

## THE SEMANTICS OF IMPERATIVES

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In this paper the much maligned but little explored theory of imperatives according to which imperatives are true or false is defended. The question of the semantics of imperatives is approached through an analysis of the nature of commanding. Specifically I shall be concerned with the sort of commanding that is done by the uttering of imperative sentences. It is assumed that it is at least relatively clear what the extension of the class of imperative sentences is. There is one fairly widespread doctrine concerning the syntax of imperatives, however, that I wish to dispute. According to this doctrine, all imperatives are composed of an indicative sentence and an imperative operator, and thus have the form '*!p*' — in words, 'Make it be the case that *p*'. This doctrine seems to me both unilluminating and false. It is unilluminating as an analysis because circular; for an imperative operator '*!*' can only be understood as the sort of operator that turns indicative sentences into *imperatives*. Since the sentence 'Make it be the case that *p*' is itself an imperative, it must be of the form 'Make it be the case that you make it be the case that *p*', etc. And the doctrine is false because imperatives such as 'Go to church on Sunday *!*' just are not of the form '*!p*'. It seems there are only two ways of understanding this doctrine according to which it is true. Firstly, it can be understood as the thesis that every imperative, though not itself of the form '*!p*', is equivalent to an imperative of that form. The imperative 'Go to church on Sunday *!*', for example, is equivalent to the imperative 'Make it be the case that you go to church on Sunday *!*'. (By equivalent I mean that the one imperative is satisfied if and only if the other is.) On this interpretation, however, the thesis is comparable to the thesis that every indicative sentence '*p*' is equivalent to an indicative of the form 'It is the case that *p*' and is thus, though true, not extremely interesting. Secondly, the doctrine can be understood as the thesis that an

imperative such as 'Go to church on Sunday !' is composed of the indicative sentence '(You will) go to church on Sunday' and an imperative operator — an exclamation mark — at the end of the sentence instead of a period. This in fact, though almost certainly not the doctrine intended, is the thesis I shall adopt. I shall argue for the view that an imperative sentence is really an indicative sentence with an exclamation mark at the end. But just as the period at the end of a sentence does not, strictly speaking, form part of the sentence, but serves rather, like the assertion sign '⊢', as an indicator of the pragmatic force of the utterance — as an indicator of the fact that the sentence is asserted — so, I shall argue, does the exclamation mark not operate on the indicative sentence to make it an imperative sentence, but serves rather as an indicator of the fact that the sentence is not asserted as true, but is *to be made true*.

An imperative sentence, then, simply is a somewhat disguised indicative. An imperative is a disguised indicative in that the subject term of the sentence is generally only implicit. In 'Go to the church of your choice !', for example, the subject term 'you' is merely understood. That 'you' is in fact the subject is apparent in that otherwise the occurrence of 'your' in the sentence rather than some other possessive adjective would be inexplicable. Similarly, one can argue that the subject of 'John, finish your dinner !' is not 'John' but rather 'you'; for were 'John' the subject, the sentence would properly read 'John, finish *his* dinner !'. I take it that 'John, finish your dinner !' is short for 'John, you will finish your dinner !' 'John' is uttered merely to catch the person's attention before issuing the imperative — hence the comma after 'John'. Sometimes, however, the subject term of an imperative is not implicit. We say, for example, 'You wait for me here !' as well as 'Wait for me here !' An imperative is a disguised indicative also in that the auxiliary verb 'will' which provides the temporal indicator for the sentence is generally only implicit. Thus, 'Go to church on Sunday !' is really an elliptical form of 'You will go to church on Sunday henceforth !'. Sometimes, however, the future tense of an imperative sentence verb is manifested by the

presence in the sentence of a future temporal indicator such as 'tomorrow', 'next week', etc. Thus, for example, 'Meet me here tomorrow!' is obviously future tensed. It is, I take it, short for 'You will meet me here tomorrow!' Although I think all imperative sentences that ever get uttered are future tensed, this seems merely for the very practical reason, rather than for any reason of logic, that only conduct posterior to the time of utterance of an imperative sentence has any chance of being influenced by such utterance. If backward time travel were a possibility, I think imperatives such as '(You have) gone to church every Sunday!' would be considered well-formed and in fact frequently uttered.

