists.

Finally, there is the reductionist. Developing Ayers' account, we might divide reductionists into two classes. For the one kind of reductionist power is nothing but its exercise; for another a power is nothing but its vehicle.<sup>2</sup>

Both transcendentalism and reductionism can exercise a powerful fascination on the mind. The later Wittgenstein devoted considerable energy to exhibiting the incoherence of transcendentalism. When doing philosophy, he wrote (PI 1 194), we sometimes have the thought: the possible movements of a machine are already there in it in some mysterious sense.

What is this *possibility* of movement? It is not the *movement*, but it does not seem to be the mere physical conditions for moving either—as, that there is play between socket and pin, the pin not fitting too tight in the socket. For while this is the empirical condition for movement, one could also imagine it to be otherwise. The possibility of a movement is, rather, supposed to be like a shadow of the movement itself. But do you know of such a shadow? And by a shadow I do not mean a picture of the movement, for such a picture would not have to be a picture of just *this* movement. But the possibility of this movement must be the possibility of just this movement. (See how high the seas of language run here.) The waves subside as soon as we ask ourselves: how do we use the phrase 'possibility of movement' when we are talking about a given machine? But where did our queer ideas come from? Well, I show you the possibility of a movement, say by means of a *picture* of the movement 'so possibility is something which is like reality'. We say: 'it isn't moving yet, but it already has the possibility of moving—so possibility is something very near reality.' Though we may doubt whether such and such physical conditions make

<sup>2</sup> See above, page 10.

this movement possible, we never discuss whether *this* is the possibility of this or that movement; 'so the possibility of the movement stands in a unique relation to the movement itself; closer than that of a picture to its subject'; for it can be doubted whether a picture is the picture of this thing or that. We say 'Experience will shew whether this gives the pin this possibility of movement' but we do not say 'Experience will shew whether this is the possibility of this movement'—so it is not an empirical fact that this possibility is the possibility of precisely this movement'.

This was the sort of transcendentalism that Descartes and Molière attacked. Descartes declared Aristotelian qualities superfluous in the explanation of nature; Molière laughed at the Aristotelian doctors who explained that opium put people to sleep because it possessed a *virtus dormitiva*.

It was in reaction to transcendentalism that Hume declared that 'the distinction between a power and its exercise is entirely frivolous'. But reductionism had a history long before Hume. Aristotle found himself obliged to combat the Megarian doctrine that agents can  $\phi$  when and only when they are actually  $\phi$ ing (*Metaphysics Theta*).

If the Megarians are right, Aristotle says, then a  $\phi$ er is not a  $\phi$ er when he is not  $\phi$ ing; for a person is not a  $\phi$ er if he can't  $\phi$ . Thus the concept of 'art' or 'skill' disappears. Secondly, if  $\phi$ ing is something that must be learnt, then every time the agent  $\phi$ s he learns to  $\phi$ ; and thus the concepts of 'learning' and 'forgetting' disappear. Thirdly, sense qualities will only exist when felt, and thus we shall reach a phenomenalist position. Fourthly, sense-powers will come and go with their operations: we shall be blind when we shut our eyes. Fifthly, if what is not  $\phi$ ing cannot  $\phi$ , and what cannot  $\phi$  will not  $\phi$ , no change at all will be possible. So, Aristotle concludes, we must make a distinction between power and its exercise, between act and potency; to remove this is to take away no small thing. We must conclude that it is possible that A is not  $\phi$ ing but can  $\phi$  and that A is  $\phi$ ing but cannot  $\phi$ .

Like Aristotle and Wittgenstein, Ayers tries to steer between reductionism and transcendentalism. His own positive account of powers makes a sharp distinction between natural and personal power which closely resembles the peripatetic distinction between

nonrational and rational powers. Natural powers are capable of analysis in terms of subjunctive hypotheticals: with due qualification we can say 'A can do' means 'in some circumstances A would do'. The principal qualification to be made is that we must are to say that X can do A. Otherwise we shall have such counter-say that certain *external* circumstances would *make* X do A, if we examples as 'If he says it will, it will', 'If it were a Rolls-Royce it would do 100 mph'. The distinction between extrinsic and intrinsic is difficult but unavoidable: we can see, for instance, that poor seed is not a *circumstance* of the failure of a crop, and that changing an engine is not a way of *testing* a car. When we test something, the antecedent which specifies the conditions of the test must be extrinsic, even though the consequence of a test may be an intrinsic change (like the explosion or dissolution of the thing to be tested). The notions of nature and of potentiality are conceptually linked: nature and powers cannot be sliced apart. 'A thing's powers characteristically constitute its nature, and indeed are largely responsible for our thinking of it as a thing with a nature at all.'

