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BORCHARDT, Edward Kurt, 1949-
IMPERATIVE AND OUGHT SENTENCES.

City University of New York, Ph.D., 1978
Philosophy

University Microfilms International, Ann Arbor, Michigan 48106

IMPERATIVE AND OUGHT SENTENCES

by

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A dissertation submitted to the Graduate Faculty in Philosophy in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1978

This manuscript has been read and accepted for the Graduate Faculty in Philosophy in satisfaction of the dissertation requirement for the Doctor of Philosophy.

Jan. 27, 1978
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ACKNOWLEDGEMENTS

I would like to thank Professor Charles Landesman for his skillful and judicious guidance of the writing of the dissertation, and particularly for his invaluable criticisms of its content. I would also like to thank Professors Paul W. Taylor and Alex Orenstein for their exceedingly generous help with and acute criticisms of the dissertation. It was a memorable experience to find the function 'Without the help of x this work would not have been written' satisfied not by no persons, as cynicism would have led me to expect, but by three. Many thanks are also due to Linda Borchardt for her patient and loving encouragement while the dissertation was being written.

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INTRODUCTION

Our purpose in treating imperative and ought sentences here is twofold. Firstly, by presenting what is argued to be an adequate theory of the syntax, semantics, and pragmatics of imperative and ought sentences, a solution is offered to the problem of the interpretation of imperative and deontic logic. The problem of interpretation, often referred to as Jørgensen's dilemma, is the following. Given that a valid inference is generally defined as a truth preserving one, and given also that imperatives and normative ought sentences are generally held to be neither true nor false, either apparently valid inferences involving those sentences are not in fact valid, or else the standard notion of validity is wrong. The primary thesis defended here is that imperatives and normative ought sentences have a truth value, and that, therefore, Jørgensen's dilemma regarding them does not arise. Secondly, since imperative and ought sentences are two principal species of normative discourse, the account offered of them is exploited for the purpose of answering certain controversial questions of meta-ethics such as the question of whether normative ought judgments are true or false descriptive judgments, or whether they are disguised imperatives, or else entail an imperative.

In the first chapter a theory of the syntax, semantics, and pragmatics of imperatives is presented and defended. In a word, the theory is that what are generally classified as imperative sentences are, syntactically, stylistically variant (because elliptical) forms of indicative sentences that have, semantically, the same truth conditions

as the indicative sentences for which they are elliptical, and are used, pragmatically, for the purpose of inducing a hearer to make the sentence true. The imperative sentence, e.g., 'Open the door!', it is held, is an elliptical form of the indicative sentence, 'You will open the door'; is true if and only if you will open the door; and is uttered with the intention of inducing a hearer to make the imperative sentence '(You will) Open the door!' true by opening the door. In the first chapter the following alternative theories of imperatives are critically discussed: the conventional theory according to which imperative sentences are *sui generis* and not to be analyzed as a variety of indicative; the operator analysis of Hofstadter and McKinsey according to which imperative sentences are composed of an imperative operator, 'Make it be the case that' prefixed to an indicative sentence; the theory of Katz and David Lewis that equates imperatives and explicit performatives ('Stop!', for example, is equated with 'I command that you stop'); and the theory of Bohnert according to which an imperative is an elliptical statement to the effect that either the hearer will perform the action described or he will incur a sanction. In an appendix to the first chapter, a theory of interrogative sentences, analogous to the proposed theory of imperatives, is presented and compared with alternative theories.

Chapter two is devoted to showing, through discussion of certain main problems in the logic of imperatives, that the theory of imperatives developed in the first chapter is adequate for the development of imperative logic. The proposal to regard imperative sentences as

having a truth value is contrasted with alternative proposals to regard the designated semantic value of imperatives not as truth, but rather as satisfaction, obedience, validity, legitimacy, or satisfactoriness.

The last two chapters are devoted to the analysis of ought sentences. In the third chapter it is argued that the statement one makes in uttering a sentence of the form 'It ought to be the case that p' (where 'p' is an indicative sentence, e.g., 'One keeps one's promises') is equivalent to the statement, 'It is required by a valid rule that p' (alternatively, 'There is a valid rule that requires that p'). The principal thesis defended in the chapter is that one does not commit a fallacy--the naturalistic (descriptive) fallacy--in construing sentences of the form 'It ought to be the case that p' and 'It is required by a valid rule that p' as true or false descriptive sentences, used to make a statement of fact and only indirectly to prescribe. In the course of defending that thesis, an analysis of explicit performative utterances as true or false descriptive utterances is also offered.

In the fourth chapter, the analysis of ought sentences is further defended through an examination of the notions of 'rule' and 'requirement'; and the proposed analysis is compared with the similar analyses of von Wright, Stenius, Keuth, Smiley, Montague, Kanger, Hintikka, Anderson, Castaneda, and Hare. The analysis is also compared with the good reasons analysis of ought sentences; and the nature of practical inference is explored through the elaboration of typical examples.

Chapter I

THE ANALYSIS OF IMPERATIVES

In this chapter a theory of the syntax, semantics, and pragmatics of imperatives is proposed and arguments presented in its favor. Alternative theories of imperatives are critically discussed and contrasted with the proposed theory.

1. Syntax

The categories of syntax, semantics, and pragmatics are used here following particularly the usage of Morris and Carnap.[1] Syntax is understood as the study of the ways in which the symbols of a language may be combined to form the well-formed formulas of the language. In doing syntax, one abstracts from the meaning of terms and their reference as well as from the uses to which those terms are put by speakers of the language. Semantics is the study of the interpretation of symbols. Two distinguishable branches of semantics are the theory of meaning and the theory of reference. In doing semantics, one abstracts from the language speakers to deal only with the symbols of the language and their relation to their designata. One semantic property with which we shall be particularly concerned is that of truth. Finally, pragmatics studies the mutual relations of speakers, hearers, and linguistic symbols. Of central importance to pragmatics is the study of the uses to which linguistic symbols are put by speakers of the language.

The theory of the syntax of imperatives to be defended is that what

are generally called "imperatives" are actually elliptical indicative sentences. The imperative, e.g., 'Try to settle your differences amicably!', it is argued, is best regarded as an elliptical form of the indicative sentence, 'You will try to settle your differences amicably'. To anticipate, the view defended is that to issue a command by using an imperative sentence is to utter an elliptical, future indicative sentence with the intention of inducing a hearer to make the sentence true following his recognition of the speaker's intention. (For convenience, writers and readers are included under the same rubric as speakers and hearers.) It is a commonplace that commands are sometimes issued using an indicative sentence, e.g., 'You will do as I say!'; and it is our primary contention that in fact they are always issued in that way. What are generally called imperative sentences are elliptical indicative sentences, but indicatives nonetheless, uttered with the intention of inducing a hearer to make the sentence true by performing the action described.

Since imperative sentences are construed as elliptical indicatives, an explanation of ellipsis is called for. Perhaps the most useful definition of 'elliptical indicative sentence' is an ostensive one. The following are examples of elliptical indicative sentences: 'Having a wonderful time', 'Wish you were here', 'Pleased to meet you', and 'Hope you're feeling better'. In all these examples, the subject term 'I' (or perhaps 'we') is omitted, as well as, in some cases, the auxiliary verb 'am' (or 'are'). It is claimed that what are called imperative sentences are similarly elliptical. Imperative sentences are indicative sentences that are shortened by omission of the subject term and auxiliary

verb. The imperative sentence mentioned above, 'Try to settle your differences amicably!', is a shortened form of the indicative sentence, 'You will try to settle your differences amicably!', obtained by omitting the subject term 'you' and the auxiliary verb 'will', indicating that the principal verb of the sentence is future tensed. Another way of putting the matter is that what are called imperative sentences are stylistic variants of indicative sentences. The imperative sentence, e.g., 'Try to settle your differences amicably!' is a stylistically variant (because elliptical) form of the indicative sentence, 'You will try to settle your differences amicably'.

Ellipsis may also be understood as an ordinary language counterpart of notational abbreviation in constructed languages. In the propositional calculus, for example, if negation and disjunction are taken as primitive, the horseshoe may be introduced by definition as an abbreviation for '-pvq'. The correspondence between notational abbreviation in constructed languages and ellipsis in ordinary language, however, is inexact, as is, notoriously, the correspondence between the formalized truth functional connectives and ordinary language connectives. In particular, whereas notational abbreviations in constructed languages are introduced by explicit convention, ellipsis in ordinary language occurs with only more or less conscious intent. The person who uses the expression, 'ibid', for example, may be completely unaware of using an abbreviation. Similarly, a person using 'op. cit.' may be aware that the expression is an abbreviation, but not know what the unabbreviated form of that expression is. Thus, it may be maintained that what are classified

as imperative sentences are really elliptical indicatives even though ordinary language speakers are not conscious in uttering an imperative sentence of employing an abbreviation. It is possible that at one time in history imperative sentences were introduced by stipulation as notational abbreviations for indicative sentences, and that ordinary language speakers today are simply unaware of that origin; but that is not very likely. Language develops more by unconscious evolutionary processes than by explicit convention. In short, it is argued that imperative sentences are best regarded as elliptical indicative sentences regardless of whether the ellipsis is a result of conscious stipulation or rather unconscious evolutionary change.

It may be questioned whether elliptical indicative sentences, such as imperatives are claimed to be, are genuine indicative sentences, or whether they are indicative sentences only in the same sense in which toy ducks are ducks. There is good reason, however, to regard elliptical indicative sentences as genuine indicatives. The reason is that only by regarding elliptical indicative sentences as indicative sentences can certain intuitively valid, ordinary language inferences involving elliptical indicative sentences be validated. One such inference is the following:

Having a wonderful time, but wish you were here.
∴Having a wonderful time.

Only by construing the elliptical indicative sentences 'Having a wonderful time' and 'Wish you were here' as indicative sentences is it possible to regard this inference as a valid instance of the inference schema, 'p&q∴/p'. Similar inferences are the following:

If Mary goes to the party, then John won't.
Mary is going to the party.
∴ John won't go to the party.

Either I'll see you tomorrow or phone you beforehand.
I won't phone you beforehand.
∴ I'll see you tomorrow.

Although the indicative sentence for which a given imperative sentence is elliptical (i.e., the sentence of which the imperative is a stylistic variant) may generally be obtained by prefixing 'You will' to the imperative, not all imperative sentences are so easily treated. Prefixing 'You will' to the imperative 'Don't go!', for example, does not yield a well-formed indicative sentence, but rather the nonsense sentence, 'You will don't go'. But it is not only negative imperatives that present this problem; for any imperative with an occurrence of the auxiliary 'do', e.g., 'Do come to see me!' presents the same problem. 'Do come to see me!' cannot be regarded as elliptical for 'You will do come to see me!' since that sentence is not well-formed.

This difficulty for the proposed theory of imperatives, however, arising from the use of the auxiliary 'do', may be surmounted. The auxiliary 'do' is a relatively late accretion to the English language. It was not until the fifteenth century, according to Ellegard,[2] that it became generally accepted in prose literature, and even then it was more commonly used in indicative than in imperative sentences. Before that time the negation of both indicative and imperative sentences was formed simply by inserting 'not' after the principal verb of the sentence. Jesperson gives the following examples of negative imperative formed in this way: 'Tell it not in Gath!', 'Publish it not in the streets of Askelon!',

'Speake not you to him!', 'Stir not you!', and 'Interrupt me not'.[3]

One theory concerning the origin of the auxiliary 'do' proposed by Sweet[4] and partially accepted by Engblom[5] is that the auxiliary 'do' developed from the pro-verb 'do'. A pro-verb, as the name implies, replaces a verb. For example, in the sentence 'Christ grew as other children do', mentioned by Sweet as an early example of a sentence employing the pro-verb 'do', the employment of the verb 'do' obviates the need for repeating the main verb 'grew'. The theory, then, of the origin of the auxiliary 'do' is that it evolved from the pro-verb 'do'. Instead of occurring later in a sentence and referring back to a previously occurring verb, the pro-verb came to be displaced from its position at the end of a sentence so as to occur alongside the verb it originally replaced.

This theory seems particularly plausible in the case of imperatives. To see this, one need only recall the familiar line from popular song, "Daisy, Daisy, Give me your answer, do!".[6] Here the pro-verb 'do' quite obviously serves the purpose of avoiding repetition of the main verb. It is amusing to note that one finds the almost identical line in Shakespeare: "Give me your answer: i'faith, do".[7] Now, it is quite easy to imagine that the pro-verb 'do' in such constructions was slowly displaced from its position at the end of the sentence to occur alongside the verb that it originally replaced. 'Give me your answer, do!', for example, thus became in the affirmative, 'Do give me your answer!', and in the negative, 'Do not give me your answer!'. Therefore, in searching for the indicative sentence that is the non-elliptical form of a given imperative sentence

containing the auxiliary 'do', one must not treat 'do' plus the main verb as a unitary expression. Instead, one must treat this construction as the condensed expression of two imperative verbs. More accurately, it is the condensed expression of a main verb plus that same verb repeated in the guise of the auxiliary 'do'. That is to say, an imperative sentence such as "Do give me your answer!' must be analyzed as a condensed expression of 'Give me your answer, do!', which in turn is to be construed as an elliptical form of the following sort of construction: 'You will give me your answer! You will do so!', or perhaps somewhat more colloquially, 'You will do the following. You will give me your answer!'. And similarly for negative imperatives. That is, although the more archaic form of the negative imperative not employing the auxiliary 'do' may be regarded as formed by deleting the subject 'you' and auxiliary verb 'will' from a future indicative sentence, the more modern form of the negative imperative employing the auxiliary 'do' must be regarded as the elliptical expression of a more complicated construction. Thus, for example, although the archaic imperative, 'Tell it not in Gath!' may be analyzed as a stylistic variant of the equally archaic indicative sentence, 'You will tell it not in Gath', obtained by omitting the subject 'you' and auxiliary verb 'will', the modern style negative imperative, 'Do not tell it in Gath!', that gradually replaced the archaic imperative, must be analysed as an elliptical form of: 'You will do the following. You will not tell it in Gath!'. Thus, although the existence of the auxiliary 'do' in English does present difficulties for the theory that regards imperative sentences as elliptical indicatives, such difficulties are not insuperable.

One point that clearly emerges from the preceding discussion is that the proposed theory of imperatives is a theory of English language imperatives only. One may indeed conjecture that what are classified as imperative sentences in all languages are simply stylistic variants of indicative sentences of some form or other; but given the enormous number of languages it is impossible here to consider even a statistically significant sample of them. Therefore, the work of determining how well and with what modifications the proposed theory of English language imperatives applies to other languages remains to be done. Thus, although the main purport of the theory is to suggest that the distinction between imperative and indicative sentences in all languages is not a distinction between *sui generis* sentences, but is rather a distinction between stylistic variants of indicative sentences and ordinary indicatives, the theory must be taken as applying narrowly to English language imperatives alone, and awaits confirmation or disconfirmation in the case of other languages. Of course, one need not worry about whether imperative sentences in constructed languages are elliptical indicatives or not; for the sentences of a constructed language may, within limits, be constructed just as anyone pleases.

One objection that might be raised to this analysis of the syntax of imperative sentences is that imperative sentences contain an element that indicatives do not, namely, an exclamation mark at the end of the sentence rather than a period. The immediate reply to this objection is the reminder that indicative sentences are sometimes terminated by an exclamation mark as well! The exclamation mark, however, merits further attention. The way to construe the exclamation mark, it is claimed, is as analogous to the assertion sign '$\vdash$'. Like the assertion sign, the exclamation mark at

the end of a sentence is not to be regarded as an element of the syntax (nor of the semantics) of the sentence to which it is attached. The exclamation mark at the end of a sentence, like the assertion sign, is a symbol of pragmatic force. Just as the assertion sign placed in front of a formula signifies that the formula is asserted by the writer as true, an exclamation mark placed at the end of an indicative sentence signifies that the sentence is not asserted as true but is to be made true by the hearer by performing the action described. Even when an exclamation mark is attached to an indicative sentence used to make an assertion, its function is to indicate something about the relation of the speaker to the sentence, e.g., that the speaker is particularly emphatic in his assertion, or that he is particularly surprised by what he asserts. In short, the exclamation mark at the end of a sentence is not part of the syntax of that sentence; nor does it affect its semantic interpretation. The exclamation mark serves, rather, as a sign of the speaker's intent, or state of mind, in uttering a sentence with a given semantic interpretation. When terminating an imperative sentence, the function of the exclamation mark is to indicate that the sentence is not put forward by the speaker as true, but is to be made true. Of course, in spoken language what takes the place of the exclamation mark is intonation and gesticulation. The speaker utters the sentence, e.g., 'You will open the door!' with one sort of intonation when his intention is to induce the hearer to believe that he will open the door, and with another sort of intonation when his intention is to induce the hearer to make the sentence 'You will open the door' true, by opening the door.

2. Semantics

It follows from the view of imperatives according to which, syntactically, imperative sentences are stylistic variants of indicatives, that imperative sentences are true or false as are ordinary indicatives. If the imperative sentence, 'Try to settle your differences amicably!', for example, is regarded as a stylistic variant of the indicative sentence , 'You will try to settle your differences amicably', then it is true under the same conditions as that sentence. 'Try to settle your differences amicably!', construed as an elliptical form of the ordinary indicative sentence, 'You will try to settle your differences amicably', is true if and only if you will try to settle your differences amicably; just as the non-elliptical indicative sentence, 'You will try to settle your differences amicably' is true under the same conditions. Indeed, one's purpose in uttering an imperative sentence (i.e., an elliptical indicative) is precisely that of inducing a hearer to make the sentence true.

Although it is generally said that imperatives are neither true nor false but can only be satisfied or not satisfied (obeyed or disobeyed), if, as it is claimed, imperative sentences are simply elliptical indicatives, then the distinction between satisfying an imperative and making it true is a purely verbal one. That is, if the imperative sentence, e.g., 'Close the door!' is a shortened form of the indicative sentence 'You will close the door', then the imperative 'Close the door!' is satisfied if and only if it is true--if and only if, that is, '(You will) close the door' is true. To satisfy an imperative sentence, on the theory of imperatives defended, is just to make it true by performing the action described.

It should be said here that in speaking of a sentence being true or false, the possibility is not meant to be excluded that it is really the proposition expressed by the indicative sentence that has the truth value. In fact, it is not unusual to maintain that imperative sentences have a propositional content, or core. This propositional content is variously referred to in the literature as the "sentence phrastic" (Hare),[8] "sentence radical" (Wittgenstein and Stenius),[9] "topic of concern" (Leonard),[10] and, not surprisingly, as a "proposition" by Lewis, Langford, and Searle.[11] Also, Sheffer is reputed to have maintained in class lectures that commands have a propositional content;[12] and Frege held that questions have a propositional content, which he called the "thought" expressed by the question, but somewhat unaccountably did not hold the same view regarding commands.[13] A theory that analyses imperative sentences as stylistic variants of indicatives, however, is committed neither to affirming the existence of propositions nor to denying their existence. If propositions exist and are expressed by indicative sentences, then they are also expressed by imperative sentences since what are generally classified as imperatives are simply elliptical indicatives.

What is perhaps peculiar to the proposed theory of imperatives, though, is the claim that if imperative sentences express a proposition (have a propositional core), then that is all they express. The propositional core of an imperative sentence exhausts its semantic content. The prescriptive aspect of an imperative is a function of pragmatic factors, specifically the speaker's intentions in uttering the sentence, and does not enter into its semantic interpretation. In a moment arguments will be presented for not considering the prescriptive element of imperative

sentences as part of their semantic content.

One objection that may be made to the proposed theory of imperatives is that even if imperative sentences can be regarded as elliptical indicatives, it does not follow that imperative sentences are true or false; for it might be said, as it has been said, that sentences have a truth value only if they are used to make a statement; and imperative sentences are not used to make a statement. This objection, however, encounters the counterobjection, as Geach has pointed out, that if it were literally true then a sentence occurring, for example, as a disjunct of a disjunction, or as the antecedent or consequent of a conditional would have no truth value since it is not asserted.[14] Only the entire disjunction or conditional in which the sentence occurs is asserted. Truth functional logic would, thus, be impossible since the atomic components out of which compound formulas are built would have no truth value. This same difficulty arises if the similar objection is made that it is not sentences themselves that are the bearers of truth, but rather the statements made using sentences.

It may also be urged that there is a disanalogy between imperatives and indicatives; for, even if what are called imperative sentences may be regarded as true or false indicatives, if an indicative sentence is used to make a statement the product of the resulting speech act has a truth value, whereas if the same indicative sentence is used to issue a command the product of that speech act has no truth value (even though the indicative sentence used to perform the act may be construed as having a truth value when considered in isolation). Statements, that is, construed as the product of a speech act of stating, have a truth value, whereas commands, construed as the product of a speech act of commanding, are neither true nor false.

The reply to this is the following. Firstly, it is possible to maintain, contrary to what is averred by the objection, that just as the product of a speech act of stating is counted true or false depending upon whether the indicative sentence (or the proposition expressed by that sentence) used to make the statement is true or false, so too is the product of a speech act of commanding true or false depending upon whether the indicative sentence (or stylistic variant of an indicative sentence) used to issue the command is true or false. In other words, the product of a speech act of commanding may be considered true or false depending upon whether its propositional content is true or false. Henry Leonard, in fact, adopted this position in his influential essay, "Interrogatives, Imperatives, Truth, Falsity, and Lies".[15] The major objection to such a position is that it contradicts conventional wisdom that commands have no truth value; but it is not unusual for a theory to contradict conventional wisdom.

Secondly, even if it is accepted that the product of a speech act of commanding does not have a truth value whereas the product of a speech act of stating does, this does not tell against the proposed theory of imperatives. That it, it may be conceded that the products of speech acts of commanding have no truth value, as long as it is granted that logic is concerned not with the relations obtaining among the products of speech acts, but rather with the relations obtaining among the indicative sentences (or propositions expressed by those sentences) used to perform those speech acts. As already emphasized, it seems that unless some such position is granted truth functional logic would be impossible

since the atomic components of compound formulae would have no truth value since they are not the products of speech acts of stating. The disjuncts of a disjunction, for example, are not products of individual speech acts of stating; for only the entire disjunction is asserted. The truth value of a disjunction must be construed as a function of the truth value of its constituent sentences (propositions), and not as a function of the truth value of the statements that those sentences might be used to make. In short, regardless of whether the products of speech acts of commanding have a truth value as do the products of speech acts of stating, the indicative sentences used to perform those speech acts have a truth value (alternatively, the propositions expressed); and it is with those sentences (propositions) that the logic of imperatives is concerned.

Perhaps the most serious objection, however, that will be raised to the proposed theory of the semantics of imperatives is the following. Although it may be agreed that imperatives have some descriptive content (since it is impossible to command someone to do something without telling him what it is that he is to do), it will be objected that the descriptive component does not exhaust the semantic content of imperatives. In addition to having a descriptive component, imperatives have a prescriptive component as well which is an essential part of their meaning. Ross makes this point in the following way: "Just as the meaning content of 'Peter is shutting the door' is a proposition . . . so the meaning of 'Peter, shut the door!' is a directive."[16] Similarly, Katz says that whereas an indicative sentence expresses an "assertive proposition" that is true or false, an imperative sentence expresses a "performative proposition" that is neither true nor false.[17] Since the descriptive com-

ponent of an imperative is but a part of its semantic content, truth is at best a partial semantic value for imperatives. If the prescriptive component of imperatives is taken into account, as it must be, then imperatives are neither true nor false.

The reply that may be made to this objection is threefold. Firstly, if a prescriptive element is to be included in the semantics of imperatives on the grounds that imperatives are characteristically used to issue commands, then by parity of reasoning an assertive element should be included in the semantics of indicative sentences since indicative sentences are characteristically used to make statements. But indicative sentences do not have an element of assertion in their semantic interpretation. An indicative sentence (proposition) may be asserted or not (it may appear, for example, as the antecedent or consequent of a conditional); but it is not part of its semantic content that it is asserted. Therefore, since stating and commanding are generally regarded as comparable speech acts, and since no assertive element is included within the semantic content of indicative sentences, no prescriptive element should be included within the semantic content of imperatives. An imperative sentence may be used for issuing a command or not (it may, for example, if imperatives are stylistic variants of indicative sentences, be used for making a statement), but it is not part of the meaning of the imperative that it is used to issue a command.

A second argument for not including a prescriptive element within the semantic content of imperatives is that postulating such semantic content is neither necessary nor, arguably, sufficient to do the job that such postulation is designed to do, namely, to account for speech acts

of commanding; that is, to account for the fact that the utterance of an imperative sentence is generally understood as the issuance of a command. In the next section of this chapter devoted to the pragmatics of imperatives, a set of conditions not assuming the existence of prescriptive meaning will be presented, the satisfaction of which, it is argued, is sufficient for a speech act of commanding to occur. Very briefly, it is sufficient for a speech act of commanding to occur that a speaker utter an indicative sentence (elliptical or non-elliptical) with the primary intention of inducing a hearer to make the sentence true, and with the further intention that the hearer recognize the speaker's primary intention. In other words, it is the speaker's intention to induce a hearer to act by providing him with the reason for acting that the speaker wants him to act. According to the proposed theory, the prescriptive force of an imperative sentence results not from its expression of prescriptive meaning, but from the hearer's recognition of the fact that it is the speaker's intention in uttering the sentence to induce the hearer to act by providing him with a reason for acting--the reason that the speaker intends to induce the hearer to act. In order to account for speech acts of commanding--that is, to account for the fact that hearers of imperative sentences recognize that the proper response to an imperative is not the acceptance of a belief (unless the command issued is to believe something, i.e., Believe me when I say . . .') but is rather the performance of an action--it is not necessary to postulate the existence of prescriptive meaning. Whatever be the fate of meanings as entities in general, prescriptive meaning in particular can and, therefore, should be dispensed with.

Not only is the postulation of prescriptive meaning unnecessary

to account for speach acts of commanding, however, (that is, to account for the suitability of imperatives to be used for issuing commands as well as to account for the hearer's recognition of the fact that the utterance of an imperative constitutes the issuance of a command) it is also, arguably, insufficient. It is possible, that is, to utter an imperative sentence expressing prescriptive meaning without thereby issuing a command since one may utter an imperative sentence with the intention of only pretending to issue a command. Sometimes, that is, in uttering an imperative sentence the speaker does not intend to induce the hearer to perform an action, and intends that the hearer recognize that the speaker has no such intention. An example of such a speech act occurring in an Abbott and Costello comedy is the following. Before entering a restaurant Abbott utters the first imperative, 'Don't order anything since we have only enough money for one!'; and then in the restaurant, in order that they not appear utterly impecunious, he utters the second imperative, 'Go ahead and order since you're taking up a seat!', assuming that Costello will recognize that he is to pay attention to the first imperative and ignore the second. If it is held that in uttering the second imperative sentence Abbott doesn't issue a command but merely simulates doing so, even though he utters a sentence having prescriptive meaning, then it follows that the expression of prescriptive meaning by an imperative sentence is not sufficient for an act of commanding to occur.

Moreover, even if it is held that in uttering the second imperative sentence Abbott does issue a command (since he utters a sentence having prescriptive meaning) but conversationally implicates that he doesn't want the command obeyed, then it may be argued that in receiving

any imperative, the hearer must infer on the basis of contextual information whether or not the speaker intends the command expressed to be obeyed. But if that is the case, then prescriptive meaning is otiose. It is insufficient for doing the job it is intended to do, namely, to communicate to a hearer the information that he is to perform a certain action. In order for the hearer to recognize that he is to perform a certain action it is not sufficient that he understand the prescriptive meaning expressed by the imperative sentence uttered. He must further rely on his knowledge of contextual features to infer whether the speaker intends the command issued in virtue of such prescriptive meaning to be obeyed or to be ignored. In order, then, to issue a command having real imperative force, it is not sufficient to utter a sentence having prescriptive meaning since such prescriptive meaning does not enable the hearer to know whether or not the speaker intends the command thereby issued to be obeyed.

Given, then, that in order to account for speech acts of commanding it is neither necessary nor sufficient to intepret imperatives as having prescriptive semantic content, such content may be dispensed with. Imperative sentences have ordinary descriptive (propositional) semantic content; and their prescriptive force is a function of pragmatic factors--specifically the speaker's intentions in uttering the sentence and the hearer's ability correctly to infer those intentions. It should be noted that one might choose to say that an imperative has "prescriptive meaning" if it is uttered by a speaker with the proper intentions, as long as it is recognized that this is only a loose way of speaking. In fact, one often uses the term 'meaning' in ordinary language to denote pragmatic rather than semantic properties. Thus, for example, one says

such things as, "When he said, 'I may have made a mistake', he *meant* that he did make a mistake for which he was sorry". But the semantic interpretation of the sentence 'I may have made a mistake' is that the speaker may have made a mistake, and not that he did make a mistake for which he is sorry even if that is conversationally implicated (to be "read between the lines"). If the semantic content of a sentence is not exhausted by its truth conditions, it is at least related to them in that the semantic content determines the conditions under which the sentence is true. Thus, the semantic content of 'I may have made a mistake' determines that the sentence is true if and only if I may have made a mistake, and not if and only if I did make a mistake for which I am sorry. The semantic content of 'I may have made a mistake' does not include what is only conversationally implicated by the utterance of that sentence. Similarly the imperative, e.g., 'Open the door!' has a semantic content which determines that the imperative is true if and only if you will open the door; and does not include what is only conversationally implicated, namely, that the hearer is to make the sentence true by opening the door.

To include a prescriptive element in the semantic interpretation of imperatives is to duplicate needlessly in the category of semantics, pragmatic factors that must be postulated to exist in any case. This should be clear from the Abbott and Costello example; for even if both imperatives uttered by Abbott are assumed to have prescriptive semantic content, it is only Costello's ability (sadly lacking, however, for the sake of comedy) to infer Abbott's intention that the first imperative be obeyed and the second imperative ignored that results in the first imperative having prescriptive force and deprives the second imperative of

prescriptive force in spite of its putative possession of prescriptive meaning. Thus, whereas the postulation of prescriptive semantic content does not enable one to dispense with the pragmatic factors of the speaker's intentions and hearer's ability to infer those intentions, postulation of those pragmatic factors does enable one to dispense with the semantic entity of prescriptive meaning.