To issue a command, then, on the view of commanding I wish to propose, is simply to utter a somewhat disguised indicative sentence with the intention that the hearer make the sentence true. Commanding and asserting, on this view, differ not in virtue of the type of sentence used to perform each speech act (imperative for the one, indicative for the other) but simply in virtue of the speaker's intentions regarding the hearer's relation to the (indicative) sentence uttered. Whereas in making an assertion the speaker's intention is roughly that the hearer believe that the sentence the speaker utters is true (and also believe that the speaker believes it to be true), the speaker's intention in issuing a command is that the hearer *make the speaker's sentence true*. One can speculate that if imperative sentences simply are indicatives, the reason they don't look much like indicatives is to provide a clue to the hearer as to the speaker's intentions in uttering the sentence. By dropping the subject term from an indicative sentence and leaving the auxiliary verb 'will' implicit, the speaker indicates to the hearer that he is expected not to believe the somewhat mutilated indicative sentence the speaker utters, but to *make* that sentence true. Other such clues are tone of voice, gestures, etc. Oftentimes, indeed, we utter full indicative sentences in commanding, e.g., 'You will be back by 10!' allowing only the tone of voice to manifest our intentions in uttering the sentence.

So far I have spoken as though sentences were the only sort

of linguistic entity involved in speech acts of commanding. If one admits propositions into one's ontology, however, the view of imperatives I wish to espouse can be expressed as the view that indicative and imperative sentences composed of the same subject and predicate express the same proposition. According to this view, one issues a command by uttering an imperative sentence that expresses a proposition describing an action for the purpose of inducing the hearer to perform the action described (i.e., to make the proposition expressed by the imperative sentence *true*). But, although one utters the sentence for the purpose of inducing the hearer to perform an action, it is not part of the propositional content expressed by the sentence that such is the speaker's intention. The propositional content merely describes the action to be performed. Nor, according to this theory, is the speaker's intention conveyed by a special and additional prescriptive propositional content expressed by the sentence. That the speaker's intention in uttering a sentence is for the hearer to make the proposition expressed true must be inferred (inductively) by the hearer; for this intention is not signified by anything the speaker says. In Grice's useful terminology, the speaker's intention is only conversationally implicated by this utterance.

To summarize, then, the view of imperatives I wish to propose is the following. Either imperative sentences are somewhat disguised indicatives, or else imperative sentences and indicatives composed of the same subject and predicate express the same proposition. I put this view in disjunctive form because the two disjuncts are quite similar (the first entails the second given the existence of propositions), but also and principally in order to make the thesis acceptable to different points of view. Thus it is not possible to reject it simply on the ground either that propositions don't exist or on the ground that they do. For convenience, however, in the rest of the paper I shall speak in terms of sentences rather than propositions, with the understanding that one can substitute 'proposition' for 'sentence' if one prefers. One possible misconception regarding the proposed theory, however, must be guarded against. To say that an imperative sentence simply is a future

contingent indicative sentence, or that it expresses a proposition, is not to say that it is asserted. A given descriptive sentence may appear now asserted now unasserted, for example as the antecedent of a conditional, without there being any change in the descriptive content of that sentence. Just so, an imperative sentence can describe a future action without it being asserted (predicted) that the described action will take place. For this reason one must reject Bohnert's (1) analysis of imperatives as implicit statements of the form ' $\neg p \supset S$ ', where 'S' stands for some such sentence as 'A sanction is incurred'. In the case of uttering an imperative, the speaker simply describes the action he intends the hearer to perform; whereas in the case of uttering a sentence of the form 'If it is not the case that p, then a sanction will be incurred', the speaker makes a statement of fact for the purpose of communicating to the hearer a piece of information that the speaker believes will influence the hearer's behavior in a desired way. In uttering a sentence of the form ' $\neg p \supset S$ ' one *states* that as a matter of fact non-realization of 'p' will be followed by the imposition of a sanction; whereas in uttering an imperative sentence one only conversationally implicates that a sanction will be applied. One doesn't state that a sanction will be applied, for in uttering an imperative one doesn't state anything at all.