Ayers is surely right in seeing an essential connection between the notion of natural powers and the notion of testing. But there are many different types of test on the basis of which powers are attributed to agents. This was a matter to which Wittgenstein devoted considerable attention in *The Brown Book*, where several language games are constructed to illustrate the role of 'can'. The first three (a tribe who describe a board with a slot by saying 'this is a board in which the peg can be moved in a circle'; people who instead of saying 'the water is in the glass' say 'the water can be taken out of the glass'; people who say 'the house is built of sticks which can be bent easily') all describe different sorts of passive potentiality. Wittgenstein is principally interested in the different ways in which these are verified (in the first two we see the state described before our eyes: we see that the board has a circular slot, that the water is in the glass; in the third case, the state has no particular simultaneous sense-experience corresponding to it) (*The Blue and Brown Books*, 100-4).

Wittgenstein goes on to describe forms of active potentiality—a tribe who say 'a man can run fast' when we would say he has bulging leg muscles; who say 'a man can throw a spear' if he has passed certain other, unnamed tests before battle; or

who—a different case—say ‘he can do so and so’ only if ‘he has done so and so’ is true (and not, e.g., if someone had done something more difficult). *The Brown Book* contains a lengthy discussion of these potentialities, especially mental potentialities, such as the one expressed by ‘now I can go on’ uttered by someone listening to the enunciation of a series (an example familiar to many readers from the *Philosophical Investigations*). The patient examination of the various types of criteria for the assigning of powers is meant to show the philosopher how to find his way between the opposite errors of **transcendentalism** and reductionism.

Much more than Wittgenstein, Ayers lays emphasis on the great difference between personal and natural powers. The powers of people, he argues, cannot be given a hypothetical analysis like the powers of things. But his arguments do not all carry conviction. If we are to give a hypothetical analysis of personal powers, he says reasonably enough, then one of the antecedent elements in the conditional must surely be the person’s wants. He goes on

Whatever we do mean by ‘He can swim’ it seems at least clear that if someone swims he can swim:  $p$  entails that  $p$  is possible. We do not also have to investigate the presence of a wish or the occurrence of a choice of effort nor the voluntariness of the swim, whatever that is. But how could we know that any conditional is true simply from knowing that its consequent is true? ‘ $p$ ’ does not entail ‘if  $q$  then  $p$ ’, or ‘ $p$  only if  $q$ ’.

This seems dubious on a number of grounds. It is, of course, of the subjunctive conditional, not the truth-functional ‘if’ that Ayers is talking about when he says that ‘ $p$ ’ does not entail ‘if  $q$  then  $p$ ’. But could not the same point be made about natural powers—indeed did he not himself make a very similar point in the passage quoted above? This passage seems to put too much weight on the principle: if  $p$  then  $p$  is possible.

Ayers sums up his argument thus:

I have argued that the ultimate verification of attributions of personal power, and of any proposition that some state of the agent or some set of circumstances in which he is placed is a

factor determining his ability to do an action is by reference to trials, that is, successes and failures; and that this verification cannot be explained on the model of stimulus-response or antecedent and consequent conditions; and that the difference between power and act corresponds to the difference between ‘can I?’ and ‘shall I?’. (162)

But it is not clear how this settles the question of the relation between ‘I can’ and ‘I will if I try’. It is surely true to say that if someone has the ability and opportunity to do X at  $t$ , and does his best to do X at  $t$ , then he will (normally do X at  $t$ . What makes the difference between such an ascription of personal power and the ascriptions of natural power is that the principle just enunciated, unlike ‘if you set a match to it it will burn’ is some kind of logical or conceptual truth and not a causal generalization linking two independent states of affairs. Trying to  $\phi$ , it seems, is doing something with the intention of  $\phi$ ing and without knowing whether one can  $\phi$  or not; what one does, as Ayers points out, may simply be the action of  $\phi$ ing itself, or a failure to  $\phi$ .

The most important difference between natural powers and personal powers seems to be not so much that personal powers are not capable of conditional analysis as that wants are not circumstances. Perhaps this is Ayers’ fundamental point. There are certainly some cases in which ~~where~~ only the want makes the difference between an action’s being performed and its not being performed. But wanting is not a phenomenon to explain action in certain circumstances and not in others. Wanting in the relevant sense, we have argued, is defined by this sort of potentiality. The locus of wanting is precisely this gap between circumstances and action, the gap left by the unpredictability of action from circumstance. To say that an action is the result of a want, or is an exercise of a personal power, does not say anything about determinism; but it does say something about determinism by external factors. Personal powers are powers to do things when you want to: perhaps for this reason they are better called ‘volitional powers’ (for they belong also to animals: you can take a horse to the water but you cannot make him drink if he doesn’t want to). A power is volitional only if there are no sets of external circumstances such that in those circumstances the agent will, necessarily,  $\phi$ .

To attribute personal, or rather volitional, powers to an agent does not seem to involve saying that his actions are undetermined. Whether determinism is true or not the power to speak French is surely a volitional power. Of course, if we were in a position to control, via the brain, someone's lips and throat muscles so that French sounds came out, we would say that this was *not* evidence that he could speak French. But this is because the determining factor is an external agent, not because only indeterministically caused French is genuinely spoken French.

