Imperative Sentences

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II.—IMPERATIVE SENTENCES.

By R. M. Hare.

It has often been taken for granted by logicians that there is a class of sentences which is the proper subject-matter of logic, and that they are at liberty to ignore all sentences which are not included in this class. For example, most logicians would undertake to tell you something about the sentence "It is raining"; for instance, that it contradicted the sentence "It is not raining"; but if confronted with the sentence "What a foul day it is!" they would be likely to look down their noses and refuse to say anything about the logic of such a sentence. This would seem a natural attitude to adopt. But it is much more difficult to say precisely what are the criteria which determine whether or not a sentence is to be admitted into the logical fold. This article is an attempt to cast doubt upon one such criterion which has been popular recently, and in so doing to shed some light on the question, "What is Logic about?".

The criterion which I shall be attacking has been formulated in various ways, but more often taken for granted without being formulated at all. The sort of sentences which are to be admitted into the logical fold are variously referred to as "scientific", "cognitive", "informative", "fact-stating", "true-or-false", "theoretical", "referential", "symbolic", etc.; and the sort of sentences which are to be excluded are called "emotive", "evocative", "non-fact-stating", etc. The latter are held not to state genuine propositions, and therefore, since propositions are the bricks out of which a logical system is built, to be altogether beyond the pale of such a system. They are sometimes even said to be "literally senseless".

As examples of the view which I am attacking, the following passages may be quoted:—

'In the scientific use of language . . . the connexions and relations of references to one another must be of the kind which we call logical. . . . But, for emotive purposes logical arrangement is not necessary' (Richards, *Principles of Literary Criticism*, p. 268).

'The symbolic use of words is *statement*; the recording, the support, the organisation and the communication of references. The emotive use of words is . . . the use of words to express or excite feelings and attitudes. . . .

'The best test of whether our use of words is essentially symbolic or emotive is the question "Is this true or false in the ordinary scientific sense?". If this question is relevant then the use is symbolic, if it is clearly irrelevant then we have an emotive utterance' (Ogden and Richards, *Meaning of Meaning*, pp. 149 f.).

'When language is used simply in order to refer to a referend, its use is *scientific*. When it is used in order to arouse an emotional attitude in the hearer, to influence him in any way other than by giving him information, then its use is *emotive*. . . .

'What is called logical connexion has little relevance to the emotive use of language, whereas it is the condition of success in scientific language' (Stebbing, *Modern Introduction to Logic*, pp. 17 f.).

'The word "meaning" is here always understood in the sense of "designative meaning", sometimes also called "cognitive", "theoretical", "referential", or "informative", as distinguished from other meaning components, *e.g.*, emotive or motivative meaning. Thus here we have to do only with declarative sentences and their parts' (Carnap, *Meaning and Necessity*, p. 6).

We may perhaps give this criterion sufficient precision for our purposes by saying that it excludes from the subject-matter of logic all sentences except those which purport to give information, *i.e.*, to state that something is or is not the case. Because sentences which do this are properly put in the indicative mood, I shall refer to them henceforth as 'indicative sentences'. The term has the advantage of being, as yet, emotively neutral. The criterion which I am attacking says, then, that indicative sentences are the only sentences with which logic is called upon to deal.

The way in which I shall attack it is as follows. I shall take a class of sentences, namely imperatives, which clearly do not purport to state that anything is the case, and shall show that their logical behaviour is in many respects as exemplary as that of indicative sentences, and in particular, that it is possible to infer an imperative conclusion from imperative premisses. I hope by this means to show that logicians have been wrong to confine their attention to indicative sentences.

In thus refusing to confine logical enquiry to sentences which state that something is the case, I shall be following a suggestion of Professor Ryle's, who has rightly warned us (*Ar. Soc.* 1945-6) not to imagine that all knowledge is knowledge *that* something is the case, but to realise that there is another important kind

of knowledge, knowledge *how* to do something. Knowledge that something is the case is normally communicated by means of indicative sentences. Knowledge how to do something is normally communicated, where it can be communicated at all, by means of imperative sentences, as can be seen by looking at any cookery-book. If, therefore, logic is to tell us anything about this second sort of knowledge, it will have to enquire into the behaviour of imperative as well as indicative sentences.