Although this view of commanding may seem counterintuitive, it is a view that must be judged on its merits like any philosophical or linguistic theory. If the merits seem great enough the intuitions can always submit to retraining. The primary merit of the theory is economy. According to this theory there is only one type of sentence that is needed to perform the speech acts of commanding and stating. A descriptive (indicative) sentence does the job in both cases. According to opposing theories, on the other hand, two sorts of sentences are required for the respective tasks. In order to state, one uses an indicative sentence with truth conditions, whereas to command one uses an imperative sentence without

(1) H. G. BOHNERT, «The Semiotic Status of Commands», *Philosophy of Science* 12(1945), 302-315.

truth conditions. It seems that this leads to considerable complexity in semantic theory; for in order to know whether a given sentence token, e.g., 'You will be home by 10' has truth conditions or not, one must know whether the speaker's intention in uttering the sentence is for the hearer to believe that he will be home by 10 or for him to make it be the case that he is home by 10. In a word, semantics becomes dependent upon pragmatics. Another way of bringing out the complexity of alternative theories of imperatives is the following. Since '(You will) be home by 10!' and 'You will be home by 10' are composed of the same subject and predicate, the difference between them must be accounted for by the way in which subject and predicate are tied together. This view has recently been maintained by Castaneda who writes:

... a prescription 'X to do A' differs from the corresponding proposition 'X does A' in that the predicate 'doing A' relates to the agent X in a different way; i.e., they differ in the copulation of subject and predicate. ... For example, 'Karl jumps' and 'Karl, jump' contrast as simply two different copulations of the constituent 'Karl' and the constituent 'jump'.<sup>(2)</sup>

On the view of imperatives according to which imperatives are indicatives it is not necessary to multiply manners of copulation in this way. Similarly, if one admits propositions into one's ontology and also maintains that imperatives, whatever they are, are not indicatives, then one is forced at the same time to let another sort of abstract entity into the fold, namely, prescriptive meanings. Thus, for example, Alf Ross writes, «Just as the meaning content of 'Peter is shutting the door' is a *proposition* ... so the meaning content of 'Peter, shut the door' is a *directive*.»<sup>(3)</sup> It seems more reasonable, if abstract entities are needed at all, to limit their species to one, namely, propositions.

<sup>(2)</sup> Hector-Neri CASTANEDA, *The Structure of Morality* (Springfield, Ill.: Charles C. Thomas Publisher, 1974), 93-4.

<sup>(3)</sup> Alf Ross, *Directives and Norms* (New York: Humanities Press, 1968), 34.

Moreover, the complication in semantic theory that is required by a view of imperatives according to which they are not, whatever they are, indicatives is not compensated for by any corresponding simplification in pragmatics. That is, the speaker's intention is the same in issuing a command whether he uses a *sui generis* imperative sentence that expresses a directive, exhibits a special kind of subject-predicate copulation, and lacks a truth value, or whether he uses an ordinary future indicative sentence for the purpose. In either case the speaker's intention is that the hearer understand the speaker's utterance, infer the speaker's purpose in making the utterance, and fulfill that purpose by performing the action described. Given, then, that the simpler theory of commanding is one according to which commands are issued through the use of ordinary, though somewhat disguised indicative sentences, such, I think, is the theory that ought to be adopted.