A final argument against including a prescriptive element within the semantic content of imperatives is that doing so results in falsely predicting that certain utterances that cannot reasonably be held to have prescriptive semantic content do have such content. The reason for this is that there exist in ordinary language, elliptical indicative sentences that are indistinguishable from imperatives. That is, if one classifies as an imperative sentence any expression resembling, syntactically, the sentence, e.g., 'Close the door!' in the respect of lacking a subject term, etc., and if one further considers all imperative sentences so classified to have prescriptive semantic content, then one must count the token, 'Close the door!', uttered in response to the question, 'What will you do if it gets too cold in here?' as having prescriptive semantic content. But, in such a context, 'Close the door!' clearly does not have prescriptive semantic content, but is an elliptical form of the indicative sentence 'I will close the door', uttered with the intention of making a true or false factual statement. In fact, it is even possible to find examples of elliptical indicative sentences that resemble imperatives more closely in that the non-elliptical indicative sentence for which the given sentence fragment is elliptical is a second person, future tense indicative, as are, it is claimed, most imperative sentences when their

non-elliptical form is revealed. Thus, for example, a fortune-teller might utter the expression 'Leave the country!' in response to a client's question, 'What will I do on my next long vacation?'; but the fortune-teller's utterance is a true or false prediction and not a command, even though the token uttered, 'Leave the country!', would be classified according to syntactic criteria as an imperative sentence with prescriptive meaning.

If the reply is made to this argument that utterances resembling, syntactically, the sentence 'Close the door!' (in the respect of lacking a subject term, etc.) have prescriptive semantic content only on those occasions when the speaker's intention is to induce the hearer to perform an action and to recognize the speaker's intention, then it is conceded, as has been urged, that prescriptive meaning is a function of pragmatic factors; and arguments have already been presented against needlessly duplicating such pragmatic factors by the further postulation of prescriptive semantic content.

Finally, it might also be urged that a somewhat less audacious theory of imperatives than the one proposed would be that imperative sentences, in addition to having a descriptive component, also have prescriptive semantic content which doesn't, however, prevent them from being true or false under the same conditions as a corresponding indicative. Although such a theory would maintain what is essential to the proposed theory of imperatives (that imperatives have a truth value) without having to construe imperative sentences as a variety of indicatives, if the arguments presented in this section to establish that postulating the possession by imperatives of prescriptive semantic content is neither necessary nor

sufficient to account for speech acts of commanding are valid, it might be wondered why one should bother to postulate the existence of such prescriptive semantic content at all.

3. Pragmatics

In this section the theory of the pragmatics of imperatives is developed in greater detail. According to the proposed analysis, commanding is one sort of language game that is played with true or false indicative sentences (though usually elliptical indicatives). Another sort of language game played with indicative sentences is, of course, stating. It is important to be quite clear on this point. Although what are generally classified as imperative sentences are analysed as stylistic variants of indicative sentences (elliptical indicatives), it does not follow from the proposed analysis that when one utters an imperative sentence one thereby makes a statement of fact, or prediction. Statement making is only one sort of activity that can be performed using indicative sentences. In Austin's terminology, to make a statement is to perform one sort of illocutionary act, whereas to issue a command is to perform quite another. Stating and commanding differ not in virtue of the sort of linguistic entity involved in each act--true or false indicative sentences for the one and neither true nor false imperative sentences for the other--since it is the ordinary indicative sentence (elliptical or non-elliptical) that is involved in both. Stating and commanding differ, rather, in virtue of the intentions with which that common linguistic entity, the indicative sentence, is employed. Very roughly, a speaker uses an indicative sentence to make a statement when he utters the sentence with the intention of thereby

inducing a hearer to believe that the sentence is true; and he uses an indicative sentence to issue a command when he utters the sentence with the intention of thereby inducing a hearer to make the sentence true.

Since the notion of making a sentence true may be subject to misunderstanding, a few words should be said by way of clarification. Firstly, just as in asserting of someone that he knocked over a flower vase one does not assert that he intentionally knocked it over, so in asserting of someone that he made a particular sentence true, one does not assert that he intentionally made it true. If John takes a long voyage, for example, then he makes the sentence 'John will take a long voyage' true. That does not imply, however, that John's intention in taking a long voyage is to make a sentence true. Most likely his intention is simply to take a long voyage. Indeed, if John's dog, Rover, accompanies him on the voyage, then Rover makes the sentence, 'Rover will accompany John on the voyage' true, even though one certainly would not attribute to Rover the intention of making that sentence true. In short, making a sentence true does not imply having the intention of making a sentence true.

It might also be thought that if one makes a sentence true, then the sentence is not true at the time of its utterance, but only becomes true upon the performance by an agent of the action described. This, however, conflicts with the idea that truth is an eternal, and not a changing property of sentences. It is clear, though, that there must be at least some sense in which an agent can make a sentence true by his action; for if a sentence describes a future action of the agent, then the sentence is true if and only if the agent performs that action. The sentence, e.g., 'You will take a long voyage' is true if and only if you will,

in the future, take a long voyage. Since, however, imperative sentences, construed as elliptical, future-tense indicatives, are but a sub-class of future-tense sentences, the problem of their truth value need not concern us particularly here. Whatever general theory is adopted concerning the truth value of future contingent sentences will automatically apply in the case of imperatives.

To return to the subject of commanding, it is claimed that the speech act of commanding can adequately be analysed as the act of uttering a true or false indicative sentence, 'p', with certain intentions in mind. Earlier it was said that these intentions included the intentions of inducing a hearer to make the sentence 'p' true, and to recognize the speaker's intention. It is claimed that the presence in a speaker of this intention in uttering an indicative sentence, plus the other intentions to be indicated shortly, is a sufficient condition for a speech act of commanding to occur. The presence of these intentions in a speaker is taken to be a sufficient, rather than a necessary and sufficient condition, since the purpose of this analysis is to support the position that speech acts of commanding can adequately be accounted for without positing the existence of *sui generis* imperative sentences lacking truth conditions and expressing prescriptive meaning. In greater detail, then, it is sufficient for a speech act of commanding to occur that a speaker utter an indicative sentence 'p' (elliptical or non-elliptical) with the intention of thereby bringing it about that:

(a) the hearer makes it be the case that p,

(b) the hearer believes that the speaker intends that he make it be the case that p,

(c) the hearer has as a reason for making it be the case that p his

belief that the hearer intends that he make it be the case that p; and having this as a reason will cause the hearer to make it be the case that p,

(d) the hearer believes that the speaker intends that he have as a reason for making it be the case that p his belief that the speaker intends that he make it be the case that p.

Condition (a) specifies the speaker's primary motive for uttering the sentence 'p', namely, to induce the hearer to make it be the case that p. The indicative sentence that the speaker utters describes an action; and it is the speaker's primary intention that the hearer perform that action. Earlier it was said that the speaker's intention in uttering the indicative sentence 'p' (elliptical or non-elliptical) was to induce the hearer to make that sentence true. The present analysis of the speech act of commanding, therefore, is a modification of that earlier analysis. Although it is quite true that if someone makes it be the case that p, he necessarily makes it be the case that 'p' is true, since ordinary language speakers generally do not believe that imperative sentences are true or false it would be inaccurate to impute to the utterer of an imperative sentence the intention of inducing a hearer to make that sentence true. A speaker who utters the sentence 'Close the door!', for example, intends thereby to induce the hearer to close the door, but he does not intend, consciously at least, that the hearer make that sentence, construed as a stylistic variant of the ordinary indicative sentence 'You will close the door' true. Yet, if the proposed theory is correct, obeying a command is identical to making an imperative sentence true. This should not be surprising, however, since intentionality is intensional. For the sake of convenience, though, in the rest of this work speakers of imperative sentences will sometimes be described as having the intention of inducing a hearer to make that imperative sentence true, even though such description involves the

idealization of assuming, contrary to fact, that ordinary language speakers regard imperative sentences as stylistic variants of indicative sentences that can, like ordinary indicatives, be made true or false.

Condition (b) specifies the speaker's secondary intention which is that the hearer recognize the speaker's primary intention. Condition (c) specifies a third intention, namely, that the hearer's recognition of the speaker's primary intention will provide the hearer with a reason for fulfilling that primary intention by performing the action specified. Somewhat more accurately, it should be said that the hearer's having a belief that the speaker intends that he perform an action is intended to be only *part of* a sufficient causal condition for inducing the hearer to perform that action. Even if the hearer recognizes that the speaker intends to induce him to perform an action, he must also have a desire to obey the command, if only the desire of avoiding punishment, for that recognition to cause him to obey it. It will be noticed that since condition (c) implies that the hearer has a belief that the speaker intends to induce him to perform an action, and also implies that having this belief causes the hearer to perform the action, conditions (a) and (b) might have been omitted but are listed separately for greater explicitness. Finally, condition (d) specifies the speaker's fourth intention which is that the hearer recognize the speaker's third intention.

The analysis of the speech act of stating is analogous. This analysis, as well as the preceding one of the act of commanding, is inspired by, though it departs from, the analysis presented by Landesman.[18] It is sufficient for a speech act of stating to occur that a speaker utter an indicative sentence, 'p', with the intention of thereby bringing it

about that:

(a') the hearer believes that p,

(b') the hearer believes that the speaker intends that he believe that p,

(c') the hearer has as a reason for believing that p his belief that the speaker intends that he believe that p; and having this as a reason will cause the hearer to believe that p,

(d') the hearer believes that the speaker intends him to have as a reason for believing that p his belief that the speaker intends that he believe that p.

Again, condition (a') specifies the speaker's primary intention in uttering an indicative sentence, which in this case is that of inducing the hearer to believe that something is the case. Although one might describe the speaker's intention as that of having the hearer believe that the speaker's sentence is true, this would involve the idealization of assuming that if a speaker intends to induce a hearer to believe that p, he also intends to induce the hearer to believe that 'p' is true (just as a certain amount of idealization is involved in assuming that if a speaker intends to induce a hearer to make it be the case that p, he also intends to induce him to make it be the case that 'p' is true). Condition (b') specifies the speaker's secondary intention, namely, that the hearer recognize the speaker's primary intention. Condition (c') specifies the speaker's third intention which is that the hearer's recognition of the speaker's primary intention will constitute a reason for him to satisfy that intention, and having that as a reason will effectively cause the hearer to satisfy that intention by believing that p. Again, the hearer must also have some willingness to believe what the speaker wants him to believe in order for his recognition of the fact that the speaker wants him to believe that p to cause him to believe that p. Since condition (c')

implies that the speaker both believes that p, and believes that the speaker intends that he believe that p, conditions (a') and (b') might be omitted but are listed separately for the sake of clarity.

To summarize, it is sufficient for a speech act of commanding to take place that a speaker utter an indicative sentence (elliptical or non-elliptical) with intentions (a)-(d), whereas it is sufficient for an act of stating to occur that a speaker utter an indicative sentence with intentions (a')-(d'). Although it is sufficient for an act of commanding or of stating to take place that a speaker utter an indicative sentence with certain intentions in mind, if, in Austin's terminology, uptake is to be secured for the speech act in question (if, that is, the hearer is to understand what speech act the speaker intends to perform), it is sufficient that at least two of the intentions be satisfied. In the case of commands, it is sufficient that intentions (b) and (d) be satisfied: that is, that the hearer recognize the speaker's intention of inducing the hearer to do something, and that he recognize the speaker's intention that the hearer's recognition of the speaker's intention of inducing the hearer to do something will motivate him to do it. If both these intentions are satisfied, then the hearer is aware of the fact that the speaker is performing the speech act of issuing a command.

Similarly, if uptake is to be secured for an act of stating, it is sufficient that the speaker's intentions (b') and (d') be satisfied. That is, it is sufficient that the hearer believe that the speaker intends that he believe something, and that he further believe that it is the speaker's intention that his having the belief that the speaker intends that he believe something will motivate him (the hearer) to believe it. If these two intentions are satisfied, then the hearer recognizes that the speaker in utter-

ing the indicative sentence 'p' is making a statement and not performing some other speech act such as commanding. Of course, the speaker would prefer that all his intentions be satisfied; but it is not necessary for a command to be issued that it be obeyed, i.e., that condition (a) be satisfied; nor is it necessary for a statement to be made that the hearer believe it.

Given, then, that uptake is secured (that is, the hearer recognizes what sort of speech act the speaker intends to perform) for acts of commanding and stating if intentions (b) and (d), and (b') and (d'), respectively, are satisfied, the question arises as to how these intentions may be satisfied. Obviously, a speaker cannot simply tell the hearer what his intentions are in uttering a given indicative sentence, nor can he command the hearer to assume that his intentions are of a certain sort; for such telling or commanding would involve exactly the same difficulties as are involved in securing uptake for the utterance of the original indicative sentence. If a hearer is unable to infer the speaker's intentions in uttering one indicative sentence, then there is no reason to expect that he would be any more able to infer the speaker's intentions in uttering a second indicative sentence for the purpose of making a statement or issuing a command regarding the utterance of the first indicative sentence.

By taking note of the existence of certain conventions governing sentence use, one can begin to explain the fact that hearers generally are able to recognize a speaker's intentions in uttering a given indicative sentence. It is standard practice, for example, when one desires that a hearer make it be the case that p, rather than that he believe that p, that one utters an elliptical form of the indicative sentence 'p' (i.e., an imperative) rather than the non-elliptical form of that sentence. Or, if one utters a

non-elliptical indicative sentence 'p' with the intention of thereby inducing a hearer to make it be the case that p rather than to believe that p, it is standard practice to utter the sentence with a particular sort of intonation. And, of course, even when one uses an elliptical to indicative sentence (an imperative) for issuing commands, it is customary to use a special sort of intonation sometimes accompanied by gesticulation.

Again, however, it is clear that it is of little explanatory value to account for these conventions as resulting from acts of explicit stipulation; for an agreement upon such practices would require either the uttering of such indicative sentence as, 'When my intonation is as follows, I intend that you perform a certain action', or the uttering of such elliptical indicatives as 'When my intonations is as follows, assume that I intend that you perform a certain action!'. Clearly, it is just as difficult for a hearer to guess the speaker's intentions in uttering these sentences as it would be to guess his intentions in uttering any other indicative sentences (elliptical or non-elliptical) whose significance is supposedly determined by the utterance of the sentences just mentioned. In short, the ability to secure uptake for acts of commanding and stating cannot be explained by postulating the existence of an explicit agreement, the making of which presupposes that very ability.

One must instead attempt to explain the existence of conventions governing sentence form, intonation, etc. as the outcome of an evolutionary process. Probably, one major feature in this process is the application of punishments and rewards. If, over a long period of time every time a speaker uttered an elliptical indicative sentence, 'p', in a certain tone of voice, expecting the hearer to make it be the case the p, the speaker punished

or rewarded the hearer whenever he failed to or did make it be the case that p, then it is not difficult to imagine that the hearer would eventually come to recognize the speaker's intentions by such signs as type of sentence uttered (elliptical or non-elliptical), intonation, gesticulation, etc. Similarly, it is not difficult to imagine that the speaker, after many attempts to induce a hearer to make it be the case that p, or to believe that p, would come to realize that he stood a greater chance of achieving his aims if he was consistent in his sentence uttering behavior. The speaker would realize, for example, that he must consistently use an elliptical indicative sentence, uttered with a particular sort of intonation, whenever he wished the hearer to do something, and a non-elliptical indicative sentence uttered with a different intonation when he wished the hearer to believe something. It is probably as the result of some such process of mutual adjustment that a set of stable expectations on the part of both speaker and hearer regarding each other's speech practices arose, thus enabling speech acts of stating and commanding to be successfully completed.

4. Amendments to the Pragmatics of Imperatives

Since the models of stating and commanding presented in this chapter are designed to present sufficient, but not necessary, conditions for speech acts of stating and commanding, it is not denied that there are acts of stating and commanding that do not fit the two models exactly. Speech acts of commanding and stating that do not fit the models are of two sorts: those that are more primitive and those that are more sophisticated.

It seems likely that earlier forms of stating and commanding lacked

the self-conscious elements reflected in intentions (b) and (d), and (b') and (d'): that is, that the hearer recognize the speaker's intention that the hearer believe or do something, and that the hearer recognize the speaker's intention that the hearer have as a reason for believing or doing something the fact that the speaker intends that he believe or do it. Intentions as difficult to characterize as these could not easily be present in the consciousness of a person learning to speak a language, or, for that matter, even in the consciousness of an accomplished ordinary language speaker. Similarly, one can imagine sentences being uttered with intentions (a), (b), and (c), or (a'), (b'), and (c') in mind, but without the fourth intention that the speaker's third intention be recognized.

One simplification that might be effected in the model of the speech act of stating is of particular interest. Although commanding seems to require the existence of a hearer to receive the command (unless one can make good sense of the notion of a self-addressed command), the act of stating does not seem to require a second person. One can say something to oneself as well as to another person. However, even when a person says something to himself, it seems possible to understand his action on the model of stating developed here. This is possible just in case one understands thought, as did Dewey and Mead, as internalized discourse.[19] When one takes thought one's soul, as Plato said, converses with itself. This metaphor of a soul conversing with itself might be understood as follows. Although many games such as chess or checkers cannot successfully be played by one person against himself since one cannot entertain a strategy without revealing it to one's opponent, i.e., oneself, the game of dialectics can be so played. One person, that is, can make a conjecture (a statement), and

then, playing the role of a second person (what Mead calls the "generalized other") offer a refutation of that conjecture. In the game of dialectics, unlike the game of chess, not only must a player not disguise his strategy (what conjecture he intends to establish and how he intends to establish it); but he must fully reveal it to his opponent whose role may be played either by another person or by the speaker himself. In offering a refutation of a statement proposed by one person, one presents a reason not to believe the statement, which, according to the model of stating given here, is just what the speaker intends that the hearer do. When, as Plato says, a soul converses with itself, it converses with itself playing the role of one's own worst critic who offers reasons for not believing what the soul says. Even monologue, thus, can be understood on the model of speaking with the intention of inducing a hearer, whose role may be played by the speaker himself, to believe what the speaker says.

It is also possible to imagine speech acts of stating and commanding more sophisticated than those described by the models presented. For example, one can utter a sentence with the intention not so much of inducing a hearer to believe the sentence true, but at least to take it into consideration. Similarly, one may issue a command not with the intention that the command be obeyed, but that it be only approximately obeyed. A doctor, for example, might order a patient to avoid cigarettes entirely with the intention of inducing him at least to moderate his habit.

Another complexity presented by Landesman's model of stating is the inclusion of the intention of inducing a hearer to believe what the speaker says for the reason that the hearer believes that the speaker himself believes what he says. Although this condition does certainly obtain

in the performance of many speech acts of stating, it has not been included in the model of stating presented here because it does not seem to be a necessary condition; and the purpose of that model, again, is to present sufficient conditions for the speech act to occur.

It should be mentioned, finally, that although the theory of commanding and stating has been developed in terms of sentences as the only linguistic unit, it may be modified to accomodate propositions. Evidently, one need only adjust the models in the following way. In order to issue a command, it is sufficient to utter the indicative sentence 'p' (elliptical or non-elliptical), expressing the proposition that p, with intentions (a)-(d) in mind; whereas in order to make a statement it is sufficient to utter the indicative sentence 'p' expressing the proposition that p, with intentions (a')-(d') in mind.

5. Evidence for Theory

In this section arguments are adduced for regarding imperative sentences, as suggested, as elliptical indicatives. Additional arguments are presented in chapter two. The first evidence for the proposed theory is the fact that imperative sentences are often reflexive, e.g., 'Control yourself!'.[20] Since reflexive terms are generally taken as referring back to the grammatical subject of the sentence, the fact that a reflexive expression such as 'yourself' occurs in an imperative sentence indicates that the subject of that sentence is 'you'. Similarly, it may be argued that the implicit subject term of the imperative, e.g., 'John, control yourself!' is not 'John', as is often claimed, but rather 'you'; for were 'John' the subject the sentence would properly read, 'John, control himself!'. The

name 'John' is uttered merely to catch the subject's attention--hence the comma after 'John'--before the imperative is issued. The imperative, 'John, control yourself!', it is claimed, is an elliptical form of the indicative sentence, 'John, you will control yourself!'.

Even when the implicit subject of an imperative sentence is not evidenced by the presence in the sentence of the reflexive term 'yourself', 'you' may usually be inserted as the subject of the sentence without changing the sense of the sentence. Thus, for example, one can say 'You wait for me here!' just as well as 'Wait for me here!'. It is not necessary, however, to insist that the implicit subject of absolutely every imperative is 'you'. The subject of 'Let's go to the movies!', for example, seems to be not 'you' but 'we'. There is no need to insist that the subject of imperative sentences is always the same. All that is maintained is that imperative sentences are elliptical; that the ellipsis consists of omitting the subject term whatever it might be (although the implicit subject is generally 'you') and the auxiliary verb 'will', and that the full sentence for which the imperative is elliptical is an indicative sentence. It is not vital to the proposed theory that the implicit subject of all imperatives is 'you'. What is vital is that once the suppressed terms of an imperative sentence are supplied, the resulting, non-elliptical sentence is an indicative sentence. Sometimes, of course, the subject term of an imperative sentence is not suppressed. Thus, we say 'You do as I say!', for example, as well as 'Do as I say!'. And sometimes, of course, we issue commands by means of a non-elliptical future indicative sentence, e.g., 'You will do as I say!' rather than an elliptical indicative, i.e., an imperative.

A second argument for interpreting 'you' as the implicit subject of imperatives stems from the fact that one can sensibly and naturally add the tag question, 'Will you?' or 'Won't you?' to most imperatives, e.g., 'Close the door! Will you?'.[21] The occurrence of 'you' in the tag question is evidence for the theory that 'you' is the subject of the imperative to which the tag question is attached. This evidence, in fact, points to 'we' as the implicit subject of the previously mentioned imperative, 'Let's go to the movies!' since one can say 'Let's go to the movies! Shall we?', but not 'Let's go to the movies! Won't you?'.

The fact that one can add the tag question 'Will you?' or 'Won't you?' to imperatives, in addition to supplying evidence that 'you' is the implicit subject of those imperatives, also provides confirmation of the theory that the auxiliary verb 'will' is implicit in those imperatives. A future tensed question tagged to an imperative sentence indicates that the imperative itself is future tensed and, hence, that the auxiliary verb 'will' is implicit. Often the future tense of the main verb of an imperative sentence is evidenced by the occurrence in the sentence of a future temporal indicator such as 'tomorrow', 'next week', etc. For example, in the imperative, 'Do it yourself the next time!' not only is the subject 'you' implicit, as is evidenced by the occurrence of the reflexive term 'yourself'; but it may be argued that the auxiliary verb 'will', making the verb future-tense, is also implicit since it is clear from the occurrence of the temporal indicator 'the next time' that the main verb is future-tensed.

Even when the insertion of 'will' into an imperative sentence is not required by the presence in the sentence of a future temporal

indicator such as 'the next time', however, it is claimed that one can always insert the auxiliary verb 'will', preceded by the proper subject term, without changing the sense of the imperative. Thus, for example, one can say 'You will do as I say!' just as well as 'Do as I say!'. In fact, one can insert the auxiliary verb 'will' even into imperative sentences whose main verb seems explicitly not future tensed because the imperative contains a temporal indicator such as 'now'. As Jack Conner writes, "'Right now' . . . may be future instead of present. It is future when the parent says, 'Stop fooling around and eat that egg right now!'".[22]

An argument correlative to the tag question argument for the theory that most imperative sentences are formed by the deletion from an indicative sentence of the subject term 'you' and auxiliary verb 'will' is that the theory best accounts for the fact that one can respond to an imperative by saying either 'Yes, I will', or 'No, I won't' regardless of whether the imperative is followed by the tag question 'Will you?' or 'Won't you?'. It is entirely appropriate, for example, to respond to an utterance of the imperative, 'Try to settle your differences amicably!' by saying either 'Yes, I will' or 'No, I won't'.

Another argument for taking the subject term 'you' and auxiliary verb 'will' to be implicit in imperatives is the following. It is often maintained, as for example by Castaneda, Nowell-Smith, and Hare,[23] that an imperative is the proper answer to a question of the form 'What shall I do?'. If this is correct, then in answering such a question by uttering an imperative, in order to refer to the same person as is referred to by the term 'I' of the question the subject term of the imperative must be

'you'. Secondly, since the main verb of a sentence which is uttered in response to a question is generally in the same tense as the main verb of the question, and since 'shall do' in the question 'What shall I do?' is future tensed, the main verb of the imperative uttered in response to that question should also be future tensed, thus indicating that 'shall' or 'will' is an implicit auxiliary verb in the imperative.

It will undoubtedly be objected to this argument that 'shall' in the question 'What shall I do?' does not indicate future tense but, rather, is synonymous with 'should'. The question, it will be said, is not one of what shall or will happen in the future but rather of what should happen. This objection, however, it may be argued, is mistaken. 'Shall' is always future tense; and the suggestion of obligation that it sometimes carries is not a matter of semantic content, but one of pragmatic use, or conversational implicature. This position will be argued more fully in chapter two. In the meantime, suffice it to say that the question 'What shall I do?' seems synonymous with 'What am I going to do?' which is more obviously future tensed than the former question. So, following the principle that the main verb of an answer to a question should be in the same tense as the main verb of the question, it may be argued that if, e.g., 'Do what you think best!' is uttered in response to the question 'What am I going to do?', then the implicit auxiliary verb of 'do' in the imperative is 'going to' or 'will'. 'Do what you think best!' is a stylistically variant, since elliptical, form of the indicative 'You are going to do what you think best!', or 'You will (shall) do what you think best!', uttered with the intention of inducing a hearer to make that sentence true--by doing what he thinks best. Wertheimer, it may be noted, has

presented additional arguments for regarding 'shall' sentences as ordinary, future tense indicatives.[24]

A word should be said regarding the reason for which imperative sentences are future tensed. The reason is a practical one and not one of logic. If, as it is claimed, what are called imperative sentences are stylistic variants of indicative sentences that describe an action to be performed and are uttered with the intention of inducing a hearer to make the sentence true by performing that action, then the only sort of imperative that can be made true is one that describes a future action since only future actions can be performed by a hearer in response to the utterance of an imperative sentence. That is to say, if an imperative sentence describes an action to be performed, that action must be posterior to the time of utterance of the imperative sentence if the hearer is to be able to make the sentence true by performing the action described. If backward time travel were a possibility, then there would be a very practical use for past tense imperatives. But, in the actual world the only sort of action an agent can perform in response to an imperative is action posterior to the time of utterance of that imperative. Therefore, since the purpose for uttering an imperative is to induce a hearer to perform an action, imperative sentences are future tensed.

The final argument to be presented in this chapter in favor of the proposed theory of imperatives is that the theory is more economical than alternative theories. It is not necessary on this theory to postulate the existence of at least two sorts of sentences: indicative sentences with truth conditions and imperative sentences without. On the proposed theory only indicative sentences are presumed to exist since what are

generally classified as imperative sentences are regarded as stylistically variant (since elliptical) forms of indicative sentences. And, as was argued in the first section of this chapter, elliptical indicative sentences should be regarded as genuine indicative sentences. On most alternative theories it is assumed that in order to account for the difference between the two speech acts of commanding and stating one must posit the existence of different sorts of linguistic entities: indicative sentences with a truth value for use in stating, and imperative sentences without a truth value for use in commanding. Hopefully the models of stating and commanding using true or false indicative sentences (elliptical or non-elliptical) in both will have served to discredit this assumption. In order to account for the difference between acts of stating and commanding, it is not necessary to assume the existence of distinct sorts of linguistic entities; it is sufficient to assume a divergence in the speaker's intentions in using a single linguistic entity, the garden-variety indicative sentence.

It may also be noted that the economy of dispensing with *sui generis* imperative sentences enables one to forego the distinction that is sometimes made between ordinary subject-predicate copulation and an extraordinary kind of copulation termed "prescriptive copulation". In order to account for the putative fact that imperative and indicative sentences consisting syntactically of the same subject term and predicate express a different kind of meaning, some authors postulate a difference in the manner of copulation of the subject and predicate. Thus, Castaneda 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 . . . Prescriptive copulation unites not any subject but an agent to a predicate. For example, 'Karl, jump!' and

'Karl jumps' contrast as simply two different copulations of the constituent 'Karl' and the constituent 'jump'.[25]

If, however, the imperative considered by Castaneda, 'Karl, jump!', is analysed as an elliptical form of the indicative sentence, 'Karl, you will jump!', then there is no need to postulate a special sort of prescriptive copulation of the subject term 'you' (Castaneda erroneously takes the subject term to be 'Karl') and the predicate 'will jump'. The two sentences considered by Castaneda differ in virtue of the speaker's intentions in uttering them, and not in virtue of the presence in one sentence of a special sort of prescriptive copulation that the other sentence lacks.

This final argument has so far ignored the possibility that sentences express propositions. If propositions are admitted into one's ontology, then the economy afforded by the proposed theory of imperatives is that prescriptive propositions need not be admitted as well. As has been seen, Ross calls the meaning content of an imperative sentence a "directive", analogous to the proposition expressed by an indicative sentence; and Katz, similarly, says that imperative sentences express a "performative proposition" analogous to the "assertive proposition" expressed by indicatives.[26] Although abstract entities such as propositions may perhaps be necessary in linguistic theory, if they are necessary it does seem desirable strictly to limit their variety. If propositions are needed as the meaning content of indicative sentences, "directives", or "performative propositions" are not needed as the meaning content of imperatives. It should be clear from the models of commanding and stating developed earlier that such abstract entities analogous to but distinct from ordinary descriptive propositions are not necessary to account for speech acts of commanding. In order to

issue a command, it is sufficient that a speaker utter an indicative sentence (elliptical or non-elliptical) with the intention of thereby inducing a hearer to make the sentence true. And for uptake to be secured, it is sufficient that the hearer successfully infer the speaker's intentions in uttering the sentence.