There is another reason which makes such an enquiry urgent, The imperative mood has in recent years been in danger of being used as a dumping ground for sentences which have failed to establish their *bona fides* as propositions, usually because they cannot be said to be either true or false. The most important class of sentences which have been classed with imperatives for this reason is that of ethical sentences. The notion that these are crypto-imperatives or contain an imperative element, has been suggested by Carnap (*Philosophy and Logical Syntax*, p. 23) who regards this as a reason for banishing ethics from philosophy ; and by Broad (*Ar. Soc.* 1933-4) ; and the idea has been developed in greater detail by Stevenson (*Ethics and Language*, pp. 21 ff.). Most of the writers who take this view of ethics seem to subscribe to the criterion which I am attacking ; for they seem, unlike Kant, to class imperative sentences with emotive utterances, and to think that, because ethical sentences are not true indicatives, logical methods cannot be used in ethics with as much confidence as in other enquiries. A sentence that does not state that something is the case is at once suspect.

Now it is an important discovery, if true, that ethical sentences do not tell us that something is the case ; but the right thing to do after making such a discovery is to ask what they do tell us, and how to frame them so that this telling is done without ambiguities and contradictions ; in fact, to find out what are the logical rules for talking ethically. It may be that there are no such rules ; but this does not follow from the premiss —although that may also be true—that ethical sentences do not state that something is the case. That philosophers have been led to abandon ethics to the psychologists, just because ethical sentences are not fact-stating, shows how firmly established has become the criterion of logicality which I am attacking.

Ethical sentences are not the only kind of sentences to be suspected of being imperatives in disguise. They are in good company. Some have said that definitions, and some even that all analytical sentences, are rules ; and a rule is a universal imperative. Rules of inference, too, are prominent in modern

logic-books ; and the list could be added to. It is true that rules have been discussed a lot recently ; but perhaps we shall not discover much more about rules, or universal imperatives, until we enquire more closely into the behaviour of imperative sentences in general. Such an enquiry would most naturally begin with simple singular commands like " Come in ", and proceed later to more complicated sentences. To do otherwise would be like starting a logic text-book with a chapter on universal sentences.

These and other reasons make an enquiry into the logical behaviour of imperative sentences urgent. As a prolegomenon to such an enquiry, I propose, in this article, first to draw attention to some features of the grammar of imperatives in ordinary speech, and then to exhibit some logical characteristics of the imperative mood. I shall start by separating from the rest of language that part of it which consists of sentences. This means that I shall say nothing about what are usually called exclamations or interjections, nor about collections of words, such as subordinate clauses, which can form parts of sentences, but cannot be sentences in themselves. Now sentences are traditionally divided into three classes, statements, commands and questions. Of these three sorts of sentence, the last, the question, although it has assumed great importance in the thought of some philosophers, for example Cook Wilson and Collingwood, seems not to be so basic as the other two. It would seem, in fact, that questions can be translated without loss of meaning into commands ; thus " Who is at the door ? " can be translated " Name the person who is at the door " (where " who " is of course a relative and not an indirect interrogative), and " Are you married ? " can be translated " I am/am not * married, * Strike out whichever is inapplicable ". Here again, " whichever " is of course a relative. In general, a question can be translated into a command, either to put values to the variables in a sentential function, or to assert one of the component sentences of a disjunction.

Apart, therefore, from noticing that we have here another addition to the list of crypto-imperatives, we need say no more about questions. We are left, according to the traditional division, with indicatives and imperatives. As we shall see, the traditional division is faulty in that it lumps with imperatives a class of sentences, namely wishes, whose function is quite different from that of true imperatives ; but for the moment it will be instructive to compare the behaviour of the two main groups, indicatives and imperatives.

The first and most obvious grammatical difference between the two moods is that the imperative mood occupies in the pages of most grammar-books very much less space than the indicative. This is because the imperative is defective in many parts. Let us see which these parts are. In the first place, certain *tenses* do not have any imperatives at all. For reasons which, though obvious, are of interest, we do not command things to happen in the past. Secondly, even in those tenses which have imperatives, all the *persons* are seldom represented. I suppose that all languages have second persons singular and plural in the imperative mood; the second person seems, indeed, to be the person for which this mood has the greatest liking; and again, it will be instructive to enquire why this is so. But we also find, as in Greek, third persons singular and plural, or, as in French, first persons plural. Hindustani has something very like a first person singular imperative, which means, by courteous implication, "Please command me to . . .". These forms, however, we feel to be oddities. Why is it, then, that commands are normally given in the second person and in the present or future tense?