It follows from this view of commanding that the logic of imperatives, syntactically and semantically, is identical with the standard logic of assertoric sentences. Syntactically, an imperative sentence simply is an indicative — though generally only elliptically so. In the relatively brief history of the formalization of the logic of imperatives, one does indeed find an isomorphism between that logic and ordinary assertoric logic. One of the first logics of imperatives, that of Hofstadter and McKinsey<sup>(4)</sup>, was isomorphic with standard propositional calculus. Hare<sup>(5)</sup> also maintained the existence of such isomorphism; and more recently Castaneda has written as follows:

The logic of imperatives and prescriptions parallels the logic of propositions. Thus, the systematization of prescriptive implications is formally a rather trivial matter. Any systematization of the logic of propositions allows of being taken either as the logic of propositions, as originally intended, or as the logic of pure prescriptions ...

(4) A. HOFSTADTER and J. C. C. MCKINSEY, «On the Logic of Imperatives», *Philosophy of Science* 6(1939), 446-457.

(5) R. M. HARE, «Some Alleged Differences between Imperatives and Indicatives», *Mind* 76(1967): 309-326.



Clearly, this generalization of the interpretation is trivial. What is far from trivial is precisely that the generalization is not vacuous, but represents the implication relationships among propositions and mandates. <sup>(9)</sup>

It is a virtue, I think, of the present theory of imperatives that it offers a simple — the simplest — explanation for such isomorphism.

Semantically, since an imperative is an indicative sentence, it follows that imperatives have truth conditions as do ordinary indicative sentences. Although it is usually said that imperatives are neither true nor false but can only be satisfied or not satisfied (obeyed or not), the difference seems to me purely verbal. Given that the imperative, e.g., 'Open the door!' is satisfied if and only if the indicative sentence 'You will open the door' is true, it is theoretically much simpler to decide that such is the case because the imperative 'Open the door' just *is* the indicative 'You will open the door' than to adopt any other hypothesis. What makes us loath to attribute truth or falsity to commands, one might speculate, is primarily the ambiguity of the word 'command'. Just as the word 'statement' can signify either a nact of stating or *what* is stated, so does 'command' mean sometimes the act of issuing a command and sometimes *what* is commanded. But, whereas I think we most frequently use the word 'statement' to refer to *what* is stated, which is either true or false, 'command' more often refers to the act of commanding which, *qua* act, can be neither true nor false. In support of this point, note how much more plausible sounding is the claim that *imperatives* can be true or false, since 'imperative' does not suffer nearly as much from the same ambiguity as does 'command', than the claim that *commands* are true or false. If, however, we think of a command, in the sense of what is commanded, simply as an indicative sentence uttered with the intention that the hearer make the sentence true, then a command is something that can be true or false after all. Furthermore, although it is true that we

<sup>(9)</sup> CASTANEDA, *op. cit.*, 85.



don't call commands true or false, it might be pointed out that we do something quite similar to commands, namely, we say yes or no to them. Now, Hare (7) has analysed the act of asserting as saying yes to a proposition; so given that we say yes or no to commands, if what we preeminently say yes to is something that has the property of being true or false, it seems likely that commands have that property. This argument, of course, is far from conclusive but will perhaps serve to make somewhat more intuitive the view of commanding here espoused. What better explanation for the fact that we can respond both to the prediction 'You will take a long voyage' and to the command 'Take a long voyage!' in exactly the same way, namely, by saying 'No, I won't' or 'Yes, Sir. I will'?

In addition to formalizing the syntax and semantics of imperatives, however, we can also formalize the pragmatics. But since a sentence doesn't say of itself either that it is put forward to be made true or to be believed, the pragmatics of imperatives and statements must be formalized by means of sentences to the effect that such and such is commanded or is asserted. Even the sentence 'This sentence is asserted', assuming it to be not nonsense, can be asserted or not as is clear in that it can appear as the antecedent of a conditional in which case it is *not* asserted. In order to formalize the pragmatics of statements we have assertion logic as developed principally by Rescher (8) which studies the logical relations of sentences of the form 'It is asserted that p'; and in order to formalize the pragmatics of imperatives we must deal with statements of the form 'It is commanded that p' or 'It is imperative that p'. The logics recommended by Bohnert and Anderson, insofar as they are intended to formalize the logic of imperatives and not the logic of ought-sentences, are essentially logics of just this kind formalizing the pragmatics of imperatives. For to say that if it is not the case that p then a sanction is imposed, is just to give a sort of operational definition of

(7) R. M. HARE, 'Imperative Sentences', *Mind* 58(1949), 21-39.