If volitional powers are not evidence in favour of indeterminism, this is not because (as some writers say) there might be circumstances which would necessitate the volitions of an agent and therefore necessitate action. If there could be such circumstances, then there would, by the definition just given, be no volitional powers. But the suggestion that circumstances—threats, say, or manipulation—might ensure action by necessitating volition misconceives the nature of volition. Wanting, to repeat, is not a phenomenon to explain action in certain circumstances and not in others; it is precisely defined by the gap between circumstances and action.

The relation between volitional power and determinism will be fully discussed in the next chapter. Before doing so, we must take much further the dissection of the senses of 'can' begun by Aristotle and revived by Wittgenstein and Ayers. It might be thought that this task would be greatly assisted by recent developments in the logic of modality. Many modal logics have been studied extensively in recent decades which can plausibly be offered as formalizations of the concepts of necessity and possibility which are used in logical and philosophical contexts (the 'alethic modalities'). Similar systems have been offered to incapsulate and explicate the intuitive notions of time, obligation, knowledge and belief: tense logics, deontic logics, epistemic logics, and doxastic logics. It might well be thought that one of the already available modal systems, or a closely analogous system, would provide a precise formalization of 'dynamic modality'<sup>3</sup>—a regimentation of the informal 'can' that we use in talking of the abilities and opportunities of human beings. This conjecture, I shall argue, is only partially correct.

In recent years philosophers and linguists have offered a

<sup>3</sup> The term is von Wright's (*An Essay on Modal Logic*).

number of distinctions between senses and uses of 'can' and between corresponding different types of possibility. Drawing on their work one can offer an incomplete list of ten distinguishable 'can's, which can be set out in the following table.<sup>4</sup>

| <i>Example</i>                                                                                                                                                    | <i>Type of possibility etc.</i>                                         | <i>Type of modality</i> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------|
| (1) (a) <i>Modus ponens</i> cannot lead from true premisses to a false conclusion<br>(b) Nine can be divided by three<br>(c) Equals can be substituted for equals | Logical or formal possibility                                           | Alethic                 |
| (2) (a) Men cannot survive without oxygen<br>(b) Smoking can cause cancer                                                                                         | Physical possibility; dispositions, natural powers                      | Dynamic                 |
| (3) (a) She can speak Russian<br>(b) I can't touch my toes<br>(c) Anyone can learn to drive a car                                                                 | Ability, mental and physical powers; personal powers; human possibility | Dynamic                 |
| (4) (a) I couldn't cross the road<br>(b) We can't expand the economy indefinitely                                                                                 | Circumstantial possibility; opportunity                                 |                         |
| (5) (a) I could have sunk the putt<br>(b) I was able to overtake the car                                                                                          | Particular possibility; 'all-in' can; natural possibility               |                         |
| (6) (a) He can be very stubborn<br>(b) You can't take a joke                                                                                                      | Volitional possibility; character                                       |                         |
| (7) (a) Can you pass the salt?<br>(b) I could have slapped her face                                                                                               | Willingness, particular inclination                                     |                         |
| (8) (a) I can hear a strange noise<br>(b) I can't feel any pain                                                                                                   | Perception and sensation                                                |                         |
| (9) (a) Stonehenge could be a primitive computer                                                                                                                  | Epistemic possibility, consistency with known data                      | Epistemic               |
| (10) (a) You can import one-fifth duty free<br>(b) You can get down now<br>(c) I cannot condone perjury                                                           | Legal, moral possibility                                                | Deontic                 |

<sup>4</sup> For the distinctions used in the table, see F. R. Palmer, *A Linguistic Study of the English Verb*; B. Aune, article 'Can' in *The Encyclopedia of Philosophy*; J. L. Austin, 'Ifs and Cans' in *Philosophical Papers*; P. Nowell-Smith, 'Ifs and Cans', *Theoria*, 1960; M. R. Ayers, *The Refutation of Determinism*; B. Gibbs, 'Real Possibility', *American Philosophical Quarterly*, 1970; A. M. Honoré, 'Can and Can't', *Mind*, 1964; J. P. Snyder, *Modal Logic and its Applications*; von Wright, *An Essay on Deontic Logic*.

Most if not all of these classifications reveal different senses of 'can': uses of 'can' in which different syntactical and semantical rules apply. Even within the ten different classes there are significantly different subclasses of instances, as the examples illustrate. Fortunately it is not a matter of present concern to investigate these differences in detail: the point of the table is to isolate by contrast the particular types of 'can' under discussion, the 'can' of opportunity and the 'can' which is used to report those human abilities, exercisable at will, of which the voluntary movements of the body and the speaking and thinking of units of language are the standard examples.