We may, I think, take a hint here from Aristotle's very important discussion of deliberation and choice in *Eth. Nic. VI*, where he is discussing in psychological terms very much the same problem as we are here discussing in linguistic terms. Put most generally, the reason for the restrictions on the scope of the imperative mood which we have noticed is that it is concerned only with states of affairs *ὧν ἀρχὴ ἄνθρωπος*, which are brought about by human action. It is, in fact, concerned with the spheres of *πρᾶξις* and *ποίησις*, and not with that of *θεωρία* in the strict sense, which is the proper province of the indicative mood. An indicative sentence is an answer to the question "What is the case?"; an imperative sentence is an answer to the question "What is to be the case?" or "What am I to make the case?". The first question presupposes that there is some unalterable fact to be stated; the second question, on the contrary, presupposes that there is a choice between alternative facts, *i.e.*, between alternative courses of action. To ask the second sort of question is to deliberate; to answer it is either to choose, if the question was asked about our own action, or to command, if it was asked about someone else's. We should neither deliberate, nor choose, nor command, unless it were in question whether the action were going to be performed or not. But this is never the case with past actions; therefore there are no true past imperatives. We do not command *Ἴλιον πεπορθήκεναι*.

The reason for the preponderance of the second person in imperative sentences is similar. Since a command can only be carried out by someone doing something, it is natural to address it to that person, and tell him to do whatever it is. But there are cases in which it is inappropriate or impossible to speak thus; hence the existence of other persons of the mood.

It is possible, however, for logical purposes, to adopt a language in which neither of these restrictions as to tense and person apply to the imperative mood. The tense-restriction can be eliminated as follows. Instead of giving our time-indications by tenses of verbs, we give them by reference to some fixed era; for example, the birth of Christ. This means that an event whose time would be given, in tense-notation, by verbs in the past, present or future tenses, according to the date of utterance of the sentence, will be given instead, univocally, by means of a date. Thus, for any imaginable event, it is possible to imagine an imperative sentence which commands that event to take place; we do not need to specify when the sentence was uttered, since the date of the event referred to has been already given. The sentence is one which might have been uttered at any time previous to the event referred to; whether it was uttered or not is a matter of contingent fact which does not concern the logician. In this way, for any indicative sentence describing an event, we can frame a corresponding imperative sentence commanding that event to happen. Of course, the command may be physically impossible of fulfilment; but this again is a matter of contingent fact.

The restriction as to person, which is in any case much less hard and fast, could be removed entirely if circumstances so required. We do not in fact use the first person singular, because we do not need to tell ourselves to do things, we just do them. If we were so constituted that we could not act without first giving ourselves an order, we should have a first person imperative; in fact, we already have a form of speech for those exceptional circumstances in which we do tell ourselves to do things; we say "Let me think"; "Let me see", etc. On the other hand, if we were omnipotent, and could command the obedience of all persons and all things, we should no doubt make great use of third-person imperatives (*cf.* Genesis i. 3). Given such omnipotence, anything could become the subject of a command; any event which could be described by an indicative sentence could equally well be commanded by an imperative sentence. The two moods would then be co-extensive, and there would be a one-one correspondence between statements

and commands. That this is not so in our ordinary grammar is merely a sign that we are not omnipotent; and this again is a contingent fact which does not concern the logician. I shall therefore assume that a logician is entitled to construct imperatives in all persons and in all tenses.

We may now state with greater precision what is the difference between indicative and imperative sentences as regards their relation to fact. An indicative sentence tells us that something is the case. An imperative sentence tells us to make something the case. Let us compare the following two sentences:

(1) Mary, please show Mrs. Prendergast her room.

(2) Mary will show you your room, Mrs. Prendergast.

Both these sentences refer to something which might be the case, and would be the case if Mary were to conduct Mrs. Prendergast upstairs, open the door, etc. We may call this something

Showing of her room to Mrs. Prendergast by Mary at time t

(where t is shortly after the sentences are uttered). These words are not a sentence. They are the description of a complex series of events; but they are not a sentence because there is something missing; to be complete, they would have either to say that the events described happened or would happen, or to command them to happen, or to ask whether they were going to happen, or something else of this general nature.

It is now necessary, for the sake of compactness, to introduce some technical terms. We have seen that part of what both the above sentences do is to describe a series of events—the same events in both cases—which we called "Showing of her room to Mrs. Prendergast by Mary at time t". I shall call this part of what a sentence does its "descriptive" function. As we shall see, it is always possible, at the cost of artificiality, to frame a sentence in such a way that the words which perform this descriptive function are separable from the words which do the other things which a sentence has to do. I shall call the part of a sentence which performs the descriptive function of that sentence its "descriptor". In sentences (1) and (2) above, the descriptor is not explicit. It can be made explicit as follows: let us write, instead of sentence (1)

(1.1) Showing of her room to Mrs. Prendergast by Mary at time t, please.

and instead of sentence (2)

(2.1) Showing of her room to Mrs. Prendergast by Mary at time t, yes.