(8) Nicholas RESCHER, *Topics in Philosophical Logic* (Dordrecht: Reidel, 1968), Ch. XIV.

the process of commanding that *p*. Whereas the logic of imperatives (understood in the sense of *what* is commanded) is isomorphic (indeed identical) with standard propositional calculus, the logic of the pragmatics of imperatives and assertion logic are modal logics. How strong a system of modal logic these logics are depends largely upon whether non-reducible iteration of the modal operators 'It is commanded that *p*' and 'It is asserted that *p*' is permitted. Of course, sentences of the form 'It is commanded that *p*' are either true or false.

Considerable light is thrown on disputes regarding the logic of imperatives by the preceding discussion. Since the beginning of debate on imperative logic, basically two sorts of semantics have been proposed for imperative logic: objective and subjective semantics.<sup>(9)</sup> According to the objective approach, the semantic value for imperatives analogous to the truth value for assertoric statements is that of satisfaction. An imperative can be satisfied (obeyed) or not satisfied. According to the subjective approach, on the other hand, the semantic value for imperatives is the existence or non-existence of a subjective state of demand in a speaker that the state of affairs referred to by an imperative be realized. In other words, an imperative can be issued or not issued, or, in Lemmon's phrase, in force or not in force. Now, although these two approaches to the semantics of imperatives have been taken to be mutually exclusive and numerous arguments proffered in support of one approach rather than the other, it is evident, if the preceding account of imperatives is accurate, that the two approaches are not at all conflicting, but rather complementary. The objective approach that takes satisfaction as the semantic value of imperatives formalizes the semantics of imperatives — *what* is commanded — for, as has already been indicated, if imperative sentences are indicatives, then there is merely a verbal differ-

<sup>(9)</sup> The designation 'subjective and objective semantics' is from Jon Espersen, «The Logic of Imperatives», *Danish Yearbook of Philosophy* 4 (1967), 57-112. Also see particularly Ernest Sosa, «The Semantics of Imperatives», *American Philosophical Quarterly* 4(1967), 1-8; and Alf Ross, *op. cit.*, 168-177.

ence between satisfying a command and making an imperative sentence *true*. And the subjective approach is necessary for the formalization of the pragmatics of imperatives. The difference between making a statement and issuing a command lies not in the sort of sentence uttered, but in the speaker's intentions regarding that sentence — whether he wishes the hearer to believe that the sentence is true or wishes him to make it true; and it is precisely this difference that assertion logic and the subjective approach to imperative logic formalize.

This failure to regard the subjective and objective approaches to the semantics of imperatives not as conflicting but as complementary has engendered several problems in imperative logic that are obviated when the proper division is made. For example, one problem that is thought to arise with the objective semantical approach is that the inferences from 'p' to '!p', and from '!p' to 'p' are thereby validated; for if it is true that p, then necessarily the imperative '!p' is satisfied, and conversely. Similarly, Rescher<sup>(10)</sup> has pointed out (though he doesn't use the imperative operator notation '!p') that on the objective approach the formula ' $((p \supset !q) \& (p \supset r)) \supset (p \supset (!q \& !r))$ ' is valid. Obviously the problem stems from the fact that on the objective approach '!p' and 'p' should be mutually substitutable since '!p' is satisfied if and only if 'p' is true. The problem, however, lies not with the objective approach itself, but results rather from not keeping properly in mind the distinction between the semantical and pragmatic level of imperatives. Semantically, ' $p \supset !p$ ' and ' $!p \supset p$ ' and ' $((p \supset !q) \& (p \supset r)) \supset (p \supset (!q \& !r))$ ' are perfectly valid formulae. The first two are simply instances of the law ' $p \supset p$ ', while the third is an instance of the law ' $((p \supset q) \& (p \supset r)) \supset (p \supset (q \& r))$ '. The exclamation mark merely indicates that the sentence 'p' is the object not of an assertion, but is ingredient in a speech act of commanding. But it is still true that p implies p no matter what sort of speech act it is ingredient in — whether it is intended to be believed or intended to be made true.