If, however, the proposed theory of imperatives has the virtue compared with alternative theories of being more economical, it does have the vice of being less intuitive. In fact, calling imperatives true or false, according to some writers, borders on the nonsensical. Consequently, it is instructive to compare the statement that imperatives have a truth value with the statement, 'This stone is thinking of Vienna', sometimes cited by early logical positivists as an example of a nonsense statement. What makes this latter statement nonsensical, if it is, is the fact that stones are not of the category of things that are capable of thought. Similarly, what makes the statement that imperatives have a truth value seem nonsensical is the common sense belief that imperatives are not of the category of linguistic entities capable of being true or false. Insofar as persons have any intuitions regarding the truth value of imperatives, these intuitions are almost unanimously to the effect that imperatives don't have one. The question arises, then, as to whether these intuitions are correct; for the fact that persons don't call imperatives true or false, given that they don't believe them to be true or false does not settle the question of whether they are true or false. Whether imperatives are true or false, or whether they are neither true nor false is a matter of objective fact; and although persons may have intuitions in the matter, and strong ones at that, such intuitions do not suffice to settle the question.

Intuitions are not infallible. It is a commonplace in the development of science that theories that have strong intuitive support at one moment in history are superceded by theories that have little intuitive appeal, and that are even strongly counterintuitive at the time they are proposed.

In this chapter and the next, theoretical reasons are adduced for holding that imperative sentences have a truth value; and it is possible, at least partially, to account for those intuitions to the contrary. A sentence is counted true, or a theory correct, if it accurately describes the world. In the case of theories the world is assumed given, and it is the goal of theory to correspond to that world. In issuing an imperative, however, one does not attempt to picture a world already given. One's purpose in issuing an imperative, rather, is to induce a change in that world. In short, the person who issues an imperative issues a call for action. Although it may seem natural to conclude on the basis of such obvious facts that imperative sentences are neither true nor false as are indicatives, such a conclusion does not logically follow. Although it is quite true that the utterer of an imperative sentence issues a call for action and does not simply picture the world as it is given at the time the imperative is uttered, there is nothing to prevent the action called for by an imperative from being precisely such as to make the world correspond to the picture presented by the imperative sentence, thus making the imperative sentence true. That is, whereas an indicative sentence is generally uttered with the intention of corresponding to the world, imperative sentences, construed as elliptical indicatives, are uttered with the intention of inducing a hearer to make the world correspond to the imperative. The speaker's intention in uttering an imperative sentence is to induce the

hearer to act so as to make the imperative sentence true. In short, although there is indeed an important difference in the characteristic functions of indicative and imperative sentences--the one being uttered with the intention of corresponding to, picturing, reality, and the other with the intention of effecting a change in that reality--it does not follow that imperative sentences are incapable of being true or false. The possibility that is left out of account in making such an inference is that the change in reality called for by the issuance of an imperative is precisely of the sort to make the imperative sentence true by bringing reality into correspondence with the sentence.

That commission of such a fallacious inference is the source of common intuitions concerning the truth value of imperatives finds confirmation in the fact that this fallacious inference is, apparently, made by Peter Geach. In an essay written in 1957, Geach advocated a theory of imperatives practically identical with the one proposed here. To quote:

> The logic of proper imperatives is, I think, fairly trivial. For every proper imperative, there is a future-tense statement whose 'coming true' is identical with the fulfillment of the imperative. This is the source of everything that can be said about the inferability, incompatibility, etc. of imperatives; their being imperatives does not affect these logical interrelations.[27]

In 1963, however, under the impulsion of a point made by Anscombe in *Intention*,[28] Geach recanted. Anscombe's point concerns the difference between a shopping list used by a man to select items from a store, and a similar list drawn up by a detective following the man and detailing his purchases. As Anscombe points out in the case of the detective's list, if there is a difference between the items purchased and those on the list the mistake is in the list, whereas in the case of the shopping list if there is a difference between the items purchased and those on the list

the mistake this time is with the purchaser. Geach apparently takes this fact as evidence that obeying an imperative is not, as he claimed before, identical with making a future indicative sentence true, for he says:

> In a previous article I quite mistakenly suggested that a man's following a directive is much the same as his action's conforming to a (future-tensed) description; Miss Anscombe has well brought out the different roles of the shopping list used by a man (a directive to him) and the list of the man's purchases made by a detective who follows him (a description of his activities).[29]

Although what Anscombe points out is quite true, it does not at all follow, as, apparently, Geach assumes it does, that one cannot make an imperative sentence true by performing the action described. That is, if a shopping list and the items purchased do not agree, the fault does indeed lie, as Anscombe says, not with the shopping list but with the shopper; but it does not follow from this that his fault does not consist precisely in not making the list come true (that is in making the items purchased correspond to those on the list). If imperative sentences are construed as stylistically variant forms of future indicative sentences, they are the sort of sentence that can be made true by the performance by an agent of the action described. To obey an imperative, if imperatives are construed as elliptical indicatives, is just to make the imperative sentence true.

It might also be argued that if ordinary language speakers don't generally call imperatives true or false, they do something equivalent, namely, they respond to them, as has already been noted, by saying, 'Yes, I will' or 'No, I won't'. It is a striking fact that one can respond to statements of fact in exactly the same way. When one responds, for example, to the fortune teller's prediction, 'You will take a long voyage' by saying, 'No, I won't', one asserts that one won't

take a long voyage; and that is equivalent to stating that the fortune teller's prediction 'You will take a long voyage' is false. Similarly, when one responds to the imperative 'Take a long voyage!' by saying 'No, I won't' one also asserts that one won't take a long voyage, which, again, is equivalent to stating that 'You will take a long voyage' is false. But, if the imperative sentence 'Take a long voyage!' is identified as a stylistically variant (since elliptical) form of the indicative sentence 'You will take a long voyage', then asserting that 'You will take a long voyage' is false is equivalent to asserting that the imperative 'Take a long voyage!' itself is false.

The theory of imperatives according to which imperatives are stylistic variants of indicative sentences provides a simple explanation of the fact that it is appropriate to respond to an imperative, e.g., 'Take a long voyage!' by saying 'Yes, I will' or 'No, I won't'. In fact, if the imperative 'Take a long voyage!' is an elliptical form of the indicative sentence 'You will take a long voyage', then what more natural way is there to refuse to obey that imperative than by asserting that one won't take a long voyage, which is equivalent to stating that the imperative sentence itself is false (that is, will not be made true by the hearer's action of taking a long voyage)? In responding to the statement of fact, 'You will take a long voyage' by saying 'No, I won't', one performs the action of disagreeing with that statement by making an assertion equivalent to the assertion that 'You will take a long voyage' is false. Similarly, in responding to the imperative 'Take a long voyage!' by saying 'No, I won't' one performs the action of refusing to obey the imperative by making an assertion equivalent to the assertion that 'Take a long voyage!' (which

is a stylistic variant of the indicative sentence 'You will take a long voyage') is false. In sum, the objection that ordinary language speakers do not in fact qualify imperative sentences as either true or false may be met by arguing that they do something equivalent, namely, responding to them by saying 'Yes, I will' or 'No, I won't'. And while it has not been established that saying 'Yes, I will' or 'No, I won't' to an imperative is equivalent to saying that the imperative is true or false, neither has it been disproved.

6. Alternative Theories

In this section the proposed theory of imperatives is contrasted with alternative theories. In chapter two, in which the logic of imperatives is discussed, additional theories will be considered.

The first theory to be considered is the oldest one. It is the theory enshrined in standard grammar books and seems to be accepted almost uncritically by the majority of philosophers. According to this theory, indicative sentences and imperatives are two *sui generis* sentences, not to be analysed one in terms of the other. An imperative sentence, according to this theory, whatever it might be, is not a kind of indicative sentence.

The first criticism to be leveled against this traditional theory is that, as it is commonly formulated, it treats indicative sentences and imperatives unequally. Whereas indicative sentences are recognized by purely syntactic criteria, imperative sentences are identified by syntactic and pragmatic criteria combined. Thus, an indicative sentence is identified as any formula resembling the formula 'The cat is on the mat' in having

a subject and verb phrase, etc. (This formulation is, of course, inadequate, but is sufficient for present purposes.) That is, any string of symbols having this syntactic structure is identified as an indicative sentence regardless of whether it is used to "indicate" something, that is, to make a statement. Even if such a word string is used to issue a command, e.g., 'You will do as I say', it is still counted as an indicative sentence since it satisfies the syntactic criteria. Thus, for example, von Wright says:

> Indicative sentences, other than deontic sentences, are also quite commonly used for expressing norms . . . In legal codes norm-formulations in the indicative mood, either in the present or in the future tense, seem particularly common. When, for example, in the Finnish constitution we read: 'The President of the Republic assumes office on 1 March next after the election' this is not meant as a description of what the president habitually *does*, but as a prescription. . . . The Swiss penal code, I understand, consistently uses the indicative form throughout.[30]

Imperative sentences, on the other hand, are not recognized by syntactic criteria alone, but by syntactic criteria in combination with pragmatic criteria. That is, for a word string to qualify as an imperative sentence it is not sufficient that it resemble the formula 'Close the door!' in lacking a subject term, etc. (Again, the criterion is inadequate, but sufficient for present purposes.) It is further necessary that the word string be uttered by a speaker with the intention of issuing a command. Thus, Archibald Hill writes:

> . . . it should be pointed out again that many imperatives are identifiable only stylistically (contextually). Thus, 'Run!' is much more likely to be an imperative than anything else, but it is at least conceivable that it might be an answer to such a question as 'Was the battle fought at Bull Branch?'[31]

Thus, syntactic criteria are not thought sufficient for identifying imperatives. An imperative sentence is one whose main verb is syntac-

tically in the "imperative mood", and is used pragmatically to issue a command. If indicative sentences were treated analogously, then the conventional distinction between two sentence types, indicatives and imperatives, would become a fourfold distinction. That is, one would have to distinguish among sentences of type 1, called "indicatives", whose main verb is syntactically in the "indicative mood" and are used pragmatically to make a statement, e.g., 'You will meet a handsome stranger'; sentences of type 2 whose main verb is syntactically in the indicative mood but are used pragmatically to issue a command, e.g., 'You will do as I way!'; sentences of type 3 whose main verb is syntactically in the "imperative mood" but are used pragmatically to make a statement, e.g., 'Take the plane!' (uttered in response to 'How will you get to the island?'); and sentences of type 4, called "imperatives", whose main verb is syntactically in the "imperative mood" and are used pragmatically to issue a command, e.g., 'Do what I tell you!'. If such a schema of classification were adopted, then the sentence mentioned by von Wright, 'The President of the Republic assumes office on 1 March next after the election', as an example of an indicative sentence used to issue a command, would not qualify as an indicative, but rather, for want of a better word, as a type 2 sentence. Of course, once the interrogative verb form is taken into account as well as the pragmatic function of asking a question, the fourfold distinction among sentence types becomes a ninefold distinction.

If, on the other hand, both imperatives and indicatives are to be distinguished on purely syntactic grounds, then the traditional distinction may be criticized as arbitrary. Why, for example, should 'Take a long voyage!' be classified as an imperative sentence, and 'Taken a long

voyage!', uttered in response to the question 'What have you done recently?', not be so classified even though the two utterances differ syntactically only in tense? If the distinction between imperatives and indicatives were made on syntactic grounds then a difference in tense should not be of such importance. 'I will take a long voyage' and 'I have taken a long voyage' are both classified as indicative sentences even though one is future tensed and the other past. Syntactically, there is little difference between 'Take a long voyage!' and the following sorts of utterances: 'Took a long voyage!', uttered, for example, in response to the question, 'What did you do last summer?'; 'A long voyage!', uttered in response to 'What would you consider a good vacation?'; and 'Taking a long voyage!', uttered in response to 'What are you doing next summer?'. Yet, of these utterances which are similar syntactically, only the one, 'Take a long voyage!' is traditionally classified as a complete sentence (an imperative), while the others are classified as sentence fragments, i.e., elliptical indicatives.

Recognizing both imperative and indicative sentences by purely syntactic criteria also has the unpalatable result of counting the word string, 'Take the plane!', for example, as an imperative sentence, even when uttered in response to the question 'How will you get to the island?'. This result is particularly unattractive if imperative sentences are construed as having prescriptive semantic content; for the word string, 'Take the plane!', uttered in response to the question 'How will you get to the island?', though qualifying on purely syntactic grounds as an imperative sentence, clearly does not express prescriptive meaning.

Finally, a criticism that has already been made of the traditional

theory is that it is uneconomical. According to the traditional theory, it is necessary to postulate the existence of two *sui generis* sentences, whereas according to the proposed theory it is only necessary to postulate the existence of indicative sentences and to distinguish between indicative sentences in standard form and stylistic variants of indicatives. This distinction, however, is needed in any case.

A second theory of imperatives is one proposed by Hofstadter and Mckinsey [32] though dating back at least to Mally [33] and appearing rather widely in the literature. According to this theory, which is referred to as the operator analysis of imperatives, imperative sentences are composed of an imperative operator 'Let it be the case that', or 'Make it be the case that' prefixed to an indicative sentence. Thus, if '!' represents this imperative operator, imperatives are all of the form '!p'.

This theory, however, may be interpreted in either of two ways. It may first of all be interpreted as a semantical theory to the effect that every imperative, though syntactically not of the form 'Make it be the case that p' (where 'p' is an indicative sentence), is logically equivalent to an imperative of that form. 'Close the door!', for example, though syntactically not of the form, 'Make it be the case that p' may be held to be logically equivalent to the imperative, 'Make it be the case that you will close the door!'. Understood in this way, the operator analysis of imperatives is analogous to the thesis that every indicative sentence, though not itself syntactically of the form, 'It is the case that p', is logically equivalent to an indicative sentence of that form. 'You will meet a handsome stranger', for example, is logically equivalent to 'It is the case that you will meet a hansome stranger'.

If the operator analysis is understood as a semantical theory, then it does not conflict with the proposed analysis of imperatives. To maintain that every imperative is logically equivalent to an imperative of the form 'Make it be the case that p' is not to deny that imperatives of that form are in turn logically equivalent to an indicative sentence of the form, 'You will make it be the case that p'. Thus, for example, if the imperative 'Open the door!' is held to be logically equivalent to the imperative, 'Make it be the case that you will open the door', that latter imperative may in turn be held to be logically equivalent to the indicative, 'You will make it be the case that you will open the door'. In general, imperative sentences of the form 'Make it be the case that p!' may be regarded as sytlistic variants of indicative sentences of the form 'You will make it be the case that p'.

The operator analysis of imperatives, however, may be understood not as a semantical, but rather as a syntactical theory. That is, it may be understood as the theory that every imperative sentence, though not on the surface of the form 'Make it be the case that p', may be regarded as a stylistic variant of a sentence of that form. 'Open the door!', for example, may be regarded as a stylistically variant (because elliptical) form of the sentence 'Make it be that case that you will open the door!'. Although this theory, construed as concerning the syntax of imperatives, does not explicitly state that an imperative of the form 'Make it be the case that p' may not in turn be construed as a stylistically variant (because elliptical) form of the indicative sentence, 'You will make it be the case that p', this is at least implied. In construing the imperative, e.g., 'Open the door!' as a stylistic variant of the imperative sentence, 'Make it be the

case that you will open the door!', it is assumed that this latter sentence is in standard form and is not itself to be construed as a stylistically variant form of another sentence such as the indicative sentence, 'You will make it be the case that you will open the door'. Thus, although the operator analysis of imperatives, construed as a theory of syntax, at least agrees with the proposed theory in regarding imperative sentences as stylistically variant because elliptical, they disagree as to what the non-elliptical form of an imperative is. Thus, for example, whereas according to the operator analysis the imperative 'Open the door!' is regarded as an elliptical form of the sentence, 'Make it be the case that you will open the door!', according to the proposed analysis 'Open the door!' is an elliptical form of the indicative sentence, 'You will open the door'.

The major criticism to be made of the operator analysis of imperatives, construed as a theory of syntax, is that there is no evidence for it (at least none that has been offered). The fact that one can add the imperative operator 'Make it be the case that' to any imperative without changing its meaning is not evidence for the theory that, syntactically, that imperative is an elliptical form of the longer sentence with the imperative operator added; for one could similarly argue that the fact that one can add the sentential operator 'It is the case that' to any indicative sentence without changing its sense is evidence for the theory that the indicative sentence is syntactically an elliptical form of the indicative sentence with 'It is the case that' prefixed. But the indicative sentence, e.g., 'The cat is on the mat' is not an elliptical form of the indicative sentence 'It is the case that the cat is on the mat'. Both sentences are logically equivalent--just as 'Put the cat on the mat!' and

'Make it be the case that you will put the cat on the mat!' may be argued to be logically equivalent--but the one sentence is not, syntactically, an elliptical form of the other.

There is in fact just as much ground for regarding, e.g., 'Put the cat on the mat!' as syntactically of the same form as 'Make it be the case that you will put the cat on the mat!' as there is for regarding the one as a stylistic variant of the other. Both imperatives, that is, are composed of a verb in the "imperative mood" ('put' in the one case and 'make' in the other) followed by a direct object, etc. Thus, one can add the imperative operator 'Make it be the case that' to the sentence 'Make it be the case that you will put the cat on the mat!' itself, yielding the logically equivalent imperative, 'Make it be the case that you will make it be the case that you will put the cat on the mat!' just as well as one can add 'Make it be the case that' to the imperative 'Put the cat on the mat!', yielding the imperative 'Make it be the case that (you will) put the cat on the mat!'. But certainly one would not want to regard the imperative, 'Make it be the case that you will put the cat on the mat!' as a stylistic variant of the sentence, 'Make it be the case that you will make it be the case that you will put the cat on the mat!', and so on *ad infinitum*.

If it is objected that the two imperatives, 'Put the cat on the mat!' and 'Make it be the case that you will put the cat on the mat!' are not analogous because the one imperative contains an imbedded indicative sentence whereas the other imperative does not, then one might instead compare the following two imperatives:

'Make it be the case that you will put the cat on the mat!'

'Tell everyone that you will put the cat on the mat!'

Since these two imperatives are both composed of an imperative operator, 'Make it be the case that' and 'Tell everyone that', prefixed to an indicative sentence, what reason is there to regard the former imperative as in standard form and to regard the latter imperative as stylistically variant?

To summarize, then, if the theory that imperative sentences are composed of an imperative operator 'Make it be the case that' prefixed to an indicative sentence is construed as a theory of the syntax of imperatives, there is no evidence for it. If, however, it is construed as a semantical theory to the effect that every imperative is logically equivalent to an imperative sentence of the form 'Make it be the case that p', then the theory does not conflict with the proposed theory of imperatives, and in fact seems true since every command may be construed as a command to make something be the case--to do something.

A third theory of imperatives proposed by David Lewis and J.J. Katz[34] equates imperative sentences and explicit performatives. The imperative, e.g., 'Close the door!' is equated by those authors with the explicit performative 'I command that you close the door'. Although the theory of Lewis and Katz is a semantical theory--'Close the door!' and 'I command that you close the door!' are held to be synonymous--it might also be construed as a theory about syntax. That is, one way of construing, e.g., 'Close the door!' and 'I command that you close the door!' as synonymous is to construe the former sentence as, syntactically, a stylistically variant (since elliptical) form of the latter. 'Close the door!' is an elliptical form of the explicit performative, 'I command that you close the door!'. But whether one construes this theory as a theory of semantics or as a

theory of syntax and semantics, the same objections hold.

The first objection that may be made to Lewis's version of the theory, though not to Katz's, is the following. Lewis construes an imperative sentence and a corresponding explicit performative as synonymous; and he construes explicit performative sentences as used to make a true or false statement of fact from which it immediately follows that, according to Lewis, imperative sentences are used to make a true or false statement of fact. But this conflicts with ordinary intuitions about imperatives. Regardless of whether Lewis is right in holding that explicit performative sentences are used to make a true or false factual statement (in chapter three it will be argued that he is right), it is at least counterintuitive to maintain that imperative sentences are so used; and Lewis does not attempt to account for those intuitions. Katz's theory, however, does not encounter this difficulty; for although he maintains that imperatives and explicit performatives are synonymous, he does not hold that explicit performatives are used to make a true or false statement of fact.

The second objection to be made to the proposal to equate imperatives and explicit performatives is that imperatives and explicit performatives do not seem synonymous. When a speaker utters an explicit performative sentence, e.g., 'I command that you open the door!', his utterance seems in some sense autobiographical. The subject of the sentence--the person referred to by 'I'--is the speaker himself. It is undoubtedly this feeling that explicit performative sentences are about the speaker of the sentence that prompted Austin to write, "If you are a judge and say 'I hold that . . .' then to *say you hold* is to hold."[35] Similarly, Searle, who, it should be noted, does not believe that explicit performative sentences are used to

make a true or false statement of fact, writes: "A man who says 'I (hereby) promise' not only promises, but *says* he does."[36] But, if in uttering an explicit performative such as, 'I command that you be there tomorrow' one says one commands that the hearer be there tomorrow, it does not seem in uttering the imperative, e.g., 'Be there tomorrow!', that one says one commands the hearer to be there tomorrow. Imperative sentences do not seem to say anything about the speaker at all. In fact, Katz himself says that the distinction between explicit performatives and constatives is a distinction between "sentences whose grammatical meaning describes the kind of act performed by the utterance of the sentence and sentences whose grammatical meaning does not describe such an act".[37] But if a performative sentence such as 'I command that you be there tomorrow' describes the kind of act performed by the utterance of that sentence, namely, my commanding that you be there tomorrow, the imperative sentence, e.g., 'Be there tomorrow!' does not describe the kind of act performed by the utterance of that sentence. If the imperative sentence 'Be there tomorrow!' describes any act, it would seem to describe the act that the hearer is to perform in response to the sentence, namely, being there tomorrow, and not the act that the speaker performs in uttering the sentence, namely, commanding that the hearer be there tomorrow.

A third objection to assimilating imperatives and explicit performatives is that it results in construing tautologous formulae as non-tautologous. Thus, for example, although the compound imperative, 'Open the door or don't open the door!' seems tautologous, if the imperative 'Open the door!' is equated with 'I command that you open the door', then 'Open the door or don't open the door!' should be synonymous with 'I command that you open the door or I command that you don't open the door'; but

that formula is non-tautologous. What is tautologous is, rather, 'I command that you open the door or I don't command that you open the door'; but this is not what is derivable from 'Open the door or don't open the door!' by substitution of 'I command that you open the door' for the supposedly synonymous sentence, 'Open the door!'.

This objection, however, is not conclusive; for it might be maintained that the formula 'I command that you open the door or I command that you don't open the door' is in fact tautologous since one of its constituent commands, 'I command that you open the door' or 'I command that you don't open the door' must be obeyed. In fact, Katz claims that the similar formula 'I request that you deliver it or that you do not deliver it' is tautologous; though it is not clear whether by this formula he means 'I request that you deliver it or I request that you do not deliver', or rather, 'I request that (You deliver or you do not deliver it)'.[38]

It might also be maintained that what is synonymous with 'Open the door or don't open the door!' is not the non-tautologous formula 'I command that you open the door or I command that you don't open the door', but rather the supposedly tautologous formula, 'I command that (You open the door or you don't open the door)'. But, if the explicit performative with which 'Open the door or don't open the door!' is synonymous is to be obtained by prefixing 'I command that' to that whole formula, then it is not clear why the formula, e.g., 'Stop or I'll shoot!' should not be held to be synonymous with 'I command that (You will stop or I will shoot)', with which it is not synonymous. This question is left unanswered by the Lewis, Katz theory of imperatives.

A final, and very influential theory of imperatives is due to

Bohnert.[39] According to Bohnert, the imperative, e.g., 'Open the door!' is to be construed as an elliptical form of the disjunctive statement, 'Either you will open the door or a sanction will be imposed'. While this theory has the virtue, from the perspective of the proposed theory, of analysing imperative sentences as elliptical, and even of partially coinciding with that analysis since the first disjunct of the statement for which, according to Bohnert, a given imperative is elliptical coincides precisely with the indicative sentence for which, on the proposed analysis, that imperative is elliptical, the theory has the vice of analysing imperative sentences as used to make a true or false statement of fact. At best, it is conversationally implicated by the utterance of an imperative that if the hearer does not satsify the imperative he risks incurring a sanction; but that is not explicitly stated, if only for the reason that in issuing an imperative, one makes no statement of fact at all.

APPENDIX

In this appendix a theory of interrogative sentences, analogous to that of imperatives, is presented. This analysis is undertaken because the fact that such an analysis is possible will be of importance for the last two chapters in which ought-sentences are discussed. In order to present this theory of interrogatives it is convenient to begin with yes/no interrogatives and afterwards to consider wh-questions. Although it is sometimes claimed that not all questions are of the yes/no or wh-type, there do not seem, in fact, to be any questions that do not fit one of the two categories; therefore, such is the working assumption of this appendix.

Earlier it was noted that commands are sometimes issued through the use of a non-elliptical indicative sentence, e.g., 'You will do as I say!', rather than an imperative, and it was claimed that, in fact, all commands are issued through the utterance of an indicative sentence. Similarly, questions are often asked not by uttering an interrogative sentence, but rather by uttering an indicative sentence in a questioning tone of voice, e.g., 'The Yankees lost again?'. In such a case, the speaker's intention is not to induce the hearer to believe that the indicative sentence is true, but rather to induce him to tell the speaker whether it is true; and the speaker's tone of voice provides the necessary tip-off to the hearer as to the speaker's intentions.

It is claimed that not only do we sometimes ask yes/no questions by uttering an indicative sentence; we always do. Just as what are called imperative sentences may be regarded as elliptical indicatives, so are interrogatives regarded, on the proposed analysis, as stylistic variants of indicative sentences uttered with a certain intention. However,

whereas in order to construe imperative sentences as stylistic variants of indicatives, it is necessary to regard them as elliptical expressions, in the case of interrogatives there is no ellipsis. It is only required that yes/no interrogatives be regarded as indicative sentences that are stylistically variant in that they have subject and verb transposed. The interrogative 'Is John tall?', for example, is to be regarded as a stylistically variant form of the ordinary indicative sentence 'John is tall'.

In the case of interrogatives, unlike that of imperatives, the existence of the auxiliary 'do' presents no problem for the proposed analysis. The interrogative 'Does John smoke', for example, is analysed as a variant form of the indicative sentence 'John does smoke', equally containing the auxiliary 'do'. And just as it was urged that elliptical indicative sentences (i.e., imperatives) are to be counted as indicative sentences, so too is it urged that indicative sentences in which the subject and verb are transposed (i.e., interrogatives) should be counted as indicative sentences as well. In the case of imperative sentences, the fact of ellipsis serves the purpose of indicating to the hearer that the speaker's intention is that of inducing the hearer to make the sentence true; and in the case of yes/no interrogatives transposition of the subject and verb serves as a device to indicate to the hearer that the speaker's intention is that of inducing a hearer to tell the speaker whether the sentence is true. Such transposition of subject and verb, however, does not result in an utterly new, *sui generis*, interrogative sentence. Interrogative sentences are simply indicative sentences with a somewhat different word order than the standard word order, uttered with the intention of inducing a hearer to tell the speaker whether the sentence is true.

In greater detail, an analysis of the act of asking a yes/no question analogous to the previous analyses of stating and commanding may be given as follows: It is sufficient for a yes/no question to be asked that a speaker utter an indicative sentence 'p' (whose subject and verb may or may not be in standard order) with the intention of bringing it about that:

(a) the hearer tells the speaker whether or not p,

(b) the hearer believes that the speaker intends that he tell the speaker whether or not p,

(c) the hearer has as a reason for telling the speaker whether or not p, his belief that the speaker intends that he tell the speaker whether or not p; and having this as a reason will cause the hearer to tell the speaker whether or not p,

(d) the hearer believes that the speaker intends that the hearer have as a reason for telling the speaker whether or not p his belief that the speaker intends that he tell the speaker whether or not p.

As before, condition (a) specifies the speaker's primary intention which, in this case, is that of inducing the hearer to tell the speaker whether or not something is the case, namely, whether the indicative sentence uttered is true. This condition captures the almost trivial intuition that a question is a request for information. Condition (b) specifies the speaker's secondary intention which is that the hearer recognize the speaker's primary intention. The speaker attempts to ensure that this second intention is satisfied by slightly changing the word order of the indicative sentence he utters in order to signal to the hearer that he does not mean to assert the sentence. Or else the speaker maintains the usual word ordering but changes his intonation. Condition (c) specifies the speaker's third intention, namely, that the hearer's recognition of the speaker's primary intention in making the utterance will motivate

(cause) him to satisfy that intention by providing the information requested. Finally, condition (d) specifies the speaker's fourth intention which is that the hearer recognize the speaker's third intention. The speaker, that is, desires that the hearer be aware of the fact that the speaker intends the hearer's beliefs concerning the speaker's intentions in making the utterance to have a causal influence upon the hearer.