We are to understand (1) and (1.1) as having the same meaning, and likewise (2) and (2.1). It is hardly necessary to point out that the contradictory of (2.1), according to the usage which I am suggesting, is not

> Showing of her room to Mrs. Prendergast by Mary at time *t*, no,

but

> No showing of her room to Mrs. Prendergast by Mary at time *t*, yes.

That is to say, negatives go into the descriptor. " Yes " and " please " in the above sentences do nothing but indicate the mood of the sentence, whether indicative or imperative or whatever it is. We need a generic name for the function which these words perform ; and I shall call it the " dictive " function, because it is they that really do the *saying* (the commanding, stating, etc.) which a sentence does. The descriptor, on the other hand, describes what it is that is being said. I shall call that part of a sentence which performs the dictive function, the " dictor ". Dictors, like descriptors, can be either implicit or explicit.

In English, as in most languages, dictors and descriptors are implicit ; they cannot be separated without artificially recasting sentences. Even in English, however, we can say of a sentence, what mood it is in ; there must, therefore, be something about it which tells us this. This, then, is the dictor, and the rest is the descriptor. For example, we know that the sentence " Come in " is a command, because it lacks a personal pronoun, and this absence of a pronoun is, in an Irish sense, a symbol for the imperative dictor. In Latin, we know that " Intrate " is an imperative, because of its termination ; and so the termination contains the dictor ; but of course it also contains something else which belongs to the descriptor, not the dictor, namely, the indication of person. There may be no languages in which dictors and descriptors are completely explicit ; but for logical purposes we shall have to make them so artificially.

Against the words " dictive " and " dictor " I hope there will be no objection. But it may be said that I have misused the word " descriptive ". It is true that this word has been much used recently as a term of approval for what I have here been calling indicative sentences, those, that is to say, which state that something is the case. The people who use it thus are generally those who adopt the criterion of logicality among sentences which I am attacking. Their usage is not, it would seem, in

accord with common practice; for the word "describe" is often used in connexion with commands; we say "Will you please describe more precisely what you are telling me to do", or "I described to him in the minutest detail how to find the house" (which means, for example, that I said to him, "Go down the road and take the second turning to the right, etc."). I therefore make no apology for following the common usage and saying that imperatives "describe" a course of action which is to be taken.

I shall call that which is described by the descriptor, the "descriptum". The descriptum of an indicative sentence is what would be the case if the sentence were true; and of an imperative sentence, what would be the case if it were obeyed. The descriptum of a statement may or may not be actually a fact; if the sentence is true, it is; if not, not. The descriptum of a command may or may not become a fact; if the command is obeyed, it does; if not, not. As the verificationists have pointed out, one of the ways in which a statement can be meaningless is by having no descriptum, *i.e.*, nothing that would be the case if it were true, or that would verify it. An imperative sentence can be meaningless in the same way. The sentence "Sing me a rope of exuberant soap" is for me (descriptively) meaningless, because I do not know what action it describes and tells me to do.

We must therefore admit the value of much that has been said by verificationists; there is such a thing as descriptive meaning, and a sentence must have it, if it is to be used for certain purposes, such as the conveying of information or orders. But to say this, is not to say, that sentences which are not true-or-false are meaningless, even descriptively; for other sentences than indicatives may have descriptive meaning, in the sense in which we are now using that word.

The distinction which we have made between descriptors and dictors enables us to state concisely what is the relation of an imperative sentence to the corresponding indicative sentence. The two sentences have the same descriptor, but different dictors; in other words, what one states to be the case, the other commands to be the case. The difference between the two sentences is confined to the dictor. If, therefore, we want to tell, in any sentence, which symbols are dictive and which descriptive, all we have to do is to frame the corresponding imperative or indicative, as the case may be, and see wherein it differs from the original sentence. The difference will be in the dictor; the resemblance will be in the descriptor. The process

is easier if we use the type of artificial translation which I have suggested ; but it can in principle be performed with any imperative or indicative sentence. We shall see, if we try out this method on sentences containing logical connectives, that these connectives are all descriptive and not dictive. In fact, it is the descriptive part of sentences with which formal logicians are almost exclusively concerned ; and this means that what they say applies as much to imperatives as to indicatives ; for to any descriptor we can add either kind of dictor, and get a sentence.