Some of the types of possibility which I have listed are capable of being confused with each other, and some of them are deliberately identified with each other by some philosophers. The possibilities most frequently confused or identified with ability are circumstantial and epistemic possibility, corresponding to the 'can' of opportunity and the 'can' of consistency with known data. There are, I think, good philosophical reasons for refusing the identification; but one does not need to be grinding a philosophical axe in order to draw the distinctions, and indeed in English they are clearly marked linguistically. The epistemic can—where 'it can be that *p*' is equivalent to 'For all we know to the contrary, *p*'—unlike the 'can' of opportunity or ability, is replaceable by 'may', and in British English usually is so replaced. The 'can' of ability and the 'can' of opportunity differ from each other in the way they form the future tense. 'I can speak Russian', in the present, according to context, may express either an ability or an opportunity. Not so in the future.

I can speak Russian tomorrow, we have guests coming from Moscow

is correct; but not

I can speak Russian next spring; I'm taking a beginner's course this fall.

The future of the 'can' of opportunity may be either 'I can' or 'I will be able'; the future of the 'can' of ability must be 'I will be able'. Similarly with conditionals. If an ability is attributed conditionally, it must be expressed by 'will be able' or the like; an

opportunity can be attributed conditionally by the plain 'can'. Compare:

If you give me a hammer, I can mend this chair  
with

If you teach me carpentry, I can mend this chair.

It is not difficult to see philosophical reasons for this and connected linguistic differences. A skill or ability is always a positive explanatory factor in accounting for the performance of an agent; an opportunity is often no more than a negative factor, the absence of circumstances that would prevent or interfere with the performance. Many abilities are states that are acquired with effort; opportunities are there for the taking until they pass. Whereas I have to possess an ability before I can exercise it, I may have an opportunity to do something which passes away before the time for taking it arrives: that is to say, it may be that now nothing prevents me from  $\phi$ ing at *t*, but before *t* arrives something will have transpired to prevent me.

An ability is something internal to an agent, and an opportunity is something external. It is difficult to make this intuitive truth precise. The boundary between external and internal here is not to be drawn simply by reference to the agent's body: illness, no less than imprisonment, may take away the possibility of my exercising some of my abilities without necessarily taking away the abilities themselves. One thing that seems clear is that the presence or absence of an opportunity must be something external to an agent considered as a locus of current volition or wanting; of current decision, intention, choice and desire.<sup>5</sup> The mere lack of a desire to do something, the mere presence of a desire to do the opposite, does not by itself remove the opportunity to do it. I am away from home for three weeks and I fail to write to my wife: when I return home I can hardly avoid her reproaches by saying 'I had no opportunity to write: every time I had a spare moment I was prevented by a strong desire for a Martini.'

Abilities and opportunities are, of course, interconnected. Abilities can be exercised only when opportunities for their

<sup>5</sup> The effects of past volitions and desires may of course provide present constraints. But current desires—even in the case of an addict—do not remove opportunities; if the desires of an addict limit his liberty, they do so in some other way—perhaps by reducing his abilities.

exercise present themselves, and opportunities can be taken only by those who have the appropriate abilities. The greater one's ability the less one needs in the way of opportunity: a cliff which would be impossible of ascent for the normal person presents the skilled mountaineer with an opportunity for a good climb. Conversely, some opportunities may be so good that one needs no great ability to make use of them: if the ball is only 1 mm from the edge of the hole it will not take a very skilful golfer to sink the putt. In the limiting case, omnipotence needs no opportunities; or, to put it another way, omnipotence can make an opportunity out of anything. On the other hand, it does not seem that we can say that if an opportunity is good enough no ability at all will be needed to exploit it. The opposite pole from omnipotent ability seems rather to be the necessary exercise of natural powers, where what we have is not so much an opportunity for action as a sufficient condition for a reaction. Perhaps we should say that the realm of application of the two concepts of opportunity and ability coincides, with omnipotence and necessitation marking the extremes on either side.

There is an important difference between opportunities and abilities in relation to time. Opportunities are things which come and pass away; they are not like logical truths which remain for ever the same. Similarly, abilities come and go; what we are now able to do we may not always have been able to do and we may not always continue to be able to do.

Clearly, a full formulation of the logic of ability or opportunity would need to be combined with a tense logic, or a time logic, to allow for an indication of the time at which an opportunity occurred or during which an ability persisted. But the temporal modifications necessary in a logic of ability are simpler than those in a logic of opportunity.

In a logic of opportunity it is not only the opportunity-operator which needs to allow for temporal qualifications. Consider the following examples:

- 1 Now I can see you; a few moments ago I was busy, and couldn't
- 2 I can dine with you tomorrow, but not on Tuesday
- 3 Yesterday I could lecture on 5 May, today I can't (my engagement book has got filled up in the meantime)

In the first example the modality is temporally qualified but not the action; in the second the action is dated but not the modality; in the third, the action and the modality are both qualified but the temporal qualification of each is different. Clearly, an adequate formalization of opportunity-sentences will have to allow for independent dating of the sentences modalized and of the modalization. With the 'can' of ability no such double dating is necessary. The ability-operator needs temporal specification, but the description of the exercise of the ability should not be temporally specified. For abilities are inherently general; there are no genuine abilities which are abilities to do things only on one particular occasion. This is true even of abilities, such as the ability to kill oneself, which of their nature can be exercised only once.<sup>6</sup>