The analysis of wh-interrogatives is somewhat different. Whereas a yes/no interrogative is analysed as an indicative sentence with subject and verb transposed, uttered with the intention of inducing a hearer to tell the speaker whether that sentence is true, a wh-interrogative is analysed as an open indicative sentence--a sentential function--uttered with the intention of inducing a hearer to tell the speaker what objects satisfy the open sentence, i.e., which objects satisfy the sentential function. The elements 'who', 'what', 'where', 'when', 'why', etc., that is, are regarded as individual variables. The interrogative sentence, 'Who was the first president of the U.S.?', for example, is analysed as the sentential function, 'x was the first president of the U.S.', or perhaps better, since 'who' seems to limit the range of possible values to persons, as the sentential function '$x_{(\text{a person})}$ was the first president of the U.S.'. The interrogative, 'Where was the first automobile built?', to take another example, is analysed as the open sentence 'The first automobile was built at $x_{(\text{a location})}$', or perhaps, 'x is the place where the first automobile was built'. The speaker's primary intention in uttering such a sentential function is to induce a hearer to tell the speaker what objects satisfy the function. Whereas in the case of yes/no interrogatives the speaker's intention is that the hearer tell him whether the sentence

uttered is true, since wh-interrogatives are analysed as open sentences (sentential functions) they are neither true nor false. The speaker's primary intention, then, is not to induce a hearer to tell him whether the sentence he utters is true, but rather to tell him for what substitutions of names for the variable represented by the wh-element the sentential function becomes true.

In greater detail, and in analogy to the analyses already presented of the act of stating, commanding, and asking yes/no questions, to ask a wh-question it is sufficient to utter an open sentence 'Fx' with the intention of bringing it about that:

(a) the hearer tells the speaker for what x, Fx,

(b) the hearer believes that the speaker intends that the hearer tell the speaker for what x, Fx,

(c) the hearer has as a reason for telling the speaker for what x, Fx, his belief that the speaker intends that he tell the speaker for what x, Fx; and having this as a reason will effectively cause the hearer to tell the speaker for what x, Fx,

(d) the hearer believes that the speaker intends that he have as a reason for telling the speaker for what x, Fx, his belief that the speaker intends that he tell the speaker for what x, Fx.

Once again, condition (a) specifies the speaker's primary intention in uttering a wh-interrogative, namely, that the hearer tell the speaker for what values the wh-interrogative (analysed as a sentential function) is satisfied. Condition (b) represents the speaker's secondary intention, which is that the hearer recognize the speaker's primary intention. Condition (c) gives the speaker's third intention, namely, that the hearer's recognition of the speaker's primary intention will motivate him to satisfy that intention. And condition (d) specifies the speaker's fourth intention which is that the hearer recognize the speaker's third intention.

In order to give a general analysis of questioning, it is necessary only to combine the analyses of yes/no questioning and wh-questioning. Thus, to ask a question it is sufficient to utter an indicative sentence 'p', or a sentential function 'Fx' with the intention of bringing it about that:

(a) the hearer tells the speaker whether or not p, or for what x, Fx,

(b), (c), and (d) remain the same as before *mutatis mutandis*.

This combined analysis, however, is somewhat complicated; so the question arises as to whether there is any possible simplification to be obtained by treating yes/no questions as a variety of wh-questions, or else by treating wh-questions as a variety of yes/no questions. One way of treating yes/no questions as a variety of wh-questions imagined by Prior, though not recommended by him, is the following.[40] Questions of the form, 'Is it the case that p?' are reducible to questions of the form, 'For what δ, δp?', where the variable 'δ' ranges over the operators 'It is the case that' and 'It is not the case that'. The speaker's intention in uttering such a question is to induce the hearer to tell the speaker which substitution for the variable 'δ' of one of the monadic sentential operators 'It is the case that' and 'It is not the case that' turns the open sentence 'δp' into a true closed sentence.

In an interesting article written in 1929, Felix Cohen recommended a procedure almost identical to that of Prior's for treating yes/no questions as wh-questions.[41] Whereas Prior imagines a variable ranging over the monadic sentential operators 'It is the case that' and 'It is not the case that', Cohen invents a variable, 'ψ', which ranges over the affirmative and negative copulae 'is' and 'is not'. The interrogative 'Is John tall?'

for example, is treated as the wh-question, 'For what ψ, John ψ tall?'. The speaker's intention in uttering this question is that the hearer tell the speaker which substitution for the variable 'ψ' of one of the copulae 'is' or 'is not' turns the open sentence 'John ψ tall' into a true closed sentence.

Although both proposals, of Prior and Cohen, succeed in reducing yes/no question to wh-questions, neither proposal is very satisfactory for the problem at hand which, it will be remembered, was to simplify the general analysis of questioning. Although Prior and Cohen reduce yes/no questions to wh-questions, because both writers introduce a type of variable distinct from the usual individual variable, neither one succeeds in really simplifying the general analysis of the act of questioning. That is, if one accepts Prior's reduction, for example, the general analysis of questioning is as follows. One utters an open sentence 'Fx', or an open sentence 'δp' with the intention of bringing it about that:

(a) the hearer tells the speaker for what x, Fx, or for what δ, δp,

(b), (c), and (d), again, remain the same *mutatis mutandis*.

This analysis, even given the reduction of yes/no questions to wh-questions is no simpler than the combined analysis given above without the reduction.

There is, however, a method of reducing yes/no questions to wh-questions that does not require the introduction of variables other than the usual individual variable, and which allows for genuine simplification in the general analysis of questions. Assuming a Tarskian semantics, since a true closed sentence is satisfied by all objects and since a false closed sentence is satisfied by none, yes/no questions may be treated as limiting cases of wh-questions; that is, as requests for information as to whether

all or no objects satisfy a given closed sentence. Whereas the answer to an ordinary wh-question is that certain objects satisfy the sentential function with which the wh-interrogative is identified, the answer to a yes/no question is either that all objects satisfy the closed indicative sentence with which the yes/no interrogative is identified (if that sentence is true), or else that no objects satisfy it (if the sentence is false). More accurately, in order to take account of the fact that there are wh-interrogatives with more than one wh-variable, e.g., 'Who said what to whom?', the response to an interrogative must be construed in terms of what sequences of objects satisfy the sentence in question. The response to the yes/no interrogative, 'Is Muscat the capital of Oman?', for example, would be that the interrogative, construed as a stylistic variant of the indicative sentence, 'Muscat is the capital of Oman', is satisfied by all sequences of objects. Having noted this complication, however, it will subsequently be ignored, and we shall speak in terms of a sentence (whether closed or open) being satisfied by individual objects rather than sequences of objects.

The analysis of the act of questioning, therefore, can be generalized as follows. To ask a question it is sufficient to utter an indicative sentence 'p', which is either a closed sentence or an open one, and whose subject and verb are either in standard order or transposed, with the intention of bringing it about that:

(a) the hearer tells the speaker for what x, p,

(b) the hearer believes that the speaker intends that he tell the speaker for what x, p,

(c) the hearer has as a reason for telling the speaker for what x, p, his belief that the speaker intends that he tell him for what x, p; and having this as a reason will cause him to tell the speaker for what x, p,

(d) the hearer believes that the speaker intends that his belief that the speaker intends that he tell the speaker for what x, p, will cause him to tell the speaker for what x, p.

Although this analysis of interrogatives is fairly novel, it is not entirely so. Felix Cohen, for example, in the article referred to, analyses wh-interrogatives as sentential (propositional) functions uttered with the intention of inducing a hearer to tell the speaker for what objects the function is satisfied. Cohen's analysis, however, does differ, as has been seen, in analysing yes/no interrogatives as open sentences in which there occurs a variable ranging over affirmative and negative copulae, instead of analysing them, as here, as closed sentences satisfied by all or no (sequences of) objects.

The proposed analysis is also very similar to David Harrah's influential analysis of questions in *Communication: A Logical Model*, although it does differ in certain major respects.[42] Harrah, first of all, analyses yes/no questions as disjunctive statements. The question, 'Is John tall?', for example, is analysed as the statement of fact, 'John is tall or he isn't tall'. The purpose for making such a statement of fact is to induce the hearer to respond by asserting one of the disjuncts: by asserting either 'John is tall' or 'John isn't tall'. Although Harrah does not explicitly analyse interrogative sentences as stylistic variants of indicatives, such an analysis seems at least in the spirit of his theory; for he does maintain that "questions are statements", and statements are characteristically made using an indicative sentence. Moreover, the proposal to regard interrogative sentences as stylistic variants of indicative sentences enables one to avoid the counterintuitive feature of Harrah's theory of regarding questions as statements; for indicative sentences

need not be used for the purpose of making a statement. The stylistically variant indicative sentence 'Is John tall?', for example (a stylistic variant of 'John is tall') may be uttered with the intention of inducing a hearer to tell the speaker whether John is tall, but without the intention of stating that he is.

It might also be argued that the proposed theory has the advantage over Harrah's theory of sticking more closely to the phenomena. Thus, although one might readily agree that the interrogative, e.g., 'Is John tall or isn't he?' is disjunctive, there seems little reason to regard the simple interrogative sentence 'Is John tall?' as similarly disjunctive as does Harrah. One deviates less from the linguistic phenomena in analysing this latter sentence as a form of the atomic sentence 'John is tall' than one does in analysing it as disjunctive.

Harrah's analysis of wh-questions also differs from the proposed analysis in construing wh-interrogatives as used to make a true or false statement of fact. Thus, instead of analysing wh-interrogatives as sentential functions of the form, 'Fx' Harrah analyses them as closed, existential assertions of the form '(Ex)(Fx)'. For example, instead of regarding the interrogative, 'Who is talking to Mary?' as the sentential function, '$x_{(a\ person)}$ is talking to Mary', he regards it as the existential assertion, 'Someone is talking to Mary'. The speaker's intention, according to Harrah, in uttering a wh-question, however, is the same as on the present account, namely, that of inducing a hearer to respond by naming the objects that satisfy the interrogative.

In "The Thought: A Logical Inquiry" Frege adumbrated a theory of interrogatives very similar to the one proposed here. Although Frege's

remarks are too brief to allow judgment, he seems to have held that yes/no interrogatives express a proposition, while wh-interrogatives, which he calls "word-questions", express a propositional function. To quote:

> In a word-question we utter an incomplete sentence which only obtains a true sense through the completion for which we ask. Word-questions are accordingly left out of consideration here. Sentence-questions are a different matter. We expect to hear 'yes' or 'no'. The answer 'yes' means the same as an indicative sentence, for in it the thought that was already completely contained in the interrogative sentence is laid down as true. So a sentence-question can be formed from every indicative sentence. . . An interrogative sentence and an indicative one contain the same thought; but the indcative contains something else as well, namely, the assertion. The interrogative sentence contains something more too, namely a request.[43]

More recently, Searle has taken the similar position that yes/no interrogatives have a propositional content, and that wh-interrogatives are to be analysed as propositional functions.[44] Searle, however, does not draw the same conclusion from this position as is drawn here, namely, that interrogatives are true or false and that the speaker's intention in uttering an interrogative is that the hearer tell the speaker which it is, or, for wh-interrogatives, that the hearer tell the speaker what substitutions make the wh-interrogative true.

Lewis, Leonard, and Langford have all also held that interrogatives have a propositional content; but they left wh-interrogatives out of consideration.[45] Leonard, moreover, also applied to interrogatives the argument that earlier was applied to imperatives, namely, that the fact that one can respond to an interrogative by saying 'yes' or 'no' is evidence that interrogatives are true or false. To quote:

> If someone were to ask me, 'Is the diameter of the Earth greater than 500 miles?' I might answer by saying 'Yes' or 'That's correct", or even 'That is true'. Surely the antecedent for 'that', in 'That is

> true', is the topic of concern (i.e., the proposition expressed by) the original question.[45]

It should also be mentioned that a theory of interrogatives very similar to the proposed theory was briefly outlined by Stenius in his essay, "Mood and Language-Game".[47]

It is also worthwhile comparing the proposed theory of interrogatives with an alternative theory. According to Aqvist,[48] and more recently Hintikka,[49] interrogatives are equated with imperatives. The interrogative, 'Did Carter win the election?', for example, is equated with the imperative, 'Make it be the case that I know that Carter won the election or I know that Carter didn't win the election!'. Similarly, the wh-question, 'Who won the election?' means the same as the imperative, 'Make it be the case that I know for what x, x won the election!'.

Similarly, Katz and David Lewis equate interrogatives and explicit performatives.[50] The interrogative, "Did Carter win the election?', for example, is paraphrased by the explicit performative, 'I request that you tell me whether Carter won the election or whether he didn't win the election'. Katz and Lewis differ, however, with regard to the question of whether such explicit performative utterances are true or false. Whereas according to Lewis in uttering the explicit performative 'I request that you tell me whether . . .' one makes the true or false factual statement that one requests that . . ., according to Katz in uttering an explicit performative sentence one makes no statement of fact at all.

The principal criticism to be made of the proposals of Aqvist, Hintikka, Katz, and Lewis is that interrogative inferences that seem intuitively valid are not validated by their proposals. For example, if

the inference from 'Does $E=mc^2$?' to 'Does $E=mc^n$?' is counted valid in the sense that a true answer to the first question ('Yes, $E=mc^2$') implies the (true) answer to the second question ('Yes, $E=mc^n$'), the apparently similar inference from 'Does $E=mc^3$?' to 'Does $E=mc^n$?' is not validated since a true answer to the first question ('No, $E\neq mc^3$') does not imply the (true) answer to the second question ('Yes, $E=mc^n$'). This may not be a problem for Aqvist, Hintikka, and Lewis since they do not explicitly state that such inferences as the one from 'Does $E=mc^2$?' to 'Does $E=mc^n$?' should be considered valid. Belnap and Steel, in fact, maintain that there are no valid inferences involving interrogatives.[51] But it is a problem for Katz since he explicitly maintains that such inferences are valid. In fact, if one construes interrogatives as synonymous with imperatives or explicit performatives, then if one grants that there are valid inferences involving imperatives and explicit performatives one must also grant that there are valid inferences inferences involving interrogatives.

In order to overcome this problem, Katz formulates the criterion for the validity of interrogative inferences in the following way: instead of counting an interrogative inference as valid if and only if the answer to the premise interrogative(s) implies the answer to the conclusion, it is counted valid if and only if, if an *affirmative* answer to the premise interrogative(s) *were* true, it *would be* a true answer to the interrogative conclusion.[52] Thus, for example, the inference already mentioned from 'Does $E=mc^3$?' to 'Does $E=mc^n$?' is counted valid by Katz on the grounds that if the affirmative answer 'Yes, $E=mc^3$' *were* a true answer to the premise interrogative, it would be a true answer to the interrogative conclusion, 'Does $E=mc^n$?'.

This modified criterion might still be criticized since it is not clear in what sense an affirmative answer to a given interrogative premise itself constitutes an answer to a different interrogative conclusion. That is, in general, it is not clear whether the answer, 'Yes, it is the case that p', uttered in response to the question 'Is it the case that p?', itself constitutes an answer to the interrogative conclusion, 'Is it the case that q?', even though 'It is the case that p' implies 'It is the case that q.' If the questioner does not know that 'It is the case that p' implies 'It is the case that q', then telling him that it is the case that p does not seem to answer his question as to whether it is the case that q. This difficulty may be easily overcome, however, by slightly changing Katz's criterion for validity from ". . . *would be* a true answer to the interrogative conclusion" to ". . . *would imply* the (true) answer to the interrogative conclusion". Thus, for example, the inference from 'Does $E=mc^3$?' to 'Does $E=mc^n$?' is validated since if an affirmative answer ('Yes, $E=mc^3$') to the premise interrogative were true, it would imply the true answer ('Yes, $E=mc^n$') to the interrogative conclusion.

If this modification is made, then Katz's criterion of validity for interrogative inferences and the criterion resulting from the proposed theory of interrogatives coincide; for it will be noticed that the affirmative answer to an interrogative is just the indicative sentence of which, according to the proposed theory, the interrogative is a stylistic variant. The affirmative answer, 'It is the case that p', to the interrogative 'Is it the case that p?', and the indicative sentence, 'It is the case that p', of which the interrogative, 'Is it the case that p?' is a stylistic variant, are the same. According to the proposed theory, the inference

from 'Is it the case that p?' to 'Is it the case that q?' is valid if and only if 'It is the case that p' implies 'It is the case that q'. And this coincides with Katz's modified criterion that the inference is valid if and only if, if an affirmative answer ('It is the case that p') to the premise interrogative were true, it would imply the true answer ('It is the case that q') to the interrogative conclusion.

However, whereas the criterion of validity for interrogative inferences falls out quite naturally from the proposed theory of interrogatives (an inference involving interrogatives is valid if and only if the inference involving the indicative sentences of which those interrogatives are stylistic variants is valid), Katz's criterion seems to conflict with his own theory. That is, Katz does not explain why, if interrogatives and explicit performatives are synonymous, the criterion of validity for inferences involving interrogatives is not the same as the general criterion of validity for inferences involving explicit performatives. In general, according to Katz, an inference from the explicit performative, 'I request that you make it be the case that p' to 'I request that you make it be the case that q' is valid if and only if 'You make it be the case that p' implies 'You make it be the case that q'. Yet, Katz maintains that the inference from 'I request that you tell me whether it is the case that p' (which he holds to be synonymous with 'Is it the case that p?') to 'I request that you tell me whether it is the case that q' (which he holds to be synonymous with 'Is it the case that q?') is not valid if and only if 'You tell me whether it is the case that p' implies 'You tell me whether it is the case that q'. Instead, as has been seen, he counts that inference as valid if and only if 'You tell me that it is the case that p; and it is the case

that p' implies 'You tell me that it is the case that q; and it is the case that q'. Katz does not explain why this fact does not indicate that interrogatives and explicit performatives are not synonymous, rather than indicating, as he would have it, that explicit performatives that are synonymous with interrogatives have a different criterion of validity than do other explicit performatives.

FOOTNOTES TO CHAPTER I

[1]Charles Morris, *Foundations of the Theory of Signs* (Chicago: University of Chicago Press, 1938); and Rudolf Carnap, *Foundations of Logic and Mathematics* (Chicago: University of Chicago Press, 1939), pp. 3-11.

[2]Alvar Ellegard, *The Auxiliary Do* (Stockholm: Almqvist & Wiksell, 1953), pp. 153-163.

[3]Otto Jespersen, *A Modern English Grammar*, Part 5 (Copenhagen: Ejnar Munksgaard, 1940), p. 508.

[4]Henry Sweet, *A New English Grammar*, Part 2 (London: Oxford University Press, 1960), p. 88.

[5]Victor Engblom, *On the Origin an Early Development of the Auxiliary Do* (Lund: C.W.K. Gleerup, 1938), p. 60.

[6]Margaret Boni, ed., *Fireside Book of Favorite American Songs* (New York: Simon & Schuster, 1952), p. 21.

[7]*Henry V*, 5.2.129.

[8]R.M. Hare, *Language of Morals* (London: Oxford University Press, 1969), pp. 17-23; and *Practical Inferences* (Berkeley: University of California Press, 1972), pp. 7-12.

[9]Ludwig Wittgenstein, *Philosophical Investigations* (New York: Macmillan Company, 1968), p. 11; Eric Stenius, "Mood and Language-Games," in J.W. Davis, Hockey, and Wilson, eds., *Philosophical Logic* (New York: Humanities Press, 1969), pp. 251-271.

[10]H.S. Leonard, "Interrogatives, Imperatives, Truth, Falsity and Lies," *Philosophy of Science* 26 (1959): 172-186.

[11]C.I. Lewis, *An Analysis of Knowledge and Valuation* (La Salle: Open Court, 1971), pp. 48-50; C.H. Langford, "The Notion of Analysis in Moore's Philosophy," in P.A. Schilpp, ed., *The Philosophy of G.E. Moore* (La Salle: Open Court, 1968), pp. 332-333; and Langford, "Introduction to Logic," *Philosophy and Phenomenological Research* 14 (1954): 564-565; John Searle, *Speech Acts* (London: Cambridge University Press, 1969), pp. 22-23.

[12]See C.I. Lewis, *An Analysis of Knowledge and Valuation*, p. 49n7.

[13]Gottlob Frege, "The Thought: A Logical Inquiry," in P.F. Strawson, ed., *Philosophical Logic* (London: Oxford University Press, 1967), p. 21.

[14]Peter Geach, "Assertion," reprinted in Jay F. Rosenburg and Charles Travis, eds., *Readings in the Philosophy of Language* (Englewood Cliffs: Prentice-Hall, 1971), pp. 252-253.

[15]Leonard, "Interrogatives, Imperatives, Truth, Falsity and Lies," pp. 172-186.

[16]Alf Ross, *Directives and Norms* (New York: Humanities Press, 1968), p. 34.

[17]J.J. Katz, *Propositional Structure and Illocutionary Force* (New York: T.Y. Crowell, 1977), p. 154,158.

[18]Charles Landesman, *Discourse and Its Presuppositions* (New Haven: Yale University Press, 1972), pp. 64-66.

[19]John Dewey, *Experience and Nature* (New York: Dover, 1958), p. 170, 173; G.H. Mead, *Mind, Self, and Society* (Chicago: University of Chicago Press, 1967), pp. 141-142. Hintikka has also called attention to two passages in Peirce on the dialogical character of thought, *Collected Papers* (Cambridge: Harvard University Press, 1931-1958), Vol. 6, Sec. 338, and Vol. 4, Sec. 421. For Plato's remarks on "inner dialogue" see: *Theatetus* 190A and *Sophistes* 263E.

[20]This argument for construing 'you' as the underlying subject of imperatives is presented in J.J. Katz and Paul M. Postal, *An Integrated Theory of Linguistic Descriptions* (Cambridge: MIT Press, 1964), p. 75, and is frequently repeated in the literature.

[21]This argument is also presented by Katz and Postal and is also frequently repeated in the literature.

[22]Jack E. Conner, *A Grammar of Standard English* (Boston: Houghton Mifflin, 1968), p. 172.

[23]Hector-Neri Castaneda, *The Structure of Morality* (Springfield: Charles C. Thomas, 1974), p. 36; and P.H. Nowell-Smith, *Ethics* (London: Penguin Books, 1967), p. 11; R.M. Hare, *The Language of Morals* (London: Oxford University Press, 1969), p. 46.

[24]Roger Wertheimer, *The Significance of Sense* (Ithaca: Cornell University Press, 1972).

[25]Castaneda, *The Structure of Morality*, pp. 93-94.

[26]See notes 16 and 17 above.

[27]Peter Geach, "Imperative and Deontic Logic," in Geach, *Logic Matters* (Berkeley: University of California Press, 1972), p. 272 (my underlining).

[28]G.E.M Anscombe, *Intention* (Ithaca: Cornell University Press, 1969), p. 56.

[29]Peter Geach, "Imperative Reference," reprinted in Geach, *Logic Matters*, p. 281.

[30]G.H. von Wright, *Norm and Action* (London: Routledge & Kegan Paul, 1963), p. 102.

[31]Archiball Hill, *Introduction to Linguistic Structures* (New York: Harcourt, Brace, 1958), p. 350.

[32]A. Hofstadter and J.C.C. McKinsey, "On the Logic of Imperatives," *Philosophy of Science* 6 (1939): 446-457.

[33]A. Mally, *Grundgesetze des Sollens: Elemente der Logik des Willens* (Graz: Leuschner & Lubensky, 1926).

[34]David Lewis, "General Semantics," in Donald Davidson and Gilbert Harman, eds., *Semantics of Natural Language* (Dordrecht: D. Reidel, 1972), pp. 205-212; J.J Katz, *Propositional Structure and Illocutionary Force.*

[35]J.L. Austin, *How to Do Things with Words* (New York: Oxford University Press, 1965), p. 88. Searle has also called attention to a similar passage in "Other Minds," *Aristotelian Society Proceedings* 20 (1946): 173-174.

[36]Searle, *Speech Acts*, p. 68.

[37]Katz, *Propositional Structure and Illocutionary Force*, p. 188.

[38]*Ibid.*, p. 241.

[39]H.G. Bohnert, "The Semiotic Status of Commands," *Philosophy of Science* 12 (1945): 302-315.

[40]A.N. Prior, *Objects of Thought* (London: Oxford University Press, 1971), pp. 76-77.

[41]F.S. Cohen, "What Is a Question?", *The Monist* 39 (1929): 350-364.

[42]David Harrah, *Communication: A Logical Model* (Cambridge: MIT Press, 1963).

[43]Frege, "The Thought: A Logical Inquiry," p. 21.

[44]Searle, *Speech Acts*, pp. 30-32.

[45]See notes 10 and 11 above.

[46]Leonard, "Interrogatives, Imperatives, Truth, Falsity, and Lies," p. 183.

[47]Eric Stenius, "Mood and Language-Games," p. 270.

[48]Lennart Aquist, *A New Approach to the Logical Theory of Interrogatives* (Uppsala: Almqvist & Wiksell, 1965); and "On the Analysis and Logic of Questions," in R.E. Olson and A.M. Paul, eds., *Contemporary Philosophy in Scandanavia* (Baltimore: Johns Hopkins Press, 1972), pp. 27-39.

[49]Jaakko Hintikka, "Questions about Questions," in M.K. Munitz and P.K. Unger, eds., *Semantics and Philosophy* (New York: NYU Press, 1974), pp. 103-158; and "Answers to Questions," in Hintikka, *The Intentions of Intentionality and Other New Models for Modalities* (Dordrecht: D. Reidel, 1975), pp. 137-158.

[50]David Lewis, "General Semantics," and J.J. Katz, *Propositional Structure and Illocutionary Force.*

[51]Nuel Belnap, Jr. and Thomas Steel, Jr., *The Logic of Questions and Answers* (New Haven: Yale University Press, 1976), p. 1.

[52]Katz, *Propositional Structure and Illocutionary Force*, p. 228.

Chapter II

THE LOGIC OF IMPERATIVES

This chapter is devoted to a discussion of certain main problems in the logic of imperatives, the result of which will be to confirm the analysis of imperatives presented in the first chapter. Discussion of imperative logic centers upon five interrelated topics that have received considerable attention in the literature. These are: the question of whether imperative logic is modal or non-modal; the question of what semantic value for imperatives is analogous to the truth value of indicatives; the problem of formulating criteria of validity for mixed inferences involving imperatives and indicatives; the question of what the negation of an imperative is; and finally the related question of whether the formula '-(!p & !-p)' is a valid formula of imperative logic.

1. Modal vs. Non-Modal

It follows from the theory of imperatives presented in the first chapter that the logic of imperatives, syntactically and semantically, is identical with ordinary sentential logic. If imperatives simply are elliptical indicative sentences, then there is no logic of imperative sentences distinct from the ordinary logic of indicatives. The logic of imperatives and sentential logic are identical. This identity accounts for the fact that even when imperative logic is presumed to be distinct from and independent of ordinary sentential logic, it is often held to be isomorphic with that logic. One of the first formal systems of imperative logic, that of Hofstadter and McKinsey,[1] was indeed isomorphic with sentential logic; and more recently one of the leading proponents of imperative

logic 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 as we want to do. 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.[2]

Among those who have also held that imperative logic is isomorphic with standard sentential logic are Peter Geach and Mark Fischer.[3]

Some writers have accounted for the isomorphism between ordinary sentential logic and imperative logic by maintaining that imperative logic deals not with imperatives as integral wholes, but only with the descriptive content of imperatives; not with the command expressed by an imperative, but *what* is commanded. Hare has presented such an account of imperative logic.[4] According to Hare, the logical relations that obtain both among statements and commands depend only upon the propositional content of statements and commands (what Hare calls the "phrastic component") and are independent of the manner in which such content is presented: independently, that is, of whether such descriptive content is asserted as true or is to be made true. Hare terms this independence of the logical relations obtaining among propositional contents from the attitude taken toward such propositional content the "dictive indifference of logic", i.e., the principle that "any sentence formula which is capable of an indicative interpretation is capable also of an imperative one."[5] In *The Logic of Commands*, Rescher writes to the same effect as Hare as follows:

> Exactly as standard (assertorical) logic occupies itself almost solely with the *content of the assertion made* in a statement (as apart from the personal and historical setting of its assertion) so our logical theory of commands will dwell in the abstract upon the content of *the command given* or *the order issued* (as apart from the particular speech-performance by which it was given and the con-

> crete occasion for its being given) . . . The 'logic of commands' that we envisage does not deal with commands as performances, but rather sets itself the task of elucidating the logical relationships between the *instructions* (or directions) conveyed by commands.[6]

It is a virtue of the proposed theory of imperatives that it offers a simple explanation of the felt isomorphism between imperative and sentential logic and explains the Hare-Rescher account of the isomorphism. If what are called imperative sentences are actually stylistic variants of indicative sentences, then it indeed follows that the logic of imperatives depends upon the descriptive content of imperatives, which is identical with the descriptive content of a corresponding indicative, and is independent of pragmatic factors such as whether the speaker asserts that the descriptive content is true or desires that it be made true. The logic of imperatives is a logic of the descriptive, propositional content of imperatives because imperatives have no other semantic content.

It will undoubtedly be felt that in regarding the logic of imperatives as identical with ordinary sentential logic an essential aspect of imperatives is left out, namely, their prescriptive force. As was argued in the last chapter, however, the prescriptive aspect of an imperative sentence is a function of pragmatic factors, specifically the speaker's intentions in uttering the sentence and the hearer's ability to infer those intentions, and is not part of its semantic content. Imperative sentences themselves are simply stylistic variants of indicative sentences with the same descriptive semantic content as ordinary indicatives. Consequently, if it is desired that the prescriptive aspect of an imperative sentence be represented, one must do so by means of a statement concerning the speaker's intentions in uttering the imperative (elliptical indicative) since those intentions are not represented by the semantic content of the

imperative itself. That is, a logic that takes account of the prescriptive aspect of imperatives by taking account of the speaker's intentions in uttering an imperative may be constructed as a logic of sentences of the form, 'The speaker's intention in uttering the imperative sentence, !p, is to command that p' (where 'p' is an indicative sentence). Such a logic was suggested by Jørgensen[7] in one of the first articles on imperative logic, and has subsequently been developed by Hanson, Fischer, and (with modifications) G.B. Keene.[8] More accurately, those authors recommend developing imperative logic as a logic of sentences of the form 'It is commanded that p' or 'So-and-so commands that p'; and although 'The speaker's intentions in uttering the imperative sentence, !p, is to command that p' and 'So-and-so commands that p' are not equivalent (the former implies the latter, but the latter does not imply the former since 'So-and-so commands that p' does not imply that so-and-so commands that p by uttering an imperative sentence) it may be argued that they are intended as equivalent by the writers mentioned since it is clear that the sort of commanding they have in mind is that which is accomplished by means of uttering an imperative sentence. Thus, Jørgensen writes that the difference between an imperative sentence and a true or false sentence of the form, 'There is a person who is commanding that such and such action is to be performed', "seems . . . not to be of a logical but rather of a psychological nature."[9] Similarly, Fischer writes:

> I write Oxp and interpret it as 'x commands that p' . . . Thus, if for x in 'Oxp' is substituted the first person pronoun 'I' we obtain . . . an imperative sentence. If any other name or uniquely referring expression (referring to a person) is substituted we obtain an indicative sentence reporting a command.[10]

Somewhat more accurately, Fischer might have said that when 'I' is substituted

for 'x', the result is not an imperative sentence, but rather an explicit performative, 'I command that p'; but it will be remembered that it has been maintained by Katz and David Lewis that imperatives and explicit performatives are synonymous.