<sup>(10)</sup> Nicholas RESCHER, *The Logic of Commands* (London: Routledge & Kegan Paul, 1966), 99.

Of course it does not follow from the fact that it is commanded that  $p$  that  $p$  is the case, or from the fact that  $p$  is the case that it is commanded that  $p$ . Nor does it follow from the fact that it is asserted that  $p$  that  $p$ , and conversely. This, therefore, is one principal difference between assertion logic and the logic of the pragmatics of imperatives on the one hand and alethic modal logics in which ' $\Box p \supset p$ ' is valid on the other.

The questions surrounding such formulae as ' $!p \supset p$ ' and ' $p \supset !p$ ' are part of the more general problem of formulating criteria for the validity of non-homogeneous inferences (inferences involving both statements of fact and imperatives). Hare, for example, has formulated the principle governing such inferences that no imperative conclusion can be validly drawn from a set of premisses which does not contain at least one imperative. But if, as I maintain, an imperative simply is an elliptical indicative, then an imperative conclusion can be validly drawn from indicative premisses, as can an indicative conclusion from imperative premisses. If one distinguishes between the semantical and pragmatic aspects of imperatives in the manner recommended, then there is no particular problem of non-homogeneous inferences. What, I think, makes us believe otherwise is precisely the habit of confounding the two levels of imperatives. Perhaps this will be clearer if we take note of an ambiguity in the operator symbolism of imperatives. In a formula ' $!p$ ', the operator ' $!$ ' can be read in either of two ways. Either ' $!$ ' simply represents the exclamation mark at the end of an indicative sentence instead of a period (in which case the formula might be better written ' $p!$ ') and can, like the period, be safely disregarded; or ' $!$ ' stands for a modal operator 'It is commanded that  $p$ ' formalizing the pragmatics of imperatives. In the first case ' $!p \supset p$ ' is a perfectly valid formula. It is an instance of the law ' $p \supset p$ ' where the antecedent is ingredient in a speech act of commanding and the consequent not. ' $p$ ', however, is self-identical no matter what sort of speech act it is ingredient in, i.e., no matter what the speaker's intentions regarding the sentence. In the second case, however, when ' $!$ ' formalizes the pragmatics of imperatives, ' $!p \supset p$ '

is not a valid formula since it is not a law of logic that if it is commanded that  $p$ , then  $p$ .

Light is also thrown on the controversial formula ' $\neg (!p \& !\neg p)$ '. Since very early in the history of imperative logic, the validity of this formula has been hotly disputed. Von Wright at one time even went so far as to maintain that if the command ' $p$ ' does not in some sense exclude the command ' $\neg p$ ', then a logic of imperatives is not conceivable at all. To quote:

I wish I could make my readers see the serious nature of this problem. (It is much more serious than any of the technicalities of deontic logic.) It is serious because, if no two norms can logically contradict one another, then there can be no logic of norms either. There is no logic, we might say, in a field in which everything is possible. So therefore, if norms are to have a logic, we must be able to point to something which is impossible in the realm of norms. But that we can do this is by no means obvious. <sup>(11)</sup>