One might expect that the logic of ability and of opportunity might be easy to represent by a combination of a tense logic with some familiar modal logic (say, one of the Lewis system such as S4 or S5). With the logic of opportunity, this may well be so: I have argued elsewhere<sup>7</sup> that the system M (= Feys' system T), which can be regarded as the minimal alethic modal system, has a claim to represent the logic of opportunity, with a certain degree of artificial regimentation. But with the logic of ability it is not so. The two characteristic axioms of M are  $CpMp$  (if something is the case, it is possible) and  $EMApqAMpMq$  (the distribution of possibility over disjunction).<sup>8</sup> It is often claimed that these hold for ability. Consider  $CpMp$  first. If I am speaking German, surely I can speak German. P. T. Geach, talking of concepts, has this to say in his book *Mental Acts*:

To say that a man has a certain concept is to say that he *can* perform, because he sometimes *does* perform, mental exercises of a specifiable sort. This way of using the modal word 'can' is a minimal use, confined to a region where the logic of the word is as clear as possible. *Ab esse ad posse valet consequentia*

<sup>6</sup> For some ingenious but inconclusive arguments to the contrary, see Honoré, art. cit.

<sup>7</sup> In a paper 'The Logic of Ability' forthcoming in *Acta Philosophica Fennica*, on which part of the present chapter is based.

<sup>8</sup> In the Polish notation I use, 'M' is the weak modal operator; 'Mp' is to be read as 'Possibly p'. The strong modal operator 'L' is read: 'Necessarily p'.

—what is can be, what a man does he can do; that is clear if anything in modal logic is clear. (*Mental Acts*, 15)

But is it so clear? Perhaps, we may imagine, it is inconceivable that someone should speak a language without being able to speak it. In fact, it is quite often done. The late Pope Pius XII used to give audiences to American servicemen at the Vatican. The gracious speech which he delivered on these occasions had been composed, I was told, by an Irish monsignore and learned by heart under the coaching of an elocutionist. At those audiences the Pope spoke English; but he was not, in the normal sense, able to speak English.

The example may be contested (is such parroting really 'speaking English?'). But others are beyond dispute. A hopeless darts player may, once in a lifetime, hit the bull, but be unable to repeat the performance because he does not have the ability to hit the bull. I cannot spell 'seize'; I am never sure whether it is an exception to the rule about 'i' before 'e'; I just guess, and fifty times out of a hundred I get it right. On each such occasion we have a counterexample to  $CpMp$ : it is the case that I am spelling 'seize' correctly but it is not the case that I can spell 'seize' correctly.

Counterexamples similar to these will always be imaginable whenever it is possible to do something by luck rather than by skill. But the distinction between luck and skill is not a marginal matter in this context: it is precisely what we are interested in when our concern is ability, as opposed to logical possibility or opportunity. Of course it is on the basis of people's performances that we attribute skills and abilities to them; but a single performance, however successful, is not normally enough to establish the existence of ability. (I say 'not normally' because a single performance may suffice if the task is sufficiently difficult or complicated to rule out lucky success. Pushing one's wife in a wheelbarrow along a tightrope stretched across Niagara Falls would be a case in point.) But it would only be if a single performance always established an ability that we could offer  $CpMp$  as a law of the logic of ability.

This may seem surprising. Surely, if I can either do X or do Y, then either I can do X or I can do Y. For instance, if I can either walk to the door or crawl to the door, then either I can walk to the

door or I can crawl to the door. The claim 'I can take it or leave it' is surely a stronger claim than either 'I can take it' or 'I can leave it'. Surely each of the weaker claims severally—let alone their disjunction—can be inferred from the stronger claim.

This is correct, but it does not show that  $CMApqAMpMq$  is a logical law if ' $M$ ' is interpreted as suggested. In ordinary English 'I can do X or Y' is commonly equivalent to 'I can do X and I can do Y', 'I can take it and I can leave it'. But if we take ' $p$ ' as 'I take it' and ' $q$ ' as 'I leave it', then  $CMApqAMpMq$  must be read: 'If I can bring it about that either I take it or I leave it, then either I can bring it about that I take it, or I can bring it about that I leave it.' This may perhaps be true, but 'I can bring it about that either I take it or I leave it' is not what is normally meant by 'I can take it or leave it'. If my wife is worried about my smoking, and thinks I have become addicted, I may try to reassure her by saying 'Don't worry about the cigarettes: I can take them or leave them alone.' No doubt the reassurance will be unsuccessful; but it would be downright dishonest if my only grounds for making the statement were my knowledge that, complete addict as I am, I nevertheless make true 'Either I am taking a cigarette or I am leaving cigarettes alone' every time I compulsively reach for the pack.