The logic of imperatives recommended by Bohnert[11] might also be regarded as equivalent to a logic of sentences of the form 'It is commanded that p'; for the statement with which Bohnert holds imperatives to be synonymous, namely, 'Either you will make it be the case that p, or you will incur a sanction' and the statement 'It is commanded that p' might (with relatively minor qualifications) be held to be equivalent.

Whereas a logic of imperatives, construed as identical with ordinary sentential logic formalizes the syntax and semantics of imperatives since syntactically what are called imperative sentences are stylistic variants (because elliptical) of ordinary indicative sentences, and semantically have the same truth conditions as ordinary indicative sentences, a logic of sentences of the form, 'It is commanded that p', or 'So-and-so commands that p' formalizes the pragmatics of imperatives. The formulae of such a logic describe what speech act is performed by the utterance by a speaker of an imperative sentence. Whereas the formalized syntax and semantics of imperatives is a non-modal logic, since it is identical with ordinary sentential logic, the formalized pragmatics of imperatives, i.e., the logic of sentences of the form 'It is commanded by so-and-so that p' is a modal logic. That is, it is a modal logic in the sense that the truth value of sentences of the form 'It is commanded that p' is not a function of the truth value of 'p'. Whether or not one chooses to consider that a sufficient condition of modality, however, is not important. What is important

is that the formalized pragmatics of imperatives, construed as a logic of sentences of the form 'It is commanded by so-and-so that p' is not isomorphic with ordinary sentential or predicate logic. This accounts for the fact that according to certain writers the logic of imperatives *per se* is modal. If the proposed theory of imperatives is correct, what those authors regard as the logic of imperatives is best regarded as the formalized pragmatics of imperatives. Sentences of the form, 'It is commanded by so-and-so that p' specify the use to which imperative sentences are put--the speech act that is performed by the utterance of an imperative.

The logic of sentences of the form 'It is commanded that p', which formalizes the pragmatics of imperatives, is analogous to what Rescher has called "assertion logic", i.e., the logic of sentences of the form, It is asserted that p', or 'So-and-so asserts that p'. Sentences of that form specify what speech act is performed by a speaker in uttering an indicative sentence, 'p' (elliptical or non-elliptical). Exactly as it was argued that it is not part of the semantic content of an imperative sentence that it is uttered for the purpose of issuing a command, so too is it not part of the semantic content of an indicative sentence that it is uttered for the purpose of making a statement. An indicative sentence (proposition) may be asserted or not, but has the same semantic content whether or not it is asserted. Even the sentence, 'The sentence is used to make a statement' may be asserted or not as is clear from the fact that it may occur, for example, as the antecedent or consequent of a conditional in which case it is not asserted. Consequently, if it is desired that the assertoric force of an indicative sentence be represented, then, since it is not represented by the semantic content of the indicative sentence itself

it must be represented by a true or false statement of the form, 'So-and-so asserts that p'. Assertion logic--the logic of sentences of the form 'So-and-so asserts that p'--formalizes the pragmatics of indicatives. The formulae of that logic specify what speech act is performed by a speaker in uttering an indicative sentence, just as sentences of the form, 'So-and-so commands that p' specify what speech act is performed by a speaker in uttering an imperative (i.e., an elliptical sentence) sentence. Assertion logic, like the formalized pragmatics of imperatives is a modal logic--at least in the sense that the operator, 'So-and-so asserts that' is not truth functional.

To summarize, the formalization of the logic of imperatives, on the proposed theory, is a straightforward matter since the variables of ordinary sentential logic may be interpreted either as indicative sentences or as imperatives, i.e., elliptical indicatives. In addition to formalizing the syntax and semantics of imperatives as identical to ordinary sentential logic, however, one may also formalize the pragmatics of imperatives by using sentences of the form 'It is commanded that p', or, 'So-and-so commands that p'. Sentences of that form specify what speech act is performed by a speaker in uttering an imperative sentence. In order to formalize the pragmatics of imperatives, one need only introduce the sentential operator 'It is commanded that', plus suitable axioms governing the operator. One axiom that is practically unavoidable either as a theorem or in the form of a rule of inference is the following: 'If p implies that q, then if it is commanded that p it is commanded that q'. In addition to introducing the sentential operator, 'It is commanded that', into sentential logic, one may also introduce the operators, 'It is asserted that' and 'It

is asked for what x'. Formulae containing those operators specify the diverse uses to which an indicative sentence may be put. The most natural way of developing logics of sentences of the form, 'It is commanded that p', 'It is asserted that p', and 'It is asked for what x, p' would seem to be as isomorphic logics.

Now that the idea of a formalized pragmatics of imperative sentences, construed as a logic of sentences of the form 'It is commanded that p', has been introduced, it is necessary to face a fundamental question concerning such a logic, namely, are any of its formulae logically true, or even true *simpliciter*? This question is necessary because the characteristic theorem of such a logic, 'p→q .⊃. Cp→Cq', interpreted as 'If p implies q, then if it is commanded that p it is commanded that q' is at best dubious, and at worst untrue. Since persons are often unaware of the consequences of what they command, it is not clear whether they command the logical consequences of what they command. This is equally a problem in assertion logic since it is unclear in what sense all the logical consequences of an assertion are asserted. And similarly in epistemic and doxastic logic: in what sense are the logical consequences of what is known or believed also known or believed? There is some difference, however, in the severity of the problem this question poses for epistemic logic on the one hand, and for the formalized pragmatics of imperatives on the other; for in epistemic logic if the characteristic formula, 'p→q .⊃. Kp→Kq', is rejected, there at least remains as valid the formula 'Kp⊃p'; whereas in the formalized pragmatics of imperatives, if the formula 'p→q .⊃. Cp→Cq' is rejected, there remains virtually nothing of that logic.

It should be emphasized, however, that even if the characteristic

formula of the formalized pragmatics of imperatives were rejected and nothing remained of such a logic but substitution instances of truths of sentential logic (formulae such as 'If it is commanded that p then it is commanded that p') this would not impugn the analysis of imperatives presented here. The formalized syntax and semantics of imperatives would still be identical with ordinary sentential logic; but the formalized pragmatics of imperatives would be uninteresting, though not non-existent.

Von Wright has attempted to meet this problem by defending the position that it is a logical truth that what is implied by what is commanded is also commanded. To quote:

> Is it not logically possible that the authority shows great anxiety to make his will effective as far as his manifest prohibitions and orders are concerned, but is completely indifferent towards the conduct of the norm-subjects as far as the derived prescriptions are concerned? The answer to the last question is that such an attitude on the part of the norm-authority is not logically possible. For let us recall what, on our definition, it means to say that a certain prohibition is entailed by a given set of prescriptions. It means that it is not logically possible in any circumstances to do the prohibited thing without disobeying some orders or breaking some prohibitions which have already been given (are in the set). If therefore, the authority manifests anxiety to make the norm-subjects obey these latter commands and prohibitions, e.g., by punishing the disobediant, he *ipso facto* also manifests anxiety to make the subjects observe the entailed prohibitions. The derived commands, prohibitions, and permissions of a corpus of prescriptions, we could say, are as much 'willed' by the norm-authority as the original commands, prohibitions, and permissions in the corpus. The derived norms *are* necessarily in the corpus with the original ones. They are there, although they have not been expressly promulgated. Their promulgation is concealed in the promulgation of other prescriptions.[13]

Von Wright's defense, however, does not seem to have found many adherents. Other writers maintain that the attitude one manifests toward one sentence (proposition) such as intending that it be made true or that it be believed, one does not necessarily manifest toward sentences that are equivalent to, or, *a fortiori* merely implied by the given sentence.

A quite different solution to this problem is urged by Moritz.[14] Instead of defending the characteristic theorem, 'p→q .⊃. Cp→Cq', of the formalized pragmatics of imperatives as valid, as does Von Wright, Moritz admits that it is false of the actual world, but maintains that it expresses not an intended logical truth, but rather a norm. Moritz, that is, interprets the characteristic formula, 'p→q .⊃. Cp→Cq', not as the falsehood that all the logical consequences of what is commanded are also commanded, but rather as a norm requiring that whatever is implied by what is commanded, is also commmanded. Similarly, Kielkopf has urged interpreting the formulae of epistemic and doxastic logic not as truths but as norms.[15] The characteristic theorem of those logics is to be interpreted in similar fashion as a norm prescribing that whatever is implied by what is believed or known also be believed or known.

It is possible, however, to interpret the formulae of the formalized pragmatics of imperatives, assertion logic, epistemic and doxastic logic both as truths (though not logical truths), and at the same time as norms. This is possible since it is possible to construe norms (laws, rules) in the same manner as imperative sentences, namely, as indicative sentences to be made true. Since this point will be of importance for the last two chapters in which ought-sentences are discussed, it is important that it be clarified. A norm (rule) is an indicative sentence (expressing a proposition or not) that can be made true. To make the indicative sentence that expresses a norm true is to act in conformity with the norm; to make it false to violate it. Although it is usually held that ought sentences enunciate norms (rules), in fact rules are often expressed by means of non-modal indicative sentences. The following are some cases

in point: "A single rule can have many different formulations . . . e.g., Pawns reaching the last rank are replaced by pieces",[16] "The rule of recognition would simply be that whatever Rex I enacts is law";[17] "After a statement of the rule requiring a special pass, there might be added the second-order rule, 'Absolutely no personnel of any rank will be exempted'".[18] In fact, according to Georges Kalinowski, most laws are enunciated by non-modal indicative sentences. To quote:

> It is quite rare for a legislator to enunciate juridical norms in the form of normative propositions as described above (ought-sentences) . . . A legislator most often speaks as though he were declaring a matter of fact, or he uses the future tense . . . A legislator prefers to describe the juridical institutions to directly enunciating a rule.[19]

The French constitution, for example, consists almost entirely of present indicative sentences, whereas the American constitution consists almost entirely of future indicatives--provided, that is, that 'shall' sentences, e.g., 'The President shall hold his office during the term of four years', may be construed as future indicatives.

One argument for interpreting shall sentences as future indicatives is that the translation of a shall sentence into French is a future indicative. If translation maintains synonymy and the translation of a shall sentence is a future indicative sentence, then it follows that the shall sentence itself is a future indicative. Of course, it may be objected that the future tense in French is ambiguous, sometimes indicating a future action and sometimes enunciating a prescription; but such ambiguity must be proved rather than simply assumed. Meanings, like other entities, should not be multiplied without necessity; and there is no necessity for assuming that future indicative sentences such as 'Le Président sera élu . . .' or 'The President shall hold . . .' are ambiguous. The prescriptive

aspect of such sentences may easily be accounted for as a function of the speaker's intention that the sentences be made true. There is as little need to assume that 'shall' or 'will' is ambiguous as there is to assume that 'stand', for example, is ambiguous, having one meaning in the sentence 'You are standing on a spot at 74° longitude and 39° lattitude', and another, prescriptive, meaning in the sentence, 'You are standing on my foot'. This latter sentence has prescriptive force simply because the speaker intends, and the hearer is easily able to infer that he intends, the hearer to remove his foot, and not because 'stand' possesses some sort of prescriptive meaning in the sentence 'You're standing on my foot' that it lacks in other contexts.

It is possible, then, to regard laws as embodied, for example, by the indicative sentences of the American constitution as descriptions of an ideal state of affairs, uttered (written) with the intention of inducing those to whom the sentences are addressed of making reality be such as to correspond to the description. The American constitution may be regarded as a description of what our founding fathers regarded as an ideal form of government; a government in which, e.g., 'The President shall (will) hold his office during the term of four years' is true. The constitution is obeyed if the sentence 'The President shall hold his office during the term of four years' is made true, and it is disobeyed if that sentence is made false: if, for example, the president is deposed by a coup d'état before the end of his four year term. If it be objected that the shall sentences of the American constitution are not true or false non-modal indicative sentences, but are equivalent to normative ought-sentences, then a sentence might be chosen instead from the French constitution, e.g.,

'Le président de la République nomme le Premier ministre', to illustrate the point that laws may be regarded as non-modal indicative sentences that are obeyed by being made true. In chapter four, contrary intuitions according to which laws (rules, norms) are enunciated by ought-sentences are accounted for.

If, then, it is possible to construe norms, or rules, as indicative sentences to be made true, it is possible, in particular, to interpret the characteristic theorem, '$p \rightarrow q \ .\supset. \ Cp \rightarrow Cq$', of the formalized pragmatics of imperatives as standing for a true or false indicative sentence that functions as a norm since it is to be made true. The axiom may be interpreted as standing for the true or false indicative sentence, 'If p implies that q, then if it is commanded that p it is commanded that q'. This sentence functions as a norm precisely because it is to be made true. It is made true by commanding all the logical consequences of what one commands. And similarly for the characteristic axiom of assertion logic. The formula '$p \rightarrow q \ .\supset. \ Ap \rightarrow Aq$' may be interpreted as the true or false indicative sentence, 'If p implies that q, then if it is asserted that p then it is asserted that q', that functions as a norm because it is to be made true.

The formulae of epistemic and doxastic logic may be similarly interpreted. Thus, for example, the formula, '$p \rightarrow q \ .\supset. \ Bp \rightarrow Bq$', of doxastic logic is to be interpreted as the possibly true or false indicative sentence functioning as a norm, 'If p implies that q, then if it is believed that p it is believed that q'. This sentence is capable of functioning as a norm because it can be made true by believing the logical consequences of what one believes. There is, thus, no incompatibility

between interpreting the formulae of epistemic and doxastic logic, assertion logic, and the formalized pragmatics of imperatives as standing for indicative sentences having a truth value, and at the same time interpreting them as standing for norms. Such formulae function as norms precisely because they can be made true or false.

This solution to the problem of the interpretation of the formulae of doxastic and epistemic logic is, in effect, the one adopted by Hintikka. According to Hintikka, the formulae of epistemic (and doxastic) logic are to be interpreted as standing for true or false factual statements. Interpreted in this way, however, the formulae are not true of the actual world, but, rather, as Hintikka says, of "every epistemically perfect world". The formula, '$p \rightarrow q \ .\supset. \ Kp \rightarrow Kq$', of epistemic logic, for example, interpreted as meaning 'If p implies that q, then if it is known that p it is known that q' is not true of the actual world since persons are not always aware of the logical consequences of what they know, but is true of every epistemically perfect world--that is, it is true of every world in which persons not only know some things, but also know the logical consequences of what they know. To quote:

> . . . the notion of self-sustenance (validity) is not interpreted as truth on every possible occasion (in every possible situation). This interpretation is not the only natural one, and it is in so many words ruled out in my book (*Knowledge and Belief*, pp. 34-38). Instead, it is proposed that self-sustenance be interpreted as truth in every "epistemically perfect world", that is to say, in every possible world whose inhabitants all follow up the consequences of what they know far enough to see each particular consequence of what they actively know.[20]

Thus, the formula, '$p \rightarrow q \ .\supset. \ Kp \rightarrow Kq$', for example, has a truth value, but is not true of the actual world, but rather of every epistemically perfect world. But, to say that the formula is true of every epistemically

perfect world is tantamount to saying that it is a norm. One puts oneself into an epistemically perfect world by making the indicative sentence expressed by the formula true. One makes the sentence true by knowing (or, in doxastic logic, believing) the logical consequences of what one knows (believes). To make the sentence true is to follow the norm. It is possible, in short, to regard the formulae of epistemic and doxastic logic both as standing for truths and as standing for norms. As truths, they are truths regarding certain sorts of worlds, namely, epistemically perfect ones; and they function as norms because by making the actual world be such that the formulae are true of it, one makes the actual world an epistemically perfect one.

It is interesting to note that not only may the formulae of doxastic, epistemic, and assertion logic, and the formalized pragmatics of imperatives be interpreted as having a truth value and at the same time as functioning as norms, but that it is possible to interpret the formulae of probability calculus in the same way. In fact, such an interpretation seems implicit on the subjective interpretation of probability. The proponents of subjective probability are quite explicit in insisting that the formulae of probability calculus are to be regarded as norms, rules for the fixation of belief. It is necessary and sufficient that one follow those rules to avoid having book made against one; that is, to avoid accepting bets the outcome of which is a guaranteed loss. To quote de Finetti:

> Once an individual has evaluated the probabilities of certain events, two cases can present themselves: either it is possible tobet with him in such a way as to be assured of gaining, or else this possibility does not exist. In the first case one clearly should say that the evaluation of the probabilities given by this individual contain an incoherence, an intrinsic contradiction; in the other case we will say that the individual is coherent. It is precisely this

> condition of coherence which constitutes the sole principle from which one can deduce the whole calculus of probability; this calculus then appears as a *set of rules* to which the subjective evaluation of probability of various events by the same individual ought to conform if there is not to be a fundamental contradiction between them.[21]

But, not only are the formulae of probability calculus interpreted by proponents of subjective probability as norms; they are also interpreted as having descriptive content. The formula, 'Pr(p)=1/2', for example, is interpreted as signifying that a certain individual's degree of belief in 'p' measures 1/2. Thus, the logical consequence principle, '$p \rightarrow q \ .\supset. \ Pr(q) \geq Pr(p)$', may be interpreted as the possibly true or false indicative sentence, 'If p implies that q, then one's degree of belief in q is at least as great as one's degree of belief in p'. Interpreted in this way, however, the principle is not true of the actual world since persons do not always distribute their degrees of belief in such rational fashion. The principle is true, rather, as Hintikka says of the formulae of epistemic and doxastic logic, of every "epistemically perfect world". It is true, that is, of every world in which persons distribute their degrees of belief in such fashion that Dutch book cannot be made against them. In order to ensure against the possibility of having book made against oneself it is necessary that one's degree of belief in q is at least as great as one's degree of belief in p whenever q is a logical consequence of p. Thus, it may be argued that the formulae of the probability calculus function as norms, on the subjective interpretation of probability, precisely because they are descriptive of certain sorts of worlds, namely, worlds in which it is impossible to make Dutch book. In order to put oneself into such a world it is necessary and sufficient to distribute one's degrees of belief in accordance with the axioms of the probability

calculus, interpreted as descriptive sentences that can be made true. Perhaps this is what Ian Hacking meant in discussing subjective probability in writing, "Let me, in closing, question whether there are *any* normative theories. I think there are only descriptive models of reasonable behavior."[22] It might finally be mentioned that it is possible to regard the principle of doxastic logic, '$p \rightarrow q \ .\supset. \ Bp \rightarrow Bq$', interpreted as 'If p implies that q, then if it is believed that p it is believed that q', as a restricted formulation of the logical consequence principle of the probability calculus, '$p \rightarrow q \ .\supset. \ Pr(q) \geq Pr(p)$', interpreted as, 'If p implies that q, then one's degree of belief in q is at least as great as one's degree of belief in p'--restricted, that is, to cases where one's degree of belief is either 1 or 0.

It should be mentioned that more recently Hintikka has taken a rather different approach to the problem of interpreting the formulae of epistemic and doxastic logic.[23] Instead of interpreting those formulae as true of every epistemically perfect world, he now favors interpreting them as true of every possible world, including the actual world, provided they are suitably restricted. The formula, '$p \rightarrow q \ .\supset. \ Bp \rightarrow Bq$', of doxastic logic, for example, interpreted as meaning, 'If p implies q, then if it is believed that p it is believed that q', is taken to be true of every possible world, provided that 'p implies q' is a surface tautology at the depth of 'p'. Although Hintikka's definition of a surface tautology is complicated, intuitively the idea is that there are certain sentences that are such obvious consequences of a given sentence that if one doesn't believe what is asserted by those consequences then one doesn't believe what is asserted by the given sentence. The fact that a person doesn't

believe certain obvious consequences of a given sentence is sufficient grounds for concluding that the person has an insufficient grasp of what is expressed by the sentence to be able to believe it.

If this solution is deemed adequate to the problem of the interpretation of doxastic and epistemic logic, then the same solution may be adopted for interpreting the formalized pragmatics of imperatives. The formula, 'p→q .⊃. Cp→Cq', for example, may be taken to express a logical truth provided it is interpreted as meaning, "If 'p implies q' is a surface tautology at the depth of p, then if it is commanded that p it is commanded that q". No exceptions to this rule are possible. If a person does not command that q, when 'p implies q' is surface tautology at the depth of 'p', then that person does not command that p. But, whether one restricts the formulae mentioned so that they are true of every possible world including the actual one, or whether one interprets them as functioning as norms in virtue of being true of only certain sorts of worlds comparable to epistemically perfect ones, the important point, for present purposes, is that the formulae of the formalized pragmatics of imperatives may be interpreted as having a truth value.

2. Semantic Values

The next topic of discussion is the problem of what designated semantic value for imperatives is analogous to the truth value of indicatives. The two most frequently proposed values are satisfaction and validity. An imperative is satisfied if and only if the action demanded by the imperative (more accurately, demanded by a speaker in uttering the imperative) is performed. An imperative inference is valid, then, if and only if, if the

premise imperative(s) is satisfied, then necessarily the imperative conclusion is satisfied. The inference from 'Prepare the dinner and set the table!' to 'Prepare the dinner!', for example, is valid since if the premise imperative is satisfied, that is, if you prepare the dinner and set the table, then necessarily the imperative conclusion is satisfied, that is, you prepare the dinner. Satisfaction as the designated value for imperatives has been adopted by Hofstadter-McKinsey, Rescher, Sosa, Fischer, and Esperson.[24]

It is important to realize that an imperative is termed "satisfied" if the action demanded by the imperative is actually performed regardless of whether it is performed in response to the imperative or for another reason entirely. The imperative, 'Continue sleeping!', for example, addressed to a sleeping person is satisfied if that person continues sleeping, even though his continued slumber is not the result of an intention to satisfy a command. One might also select as the designated semantic value for imperatives a stronger condition than satisfaction such as obedience, defined as satisfaction of an imperative with the intention of satisfying it. Obedience as a designated value is chosen by Katz;[25] though he doesn't note that such a choice results in the failure of the substitutivity of identicals in imperative contexts. For example, given obedience as the designated semantic value, the inference from 'Read a book by Mark Twain!' to 'Read a book by Samuel Clemens!' is invalid even though Mark Twain is Samuel Clemens; for it does not follow from the fact that someone reads a book by Mark Twain with the intention of satisfying a command that he read a book by Mark Twain that he reads a book by Samuel Clemens with the intention of satisfying a command to read a book by

Samuel Clemens. The hearer will not have the intention of satisfying a command to read a book by Samuel Clemens if he doesn't realize that Mark Twain is Samuel Clemens. In fact, it may be argued that virtually no imperative inference is validated by the proposal to regard obedience as the designated semantic value of imperatives; for it may be argued that the imperative 'Make it be the case that p!' does not imply the imperative 'Make it be the case that q!' even though 'You will make it be the case that p' is equivalent to 'You will make it be the case that q', since it does not follow from the fact that a person makes it be the case that p for the purpose of satisfying a command to make it be the case that p, that he makes it be the case that q for the purpose of satisfying a command to make it be the case that q, because that person may not realize that making it be the case that p is equivalent to making it be the case that q.

An imperative is valid, on the other hand, if it is issued by a speaker who is in a psychological "state of willing that his directive be obeyed."[26] Validity, as the designated semantic value for imperatives, was first suggested by Alf Ross; and later E.J. Lemmon made the analogous proposal that imperatives be regarded as being in force or not in force.[27] An imperative inference is valid, then, if and only if it follows from the fact that the imperative premise(s) is valid that the imperative conclusion is also valid. The inference mentioned above from 'Prepare the meal and set the table!' to 'Prepare the meal!' is valid, if validity is taken to be the designated semantic value of imperatives, since if a speaker desires that the first imperative be satisfied he also desires that the imperative conclusion be satisfied (though this implication, as discussed earlier, may hold only in special sorts of perfect worlds in which persons

command the consequences of what they command).

Although arguments have been proffered to show that satisfaction is more satisfactory as the designated semantic value of imperatives than is validity, and vice versa, if the proposed theory of imperatives is correct then the two semantic values are not competing but complementary. As has already been noted, an imperative, e.g., 'Close the door!', is satisfied if and only if a corresponding indicative sentence, 'You will close the door' is true. But, if what are classified as imperative sentences are simply stylistic variants of a corresponding indicative sentence, then the distinction between satisfying an imperative and making it true is a purely verbal one. If, that is, the imperative, e.g., 'Close the door!', is an elliptical form of the indicative sentence 'You will close the door', then 'Close the door!' is satisfied if and only if it (i.e., '(You will) Close the door!') is true.

An imperative sentence, e.g., 'Close the door!' is valid, on the other hand, if and only if the indicative sentence, "The imperative, 'Close the door!' is uttered by a speaker who is in a psychological state of willing that his directive be obeyed" is true--or, more concisely, if the indicative sentence, 'The speaker commands that you close the door' is true. But sentences of the form, 'So-and-so commands thatp (by uttering a certain imperative sentence)' are just the sort of sentences that are used for formalizing the pragmatics of imperatives. The validity of an imperative is another name for the truth of a sentence of the form 'So-and-so commands that p', describing what speech act is performed by the utterance of a given imperative sentence. An imperative is valid if and only if a sentence of that form is true. As was mentioned before, logics of sentences

of the form 'So-and-so commands that p' have been developed by Hanson, Fischer, and Keene;[28] and although those authors do not note the fact, such logics are equivalent to a logic based on validity as the designated semantic value of imperatives.

One advantage of the proposed theory of imperatives, then, is that it is more conservative than other theories, at least in the respect of not positing semantic values for imperatives other than the semantic value that is most entrenched, namely, truth. Since what are called imperative sentences are construed as elliptical indicatives, an imperative is satisfied if and only if it is true. An imperative is valid, on the other hand, if and only if a sentence of the form 'So-and-so commands that p', describing what speech act is performed by the utterance of a given imperative sentence, is true. Sentences of that form are used to formalize the pragmatics of imperatives. On the proposed theory, then, it is not necessary to postulate semantic values such as satisfaction or validity in order to construct a formal logic of imperatives. The inference already mentioned from 'Prepare the meal and set the table!' to 'Prepare the meal!', for example, is valid; for if the imperative premise is true (if, that is, you will in fact prepare the meal and set the table) then the imperative conclusion is also true (that is, you will in fact prepare the meal). The inference, in fact, is obtainable from the valid inference 'You will prepare the meal and you will set the table; therefore, you will prepare the meal' by substitution for the indicative sentences 'You will prepare the meal' and 'You will set the table', of the stylistic variants 'Prepare the meal!' and 'Set the table!' of those indicative sentences. In order to take account of the fact that the elliptical indicative sentence, 'Pre-

pare the meal and set the table!' is not used to make an elliptical statement but is intended to be made true, one can form the indicative sentence, 'So-and-so commands that you perpare the meal and set the table', describing what speech act the elliptical indicative (imperative) sentence is used to perform. And, from that sentence one can infer 'So-and-so commands that you prepare the meal', since if the former sentence is true, then it follows by the principle of the pragmatics of imperatives that if p implies q, then if it is commanded that p it is commanded that q, that the latter sentence is also true. Again, however, whether this implication holds in every possible world or only in certain sorts of "perfect" worlds is controversial.

Besides being more conservative than other theories (in the respect of not postulating semantic values other than truth), the proposed theory has another advantage. Since the proposed theory combines aspects of both those theories that take satisfaction and validity as designated values the proposed theory is able to have the virtues of both theories without, however, having either theory's vices. Since, that is, the proposed theory takes something equivalent to satisfaction, namely, the truth of imperatives, as the designated value for imperative logic; and since it also takes something equivalent to validity, namely, the truth of sentences of the form 'It is commanded that p' as the designated value for the formalized pragmatics of imperatives, evidence for both satisfaction and validity as the designated value of imperatives is *ipso facto* evidence for the proposed theory. In short, since the proposed theory of imperatives regards satisfaction and validity not as competing semantic values but as complementary--the one needed for imperative logic *per se* and the other

for the formalized pragmatics of imperatives--it is able to account both for those intuitions according to which satisfaction is the designated value of imperatives as well as for those intuitions according to which the designated value is rather validity.

The principal vice of taking validity as the semantic value is that not enough inferences are thereby validated. In particular, from the fact that a given imperative, e.g., 'Close the window!' is valid (in force), it does not follow that the negation of that imperative, 'Don't close the window!', is not valid (not in force), since it may happen that someone both commands that the window be closed and that it not be closed. It is not logically impossible for contradictory commands to be issued. A commander may both command that a certain action be performed and command that it not be performed either through sheer perversity, or else because he does not realize that the two commands are contradictory. A logic of imperatives based exclusively on validity as the designated semantic value is, thus, too weak since on such a logic one cannot infer from the fact that an imperative to make it be the case that p is in force that the imperative not to make it be the case that p is not in force.