This point has been put in another way by saying that imperative sentences " contain an indicative factor " (*Jörgensen, Erkenntnis*, vol. 7, p. 291). This is perhaps misleading. They do indeed contain a factor (the descriptor) which is also contained in statements ; but they do not contain the specifically " indicative factor " of statements, *viz.* their indicative dictor. This misleading form of expression has led some people to talk as if an imperative inference, such as those we shall consider, were really, as it were, an indicative inference in disguise ; and it might be argued on this basis that imperatives are not logical as such, but only in virtue of their indicative factor. Granted this interpretation of " indicative factor ", to mean what we have called " descriptor ", such a contention is sound ; but it would be equally sound to call the descriptor of indicative sentences an " imperative factor ", and so to argue that indicatives were not logical as such, but only in virtue of their " imperative factor ". A less misleading form of expression is to say that there is a factor, the descriptor, which is contained in both indicatives and imperatives, and that it is this descriptor that we operate with in most, if not all, logical inferences.

In order to illustrate this, and to make quite clear the distinction between descriptors and dictors, I shall give some more examples. The first in each pair is the English sentence ; the second is its translation, making the dictor and descriptor explicit.

(3) Do not walk on the grass.
(3.1) No walking on the grass (by anyone ever), please.
(4) Nobody ever walks on the grass.
(4.1) No walking on the grass by anyone ever, yes.
(5) If the train has not gone, catch it.
(5.1) In event of train not being gone, catching of it by you, please.
(6) If the train has not gone, you will catch it.
(6.1) In event of train not being gone, catching of it by you, yes.

(7) Go and see.
(7.1) Going and seeing by you, please.
(8) Talk sense or get out.
(8.1) Talking sense by you or getting out by you, please.

Let us now go further, and see what happens to these descriptors and dictors when we perform an inference. Consider the following disjunctive syllogism :

You will use an axe or a saw.
You will not use an axe.

You will use a saw.

Let us translate it as before,

Use of axe or saw by you shortly, yes.
No use of axe by you shortly, yes.

Use of saw by you shortly, yes.

Now let us put all these sentences into the imperative. Suppose I say to someone, " Use an axe or a saw ", and then, fearing that he may cut off his leg, say " No, don't use an axe ". He will, without further instruction, infer that he is to use a saw. This syllogism, translated, becomes,

Use of axe or saw by you shortly, please.
No use of axe by you shortly, please.

Use of saw by you shortly, please.

We notice that in these two syllogisms, one indicative and one imperative, the descriptors are the same ; only the dictors are different. This is as we should expect ; for it is only in the dictor that an imperative differs from the corresponding indicative. We also notice that the dictors seem not to make any difference to the argument. We could write :

Use of axe or saw by you shortly.
No use of axe by you shortly.

Use of saw by you shortly.

If the premisses describe a situation, then the conclusion also describes that situation, though not necessarily so fully as the premisses do. We can then add whichever set of dictors we please. If we command someone to use an axe or a saw, and then not to use an axe, we command him to use a saw ; if we say that he will use an axe or a saw, and then that he will not use an axe, we say that he will use a saw.

We may put this more formally as follows. Let C be a command, and let S be a statement with the same descriptor. Let

$c_1c_2 \ldots c_n$ be commands which can be inferred from C (*i.e.* whose descriptors describe states of affairs which logically must be the case if the state of affairs described by the descriptor of C is the case); and analogously for S and $s_1s_2 \ldots s_n$. Then if we command C we command $c_1c_2 \ldots c_n$; that is to say, if we command to be the case what is described by the descriptor of C, we command to be the case what is described by the descriptors of $c_1c_2 \ldots c_n$. Since this assertion, if misunderstood, can give rise to paradox, it requires further explanation. It does not, in the first place, follow that to obey c_1, for example, is to obey C, any more than that to verify s_1, a logical consequence of S, is to verify S; in either case to claim this would be to make an improper conversion. We cannot therefore, if given a command, or set of commands, deduce one or more consequences of those commands, and think that if we have obeyed the latter we have done all that was commanded by the former. For example, if C was "Put on your parachute and jump out", and we inferred the consequential command "Jump out", and obeyed this, we should be only partially fulfilling the command given, in this case with disastrous consequences. There are other examples even more paradoxical, in which to fulfil a consequential command is not to fulfil the original command at all; and these have led some people to suppose that the logic of imperative sentences is radically different from the logic of indicatives. The point has been clarified to a certain extent by A. Ross in an illuminating article, "Imperatives and Logic" (*Phil. of Science*, vol. 11 (1944), p. 41). Consider the following example of Ross's. An indicative inference of the form

$$\frac{\text{You will post the letter}}{\text{You will burn or post the letter}}$$

is valid in ordinary logic, but the corresponding imperative inference

$$\frac{\text{Post the letter}}{\text{Burn or post the letter}}$$

appears to us paradoxical, because we think it means that if we told someone to post a letter, he might make this inference and so think he would do what he was told if he obeyed the conclusion by burning the letter. The reasons for the paradox are worth examining. First, but of minor importance, is the fact that the inference, like the corresponding indicative one, is trivial, and therefore would never be made. The second reason is the one which we have already suggested. Let C be the command