If we are careful in interpreting  $CMApqAMpMq$  we see that it does not express a logical law. Given a pack of cards, I have the ability to pick out on request a card which is either black or red; but I don't have the ability to pick out a red card on request nor the ability to pick out a black card on request. That is to say, the following ( $MApq$ ) is true:

I can bring it about that either I am picking a red or I am picking a black

but the following ( $AMpMq$ ) is false:

Either I can bring it about that I am picking a red or I can bring it about that I am picking a black.

Similar counterexamples can be constructed in connection with any other discriminatory skill (e.g. one may have sufficient skill at darts to be quite sure of hitting the board, and yet not be at all sure of obeying either the command 'Hit the top half of the dartboard' or the command 'Hit the bottom half of the dartboard').

The failure of ability to distribute over disjunction is a particularly serious matter for the project of formalization. To see this we must turn briefly from the syntax to the semantics of modal systems.

Kripke and Hintikka and their followers have shown how the semantics of a modal system may be formalized with the aid of the notion of a set of possible worlds and of an alternativeness relation between members of the set. In this type of account the proposition ' $Lp$ ' is true in a given possible world if the proposition ' $p$ ' is true in every possible world alternative to that possible world; the proposition ' $Mp$ ' is true in a given possible world if the proposition ' $p$ ' is true in some possible world alternative to that possible world.

The philosophical interest of possible-world semantics is that it enables us to systematize our intuitions about the truth-conditions of propositions containing various modal operators. Formal semantics does not enable us to dispense with intuition: we still have to use our intuitions as rational users of language to decide whether or not a given formal semantics captures the informal meaning of an ordinary language modal word. But we can apply our intuitions not just piecemeal to particular formulae—which may well result in contradictory upshots—but to systems as a whole. In the light of this one is then able to make a rational decision between conflicting intuitions in particular cases.

In effect it is the alternativeness relation on which we have to focus the beam of philosophical intuition. The Kripke-Hintikka approach permits the alternativeness relation to have a wide variety of properties: the two-placed relation of alternativeness may or may not be, for instance, transitive, symmetrical or reflexive. There are necessary relationships between the properties of the alternativeness relation in the semantics and the different syntactic systems: thus a semantic system in which the alternativeness relation is reflexive and also transitive and symmetrical will make true under every interpretation all and only the theses of the Lewis system  $S_5$ .

In relating the formal modal operators with the modal words of ordinary language, consequently, it is important to direct one's attention to the interpretation of the alternativeness relation. For epistemic logic, for instance, a world  $W_2$  will be alternative to a world  $W_1$  if it is a world in which whatever is known in  $W_1$  is

true. A world  $W_2$  will be alternative to  $W_1$  in the logic of opportunity if in  $W_2$  all constraining forces operative in  $W_1$  have achieved their effect.

Now what would be the corresponding intuitive account of the alternativeness relation for a logic of ability? One suggestion which comes to mind is that in the logic of ability  $W_2$  is alternative to  $W_1$  if in  $W_2$  all the abilities present in  $W_1$  have been exercised.<sup>9</sup> At first sight this seems reasonable enough. But reflection shows that there is something wrong with the idea of a world in which all A's abilities are exercised. For suppose that for some  $\phi$  A is able to  $\phi$  and is able to  $\neg\phi$ : John, say, can be a smoker and can also be a non-smoker, i.e. not be a smoker. Then in a world in which all John's abilities are exercised, it will be true both that John is a smoker and that he is not a smoker. And that is not a possible but an impossible world.

It is true that people may have inconsistent beliefs and may be under incompatible obligations: so that a world in which all a person's beliefs were true, and a world in which all his obligations were fulfilled, may be as impossible as a world in which all his abilities are exercised. That is why it has been found convenient in doxastic and deontic logic to adopt the assumption that one is dealing with rational belief and reasonable obligation. This is a justifiable simplification, because it is a defect in beliefs and obligations to be inconsistent: a defect which calls in question *pro tanto* their genuineness as beliefs and obligations. But with ability it is not so. That I have the ability to  $\phi$  in no way weakens the claim that I have the ability not to  $\phi$ : it is a merit, not a defect, in an ability that it is accompanied with an ability of a contrary kind and is therefore an ability which can be exercised at will: indeed it is a mark of volitional ability, as opposed to natural power, that it should be a two-way ability of this kind.

The difficulty in applying possible world semantics to the logic of ability goes further than the problem of finding the appropriate alternativeness relation, however. In the different modal logics some principles follow from special assumptions about the nature of the alternativeness relation while others follow from the basic

<sup>9</sup> Analogy with the other cases would suggest that if this were the appropriate relation then the 'can' of ability should be represented as a strong modal operator (' $L$ ') not, as we have so far supposed, a weak one like the other 'can's.

framework of possible world semantics. But one of the principles which we earlier gave reason for rejecting—the distribution law,  $EAM\phi MqMAp\phi$ —is a principle of this kind. On the usual analysis, the second half of this says that if a disjunction is true in some possible world, then one of the disjuncts must be true in some possible world. This principle will hold no matter how we choose our possible worlds or specify our alternativeness relation.<sup>10</sup> Hence, if we regard possible world semantics as making explicit what is involved in being a possibility, we must say that ability is not any kind of possibility.