In a logic of imperatives based on satisfaction as the designated value, an imperative to make it be the case that p is indeed the contradictory of an imperative not to make it be the case that p since if the first imperative is satisfied then necessarily the second imperative is not satisfied, since it is impossible for a hearer both to make it be the case that p and not to make it be the case that p. Similarly, on the proposed theory of imperatives, an imperative to make it be the case that p and an imperative not to make it be the case that p are contradictory since the

indicative sentences that are taken to be the non-elliptical forms of those imperatives, namely, 'You will make it be the case that p' and 'You will not make it be the case that p' are contradictory. Both cannot be made true at the same time. Thus, the proposed theory has the same advantage relative to the theory that takes validity as the semantic value as does the theory that takes satisfaction as the designated value of imperatives.

If the proposed theory of imperatives has the virtues of the theory that takes satisfaction as a semantic value, it does not have its vices. Whereas the principal vice of the theory that takes validity as the designated value is that not enough inferences are thereby validated, the principal vice of the theory that takes satisfaction as the designated value is that it validates too many inferences. In particular it validates the inference from an imperative to make it be the case that p to the proposition that the hearer will in fact make it be the case that p, as it does the converse inference from the proposition that the hearer will make it be the case that p to the imperative requiring that it be made the case that p; for if it is true that the hearer will make it be the case that p then necessarily the imperative to make it be the case that p is satisfied, and conversely. In Hofstadter and McKinsey's system of imperative logic which was based upon a satisfaction semantics the formulae '!p⊃p' and 'p⊃!p' were indeed considered valid. Similarly, Rescher has pointed out that on a satisfaction semantics the following formula is validated:

$$:.\ p \supset !q\ \&\ p \supset r\ .\supset:\ p\ .\supset.\ !q\ \&\ !r$$ [29]

(For example, 'If it rains take an umbrella! & If it rains you will catch a cold; therefore, If it rains take an umbrella and catch a cold!')

Clearly, the problem is that an imperative, '!p', e.g., 'Catch a cold!',

is satisfied if and only if the corresponding indicative sentence, 'p', e.g., 'You will catch a cold' is true; therefore, the imperative and its corresponding indicative sentence should be mutually substitutable, but substituting one for the other produces counterintuitive results.

It is because of this that the temptation arises to take validity as the designated value of imperatives. If one takes validity as the designated value, then the formulae above are not validated, as intuition tells us they should not be; for from the fact that an imperative requiring that it be made the case that p is issued (in force), it does not follow that it is (or will be made) the case that p. Nor does it follow from the fact that it is made the case that p that an imperative to make it be the case that p is valid (in force). Similarly, Rescher's formula interpreted in terms of validity is not valid. That is, if the fact that p implies that an imperative to make it be the case that q is valid, and if the fact that p also implies that it is the case that r, it does not follow that the fact that p implies that an imperative to make it be the case that q and an imperative to make it be the case that r are both valid (in force). Thus, for example, the following inference is not valid: 'If it rains it is commanded that you take an unbrella & If it rains you will catch cold; therefore, if it rains it is commanded that you take an umbrella and it is commanded that you catch cold'. However, if the proposal to regard validity as the designated semantic value of imperatives has the virtue of not validating certain inferences that it should not validate, it has the vice, as has been seen, of not validating other inferences that it should.

On the proposed theory of imperatives, the formulae that cause problems for a satisfaction semantics are also validated; but they are no

longer troublesome. That is, the formulae, '!p⊃p', 'p⊃!p', and Rescher's formula, which are validated by a satisfaction semantics, are also validated by the proposed theory; but, whereas such formulae are unacceptable on a satisfaction semantics since it construes imperative and indicative sentences as *sui generis*, the formulae are acceptable from the point of view of the proposed theory since it construes imperative sentences as elliptical indicatives. That is, whereas on a satisfaction semantics an imperative sentence and a corresponding indicative should not be mutually substitutable (but are because the one is satisfied if and only if the other is true) since imperative and indicatives are construed as *sui generis*, on the proposed theory of imperatives an imperative sentence and a corresponding indicative should be mutually substitutable (and are) since the one is construed as a stylistic variant of the other. Since, however, the problem concerning the formulae, '!p⊃p', 'p⊃!p', and Rescher's formula is part of the general problem of formulating a criterion of validity for mixed inferences (involving both imperatives and indicatives), it will be discussed at greater length in the section devoted to mixed inferences. In that section it will be argued that ordinary intuitions according to which the formulae mentioned above are invalid are mistaken.

Logics based upon satisfaction or validity as the designated semantic value of imperatives are not the only sort of imperative logics that have been recommended in the literature. Two other proposals are due to Castaneda and Kenny and must be considered.[30] According to Castaneda, the property that is inherited from premises to conclusion in a valid imperative inference is legitimacy (or what he used to call "justifiedness'). Very roughly, an imperative is legitimate (justified), according to

Castaneda, if satisfaction of the imperative is a necessary condition for certain ends to be achieved. The complete explication of the notion of legitimacy, however, is rather complicated. Firstly, in order to determine whether an imperative, issued at time t, is legitimate or not, it is necessary to determine what ends are subscribed to by those persons involved in issuing or receiving the imperative. For simplicity, it is assumed that only two persons are involved: the person issuing the imperative and the person to whom the imperative is addressed. When more than two persons are involved the goals they pursue must also be taken into account. Now, not only is it necessary to determine what ends are subscribed to by the two persons; but it is necessary to determine their order of importance. It is possible, however, that the hierarchical array of ends subscribed to by either person at time t is not consistent. A person, that is, may be in the position in relation to certain ends of wanting to eat his cake and have it too (i.e., not eat it). If such is the case, then instead of considering the person's actual hierarchy of ends, one must consider instead a hierarchy of ends that is as close as possible to the hierarchy of ends actually pursued by the person but that is at the same time consistent. But even given that each person's hierarchy of ends is made consistent, it is quite possible that the ends pursued by both persons are mutually unsatisfiable. Whereas person X may want to eat a certain piece of cake, person Y may not want to eat it but to keep it. If such is the case, then instead of considering the combined hierarchy of the ends actually pursued by each person (more accurately, the ends he would pursue if he were self-consistent) one must consider a combined hierarchy of ends that is as close as possible

to each person's hierarchy of ends but that is at the same time consistent. All the ends pursued by both persons must be capable of joint attainment. The full characterization of the set of these adjusted ends is complex, so one must refer to Castaneda for the details. To quote:

> Consider two men X and Y at a certain time t. We have, then, two hierarchical complexes of the ends they subscribe to at t, say C_x and C_y. There is, of course, no guarantee that C_x and C_y are harmonious or consistent, i.e., that they can be jointly attained. Indeed X and Y may both deeply and urgently desire the exclusive use or possession of a given object or person. In such a case C_x and C_y are disharmonious. But there are always several complexes C'_x and C'_y which are harmonious and are, respectively, revisions of C_x and C_y. Of course, there is no guarantee that there are such complexes C'_x and C'_y as would be endorsed by X and Y instead of C_x and C_y, respectively. Nevertheless, we may consider *ideal harmonizations* of complexes C_x and C_y such that: (i) C_x is revised to H_x, which differs from C_x as little as possible in its highest ranks; (ii) C_y is revised to H_y which differs from C_y as little as is possible in the highest ranks; (iii) H_x and H_y are harmonious. Obviously, there may very well be many ideal harmonizations of C_x and C_y. Furthermore, these harmonizations may be incompatible. Let H^*_x be the part common to all ideal harmonizations H_x, and similarly for H^*_y. Since H^*_x and H^*_y are consistent, let us consider their junction and call it the *total ideal hierarchic complex of ends* subscribed to by X and Y, and let us represent it by $H^*_{x,y}$. If C_x and C_y are consistent, we let $H^*_{x,y}$ be the junction of C_x and C_y.[31]

When more persons than X and Y are involved in the issuance or receiving of an imperative their ends must be considered too and adjusted in such a way as to harmonize with the hierarchical ends of X and Y. The junction of all these ends so harmonized is what is referred to as the absolute context K*(X,Y) of persons X and Y at time t. The absolute context includes besides a description of the ends of X and Y, a description of the total history of the world up to time t.

Once the absolute context K*(X,Y) of persons X and Y at time t has been specified, an imperative is determined legitimate (justified) if and only if one of the following three conditions is satisfied. It is

important to note that these conditions are listed not disjunctively, but rather in serial order. The first condition, that is, must be considered first, and if the imperative does not satisfy that condition then the second condition is considered, and finally the third. The first condition states that an imperative is legitimate if performance of the action prescribed by the imperative is a necessary condition for the achievement of the total hierarchic complex of ends subscribed to by X and Y (and any other agents concerned). Somewhat more formally, an imperative is legitimate if its performance proposition (the proposition asserting that the action prescribed by the imperative is performed) is implied by the propositions whose conjunction constitutes a description of the absolute context, K*(X,Y) of X and Y and time t. Again, the propositions whose conjunction constitutes a description of the absolute context K*(X,Y) describe what is the case if all of X's and Y's ends are achieved, as well as describing the total history of the world up to time t. It is now evident why it is necessary to adjust X's and Y's ends for consistency; for were they not consistent, K*(X,Y) would imply every proposition, and, thus, contradictory imperatives, e.g., 'Eat your cake!' and 'Don't eat your cake but have it!' would both be legitimate.

If an imperative does not meet the first condition for legitimacy, it may still be legitimate if it meets the second condition. An imperative is legitimate on the second condition if it is endorsed by either X or Y (or by some other persons involved with the imperative, if others are involved), and neither X nor Y (nor any other persons) endorses the negation of the imperative. Just what is meant by the "endorsement" of an imperative is rather complex, so one would do well to refer to Castaneda's

own writings for clarification. For present purposes, however, we shall let one statement of his suffice by way of explanation. It should be borne in mind, however, that this explanation of endorsement comes from the *Structure of Morality*, which was written two years before *Thinking and Doing* from which the present exposition of the notion of legitimacy comes and, thus, may no longer accurately reflect Castaneda's ideas on the subject. To quote:

> We may say that a person X endorses a set of practitions, whether intentions, or mandates, or prescriptions, when he has some positive, but not necessarily overriding, interest in their fulfillment; or X would be interested in their fulfillment if he were to reflect on them; or the practitions in question formulate necessary means for the attainment of X's adopted policies or goals; or the practitions in question are part of the enacted rules, regulations, statutes, laws, etc. of the games he plays or activities he carries out, or the institutions or countries to which he belongs.[32]

Since the notion of endorsement is here explicated at least partially in terms of the practition (imperative) in question "formulating necessary means for the attainment of X's adopted policies or goals", there seems to be some overlap between the first and second conditions; but probably this difficulty is more apparent than real and no more will be said about it here. It might be noted, however, by way of further clarification of endorsement, that the notion of endorsement is used to explicate the notion of intending. To intend to do something is to endorse the imperative prescribing that it be done.

If an imperative meets neither the first nor the second condition, it may still be justified if it meets the third condition that its corresponding performance proposition (the proposition asserting that the action prescribed by the imperative is performed) is true. In other words, according to the third condition an imperative is legitimate if the action

prescribed by the imperative is in fact performed.

One criticism that may be made of Castaneda's theory is that it doesn't determine a semantic value for imperatives that are not uttered on any actual occasion and, thus, fails to validate inferences involving such imperatives. For example, the inference from 'Turn left at Mars and head for Jupiter!' to 'Turn left at Mars!', which seems to be a valid imperative inference, is not validated by Castaneda's proposal if it is assumed that the imperative premise, 'Turn left at Mars and head for Jupiter!' has never been, and may never be, uttered on any actual occasion for the purpose of issuing a command since in that case there is no speaker or hearer whose ends may be taken into account in order to determine whether the imperative is legitimate. Nor does the imperative satisfy the third condition for legitimacy since it has no determinate performance proposition, 'You will turn left at Mars and head for Jupiter', (since the imperative is not addressed to any particular hearer to whom 'you' may refer) whose truth value may be determined in order to determine the legitimacy value of the imperative. In other words, the legitimacy value of an imperative that is not uttered on any actual occasion is indeterminate since the imperative is not uttered by a speaker whose ends may be taken into consideration and does not require the performance of an action by a particular hearer whose response to the imperative may be observed in order to determine whether, according to the third condition on legitimacy, the performance proposition of the imperative is true, thus making the imperative legitimate.

A second criticism to be leveled against Castaneda's theory of the semantics of imperatives is that it leads to some counterintuitive

results when applied to mixed inferences. In particular, the inference from the proposition 'p' to the imperative '!p' is sanctioned by Castaneda's theory because if it is true that p, then even if the imperative does not satisfy either of the first two conditions on legitimacy it necessarily satisfies the third condition that its performance proposition be true--since the performance proposition of the imperative '!p' is simply 'p'.

As was mentioned, the inference from 'p' to '!p' is also sanctioned by the proposed theory of imperatives since that inference is taken to be an inference from the indicative sentence 'p' to a stylistic variant of that same indicative sentence. On the proposed theory, however, this inference is seen to be harmless, and contrary intuitions, it is argued, are accounted for, whereas on Castaneda's theory there is no such excuse for sanctioning the inference. Since Castaneda does not construe imperatives as stylistic variants of indicatives but regards them as *sui generis*, he should not allow the imperative '!p' to be implied by the matter of fact that 'p' is true.

Another criticism that might be made of Castaneda's proposal is simply that it is too complicated for the results achieved. As was noted in the first chapter, the logic of imperatives that results from taking legitimacy as defined by Castaneda as the designated semantic value of imperatives is a two valued logic isomorphic with standard sentential logic. But this same result may be achieved, and more simply, by construing imperative sentences as elliptical indicatives and taking truth as the designated value of imperatives. On such a theory not only is imperative logic isomorphic with standard propositional logic, but it is iden-

tical with it. On the proposed theory one is able to validate all the imperative inferences that are validated by Castaneda's theory but without having to consider the ends to which the speaker and hearer subscribe, and without having to adjust those ends for consistency.

Another system of imperative logic has been proposed by Kenny. Whereas according to Castaneda an imperative is legitimate if (again, speaking very roughly) performance of the action prescribed by the imperative is a necessary condition for the achievement of the speaker's and hearer's ends, according to Kenny, an imperative is "satisfactory" if and only if performance of the action prescribed by the imperative is a sufficient condition for the achievement of those ends. An imperative inference is valid, then, if and only if, if the premises are satisfactory then necessarily the imperative conclusion is satisfactory. Whereas the logic of imperatives recommended by Castaneda, and the proposed theory, is isomorphic with standard propositional logic, the logic of imperatives recommended by Kenny is the mirror image of that logic. That is, if 'p' implies 'q' in ordinary propositional logic, then in Kenny's logic the imperative '!q' implies the imperative '!p', since if '!q' is satisfactory relative to a set of ends (if, that is, q implies that those ends are achieved), then necessarily '!p' is satisfactory relative to the same set of ends since if 'p' implies 'q', then 'p' also implies that those ends are achieved.

This approach of Kenny's, however, has the defect of validating some very implausible inferences, and seems unacceptable on that account. Thus, for example, if ordinary imperative logic has the somewhat paradoxical result, as Ross pointed out,[33] of validating the inference from

'Post the letter!' to 'Post the letter or burn it!' (since 'You will post the letter' implies 'You will post the letter or you will burn it'), Kenny's system has the even more paradoxical result of validating the inference from 'Post the letter!' to 'Post the letter and burn it!'. In general, Kenny's system has the paradoxical result of sanctioning all imperative inferences from '!p' to '!(p&q)', since if satisfying the imperative '!p' implies that the speaker's ends are achieved, then satisfying the imperative '!(p&q)' implies that those same ends are achieved.

One interesting point, however, that emerges from Kenny's theory is the existence of a rather great disparity in the intuitions concerning the validity of imperative inferences. Although one might reject Kenny's theory on the grounds that it sanctions the inference from '!p' to '!(p&q)', Kenny himself regards that inference as valid and is prepared to explain away contrary intuitions as misguided. The fact is that in logic, as in science, there is no zero level of evidence by which to judge the adequacy of theory. Just as observation statements in physical theory are theory laden, so too in logical theory are the inferences one is prepared to accept at least partly dependent on one's theory of what constitutes validity. Because Kenny accepts a certain theory concerning what property is inherited from premises to conclusion in a valid imperative inference, he is prepared to accept the consequences of that theory even if it means sanctioning inferences that seem counterintuitive to others. Similarly, it is maintained that since on the proposed theory what are called imperatives are elliptical indicatives, the inference from '!p' to 'p' is valid, as is the converse inference, contrary intuitions notwithstanding. Hopefully the discussion in this section and in the next will serve ade-

quately to account for those contrary intuitions and lay the ground for the development of new ones.

3. Mixed Inferences

In the last section of this chapter it was maintained that the fact that the formulae '!p⊃p', 'p⊃!p', and ':.p⊃!q & p⊃r .⊃: p . ⊃ . !q & !r' are validated by a satisfaction semantics for imperatives was fatal to that theory, whereas the fact that the same formulae are validated by the proposed theory was harmless for it; but discussion of those formulae was postponed in anticipation of a general discussion of the problem of mixed inferences.

Much modern day discussion of this problem derives from the formulation by Hare of the following two rules governing mixed inferences:

(1) No indicative conclusion can be validly drawn from a set of premisses which cannot be validly drawn from the indicatives among them alone.

(2) No imperative conclusion can be validly drawn from a set of premisses which does not contain at least one imperative. (Poincaré's rule)[34]

If the proposed theory of imperatives is correct, then both these rules are mistaken; for if imperative sentences simply are elliptical indicatives, then an indicative conclusion can be drawn from a set of imperative premisses, given that those imperative premisses are actually stylistically variant indicatives; and an imperative conclusion can be drawn from a set of indicatives, given that the imperative conclusion is an elliptical indicative. The two formulae, '!p⊃p' and 'p⊃!p', are cases in point. The imperative premise, e.g., 'Close the window!' implies the indicative conclusion 'You will close the window' since the imperative

premise 'Close the window!' is a stylistic variant of the indicative conclusion 'You will close the window'. The implication 'Close the window only if you will close the window!' is, in fact, derivable from the tautologous implication, 'You will close the window only if you will close the window' (a substitution instance of 'p⊃p') by substitution for the indicative antecedent, 'You will close the window', of the stylistic variant, 'Close the window!', of that same indicative sentence. (Substitution for an indicative sentence of a stylistic variant of that sentence need not be uniform but is permitted at any occurrence of the indicative sentence.) Similarly, 'If you will close the window then close the window!' is derivable from the tautology, 'If you will close the window then you will close the window' by substitution for the consequent of that tautology of the stylistic variant 'Close the window!' of that consequent. In short, the formulae '!p⊃p' and 'p⊃!p' are valid since they result from the substitution for the indicative sentence 'p' in the tautologous formula 'p⊃p' of a stylistic variant, '!p', of that indicative sentence. A stylistic variant of an indicative sentence has the same implication relations as the indicative sentence of which it is a variant. Thus, Rescher's formula, ':.p⊃!q & p⊃r .⊃: p .⊃. !q & !r', is valid since it results from the tautologous formula ':.p⊃q & p⊃r .⊃: p .⊃. q & r' by substitution of the stylistically variant indicative sentence, '!r', for the indicative sentence, 'r' (at one occurrence only).

Perhaps this will be clearer if one takes note of an ambiguity in the symbolism of the formulae, '!p⊃p', 'p⊃!p', and ':.p⊃!q & p⊃r .⊃: p .⊃. !q & !r'. The exclamation mark in these formulae may be interpreted either as an exclamation mark at the end of an indicative sentence

(usually an elliptical indicative) and serves to indicate that the sentence is put forward by a speaker with the intention of thereby inducing a hearer to make the sentence true; or it may be interpreted as the monadic sentential operator, 'It is commanded by so-and-so that'. In the first case, if the exclamation mark is interpreted as a punctuation mark indicating the relation of the speaker to the sentence the formulae are valid since an (elliptical) indicative sentence put forward by a speaker to be made true has the same implication relations as that same (though, non-elliptical) indicative sentence put forward by a speaker as true. An elliptical indicative sentence has the same implication relations as a non-elliptical indicative sentence. And it has the same implication relations no matter what the speaker's intentions in uttering the sentence. Just as 'You did the best you could', uttered for the purpose of consoling a hearer implies 'You did the best you could' uttered for the purpose of insulting him, so does an elliptical indicative sentence uttered for the purpose of inducing a hearer to make the sentence true imply the non-elliptical form of that same indicative sentence uttered for the purpose of inducing a hearer to believe that it is true (and conversely).

If, on the other hand, the exclamation mark is interpreted as the monadic sentential operator 'It is commanded by so-and-so that . . .', then the formulae '!p$\supset$p', 'p$\supset$!p' (and Rescher's formula) are invalid since it does not follow from the fact that it is commanded by so-and-so that p that it is the case that p; nor does it follow from the fact that it is the case that p that it is commanded by so-and-so that p. Such formulae are not valid formulae of the formalized pragmatics of imperatives.

The position that the inference from the imperative '!p' to

the indicative 'p' and the converse inference are valid, however, goes against ordinary intuitions according to which there is something contained in the imperative that is not contained in the indicative. What is felt to be contained in the imperative is an active prescriptive element. If someone who rejects those inferences is asked why he thinks them invalid, most likely he will reply that it does not follow from the fact that a command is issued to make it be the case that p that it will be the case that p, or conversely. In the first chapter, however, it was argued that the theory that imperative sentences have prescriptive semantic content in virtue of which they issue a command is a mistaken one. If one rejects the inference from an imperative sentence, e.g., 'Close the window!' to the indicative sentence, 'You will close the window', on the grounds that it does not follow from the fact that a command is issued to close the window that you will close the window, then by parity of reasoning one should reject the inference from the elliptical indicative sentence, 'Having a wonderful time' to the non-elliptical indicative sentence, 'We are having a wonderful time' on the grounds that it does not follow from the fact that a statement is issued to the effect that we are having a wonderful time that we are having a wonderful time. Just as Strawson has argued that only persons and not sentences make statements; and it is not part of the semantic content of an indicative sentence that it is used to make a statement, so too might it be argued that only persons and not (imperative) sentences issue commands; and it is not part of the semantic content of an imperative sentence that it is used to issue a command. Rejection of the inference from the imperative,'!p', to the indicative, 'p' (and conversely), thus stems, it may be argued, from confusing the inference from an elliptical

indicative sentence having the same semantic content as the non-elliptical sentence to the non-elliptical form of that indicative sentence, with the related inference from the sentence, 'It is commanded by so-and-so that p', describing what speech act the imperative sentence, '!p', is used to perform, to the indicative sentence 'p'. Whereas the inference from an elliptical indicative sentence (i.e., an imperative) to the non-elliptical form of that same indicative sentence is valid, the inference from 'It is commanded by so-and-so that p', describing what speech act the imperative sentence is used to perform, to 'p' is invalid, since it does not follow from the fact that a command is issued that it is obeyed.

It is undoubtedly in order to capture an active, prescriptive element that Katz and David Lewis[35] equate imperative sentences and explicit performatives of the form 'I command that . . .'. But explicit performatives of that form might be held to be synonymous with sentences of the form 'It is commanded by me that . . .'; and it has been argued that sentences of that form are true or false descriptive sentences used for formalizing the pragmatics of imperatives. Such sentences describe what speech act is performed by the utterance of an imperative sentence which itself performs no speech act whatever. Thus, the very fact that certain authors equate imperatives and explicit performatives might be taken as confirmation of the theory that when the inference from '!p' to 'p' and the converse inference are rejected, such rejection stems from confusing that inference with the closely related but invalid inference from 'I command that p' ('It is commanded by me that p') to 'p'.

If imperative sentences are regarded as elliptical indicatives, then the problem of mixed inferences does not arise. There simply are no

mixed inferences. That is, there are no inferences involving both imperative and indicative sentences; there are only inferences involving both elliptical and non-elliptical indicatives. The following inference, for example,

If there's a chance of rain then take an umbrella!
There's a chance of rain.
∴ Take an umbrella!

(which is derivable from the inference, "If there's a chance of rain then you will take an umbrella!, There's a chance of rain; therefore, You will take an umbrella!" by substitution of the elliptical indicative sentence, 'Take an umbrella!' for the non-elliptical indicative 'You will take an umbrella') is no more a mixed inference since it contains an elliptical indicative sentence than is the inference,

If Mary goes to the party then John won't!
Mary is going to the party.
∴ John won't go to the party!

(which is derivable from the inference, "If Mary goes to the party then John won't go to the party, but Mary is going to the party; therefore, John won't go to the party" by substitution of the elliptical indicative sentence 'John won't' for the non-elliptical indicative 'John won't go to the party') since it contains an elliptical indicative. If it is wished that the fact be taken into account that the elliptical indicative sentence, 'Take the umbrella!' in the first inference is not put forward as true, as is the elliptical indicative in the second inference, but is to be made true, then one can form the following valid inference:

If there's a chance of rain then it is commanded that you take an umbrella.
There's a chance of rain.
∴ It is commanded that you take an umbrella.

It is a virtue of the proposed theory of imperatives that the problem of mixed inferences is so easily dissolved. The theory also finds.

confirmation in the fact that it is able to account for the equivalence of the following two formulae: 'Stop or I'll shoot!' and 'If you don't (won't) stop I'll shoot!'. If the imperative 'Stop!' is an elliptical form of the indicative sentence, 'You will stop', then it follows that 'Stop or I'll shoot!', like any disjunction, is true if and only if either of its disjuncts is true: if and only if, that is, '(You will) stop' is true or 'I'll shoot' is true. The purpose for shortening the sentence 'You will stop' to 'Stop!' is to signal to the hearer that he is to make the disjunction true by making the first disjunct '(You will) stop' true so that the speaker won't be forced to make the disjunction true by shooting him. A theory that takes satisfaction as the designated semantic value of imperatives is also able to account for the equivalence of 'Stop or I'll shoot!' and 'If you won't stop I'll shoot!', but only at the expense of construing imperative sentences and their corresponding indicative sentences as equivalent (since the one is satisfied if and only if the other is true). But, whereas it is natural for a theory that construes imperative sentences as elliptical indicatives to construe an imperative and a corresponding indicative as equivalent, it is unacceptable from the point of view of a theory that construes imperative sentences and indicatives as *sui generis* to postulate the same equivalence. The theories according to which the designated semantic value of imperatives is validity, justifiedness, or satisfactoriness, on the other hand, are completely unable to account for the equivalence of 'Stop or I'll shoot!' and 'If you won't stop I'll shoot!'

The fact that there are no mixed inferences on the proposed theory of imperatives, however, does not mean that the intuitions behind such criteria as those of Hare, given at the beginning of this section, for

the validity of mixed inferences are not captured by the proposed theory. As has been noted, if the exclamation mark in the formula 'p⊃!p' is interpreted as the monadic sentential operator 'It is commanded that', then the formula is not valid; for it does not follow from the fact that p, that it is commanded that p. This, it might be argued, adequately captures the intuition behind what Hare calls Poincare's rule that no imperative conclusion can be validly drawn from a set of premisses which does not contain at least one imperative. Similarly, the fact that the formula '!p⊃p' is not a valid formula of the formalized pragmatics of imperatives if the imperative operator, '!', is interpreted as the sentential operator, 'It is commanded that', captures the intuition behind Hare's other rule that no indicative conclusion can be validly drawn from a set of premisses which cannot be validly drawn from the indicatives among them alone. This rule may be thought of as a somewhat technical manner of expressing the intuition that nothing follows from the fact that an imperative is issued beyond the fact that it is issued. In particular, it does not follow from the fact that an imperative is issued that it is obeyed. Similarly, 'Ap⊃p' and 'p⊃Ap', interpreted as 'If it is asserted that p, then it is the case that p' and 'If it is the case that p, then it is asserted that p' are not valid formulae of assertion logic. In short, the fact that the formulae '!p⊃p' and 'p⊃!p' are not provable in the formalized pragmatics of imperatives if the exclamation mark is interpreted as the monadic sentential operator, 'It is commanded by so-and-so that', adequately captures the intuitions behind Hare's two rules governing mixed inferences.

4. Negation

Light is also thrown by the proposed theory of imperatives on the controversy concerning the negation of imperatives. According to some, including Castaneda, Hare, and Downing,[36] the negation of an imperative, e.g., 'Open the door!' is 'Don't open the door!', whereas according to others, for example, Bergstrom, Storer, Hall, and Fischer,[37] the proper negation of that imperative is rather, 'It is not commanded that you open the door'. If, however, the distinction is made in the way recommended by the proposed theory between the syntax and semantics of imperatives on the one hand and the pragmatics of imperatives on the other, then the conflict is easily resolved. Both forms of negation are needed but for different purposes. The negation of the imperative, e.g., 'Open the door!', construed as an elliptical form of the indicative sentence, 'You will open the door', is 'Don't open the door!', since the negation of the non-elliptical indicative sentence for which the imperative is elliptical is 'You will not open the door'. Perhaps this will be somewhat clearer if we consider for a moment the archaic way of negating a sentence without using the auxiliary 'do'. If the imperative 'Open the door!' is regarded as an elliptical form of the indicative sentence 'You will open the door', then the negation of that sentence, not employing the auxiliary 'do', is 'You will open not the door', which, when shortened, becomes the imperative sentence 'Open not the door!'. Clearly the imperative 'Open not the door!' is equivalent to the negative imperative 'Don't open the door!' employing the auxiliary 'do'.

Whereas the negation of the imperative sentence 'Open the door!' is 'Open not the door!', or equivalently, 'Don't open the door!'; the negation of the sentence 'It is commanded that you open the door!', which

states what speech act the elliptical indicative sentence 'Open the door!' is used to perform, is 'It is not commanded that you open the door'. If the proposed theory of imperatives is correct, then what some authors regard as the negation of an imperative, namely, a sentence of the form, 'It is not commanded that p' is the negation of a sentence expressing the pragmatics of imperatives. It is, thus, a virtue of the proposed theory of imperatives that it is able to account both for the intuitions according to which the negation of an imperative, e.g., 'Open the door!' is 'Don't open the door!', as well as for the intuitions according to which the negation is rather, 'It is not commanded that you open the door'. Properly understood, both sets of intuitions are correct.