Those who reject the axiom do so on the ground that it is not at all impossible for someone to command both that a certain action be performed and that it not be performed. However, in light of the preceding discussion it seems that there is no reason to have to choose between accepting and rejecting the axiom. Both parties to the dispute are right given their particular way of reading the formula. If the exclamation mark is read simply as the punctuation at the end of the sentence indicating that the sentence is not asserted as true but is to be made true, then the command ' $p$ ', e.g., 'Open the door' does indeed exclude the command ' $\neg p$ ', e.g., 'Don't open the door'. Semantically, the formula ' $\neg (!p \& !\neg p)$ ' is but an instance of the formula ' $\neg (p \& \neg p)$ ', where ' $p$ ' stands for a sentence to be made true. The imperative 'Don't both open the door and not

<sup>(11)</sup> G. H. VON WRIGHT, *Norm and Action* (London: Routledge & Kegan Paul, 1971), 148.

open the door !' cannot but be made true. If, however, the exclamation mark is read as the modal operator 'It is commanded that p' formalizing the pragmatics of imperatives, then ' $\neg (!p \& !\neg p)$ ' is not valid; for it is not logically necessary, as opponents of the formula have argued, that it is not both commanded that p and that not  $\neg p$ . Similarly, while ' $\neg (p \& \neg p)$ ' is a law of standard propositional calculus, ' $\neg (Ap \& A\neg p)$ ' is not a law of assertion logic since one can make contradictory assertions.

A related dispute that is resolved on our view of imperatives is the question of whether the logic of imperatives is essentially two or three valued. Those who have argued for a two valued logic have argued that 'Open the door!' and 'Don't open the door!', for example, are contradictory because if the one imperative is satisfied the other necessarily is not satisfied. There is no middle ground between opening a door and not opening it. Those who have argued for a three valued logic, on the other hand, for example Storer and Hall<sup>(12)</sup>, have argued that while there is no middle ground between opening and not opening a door, there is a middle ground between issuing the command 'Open the door' and issuing the command 'Don't open the door!'. One may not issue any command regarding the door at all. Evidently what is involved here is again an unnecessary choice between two alternatives forced by a failure to understand the logic of the semantics and the logic of the pragmatics of imperatives not as conflicting but as complementary. For, while the imperative '(You) open the door!' can only be negated in one way, namely, '(You) don't open the door!', the statement 'It is commanded that you open the door' has two negations: 'It is not commanded that ...' and 'It is commanded that you not...'

To summarize, the virtues of the theory of imperatives according to which imperative sentences are somewhat elliptical indicative sentences are the following. Firstly, on this

<sup>(12)</sup>Thomas STORER, «The Logic of Value Imperatives», *Philosophy of Sciences* 13(1946), 25-40; Everett HALL, *What is Value?* (London: Routledge & Kegan Paul, 1952), 125ff.

theory Jørgensen's dilemma does not arise. Imperatives, like ordinary indicatives, are true or false; and sentences of the sort 'It is commanded that  $p$ ', formalizing the pragmatics of imperatives, are also true or false. Secondly, the theory is more economical than other theories. It is not necessary to multiply types of sentences — those with truth conditions and those without, those with ordinary subject-predicate copulation and those with prescriptive copulation — or to introduce the abstract entity of prescriptive meaning in order to account for the diverse speech acts of commanding and stating. One sort of sentence, the ordinary indicative sentence, does the job in both cases. And finally, this theory of imperatives is able to account for the diverse intuitions of a large number of logicians. It is able to account for the intuitions of those who hold that the logic of imperatives is isomorphic with standard propositional calculus as well as the intuitions of those who hold that it is a modal logic. It accounts for the intuitions of those who hold that an objective satisfaction semantics is required for imperatives, as well as those who opt for a subjective semantical system — and at the same time solves the problem of non-homogeneous inferences. It accounts for the intuitions according to which ' $\neg (!p \& !\neg p)$ ' is a valid formula as well as those according to which it is not. And, finally, it clarifies the sense in which imperative logic is two valued and the sense in which it is three valued.