Our failure to account for ability as a type of modality might well be taken as confirmation of the familiar view that posits a conditional analysis of personal powers. In this connection there are three questions which remain to be considered. The first is: what is the correct analysis of 'I can if I choose'? The second is, whether the sense of 'I can', where this reports an ability, can be given by a conditional which makes no use of a modal verb of ability. The third is, what are the consequences of our discussion of 'can' for the traditional problem of the relationship between liberty of indifference and liberty of spontaneity?

Ayers, it will be remembered, displayed hostility to the notion of a conditional analysis of personal powers. While discussing another topic, however, he offers a suggestion which seems to me to show the way to a correct solution of the long-standing puzzle about how to analyse expressions such as 'I can if I choose'. He is dealing with the objection that 'the car could do 100 only if there were petrol' seems to suggest, against his theory, that the existence of powers cannot depend on extrinsic factors. Considering the statement 'the lorry could do 70 mph if it were not heavily laden' he says

A lorry that can only do 70mph if it is empty is less powerful than a lorry that can do 70mph even when fully laden. Yet how are we to mark the difference in power between them if it is true to say categorically of them both that they can do the action in question, i.e. can do 70mph. It seems helpful to suggest that we take the if-clause to modify, not the whole main-clause, but simply the description of the action: doing 70-

<sup>10</sup> For this important point I am indebted to Professor R. Stalnaker.

heavily-laden and doing 70-without-a-load are different performances, species, so to speak of the genus 'doing 70'. (p. 101)

We can apply this suggestion to the vexed question of the correct analysis of 'I can if I choose'. Many parties to this inquiry have assumed that in the expression 'I can if I choose' the 'if' clause expresses a condition on the ability. They have then gone on to argue whether it was an ordinary 'if' or a special 'if' analogous to the 'if' in 'there are biscuits on the table if you want them'. Davidson has recently argued that in such cases no special 'if' is called for.<sup>11</sup> Be that as it may, it is a mistake to read 'I can if I choose' as equivalent to 'If I choose, I can'. 'I can if I choose' is elliptical for 'I can  $\phi$  if I choose', where the appropriate substitution for ' $\phi$ ' will be given by the context; and in 'I can  $\phi$  if I choose' the 'if' clause is to be taken with the  $\phi$ , as qualifying the exercise, not the ability. (Consider the capacity to weep: a child does not have this capacity at all when new-born; I do; but I don't have the ability, which an actress would have, to weep-when-I-choose or weep-if-I-choose. In 'I can weep at will', 'I can weep to order' the adverbials affect not the 'can' but the 'weep'.)

How rightly to analyse the explicit conditional 'I can if I choose' is a different question from whether the analysis of the straightforward 'I can  $\phi$  should yield an implicit conditional. This was the subject of a famous debate which began in the 1950s between Professor P. Nowell-Smith and the late J. L. Austin: in the words of the latter: are cans constitutionally iff?

The protagonists concentrated much of their attention on the 'all-in' can, the notion of 'can' which is used in 'can do otherwise' in discussions of responsibility, the notion of 'power' which is used when we talk of what is in our power, a concept which combines both ability ('personal powers', confusingly, in Ayers' sense) and opportunity. On one point at issue it seems to me that Austin was right against Nowell-Smith: even ability plus opportunity plus all-out effort does not guarantee success in the exercise of a skill. As Austin said in a famous footnote

Consider the case where I miss a very short putt and kick myself because I could have holed it. It is not that I should have holed it if I had tried: I did try, and missed. It is not that I should have holed it if conditions had been different: that

<sup>11</sup> In *Essays on Freedom of Action*, ed. Honderich.

might of course be so but I am talking about conditions as they precisely were, and asserting that I could have holed it. There is the rub. Nor does 'I can hole it this time' mean that I shall hole it this time if I try or anything else: for I may try and miss, and yet not be convinced that I could not have done it; indeed, further experiments may confirm my belief that I could have done it that time although I did not.

But if I tried my hardest, say, and missed, surely there *must* have been *something* that caused me to fail, that made me unable to succeed? So that I *could not* have holed it. Well, a modern belief in science, in there being an explanation of everything, may make us assent to this argument. But such a belief is not in line with the traditional beliefs enshrined in the word *can*: according to *them*, a human ability or power or capacity is inherently liable not to produce success, on occasion, and that for no reason (or are bad luck and bad form sometimes reasons?). (*Philosophical Papers*, 166)

This seems correct. But one must, I think, concede to Nowell Smith that 'I can  $\phi$ ' entails: if I have the opportunity to  $\phi$ , and if I do my best to  $\phi$ , then I normally will  $\phi$ . An ability which regularly failed to come off, a skill whose possessor was *always* off form, would not be a genuine ability. ('When I'm on form, I can box better than Muhammad Ali. It's just that I've never yet been on form.') There is this much truth in the conditional analysis of ability. Indeed, as observed, all the difficulties we encountered in analysing ability as a modality may be taken as telling in support of a conditional analysis.