5. -(!p & !-p)

Light is also shed on a closely related problem, namely, the question of whether the formula '(!p & !-p)' is a valid formula of imperative logic or not. It is claimed, for example, by Castaneda and Kalinowski, that the formula is valid, and by implication by Rescher since he says that a command must be satisfiable in order to qualify as a command.[38] Von Wright has even gone so far as to maintain that if no two commands can contradict each other, then a logic of imperatives is not conceivable. To quote:

> Can commands, or norms in general, ever contradict one another? 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.[39]

Perhaps the problem is not quite so grave as von Wright here maintains. A logic of imperatives without negation--that is, a logic in which no two imperatives contradict one another--is not an impossibility; but such a logic would clearly be too weak to be a satisfactory formalization of the logic of imperatives.

It is maintained by some, however, for example, Stenius, Lemmon, and Esperson that the formula '-(!p & !-p)' is not valid because it is not logically impossible that it both be commanded that p, and commanded that not-p.[40] No two imperatives, e.g., 'Open the door!' and 'Don't open the door!' are logically contradictory since it is possible for both these imperatives to be in force at the same time. A speaker either out of ignorance of the fact that what he commands cannot possibly be performed, or out of sheer perversity, might issue a command to open the door as well as a command not to open the door. There is nothing logically impossible in the occurrence of such a situation regardless of its impracticality.

From the perspective of the proposed theory of imperatives, however, it should be clear that the controversy surrounding the validity of the formula '-(!p & !-p)' is a result of the ambiguity of that formula. As has already been noted, the exclamation mark in the formula may be interpreted either as a simple mark of punctuation added to the end of an indicative sentence (elliptical or non-elliptical) to indicate that the sentence is not put forward as true but is to be made true by the person to whom it is addressed; or the exclamation mark may be interpreted as the monadic sentential operator 'It is commanded that'. If the exclamation mark is interpreted as a mark of punctuation added to the end of an indicative sentence, then the formula '-(!p & !-p)' is valid. It is in fact derivable

from the tautology '-(p & -p)' by substitution for the indicative sentence, 'p', of the stylistic variant, '!p', of that same indicative sentence. The whole formula, then, corresponds to the command, 'Don't both make it be the case that p and make it be the case that not p', which is a tautologous command, if any such exist, since it cannot but be made true.

If, however, the exclamation mark in the formula, '-(!p & !-p)', is interpreted as the sentential operator 'It is commanded that', then the formula is not valid. Interpreted in this manner the formula reads, 'It is not the case that it is both commanded that p and (at the same time) commanded that not p', which, as critics of the formula have pointed out, is not logically true since contradictory commands can, and sometimes do, get issued. It is this interpretation that critics of the formula have had in mind in presenting their criticism. A statement of the form 'It is not the case that it is both commanded that p and commanded that not p' is a statement concerning what imperative sentences get uttered by speakers on particular occasions, and thus belongs to the pragmatics of imperatives. Since the formula is not true it should not be an axiom of, or be derivable in the formalized logic of the pragmatics of imperatives.

The formula might, however, be accepted in such a logic if the formulae of that logic are interpreted as descriptions of what is true in every world of perfect commanders. Just as the formula 'p→q .⊃. Cp→Cq' can be accepted as describing the behavior of persons who are perfect enough to follow the logical consequences of what they command so as to command all the consequences of what they command; so too might the formula '-(Cp & C-p)' be accepted in the formalized pragmatics of imperatives as describing the behavior of persons who are perfect enough not to issue

contradictory commands.

6. Summary

Now that the theory of imperatives has been fully developed, the arguments in its favor presented in this chapter and the last may be briefly summarized. Firstly, the proposed theory of imperatives is more economical than alternative theories. Since the proposed theory construes imperative sentences as elliptical indicatives, it is not necessary on that theory to postulate the existence of at least two sorts of sentences: indicative sentences that express a proposition, exhibit ordinary subject-predicate copulation, and have a truth value on the one hand, and imperative sentences that express a performative proposition (a directive), exhibit prescriptive subject-predicate copulation, and lack a truth value on the other.

Secondly, certain linguistic facts favor the theory that imperative sentences are elliptical. The fact, first of all, that imperatives are sometimes reflexive, containing an occurrence of the term 'yourself', e.g., 'Control yourself!', is evidence that the understood subject of the imperative is 'you'. Even in the case of imperatives not containing an occurrence of 'yourself', however, the subject term 'you' can always be supplied (unless the underlying subject of the imperative is 'we') without changing the sense of the imperative. Thus, one can say, e.g., 'You do as I say!' as well as 'Do as I say!'.

Similarly, the presence in imperative sentences of a future temporal indicator such as 'tomorrow', 'next week', etc., as for example in the imperative, 'Meet me at 9 o'clock tomorrow!' is evidence of the fact that the auxiliary verb 'will', indicating that the main verb of the

imperative is future tensed, has been omitted from the sentence. Even imperatives that do not contain a future temporal indicator, however, may have the auxiliary verb 'will' inserted, preceded by the proper subject term, without changing the meaning of the imperative. Thus, for example, one issues the same order in uttering the sentence, 'You will do exactly as I say!' as one does in uttering the sentence, 'Do exactly as I say!'

A third reason for regarding imperative sentences as elliptical future indicatives is that the theory provides a simple explanation of the fact that one can add the tag question, 'Will you?' or 'Won't you?' (or sometimes 'Shall we?') to imperatives, e.g., 'Watch where you're going! Will you?'. The fact that a future tense tag question is appropriate is evidence for believing that the imperative itself is future tensed, and that the subject of the imperative is the same as the subject of the tag question, i.e., generally 'you'. Similarly, the theory that what are called imperative sentences are elliptical, second-person, future indicatives offers the best explanation of the fact that one can assent to or refuse to obey an imperative by saying 'Yes, I will' or 'No, I won't'.

The theory also very neatly accounts for the fact (maintained by several writers) that an imperative sentence is properly uttered in response to a question of the form 'What shall I do?' or 'What am I going to do?'. If an imperative sentence is uttered in response to such a question, then it follows that the subject of the imperative is 'you' and, following the principle that sentences uttered in response to a question must generally be in the same tense as the question itself (and assuming that 'shall' and 'going to' are future tensed) that the imperative itself is future tensed.

But if imperative sentences are future tensed, then the auxiliary verb 'will' must be regarded as implicit; for in English, future tense is indicated by the auxiliary verb 'will' or by the expression 'to be going to'.

A third reason for accepting the proposed theory of imperatives is that the theory compares favorably with alternative theories of imperatives in accounting for the logic of imperatives. Firstly, the proposed theory offers a simple explanation for those intuitions according to which the logic of imperatives is isomorphic with standard sentential logic. Indeed, if the proposed theory is correct, then not only is the logic of imperatives isomorphic with ordinary sentential logic. It is identical to that logic. If what are called imperative sentences are elliptical indicatives, then the logic of imperative is simply the logic of indicatives.

The proposed theory also accounts, however, for those intuitions according to which the logic of imperatives is a modal logic of sentences of the form 'It is commanded that p'. In addition to the logic of imperatives which is identical with sentential logic, one can construct another, complementary logic by introducing the modal operators 'It is commanded that', 'It is asserted that', and 'It is asked for what x it is the case that' and suitable axioms employing those operators--the most important of which is, 'If p implies that q, then if it is commanded that p (asserted that, asked for what x) it is commanded that (asserted that, asked for what x) q. Formulae containing such operators are needed in order to formalize the pragmatics of indicative sentences. A statement to the effect that it is commanded that p, or asserted that p, or asked for what x, p, specifies for what purpose a given indicative sentence 'p' (elliptical

or non-elliptical) is uttered: whether for the purpose of inducing a hearer to believe that it is the case that p, to make it be the case that p, or tell the speaker for what x, p. Whereas the logic of imperatives is identical with standard sentential logic, the logic of sentences of the form 'It is commanded that p', 'It is asserted that p', and 'It is asked for what x, p' is a modal logic, thus accounting for the fact that according to some writers the logic of imperatives itself is modal.

Secondly, the proposed theory of imperatives is able, without postulating the existence of semantic values other than truth, to account for the intuitions according to which the designated semantic value of imperatives is satisfaction as well as for the intuitions according to which it is validity. Since an imperative is satisfied if and only if its corresponding indicative sentence is true, if the imperative is construed as an elliptical form of that corresponding indicative sentence then it is satisfied if and only if it is true. The distinction between satisfying an imperative and making it true is a purely verbal one. An imperative to make it be the case that p is valid, on the other hand, if and only if a sentence of the form 'It is commanded that p' is true. Sentences of that form, it has been argued, are needed in order to formalize the pragmatics of imperatives. Such sentences specify the purpose for which a given imperative sentence is uttered--what speech act is accomplished by its utterance. Thus, the intuitions according to which validity (being in force) is the designated value of imperatives are also accounted for by the proposed theory.

Since the proposed theory combines aspects of those theories that take satisfaction and validity as the designated value of imperatives, it

is able to have the virtues of both theories without, however, having either theory's vices. The principal vice of theories that take satisfaction as the designated value is that too many inferences are thereby validated. Since an imperative is satisfied if and only if its corresponding indicative sentence is true, an imperative and its corresponding indicative should be mutually substitutable. But substituting an imperative for an indicative produces counterintuitive results. In particular, the inference from '!p' to the indicative sentence 'p' is validated by a satisfaction semantics, as is the converse inference. On the proposed theory of imperatives those inferences are also validated but are no longer troublesome since the imperative sentence '!p' is construed simply as an elliptical form of the indicative sentence 'p'. On the proposed theory, the formulae '!p⊃p' and 'p⊃!p' are derivable from the tautology 'p⊃p' by substitution for the non-elliptical indicative sentence 'p' of the elliptical form, '!p', of that same indicative sentence. The reason that such formulae as '!p⊃p' and 'p⊃!p' seem counterintuitive is that they are ambiguous. When such formulae are rejected, it is because they are interpreted as, 'If it is commanded that p, then p', and 'If p, then it is commanded that p', respectively. Interpreted in this manner, however, such formulae are not valid, but belong to the pragmatics of imperatives.

The principal vice of theories that take validity as the designated semantic value, on the other hand, is that on that theory no two imperatives can contradict one another since it is possible for seemingly contradictory imperatives both to be valid (in force) at the same time. Persons are not infallible, and they may through inadvertence, or sheer perversity, issue contradictory commands. The imperatives, e.g., 'Open

the window!' and 'Don't open the window!' may both be in force at the same time. If no two commands can contradict one another, however, then the resulting logic of imperatives is much too weak to present a satisfactory formalization of the logic of imperatives. This defect is not a defect of the proposed theory of imperatives, since on that theory 'Open the window!' and 'Don't open the window!' ('Open not the window!') are indeed contradictory. Both imperatives cannot be made true (i.e., satisfied) at the same time.

The proposed theory also does not have the defects of alternative semantical systems of imperative logic. The principal defect of Castaneda's proposal to take "legitimacy" as the designated value of imperatives is that it legitimizes the inference from the proposition that you will make it be the case that p to the imperative to make it be the case that p. Whereas the proposed theory of imperatives sanctions this same inference, it is able to explain away the intuitions according to which the inference is invalid as stemming from a confusion of that inference with the closely related, but invalid, inference from 'You will make it be the case that p' to 'It is commanded that you make it be the case that p'. Castaneda's theory, however, has no such option. The proposed theory also compares favorably to Castaneda's theory with regard to simplicity. The proposed theory also does not have the defect of Kenny's theory of imperatives which takes "satisfactoriness" as a semantic value (i.e., prescribing an action that is sufficient for the attainment of certain ends) of validating inferences from an imperative, '!p' to the imperative '!(p&q)', e.g., 'Post the letter!', therefore, 'Post the letter and do anything at all!'.

A third virtue of the proposed theory is that it offers a simple,

but satisfactory, resolution of the problem of mixed inferences. In fact, on the proposed theory the problem of mixed inferences is dissolved since if what are called imperative sentences are really elliptical indicatives, then there are no inferences involving both indicative sentences and sentences other than indicatives. If imperatives are simply elliptical indicatives, then an indicative conclusion can be validly drawn from a set of imperative premisses as can an imperative conclusion from as set of indicative premisses. An indicative sentence implies an elliptical form of the same sentence, and conversely, even though the non-elliptical sentence is put forward to be believed and the elliptical indicative sentence is put forward to be made true. An indicative sentence implies stylistic variants of itself regardless of the speaker's intentions in uttering the sentence on different occasions. Confirmation of this theory of mixed inferences is found in the fact that it is able to account for the equivalence of the formulae, 'Stop or I'll shoot!' and 'If you won't stop I'll shoot!'. The intuitions behind commonly formulated rules governing mixed inferences are accounted for, by the proposed theory, by the fact that the formulae 'Cp⊃p' and 'p⊃Cp', interpreted as 'If it is commanded that p, then p', and conversely, are not valid formulae of the formalized pragmatics of imperatives (i.e., the logic of sentences of the form 'It is commanded that p') that is developed alongside the formalized syntax and semantics of imperatives.

A fourth respect in which the proposed theory compares favorably with other theories is that the proposed theory is able to account both for the intuitions according to which the negation of an imperative, e.g., 'Close the window!' is 'Don't close the window!' and for the intuitions

according to which it is rather 'It is not commanded that you close the window'. If 'Close the window!' is an elliptical form of the indicative sentence 'You will close the window', then since the negation of that sentence is 'You will not close the window', it follows that the negation of the imperative sentence, employing the auxiliary 'do', is 'Don't close the window!'. The sentence 'It is not commanded that you close the window', on the other hand, is the negation of the sentence, 'It is commanded that you close the window' which specifies what speech act is performed in uttering the elliptical indicative, 'Close the window!', and, thus, belongs to the pragmatics of imperatives.

Finally, a fifth reason for preferring the proposed theory is that it is able to account for the fact that according to some writers the formula, '-(!p & !-p)' is valid, as well as for the fact that according to other writers it is not valid. The formula, in fact, is ambiguous. Interpreted as the command, 'Don't both make it be the case that p and make it be the case that not p', the formula is valid. But, interpreted as 'It is not both commanded that p and commanded that not p', as critics of the formula have interpreted it, the formula is not valid since contradictory commands are sometimes issued. The formula, however, might be interpreted not as descriptive of the actual world, but only of all worlds that are perfect in the respect that persons in those worlds do not issue contradictory commands, and command the consequences of what they command.

FOOTNOTES TO CHAPTER II

[1]A. Hofstadter and J.C.C. McKinsey, "On the Logic of Imperatives," *Philosophy of Science* 6 (1939): 446-457.

[2]Hector-Neri Castaneda, *The Structure of Morality* (Springfield: Charles C. Thomas, 1974), p. 85.

[3]Peter Geach, "Imperative and Deontic Logic," in Geach, *Logic Matters* (Berkeley: University of California Press, 1972), pp. 270-275; Mark Fischer, "A System of Deontic-Alethic Modal Logic," *Mind* 71 (1962): 231-236.

[4]R.M. Hare, *The Language of Morals* (London: Oxford University Press, 1969), esp. pp. 26-28; and *Practical Inferences* (Berkeley: University of California Press, 1972), esp. pp. 15-18.

[5]Idem., *Practical Inferences*, p. 16.

[6]Nicholas Rescher, *The Logic of Commands* (London: Routledge & Kegan Paul, 1966), p. 9.

[7]Jørgen Jørgensen, "Imperatives and Logic," *Erkenntnis* 7 (1937-1938): 288-296.

[8]William H. Hanson, "A Logic of Commands," *Logique et Analyse* 9 (1966): 329-348; Mark Fischer, "A Logical Theory of Commanding," *Logique et Analyse* 4 (1961): 107-118; G.B. Keene, "Can Commands Have Logical Consequences?", *American Philosophical Quarterly* 3 (1966): 57-63.

[9]Jørgensen, "Imperatives and Logic," p. 293.

[10]Fischer, "A Logical Theory of Commanding," p. 156.

[11]H.G. Bohnert, "The Semiotic Status of Commands," *Philosophy of Science* 12 (1945): 302-315.

[12]Nicholas Rescher, *Topics in Philosophical Logic* (Dordrecht: D. Reidel, 1968), pp. 250-285.

[13]Georg Henrik von Wright, *Norm and Action* (London: Routledge & Kegan Paul, 1963), p. 157.

[14]Manfred Moritz, "On Second Order Norms: An Interpretation of 'Ought Implies Can' and 'Is Commanded Implies is Permitted'", *Ratio* 10 (1968): 101-115.

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[17]H.L.A. Hart, *The Concept of Law* (New York: Oxford University Press, 1961), p. 93.

[18]Paul W. Taylor, *Normative Discourse* (Englewood Cliffs: Prentice-Hall, 1961), p. 103.

[19]Georges Kalinowski, *Introduction à la logique juridique* (Paris: R. Pichon & R. Durand-Auzias, 1965), p. 55.

[20]J.K.K. Hintikka, "Knowing Oneself and Other Problems in Epistemic Logic," *Theoria* 32 (1966), p. 2.

[21]Bruno de Finetti, "Foresight: Its Logical Laws, Its Subjective Sources," in Henry Kyburg and Howard Smokler, eds., *Studies in Subjective Probability* (New York: John Wiley & Sons, 1964), p. 103, my underlining.

[22]Ian Hacking, "Slightly More Realistic Personal Probability," *Philosophy of Science* 34 (1967), p. 324.

[23]H.K.K. Hintikka, "Knowledge, Belief, and Logical Consequence," in Hintikka, *The Intentions of Intensionality and Other New Models for Modalities* (Dordrecht: D. Reidel, 1975), pp. 179-191; and "Surface Information and Depth Information," in Hintikka and Suppes, eds., *Information and Inference* (Dordrecht: D. Reidel, 1970), pp. 263-297.

[24]Hofstadter and McKinsey, "On the Logic of Imperatives"; Hare, *The Language of Morals*, p. 25,172 (Hare counts an imperative inference valid if and only if it is not possible to assent to the premisses and not assent to the imperative conclusion; and he defines "assent to an imperative" in terms of doing what the imperative requires, i.e., satisfying the imperative); Rescher, *The Logic of Commands*; Ernest Sosa, "The Logic of Imperatives," *Theoria* 32 (1966): 224-235; and Sosa, "The Semantics of Imperatives," *American Philosophical Quarterly* 4 (1967): 1-8; Fischer, "A Logical Theory of Commanding;" Jon Esperson, "The Logic of Imperatives," *Danish Yearbook of Philosophy* 4 (1967): 57-112.

[25]J.J. Katz, *Propositional Structure and Illocutionary Force* (New York: T.Y. Crowell, 1977).

[26]Alf Ross, "Imperatives and Logic," *Theoria* 7 (1941): 53-71.

[27]Ross, "Imperatives and Logic;" and E.J. Lemmon, "Deontic Logic and the Logic of Imperatives," *Logique et Analyse* 8 (1965): 39-71.

[28]See note 8 above.

[29]Rescher, *The Logic of Commands*, p. 99.

[30]Hector-Neri Castaneda, *Thinking and Doing* (Dordrecht: D. Reidel, 1975), esp. Ch. 5; A.J. Kenny, "Practical Inference," *Analysis* 26 (1966): 65-75.

[31]Castaneda, *Thinking and Doing*, p. 143.

[32]Idem., *The Structure of Morality*, p. 104.

[33]Alf Ross, "Imperatives and Logic".

[34]Hare, *The Language of Morals*, p. 28.

[35]Katz, *Propositional Structure and Illocutionary Force*; David Lewis, "General Semantics," in Donald Davidson and Gilbert Harman, eds., *Semantics of Natural Language* (Dordrecht: D. Reidel, 1972), pp. 205-212.

[36]Castaneda, *The Structure of Morality*, p. 88; *Thinking and Doing*, p. 104; Hare, *The Language of Morals*, pp. 23-34, and review of Everett Hall, *What is Value?*, *Mind* 70 (1961): 491-502, esp. 497ff.

[37]Lars Bergstrom, *Imperatives and Ethics*, *Filosofiska studier utgivna av Filosofiska Institutionen vid Stockholms Universitet*, Hafte 7, Stockholm, 1962, and "Imperatives and Contradiction," *Mind* 79 (1970): 421-424; Thomas Storer, "The Logic of Value Imperatives," *Philosophy of Science* 13 (1946): 25-40, esp. p. 33n; Everett Hall, *What is Value?* (New York: Humanities Press, 1961), pp. 125ff; Mark Fischer, "Strong and Weak Negation of Imperatives," *Theoria* 28 (1962): 196-200. Fischer maintains that in addition to negating imperatives by prefixing 'Don't', one needs a second negation which is equivalent to 'It is commanded by so-and-so that p', namely, 'You don't have to', or 'I don't tell you to do A'.

[38]Castaneda, *The Structure of Morality*, pp. 50,101-103; and *Thinking and Doing*, pp. 225-228; Georges Kalinowski, *Du métalanguage en logique: réflexions sur la logique déontique et son rapport avec la logique des normes*, Università di Urbino, numéro 48, 1975 p. 14. I am indebted to Professor Sam Levin for this article; Rescher, *The Logic of Commands*, p. 29.

[39]von Wright, *Norm and Action*, p. 148.

[40]Eric Stenius, "The Principles of a Logic of Normative Systems," *Acta Philosophica Fennica* 16 (1963): 247-260; Lemmon, "Deontic Logic and the Logic of Imperatives;" Esperson, "The Logic of Imperatives".

Chapter III

THE ANALYSIS OF OUGHT SENTENCES

In this chapter an analysis of ought sentences is presented according to which ought sentences are always used to make a true or false statement of fact and only indirectly for prescribing. Arguments are offered to refute the thesis that one commits a fallacy -- the naturalistic (descriptive) fallacy -- in analysing normative ought statements as true or false descriptive statements; and counterarguments designed to show that one does commit such a fallacy are critically discussed.

1. The Naturalistic (Descriptive) Fallacy

The thesis argued in this and the final chapter is that the principal reason for thinking that there is such a fallacy as the naturalistic fallacy is not a good reason; and that in its absence there is no objection to, and good reason for, construing ought sentences as true or false descriptive sentences used only indirectly for prescribing. The naturalistic fallacy is the (putative) fallacy of supposing that it is logically possible for any statements of the kind usually called descriptive to imply or be implied by statements of the kind usually called normative (prescriptive, evaluative), including, of course, normative ought statements.[1] The definite description 'the naturalistic fallacy' is used ambiguously here to denote any of a family of fallacies depending upon the interpretation

of 'imply'. If implication is understood as the relation that obtains between two sentences when the meaning expressed by one is contained within the meaning expressed by the other, then the fallacy in question is what is referred to as the "definist fallacy", i.e., the fallacy of supposing that there may be a relation of synonymy between descriptive and normative statements (the one being defined in terms of the other); for two statements are synonymous when each implies the other (in the sense of 'implies' just mentioned). If, however, implication is understood in some other sense, for example, as a necessary, but synthetic connection between propositions, or simply as material implication, then the fallacy in question is what is referred to as the "deductive fallacy".

Actually, given this description of the naturalistic fallacy, the name "naturalistic fallacy" is somewhat unfortunate. The fallacy, that is , is one of supposing that *descriptive* statements may imply and be implied by normative statements, and is not, as the name suggests,the fallacy of supposing that it is logically possible for any *naturalistic* statements to imply and be implied by any normative statements. A statement to the effect that an object possesses a non-natural property, e.g., goodness, is a descriptive (factual) statement, but it is not, by hypothesis, a naturalistic one. The naturalistic fallacy is still committed, however, in supposing that a statement ascribing a non-natural property to an object may imply or be implied by a statement of the kind usually called normative (prescriptive, evaluative). The problem, according to proponents of the naturalistic fallacy, is that even statements ascribing non-natural properties are descriptive statements; and descriptive statements

can neither imply nor be implied by statements of the kind usually called normative. Consequently, what has been described as the naturalistic fallacy might better be termed "the descriptive fallacy", if only to evade the question of whether what is here referred to as the naturalistic fallacy is what was meant by G.E. Moore, the inventor (or discoverer) of that fallacy. In fact, there is reason to believe that the descriptive fallacy and Moore's naturalistic fallacy are not identical.

The title "descriptive fallacy" is doubly apt. It is apt, first of all, because Hare has termed "descriptivism" the doctrine, which he believes erroneous, that normative judgments of the sort ought sentences are used to make, are true or false descriptive (factual) judgments.[2] And secondly, it is apt because Austin has used the title "descriptive fallacy" to denote the putative fallacy of supposing that explicit performative sentences are true or false descriptive sentences.[3] The analogy between ought sentences and explicit performatives is a close one. In fact, it must be noted that Hare chose the term "descriptivism" because of that analogy. In both cases there is an indicative sentence that, supposedly, is not used to make a true or false statement of fact, as indicative sentences are characteristically used to do, but is instead used to perform an action such as promising or prescribing. It is the fact that ought sentences and explicit performatives express a type of meaning in virtue of which they are used to perform an action, such as prescribing and promising respectively, that makes it logically impossible for them to imply or be implied by a sentence whose meaning renders it

suitable (at least primarily) for describing. Whereas ordinary indicative sentences describe a state of affairs and are, hence, true or false depending upon whether the state of affairs obtains, other kinds of indicative sentences, namely, ought sentences and explicit performatives, it is held by proponents of the descriptive fallacy, do not simply describe, but prescribe, or else are used to perform some other action. As Katz says, whereas ordinary indicative sentences express an "assertive proposition", explicit performatives and, one might add, normative ought sentences express a "performative proposition".[4] Since, however, the title "naturalistic fallacy" is more common in discussions of normative ought sentences than is "descriptive fallacy", that is the term which is employed here, though understood in the sense indicated.

The principal reason, then, for holding that it is a fallacy to suppose that a descriptive statement can imply or be implied by a normative statement is the fact that normative statements possess prescriptive meaning in virtue of which they enunciate a prescription, and, hence, are neither true nor false. But if prescriptive statements are neither true nor false, then they are incapable of implying or being implied by a true or false descriptive statement since it is a necessary condition for there to be an implication relation between propositions, whether material implication or a necessary connection between meanings, that if the first proposition is true, then the implied proposition is also true. Moreover, apart from questions concerning truth valuation and preservation, the possession by prescriptive statements of a sort of prescriptive meaning that descriptive statements lack precludes an analytic entailment between prescriptive and descriptive statements, and

on similar grounds may be argued to preclude a necessary, but synthetic, connection as well. For, although Hintikka[5] has argued that a logical inference may result in an increase in information from premise to conclusion such that the information expressed by the conclusion is not simply contained in the premise(s); still the surplus information (meaning) expressed by the conclusion is of the same sort, namely, descriptive meaning, as is expressed by the premises. There is no precedent for an inference to result in the expression by the conclusion of the inference of a radically different sort of meaning from that expressed by the premises, such that whereas the premises of the inference contain merely descriptive information, the conclusion expresses prescriptive meaning, and, hence, enunciates a prescription.

The possession of prescriptive meaning by prescriptive statements, however, is a bad reason for thinking that prescriptive statements can neither imply nor be implied by a true or false descriptive statement since, it is argued, prescriptive meaning does not exist. The arguments for this, to be developed in the course of this chapter, are threefold. Firstly, the postulation of prescriptive meaning is uneconomical. It is neither necessary nor, arguably, sufficient to posit the existence of prescriptive meaning in order to account for speech acts of prescribing. Secondly, there is good reason to believe that none of the other principal sorts of sentences--imperatives, interrogatives, explicit performatives--possesses anything other than ordinary descriptive meaning. In particular, if, as has been sometimes maintained, a normative ought sentence is a disguised imperative, or if, as Hare has maintained, a normative ought sentence entails an imperative, and if imperative sentences are themselves

true or false descriptive sentences, as was maintained in the first two chapters, then it follows that normative ought sentences are true or false descriptive sentences as well. And thirdly, the apparent fact that logicians define the evaluative expression 'valid' in purely descriptive terms in the context 'x is a valid rule of deductive or inductive inference' provides a counterexample to the claim that a prescriptive (evaluative) statement cannot imply or be implied by a purely descriptive statement, since 'x is a truth preserving rule of deductive inference' implies and is implied by the statement 'x is a valid rule of deductive inference'. Moreover, the apparent fact that 'valid' is definable in purely descriptive terms in the context 'x is a valid rule of deductive or inductive inference' is relevant to the analysis of ought sentences since 'It ought to be the case that p' (where 'p' is an indicative sentence, e.g., 'One keeps one's promises') and 'It is required by a valid rule that p' are commonly thought to be synonymous. And it is reasonable to suppose that the term 'valid' is the same in the context 'x is a valid rule of deductive or inductive inference', in which it is definable in purely descriptive terms, as in the context, 'It is required by a valid rule (e.g., of morals) that p'. In other words, there is good reason to believe that normative ought sentences are true or false descriptive sentences because there is good reason to believe that sentences with which ought sentences are synonymous, namely, sentences of the form, 'It is required by a valid rule that p' are themselves true or false descriptive sentences.

In sum, it is maintained that normative ought sentences are descriptive sentences used to make a true or false statement of fact, and indirectly used for prescribing by way of making a true or false factual

statement. Normative ought sentences, it is held, are 'is' sentences. And, of course, if ought sentences are 'is' sentences, then there is no fallacy--the naturalistic (descriptive) fallacy--inherent in thinking that normative ought sentences may imply or be implied by a descriptive 'is' sentence.