"Post the letter" and c_1 be the command "Burn or post the letter". When I said above that to command C is to command c_1 I did not mean that to obey c_1 was to obey C. Let us imagine that a stupid, but logical person is told to post a letter. Let us suppose that he is stupid enough not to know that if he burns it he can't also post it. What can he infer from the command? He cannot infer that burning the letter would break the command, because for all he knows he can burn it *and* post it. He does, however, know that if he *breaks* the command c_1 (which he can only do by neither posting nor burning it) then he breaks the original command C. This inference is the imperative equivalent of the indicative inference

$$\frac{\text{S entails } s_1}{\text{Not-}s_1 \text{ entails not-S}}$$

He also knows that he must not break any other command which follows from C. Suppose he then discovers that burning the letter rules out the possibility of posting it. He then knows that he must not burn it; for if he did, he could not post it. It is the fact that we assume everyone to possess this latter piece of knowledge which, among other reasons, makes this imperative inference appear paradoxical, though it is in fact valid.

It appears, then, that it is possible, by reasoning in imperatives, to guide our actions. We cannot indeed, when given a command, infer other commands from it, and think that by fulfilling them we have fulfilled the original command, and done all that we were told to do; but we can infer that unless we fulfil at least the deduced commands we have *not* done all that we were told to do. Thus imperative inferences may be of use from the point of view of the person commanded. From the point of view of the person commanding they may also be of use. He knows that if he commands C he also commands $c_1 c_2 \ldots c_n$; that is to say, he makes himself responsible, as it were, for the logical consequences of his command as well as the command itself; and this may be of use in helping him to decide what to command.

The method of reasoning used in such inferences is, of course, exactly that which is used in indicative logic; these considerations in no way support the theory that there can be a separate "Logic of Imperatives", but only that imperatives *are* logical in the same way as indicatives. This is because both imperatives and indicatives contain descriptors, which are the parts of sentences which we normally operate with in our reasoning. Thus most inferences are inferences from descriptor to descriptor, and we could add whichever set of dictors we pleased.

It is even possible to mix dictors within the same syllogism ; Aristotle does it in his practical syllogism, where the major is usually an universal imperative, the minor an indicative, and the conclusion either a further imperative, or an action which, so to speak, elides an imperative. But since I have not yet investigated the rules which make such mixed syllogisms valid or invalid, I shall not deal with them here.

In case it should still be doubted whether it is possible to argue in imperatives, here is another example :

When you come to the cross-roads, turn right.
Before you turn right, give the appropriate signal.

Before you come to the cross-roads, give the appropriate signal.

In this case, as in (6) above, it might be asked, whether there are indicative dictors concealed in the subordinate clauses. That this is not so can be seen by translating in the usual manner,

On coming to the cross-roads, turning right by you, please.
Before turning right, giving of appropriate signal by you, please.

Before coming to the cross-roads, giving of appropriate signal by you, please.

Only main verbs contain dictors.

Closely connected with the fact that it is possible to infer in imperatives, is the fact that it is possible to contradict oneself in them. As all soldiers know, it is possible to give or receive contradictory orders. An example would be " Advance to the left . . ." ; a squad can either move to the left, or advance, but not both. Another would be, " No. 1 (gun), five rounds, troop fire " ; troop fire is, by definition, fired by more than one gun. For the purposes of discussion, I shall take a more elementary example, which would never in fact occur, " Both do and do not do X ". This command is self-contradictory in the same way as the corresponding indicative sentence " You will both do and not do X ". The same self-contradiction occurs in both these two sentences, because both their descriptors are the same, and self-contradictory. The descriptor is " Doing of X by you shortly and not doing of X by you shortly ". Whichever dictor we add to this, the result is a self-contradiction.

That it is descriptors and not dictors which contradict, will appear also from the following consideration. To contradict, we have, if we make ourselves explicit, to use the symbol of

negation. This, as we have seen, belongs to the descriptor, like the other chief logical signs. It belongs to the descriptor, because it has nothing to do with the mood of a sentence. It will follow a sentence in all its moods.