On the other hand critics of the conditional analysis are right that the conditional analysis of ability is not a causal conditional analysis. Ayers is right to reject the position that 'character, or motive or attitude and so on comprises a third variable knowledge of which, together with a knowledge of abilities and circumstances will enable us to predict action'. He is right to reject the position because volition is not a third independently ascertainable variable. All that is involved in a person's wanting to do something may simply be his doing it, his doing it unconstrained.

What are the consequences of all this with respect to the importance of the distinction between liberty of indifference and liberty of spontaneity? In the light of what we have said, it seems

obvious that liberty of spontaneity entails the two-way power that is part of liberty of indifference. Something can only be done because it is wanted if it is something that one has an ability not to do. One must have the ability not to  $\emptyset$  if one is to  $\emptyset$  because one wants to. (One need not necessarily have an opportunity, as Locke showed: a man who stays in a room because he wants to, when unknown to himself it is locked, has the ability but not the opportunity to leave it.) There seems to be truth in the Aristotelian contention that it is only to agents who are of a kind to be able both to do X and not do X that one can attribute wants or desires to do X, as opposed to tendencies to do X. It need not follow from this that when somebody does X this cannot be explained by saying that he wanted to do X, unless it was on that occasion in his power not to do X. For it is only in his power not to do X if he has both ability and *opportunity*. But if an agent does X because he wants to, in circumstances where he has no opportunity not to do X, this can only be because there is some action Y, which would constitute trying not to do X, which he has the opportunity to do. There is thus a necessary relationship between liberty of spontaneity and liberty of indifference, but not the simple one which might have been expected.

The notion of power involved here does not seem to be one which is incompatible with predictability, much less incompatible with determinism. On occasion it may well be true that I can do X even if it is predictable that I will not do X. There is nothing contradictory in saying that I can, but will not, do X any more than there is anything contradictory in saying that I could have done X but did not do X. Thirty seconds ago I did not lift my left leg; but I could have lifted my left leg and my not having done so did not take away the power (the ability and opportunity) that I then had.

As Aristotle saw, liberty of spontaneity applies also to animals; they do things because they want to. But they do so only in so far as they enjoy the two-way power involved in liberty of indifference. It is because the dog can run home that we say he doesn't want to when he disobeys the master's command and pursues the rabbit instead. That is one reason why plants don't have wants; it is because they do not have the capacity to act otherwise. (When a plant does something unexpected, we look for an external cause.)

In human wants of the volitional kind, liberty of spontaneity is linked with liberty of indifference because volition is the rational consideration of an action and as we have seen, rational consideration is ineradicably defeasible.

On the other hand, to the extent that the conditional analysis of human ability is correct, it seems that liberty of indifference must involve liberty of spontaneity. For according to that view the logic of human abilities is intimately connected with such notions as trying, wanting, intending, and choosing. Whatever may turn out to be the most plausible conditional translation of the 'can's of ability, it seems clear that the antecedents must concern mental states or events which constitute volitions or their manifestations. Thus the two-way powers characteristic of rational agents seem *eo ipso* to be powers to act as one wants.

Since Hobbes and Hume, many people have thought that liberty of spontaneity was compatible with determinism. If we are correct in regarding liberty of spontaneity and liberty of indifference as inextricably linked in this way, this can only be the case if liberty of indifference also is compatible with determinism.

## VIII

### FREEDOM AND DETERMINISM

'The problems of freewill', said Tolstoy, 'from earliest times has occupied the best intellects of mankind and has from earliest times appeared in all its colossal significance. The problem lies in the fact that if we regard man as a subject for observation from whatever point of view—theological, historical, ethical or philosophic—we find the universal law of necessity to which he (like everything else that exists) is subject. But looking upon man from within ourselves—man as the object of our own inner consciousness of self—we feel ourselves to be free.' The existence of freedom, Tolstoy thought, was incompatible with the existence of scientific laws. Reason teaches us the laws of necessity: the consciousness of freedom must at best be the expression of ignorance of laws. 'It is necessary'—these are the last words of *War and Peace*—'to renounce a freedom that does not exist and to recognise a dependence of which we are not personally conscious.'

Like Tolstoy, Dr. Johnson regarded freedom and determinism as incompatible; because of the incompatibility, he rejected determinism. 'We know our will is free and there is an end on it,' he said. Tolstoy and Johnson present, in effect, two parallel and conflicting arguments.

- 1 Freedom and determinism are incompatible  
We know determinism is true  
Therefore, freedom is illusory
- 2 Freedom and determinism are incompatible  
We know we are free  
Therefore, determinism is false

Many distinguished philosophers have considered the possibility of rejecting the major premiss which is common to both Johnson and Tolstoy.