It would appear, then, that inference and contradiction, two of the things about sentences which logic especially studies, can be studied in commands as well as in statements. This is because these processes are to be found in the descriptive part of sentences, which is common to both moods. We may go further, and assert that any formula of formal logic which is capable of an indicative interpretation is capable also of an imperative one. The proof is as follows. Let S be any formula which is a complete sentence, and which has an indicative interpretation. This means that there is something which it states to be the case. This, in our terminology, means that it has a descriptor and an indicative dictor. Now if any state of affairs (whether actual or not) is described by the descriptor of this sentence, it must be possible, instead of stating this state of affairs to be the case, to command it to be the case; *i.e.*, we can substitute for the indicative dictor an imperative one, leaving the descriptor unchanged. This leaves us with an imperative sentence which is as much an interpretation of the original formula as the indicative one.

Let us take as established this principle, that any sentence-formula which is capable of an indicative interpretation is capable also of an imperative one; and let us imagine it applied to all the sentences in a logic-book. We shall call it "The principle of the dictive indifference of logic". We shall see that it applies to what are called "object-sentences" but not to what are called "meta-sentences". All the logical characteristics of object-sentences will remain the same in either interpretation, because they will contain the same descriptors, *i.e.*, the same logical connectives and the same expressions connected by them; and this is all that logical formulae need to contain, in order to be used as object-sentences. For example, let us suppose that a logician quotes the familiar syllogism which begins "All men are mortal". This syllogism could be rewritten:

Let all men be mortal.
Let Socrates be a man.
Let Socrates be mortal.

and would remain valid, for the reason that its descriptors, which are the same as those in the indicative syllogism, form a valid inference:

All men mortal:
Socrates man:
Socrates mortal:

Similarly, all arguments which are conducted in object-sentences will remain valid in the new interpretation. But the dictive indifference of object-sentences is not shared by meta-sentences which a logician uses to *say* things about his object-sentences. For example, suppose that, after quoting the above syllogism, he goes on, "This is a syllogism, and all syllogisms of this form are valid" we could not, without altering his meaning, re-write the remark as "Let this be a syllogism, and let all syllogisms of this form be valid". He wants to *state* that it *is* a syllogism and that they *are* valid; and he can only do this by making a statement, *i.e.*, by using an indicative dictor.

The reason for this distinction between object-sentences and meta-sentences in respect of their dictive indifference should be obvious. When a logician writes down an object-sentence, he is mentioning it and not using it; that is to say, he is not *saying* whatever the sentence is designed to say, but only quoting it as an example of something that someone might say. He does this in order to examine the logical properties of the sentence; and as these are all logical properties of the descriptor, he could, if he wished, ignore the dictor; in fact, he could treat his object-formulae just as descriptors. But when he uses a meta-sentence to *say* something about an object-sentence, he really is saying something; and to say something, he has to use a dictor; otherwise we should not know whether he was commanding or stating or asking or something else.

There is one respect, however, in which an imperative interpretation of the object-sentences in a logic-book would necessitate a radical recasting of the meta-linguistic part of the book. Most logic-books are written on the assumption that the formulae mentioned in them are to be interpreted indicatively. They therefore, in their meta-linguistic remarks, use forms of expression which are not appropriate to imperative object-sentences. For example, they use the words "true" and "false" of the object-sentences; and imperative sentences are not either true or false. I should like to suggest that the use of the words "true" and "false" in logic-books is often a blemish, and that this blemish would be removed if the meta-sentences were recast in order to accommodate an imperative interpretation of the object-sentences. Logic is primarily concerned, not with the truth of propositions, but with the validity of inferences; and

it has long been a common-place of traditional logic that it makes no difference to the validity of an inference whether its premisses and conclusion are true or whether they are false. The argument is valid if the conclusion follows from the premisses, whether true or false, or, we may add, neither. It is true that we often say that *if* the premisses are true, then the conclusion is true. But this is a concession to the indicative mood which we need not make. In our terminology, we could ignore the dictors, and say that *if* the descriptors of the premisses describe a state of affairs, then the conclusion describes, at least partially, the same state of affairs. Whether the state of affairs is actually the case, makes no difference to the validity of the argument. References to truth and falsehood are therefore irrelevant.

There is no room here to attempt a detailed recasting of the terminology of logicians to accommodate imperative sentences. I am satisfied that such devices as truth-tables can be so modified without impairing their performance of their function. Other uses of the words " true " and " false ", especially in semantical discussions, will create more difficulties. In particular, definitions of validity in terms of truth will need careful examination. But to discuss these difficulties would carry me outside the scope of this article, which is in any case intended only as a first reconnaissance of the subject. Let us rather repeat our main conclusion, that since logic is mainly about descriptors, and commands contain descriptors, commands are a proper concern of the logician.

There is one objection that might be made to this contention. It might be said that, although commands contain words which in statements would be called logical words, and although they behave in a manner which superficially resembles that of statements, they are unreliable from the logical point of view, because their real function is motivative, emotive, hortative, evocative, etc., that is to say, their object is to produce emotions in the hearer, especially such emotions as lead to actions ; and emotions are best kept out of logic. Such an objection would naturally be made by an upholder of the view that I am attacking, that it is only true-or-false fact-stating indicative sentences which can safely be discussed by the logician. Confronted with any sentence which is not true-or-false, which claims to state no fact, one who holds such a view finds it hard to ascribe to the sentence any kind of meaning which is logically reputable ; he therefore has to find some other sort of meaning to ascribe to it ; and emotive meaning is a possible candidate. It is not a very plausible one in the case of imperatives ; for they, after

all, include laws, about which counsel are supposed to produce logical and dispassionate arguments, and rules of inference, which are the bases of logical systems themselves. But nevertheless, let us see whether commands are more emotive than other kinds of sentence.

There are in general two ways in which a sentence may be emotive. It may express emotions which are affecting the speaker; or it may evoke emotions in the hearer. In the former case, I shall say that the sentence is expressive, in the latter, evocative. A sentence may well do both these things; it may also have emotive meaning in addition to other sorts of meaning, for example descriptive meaning and dictive meaning. Since emotive meaning is exhaustively divided into expressive and evocative meaning, we must enquire whether commands possess either of these two sorts of meaning in a greater degree than, for example, statements.

Since the sort of emotion that a command would be most naturally said to express is a wish or desire that something should take place, it will be instructive to compare commands with another sort of sentence that somewhat resembles them, wish-sentences. Now it is at least plausible to maintain that when David said "Would God I had died for thee, O Absalom, my son, my son", he was not trying to give information, either about himself or about his son, but was expressing an emotion, namely the wish that he had died. Note, that even this highly emotive utterance has some descriptive meaning, in the sense in which we have been using the term; David had to know what would have been the case if the wish had been fulfilled, *i.e.*, that he himself would have been dead and Absalom alive. But the sentence is nevertheless charged with emotion, and we should be unwise to examine its logic too closely. Contrast this sentence with a dull command like "Come in". This does not mean in the least the same as "Would God you would come in". "Come in" may, indeed, express emotion in two senses. In the weak sense, it expresses a wish, not like David's utterance, but in the same sort of way as an indicative sentence expresses a *belief* that something is the case. In the strong sense, the words "Come in" may, by the tone in which they are uttered, express emotion, in the sense of agitation or some other powerful feeling. For example, if I think that the man outside the door is an assassin, my words may express apprehension; on the other hand, if I think that he is an old friend, they may express welcome. But in this sense, any sentence whatever may express emotion; Professor Ryle gives the example

of " Seven sevens are forty-nine " said by an angry schoolmaster to a stupid schoolboy who had made a mistake. It may even be true, as Collingwood and others have thought, that all language is in origin and by nature expressive ; certainly it would seem that any sentence which is actually used must at least express an interest in its subject ; else why should it be said ? At any rate there is no reason to suppose that commands are more expressive than statements in any sense. How expressive a sentence is, can hardly ever be decided by looking at the mere words of which it is composed, let alone by simply noticing what mood it is in. It depends on the circumstances, the context, the tone of voice, and many other factors.

If commands are not markedly more expressive than other sentences, are they more evocative ? Here again, we must be careful to distinguish between different ways in which a sentence may evoke, or be designed to evoke, emotion. In the strong sense, " emotion " may mean " agitation or some other violent state of feeling ". In this sense, any sentence may be evocative ; for example, the statement " A scorpion has just crawled up your trouser-leg " might be highly evocative, and the command " Come in " highly unevocative. In the weak sense, a sentence might be said to be evocative if it is intended to, or does, produce *any* change in the hearer's state of mind or behaviour. In this sense it would be hard to find any sentence that was not evocative. At the least, a sentence that is heard and understood must produce the dispositional property called " understanding the sentence ". It is true that commands are designed to produce an action, or a will to action, in the hearer ; but even this does not necessarily make them more evocative than other sentences. If you want a man to take off his trousers, you will more readily succeed by saying " A scorpion has just crawled up your trouser-leg " than by saying " Take off your trousers ".

It is, in short, impossible to ascribe the logically undesirable character of emotivity to classes of sentences *en bloc*. It is quite true that the logician should be on his guard against the danger of trying to be more logical about any group of words than its nature will bear ; but this does not absolve him from doing his job, which is to tell us how to say whatever we want to say without ambiguity or inconsistency. If there is any kind of sentence in which precision and consistency are virtues, then it is the logician's business to tell us how to achieve them. If commands are such a kind of sentence, then the logician must study the imperative mood.