2. The Form of Ought Sentences

Before discussing the content of ought sentences--what sort of statement ought sentences are used to make, and how such statements may be used indirectly for prescribing--a word should be said regarding their logical form. It is assumed here that every ought sentence, e.g., 'John ought to pay more attention to his work', though not itself syntactically of the form 'It ought to be the case that p' (where 'p' is an indicative sentence) is logically equivalent to an ought sentence of that form. 'John ought to pay more attention to his work', for example, is logically equivalent to 'It ought to be the case that John pays more attention to his work'. This assumption reflects the standard practice of deontic logicians; though it should be mentioned that in von Wright's original system of deontic logic, deontic operators were prefixed not to propositions, but rather to names of act-types.[6] In later writings, though, von Wright adopted the practice of formulating ought sentences as composed of a deontice operator 'O' prefixed to a proposition, or indicative sentence 'p'.[7]

Recently, Harman has offered an argument against construing every ought sentence as logically equivalent to a sentence of the form 'It ought to be the case that p'; but his argument rests upon an equivocation.[8] The

argument is that if the sentence 'Rockefeller ought to give his money to the poor' were logically equivalent to 'It ought to be the case that Rockefeller gives his money to the poor', then, since, says Harman, Rockefeller giving his money to the poor is the same as the poor getting Rockefeller's money from him, it should also be equivalent to 'It ought to be the case that the poor get Rockefeller's money from him (if they can)'; but it is not. Clearly, Harman first assumes that Rockefeller giving his money to the poor is the same as the poor getting Rockefeller's money from him and then later in the argument assumes that it is not the same (as is evident from his later inclusion of the phrase 'if they can', indicating that the agents are no longer Rockefeller, as originally, but the poor). Had Harman said, less ambiguously, Rockefeller giving his money to the poor is the same as the poor being given Rockefeller's money by him, rather than getting his money from him if they can, then this supposed problem would not arise. In chapter four, a different argument, of Castaneda's, for maintaining that ought sentences are not of the form 'Op' will be considered.

3. The Content of Ought Sentences

What sort of statement, then, are ought sentences used to make? It is held that a sentence of the form, 'It ought to be the case that p' is equivalent to the statement 'It is required by a valid rule that p'. The rule in question may be a moral rule, a rule of prudence, inquiry, hygiene, etc. In uttering a sentence of the form 'It ought to be the

case that p', one states that it is required by a valid rule that p, but one does not specify by what sort of rule. Generally, one relies on contextual features to make clear the sort of rule referred to. If a doctor, for example, in the course of an examination says, "You ought to watch your weight", it is clear that he means that it is required by a valid rule of hygiene that the person addressed watch his weight. Or if a priest in the confessional says, "You ought to return what you stole", it is clear that he means that it is required by a valid rule of morals that the person return the stolen object. Sometimes, of course, a speaker may specify what sort of rule he has in mind in stating that something ought to be the case. Thus, one often says such things as "Morally, you ought to do such and such", or "Legally, you ought to do it", and these statements are equivalent to the statements that it is required by a valid rule of morals that you do such and such, and that it is required by a valid rule of law that you do it, respectively. Unless a speaker specifies the kind of rule he has in mind, however, it is not part of the content of an ought statement what sort of rule is involved. Nor, *a fortiori*, is it part of the semantic content of an ought statement what particular rule is referred to. In fact, in order for a speaker to make an ought statement, he need not even have any particular rule in mind; he need only believe that *there is* a rule requiring a certain action. In what follows, however, since we shall be concerned almost exclusively with the moral 'ought', it is assumed that by a statement of the form 'It ought to be the case that p', it is meant that it morally ought to be the case that p, i.e., it is required by a valid rule of morals that p. It is interesting to note that,

according to Anscombe, the moral 'ought' acquired the sense of "required by a valid moral rule" as a result of the Christian law conception of ethics.[9]

Although the preceding analysis of ought statements may find widespread support, the controversial part of the analysis concerns the question of whether the term 'valid' occurring in it is a normative or purely descriptive term. It is here maintained that the term 'valid', though normative, may be defined in purely descriptive terms. In other words, there is no fallacy involved (the naturalistic, or descriptive fallacy) in taking the sentence 'It is required by a valid rule (of morals) that p' to imply and be implied by (in any sense of implication) a purely descriptive sentence. In fact, there may be an identity of meaning between what is expressed by the sentence 'It is required by a valid rule (of morals) that p' and some purely descriptive sentence, though the characteristic uses of the two sentences may differ.

Among possible candidates for definitions of 'valid moral rule' are the following. "A valid moral rule is one whose general obedience would result in a maximization of utility." Such a definition has been urged by Mill and rule utilitarians generally. A second possible candidate, urged by Rawls, is that: "A valid moral rule is one that would be adopted by rational persons in the original position."[10] It is interesting to note that the possibility of defining 'validity' in purely descriptive terms does not entail the non-relativity of morals in the sense that any two action tokens of the same type must be of the same moral character; though it does entail the non-relativity of morals in the sense

that one definition of 'validity' is taken to be objectively grounded, i.e., true. It might be the case, for example, that a valid rule of morals is objectively one, as existentialists have urged, that is freely adopted by a person to regulate his own conduct. If such is the case, then it might be objectively true that one person ought to perform a certain action since it is required by a freely adopted, self-imposed rule of that person; whereas another person ought not to perform the same sort of action since doing so is not required by a self-imposed rule of that other person. Similarly, it might be the case, as ethical egoists insist, that the only valid rule of morals is that one does what will most benefit oneself. In that case, it might happen that one person ought to perform a certain action since doing so will benefit him, whereas another person ought not to perform a similar action since doing so will not benefit that person. One man's meat, as the saying goes, is another man's poison. In short, the possibility of defining the validity of moral rules in purely descriptive terms does not entail the non-relativity of morals in the sense that what is right for one is right for all.

No particular analysis of the validity of moral rules, however, is to be defended here. What is argued, rather, is that there is no objection in principle to taking a sentence of the form, 'It ought to be the case that p' to imply and be implied by a sentence containing only descriptive terms such as 'It is required by a utility maximizing rule that p', or 'It is required by a rule that would be adopted by rational persons in the original position that p', etc. In particular, there is no fallacy stemming from the possession by ought sentences of an element of

prescriptive meaning that descriptive 'is' sentences lack, in equating an ought sentence and a purely descriptive 'is' sentence. This is not to deny, however, that ought sentences have a prescriptive *use*. What is denied is that in addition to having a prescriptive pragmatic use, ought sentences have prescriptive semantic content. Ought sentences have purely descriptive semantic content, as do 'is' sentences; but in addition they have a characteristic prescriptive use.

4. The Prescriptive Use of Ought Sentences

In this section the question is discussed concerning how ought sentences may be used both to make a true or false statement of fact and, indirectly, to prescribe. In particular, a set of conditions, not assuming the existence of prescriptive meaning, is presented, the satisfaction of which in uttering an ought sentence is sufficient for a speech act of prescribing to occur. Very briefly, ought sentences are used prescriptively if they are used to make a statement of fact to the effect that a certain action is required by a valid rule, e.g., of morals (where 'validity' may be defined in purely descriptive terms), and if the reception of that information by the hearer is expected to influence him to perform the required action for the reason that it is required. The hearer, furthermore, is expected to recognize that it is the speaker's intention in uttering the ought sentence to induce him, the hearer, to act.

In more detail, since ought sentences are used to make a true or false statement of fact to the effect that an action is required by

a valid rule (of morals), the analysis of statement making presented in the first chapter is applicable here. That is, in uttering an ought sentence for the purpose of prescribing, the speaker utters the sentence, 'Op', with the intention of bringing it about that:

(a) the hearer believes that Op,

(b) the hearer believes that the speaker intends that he believe that Op,

(c) the hearer has as a reason for believing that Op his belief that the speaker intends that he believe that Op; and having that as a reason will cause the hearer to believe that Op,

(d) the hearer believes that the speaker intends that he have as a reason for believing that Op, his belief that the speaker intends that he believe that Op.

As before, condition (a) represents the speaker's primary intention in uttering an ought sentence, namely, to induce the hearer to believe that it ought to be the case that p--which statement, it is held, is equivalent to the statement that it is required by a valid rule (of morals) that p. Condition (b) represents the speaker's secondary intention that the hearer recognize the speaker's primary intention. Condition (c) represents a third intention that the hearer's recognition of the speaker's primary intention will motivate the hearer (by giving him a reason for acting) to satisfy that primary intention by believing that it ought to be the case that p. Since condition (c) implies conditions (a) and (b), those conditions might have been omitted, but are listed separately for greater explicitness. Finally, condition (d) represents the speaker's fourth intention in making a statement, which is that the hearer recognize the speaker's third intention.

So far, then, conditions have been listed which are sufficient for

an ought sentence to be used to make a true or false statement of fact. In order for an ought sentence to be used in addition for prescribing, it is sufficient that two more conditions be satisfied. It is sufficient, that is, for an ought sentence to be used prescriptively that in addition to conditions (a)-(d) being satisfied, the following two conditions are also satisfied:

(e) the hearer makes it be the case that p for the reason that Op,

(f) the hearer believes that the speaker intends that he make it be the case that p for the reason that Op.

The first condition (e) embodies the intention that the information which is communicated to the hearer, that it ought to be the case that p, will cause him (more accurately, will be part of a sufficient causal condition) to make it be the case that p. It is the speaker's intention, that is, to motivate the hearer to make it be the case that p by providing him with the information that it is required by a valid (moral) rule that he make it be the case that p. The speaker expects that once the hearer has knowledge of the fact that something is required by a valid moral rule he will have a reason for doing it, and that he will in fact do it for that reason.

Now, it may be the case that communication of the information that a certain action is required by a valid moral rule has no effect upon the hearer. It will have no effect, for example, on the person who sells his soul to the Devil. Such a person freely acknowledges that what he does is immoral; but he does it nonetheless for the sake of gain, glory etc. Although such a person believes erroneously (or at least so the story goes) that gain or glory is of greater value than rectitude, he has no

misapprehension concerning the rightness of his action. Therefore, telling him that he ought not to do what he does will have no effect upon him since he believes and freely acknowledges that what he does is wrong, but does not alter his behavior on that account. The fact that moral injunction has no effect upon persons who are not inclined to be moral, however, in no way impugns the analysis of the prescriptive use of ought sentences presented here. The fact that the utterance of an ought sentence may have no effect upon the person addressed does not mean that the analysis of the prescriptive use of ought sentences is wrong. It simply means that the user of an ought sentence is ill advised to attempt to influence a hearer who is not inclined to be moral through the use of moral exhortation. The prescriptive use of ought sentences might be compared with the use of true or false descriptive sentences in propagandizing. The statement, "I favor international understanding", for example, uttered by a politician, is usually intended to influence the hearer's behavior, particularly his voting behavior, by giving him a reason for supporting the politician. But the fact that a political candidate favors international understanding will not be a reason for supporting him if one happens not to favor international understanding but desires global conflict instead.

Finally, condition (f) represents the speaker's fourth intention that the hearer recognize that the speaker's purpose in communicating the information that something is required by a valid moral rule is to induce the hearer to do what is required. Much of the prescriptive force of ought sentences derives from the satisfaction of this condition. It is not some abstract entity called "prescriptive meaning" that lends prescriptive force to the utterance of ought sentences, but rather the

concrete fact of recognition on the part of the hearer that the speaker is not supplying information to him in a disinterested manner, but that the speaker intends to induce the hearer to act. In short, then, it is sufficient for an ought sentence to be used prescriptively that conditions (a)-(f) be satisfied. It is not necessary to posit the expression of prescriptive meaning by ought sentences in order to account for their prescriptive force. Ought sentences are suitable for use in prescribing precisely because they have truth conditions and may be used for making a true or false statement of fact. In short, it is possible to account for what, according to prescriptivists, is the most distinctive feature of the language of morals, namely, the fact that it is prescriptive, without positing such abstract entities as prescriptive meaning. Normative ought sentences are descriptive sentences having nothing other than ordinary descriptive meaning.

It might be mentioned that the position that the prescriptive and descriptive functions of ought sentences are not mutually exclusive, as is often maintained, but that the prescriptive function of an ought sentence might be accomplished precisely in virtue of its descriptive content has been advocated by at least the following writers: Searle, Wertheimer, Hancock, Mitchell, Walker, Glossop, Fink, Stojanovic, Shaw, Forrester, Lewis, and Baker and Hacker.[11] It should also be mentioned, in case it is not sufficiently clear, that ought sentences need not be used prescriptively. They may be used in what Hare calls the inverted commas sense to state the matter of fact that a certain action is required by a valid rule, but without the intentions of inducing a hearer to act.

In uttering an ought sentence, that is, intentions (a) - (d) may be exemplified, but not the further intentions (e) and (f).

5. First Argument for Interpreting Ought Sentences Descriptively

One of the principal virtues of the proposed theory of ought sentences, as with the theory of imperatives put forward in the first two chapters, is the economy it affords. On the proposed theory it is not necessary to interpret ought sentences as being ambiguous in meaning, sometimes having purely descriptive meaning and sometimes having prescriptive meaning. On the proposed theory ought sentences have only descriptive semantic content, but may when desired be *used* prescriptively. It is not necessary to posit the existence of prescriptive meaning in order to account for the prescriptive force of ought sentences. Nor, arguably, is it even sufficient to posit the expression of prescriptive meaning by ought sentences to account for speech acts of prescribing. This may be seen by slightly changing the Abbott and Costello example mentioned in chapter one such that Abbott first utters the normative ought sentence 'You ought not order anything since we are short on money' (rather than the imperative 'Don't order anything!') and then in the presence of the waitress utters the second normative ought sentence, 'You ought to order something since you're taking up a place', assuming that Costello will recognize that he is to pay attention to the first ought statement rather than the second. If it is held that Abbott does not issue a prescription in making the second ought statement but merely simulates doing so, then it follows that the expression of prescriptive meaning by ought statements is not sufficient for a prescription to occur. And

even if it is held that Abbott does issue a prescription in making the second ought statement since he utters a sentence having prescriptive meaning but relies upon Costello to infer that he doesn't intend the prescription to be obeyed, it may be argued that in the case of every ought statement, then, the hearer must similarly infer whether or not the speaker intends the prescription issued to be obeyed. In other words, even if it is assumed that the utterance of an ought statement expressing prescriptive meaning is sufficient for a prescription to be issued, in order for the prescription to have prescriptive force it is further required that the speaker intend, and that the hearer correctly infer that the speaker does intend, that the prescription be obeyed. In even normal circumstances, that is, the hearer must say to himself, "The speaker has issued a prescription, but does he mean for it to be obeyed?".

The economy to be had on the proposed theory is particularly evident in the construction of deontic logic. Since ought sentences are interpreted as always having descriptive semantic content it is not necessary to invent semantic values such as 'satisfaction', 'validity', 'legitimacy', or 'satisfactoriness', as have been proposed for doing the logic of imperatives, in order to construct a deontic logic. Truth suffices. A valid formula of deontic logic, as in ordinary logic, is one that is true in all interpretations; and a valid inference is a truth preserving one. It is also possible to give a standard truth-table interpretation to the truth functional connectives used in deontic logic.

By way of contrast, the deontic logic constructed by von Wright admits of two interpretations, a prescriptive and a descriptive interpretation, thus reflecting the ambiguity of ought sentences on alternative

theories.[12] In von Wright's system of deontic logic the formulae may either be interpreted as standing for true or false "norm-propositions" stating that there exists a norm requiring that a certain action be performed; or they may be interpreted as standing for the norms themselves, in which case, according to von Wright, the formulae are neither true nor false. Von Wright's system of deontic logic, in effect, formalizes two distinct logics that are formally identical: the logic of norm-propositions on the one hand, and the logic of norms on the other. The logic of norms, as von Wright says, is reflected in the logic of norm-propositions (and conversely). To quote:

> One such question is whether the Logic of Norms which we are building is a logical study and theory of descriptively or of prescriptively interpreted O- and P- expressions . . . The "fully" developed" system of Deontic Logic is a theory of descriptively interpreted expressions. But the laws (principles, rules), which are peculiar to this logic, concern logical properties of the *norms* themselves, which are then reflected in logical properties of norm-propositions.[13]

This same dual interpretation, which Stenius calls the "method of double interpretation", is also characteristic of Stenius's system of deontic logic.[14] Stenius agrees with von Wright that ought sentences may be interpreted either as expressing norms which lack a truth value, or as expressing a true of false proposition to the effect that there exists a norm; and he enunciates it as an important principle that the logic of ought sentences is formally the same on either interpretation. The formulae of deontic logic, that is, may be interpreted either as norms or as true or false propositions concerning norms (though a mixed interpretation is not allowed).

On the proposed theory of ought sentences, however, one is able to dispense with this dual interpretation of the formulae of deontic logic.

Instead of having two distinct, but formally identical, logics, there is but one logic of ought sentences, namely, the logic of ought sentences interpreted descriptively. Of course a descriptive ought sentence may be used either for prescribing (indirectly) or else simply for describing; but the use of ought sentences is not part of what is to be captured in their logic. To repeat an analogy made before, it is no more necessary, on the proposed theory, to give a dual interpretation to the formulae of a logic of ought sentences than it is to give a dual interpretation to the formulae of a logic of 'stand' sentences: one interpretation for 'stand' sentences used purely descriptively, e.g., 'You are standing on a spot at 75° longitude and 39° latitude', and another interpretation for 'stand' sentences used prescriptively, e.g., 'You are standing on my foot'. The fact, stressed by von Wright and Stenius, that the logic of ought sentences is the same whether its formulae are interpreted prescriptively or descriptively is easily accounted for by the proposed theory as a consequence of the fact that ought sentences have only descriptive semantic content, but may be used indirectly for prescribing. The putative distinction between the logic of ought sentences interpreted prescriptively and the logic of ought sentences interpreted descriptively is a distinction without a difference. In the next chapter we shall attempt to account for the fact that ought sentences may seem to enunciate norms in addition to being used for stating, truly or falsely, that a norm exists.

6. Second Argument for Interpreting Ought Sentences Descriptively

The second argument for construing normative ought sentences and sentences of the form 'It is required by a valid rule that p' as true or false descriptive sentences is that if normative ought sentences have a precriptive semantic content that descriptive sentences lack, then they are unique in this regard. In the first two chapters it was argued that imperative sentences have descriptive semantic content and a prescriptive use. Imperative sentences are suitable for use in prescribing precisely because they are descriptive of a state of affairs that is to be brought about. That the speaker desires the state of affairs to be brought about, however, is no more a part of the semantic content of an imperative sentence than is the fact that an indicative sentence is used by a speaker to make an assertion a part of the semantic content of the indicative sentence. The semantic content of an imperative is exhausted by its truth conditions, or, alternatively, by the descriptive proposition expressed which determines the conditions under which the sentence is true. To understand that the utterance of an imperative sentence is a call for action is not to understand something about the semantic content of the imperative, but is rather to make a correct inference concerning the speaker's intentions in uttering the sentence. This theory of imperatives is particularly relevant to the analysis of ought sentences not only because imperatives are commonly thought to have a type of prescriptive, or imperatival, meaning that normative ought sentences also express, but also because normative ought sentences are sometimes held to be disguised imperatives.[15] If, however, ought sentences

are disguised imperatives, or if, as Hare has maintained, they entail an imperative, then, since it has been argued that imperative sentences are stylistic variants of true or false indicative sentences, it follows that normative ought sentences are also true or false descriptive sentences. In short, if the prescriptivist theory is true that normative ought sentences are not true or false descriptive sentences either because they are disguised imperatives or because they entail an imperative, then the theory is false, since imperatives themselves are true or false descriptive sentences; therefore the prescriptivist theory is false.

Similarly, it was argued in the appendix to the first chapter that what are called interrogative sentences are best regarded as stylistic variants of indicatives. What are called interrogative sentences, that is, are simply indicative sentences with subject and verb transposed. Although it is often held that interrogative sentences have a special sort of performative semantic content since they are used to solicit information rather than give information (Lewis and Katz even equate interrogatives and explicit performatives, while Aqvist and Hintikka equate them with imperatives), it was argued that the descriptive component of interrogative sentences exhausts their semantic content. In fact, interrogative sentences are suitable for use in soliciting information precisely because they are descriptive. It is because interrogatives describe a state of affairs that they may be uttered with the intention of inducing a hearer to tell the speaker whether the interrogative sentence is true (or for what values it is satisfied). From the fact that interrogative sentences are characteristically used to solicit information, rather than to state that something is the case, it does not follow that interrogatives may be equated with imperatives or explicit

performatives, or that they have a prescriptive (performative) semantic content. Interrogative sentences have a characteristic use in obtaining information; but their semantic content is exhausted by their truth conditions (or, alternatively, by the descriptive proposition expressed that determines the sentence's truth conditions).

In the beginning of this chapter, the naturalistic fallacy was linked with what Austin called the "descriptive fallacy". Both putative fallacies consist in assuming that if a sentence is an indicative sentence, it must have descriptive semantic content and be used for making a true or false statement of fact, whereas in fact explicit performative and normative ought sentences are not primarily descriptive and are not used for making a true or false statement of fact. The purpose of the present work is to reverse Austin. The real fallacy, it is held, lies not in supposing that all indicative sentences are true or false descriptive sentences, but rather in supposing that there are any sentences that are not such. Even imperatives and interrogatives, it has been argued, are true or false descriptive sentences. In fact, they are simply stylistic variants of indicative sentences. In order to complete this reversal of Austin, then, it is necessary to argue that even those sentences that Austin took to be obviously not true or false descriptive sentences, namely, explicit performatives, are in fact just what Austin thought they were not. In a lengthy digression, then, it is argued that explicit performative sentences are true or false descriptive sentences uttered with the intention of making a statement of fact and only indirectly to perform a further action by means of making the factual statement. Although this treatment of performatives is not as complete as the subject warrants, still it should be sufficient to establish the possibility

of analysing explicit performative utterances as true or false factual utterances as a real one. It should be mentioned that performative utterances have been analysed as true or false factual statements by Aqvist, Bach, Danielsson, Heal, Hedenius, Lemmon, Lewis, and Warnock, and as having a truth value though not used to make a statement by von Wright.[16] Therefore, if even explicit performatives may be analysed as having a purely descriptive semantic content, and not as expressing a "performative proposition", then the motivation for claiming that ought sentences have a special sort of prescriptive (performative, evaluative) semantic content in addition to a prescriptive pragmatic use will have been considerably reduced. The presumption must be, rather, that normative ought sentences, like the other principal sorts of sentences -- imperatives, interrogatives, and explicit performatives -- have purely descriptive content.

7. Performatives

The case for construing explicit performatives as true or false statements of fact is best made by examining the probable origin of performatives. It is safe to assume that the activity of promise making (to take that as paradigmatic) existed long before there were explicit performative utterances of the form 'I promise to do x'. Austin, it might be noted, made this assumption.[17] That is, long before persons categorized certain sorts of activity as being of the promise making type, they made promises by uttering such things as, 'I will do it' or 'You can count on me to do it', thereby expecting to incur an obligation to do the thing they said they would do. In general, it is

safe to assume that an activity exists before it can be recognized and categorized. Then after a long period of making promises by uttering such things as 'I will do it', persons came to recognize such activity as being of a kind they called "promise making"; and eventually it was noticed that it was possible to facilitate the activity of promise making by stating that the utterance of such a sentence as 'I will do it' constituted the making of a promise. That is, instead of saying simply 'I will do it', for example, and expecting thereby to incur an obligation by creating in the hearer the expectation that the speaker would do what he said, speakers began to say such things as 'I will do it. That's a promise'. It is relatively clear that in such a context the sentence 'That's a promise' is uttered to make a true or false factual statement. 'That's a promise' is true if and only if the utterance of the sentence 'I will do it' constitutes the making of a promise.

By making a statement of fact to the effect that one's utterance constitutes the making of a promise, the act of promise making is facilitated. Since the purpose for making a promise is to get the hearer to extend some sort of credit to the speaker in exchange for staking his reputation for reliability that he will do what he says, that purpose is defeated if the hearer fails to realize that the speaker intends to make a promise. And, of course, the easiest and most natural way for a speaker to get a hearer to understand what speech act he is performing is simply to tell him. If a speaker tells a hearer that in uttering the words, 'I will do it' he promises to do something, then the hearer is not likely to misunderstand the speaker's intentions. In Austin's terminology,

uptake is secured for an act of promise making simply by telling the hearer that that is the act the speaker performs.

Eventually, then, it was noticed that not only could one facilitate the activity of promise making by making a statement to the effect that one promised, but that one could make a promise simply by stating that one promised. Instead, that is, of uttering such sentences as 'I will do it', and then specifying, 'That's a promise', persons noticed (or it simply came to pass) that they could make a promise simply by stating, 'I promise to do it'. Therefore, what was once merely accessory to the act of promise making came to embody the act of promising itself. In uttering a sentence of the form 'I promise to do it', one states that one performs the speech act of promising; and one's statement is in fact true because there exists a convention to the effect that stating that one promises constitutes an act of promising. This is not to say that such a convention arose as the result of an explicit agreement. Rather, what is much more likely is that the practice of making promises through the act of stating that one promised evolved unconsciously over a long period. Of course, not every action is capable of being performed by the utterance of an explicit performative because not every action is of the sort that it can be accomplished by means of a convention to the effect that stating that one performs the action counts as actually performing it. One cannot play the piano, for example, in virtue of any convention to the effect that stating that one plays the piano counts as (is as good as) actually playing it. Speech acts, however, since they are accomplished by linguistic means anyway, are quite capable of being performed by means of

performing the substitute speech act of stating that one performs the speech act in question.

Explicit performative utterances, then, are true because there exists a convention to the effect that stating that one performs certain actions counts as actually performing them. Of course, whether there exists such a convention is a contingent matter; so if explicit performative utterances are true, they are only contingently so. It is important to realize, however, how natural such conventions are. What better way, in effect, to secure uptake for a speech act than simply to state what sort of speech act one performs? If one attempts to make a promise by saying, e.g., 'I will do it', it is quite possible that the hearer will mistake the speaker's intentions and think that he is making a statement of fact but does not mean to incur an obligation to do what he says. If, however, a speaker says, 'I promise that I will do it', thereby stating that his present action constitutes an act of promising, then the hearer cannot very easily mistake the speaker's intentions. What better way to get a hearer to know what sort of speech act the speaker is performing than simply to tell him?

If explicit performative utterances are capable of being true, they may also be false. They are false in just those cases when, as Austin says, the attempted speech act misfires. For example, to take a case considered by Austin, if in a somewhat inebriated state I see a vessel on the stocks, walk up and smash the bottle hung at the stern and proclaim, 'I name this ship the *Mr. Stalin*' when I was not the person designated to do so, then I do not officially name it. The attempted speech act, as Austin says, misfires. But if I do not succeed in performing the action

I say I perform (naming the ship), then what I say is false. In other words, although there is a convention that one may name a ship by stating that one names it, the convention also requires that one be officially designated to do so. If a person who has not been so designated attempts to name a ship by stating that he names it, then he fails to name it because he fails to satisfy all the requirements for naming it; and so what he says is false. In general, since an explicit performative utterance is counted false, under the proposed theory, just in case it misfires, the statement that an explicit performative utterance is false and the statement that it misfires are equivalent.

One exceedingly important question concerning explicit performatives that requires investigation is the question of whether such utterances are self-referential, as Danielsson and Aqvist, for example, have maintained.[18] If one makes a true or false statement of fact in uttering the sentence, e.g., 'I hereby pronounce you man and wife', then it seems one's statement must refer to the very act of uttering that sentence since to pronounce two persons man and wife is to say 'I hereby pronounce you man and wife' under the proper circumstances. In other words, if in uttering a sentence such as 'I hereby pronounce you man and wife' one states that one performs an action, then one's statement must refer to the act of uttering that sentence since, apparently, no other action is performed. In short, explicit performative utterances are self-referential.

Of course the question of whether and in what sense explicit performatives are self-referential must be decided by an exhaustive case by case examination of different explicit performatives. In some

cases it seems indeed that in uttering an explicit performative one refers to the very act of uttering the performative sentence. The sentence, e.g., 'I hereby pronounce you man and wife' might be taken as equivalent to the explicitly self-referential sentence, 'In uttering this sentence, I pronounce you man and wife', or, alternatively, 'The action I presently perform, namely, uttering this sentence, constitutes an act of pronouncing you man and wife'. Such sentences as these two might be used to make a true statement of fact if there is a convention according to which a sufficient condition for an officially designated person to pronounce two persons man and wife is that he utter a token of the sentence type, 'The action I perform in uttering this sentence constitutes an act of pronouncing you man and wife'. In other words, it is true that the action one performs in uttering the sentence 'The action I perform in uttering this sentence constitutes an act of pronouncing you man and wife' constitutes an act of pronouncing two persons man and wife, because there exists a convention according to which the speech act of uttering that sentence does in fact constitute an act of pronouncing two persons man and wife.

In uttering some other explicit performatives, however, it seems that one refers not merely to the very act of uttering the performative sentence, but also to another act distinct from the act of uttering the performative but accomplished at the same time. The sentence, "I baptize thee 'John'", uttered while sprinkling water on an infant, seems to be an example of such an explicit performative. In uttering this performative one makes reference not only to the fact that one sprinkles water on the infant; but one also makes reference to the fact that one utters

a certain sentence, namely, "I baptize thee 'John'", while doing so. Explicit performatives such as this one might be compared with the inscription on American paper currency that reads, "This note is legal tender for all debts, public and private". The referent of the term 'this note' is the entire bill, including the sentence, 'This note is legal tender. . .' itself. Probably the element of self-referentiality inherent in this inscription is unintended. The person who first thought of putting such an inscription on paper currency very likely did not notice that in putting an inscription referring to a particular bill on the bill to which it referred, he had to refer to the inscription itself since the inscription is part of the bill. Similarly, it may well be the case that explicit performative utterances such as "I baptize thee 'John'" are not intentionally self-referential. The person who utters such a sentence may mean to assert only that his present action, namely, the sprinkling of water on an infant, constitutes an act of baptism. And yet, since the very act of uttering the sentence "I baptize thee 'John'" is part of the person's action, it may be maintained that the person in referring to his present action thereby refers to the act of uttering the sentence whether he explicitly intends to or not. The explicit performative "I baptize thee 'John'", it might be argued, is equivalent to the factual statement, "My present action constitutes an act of baptizing this infant 'John'". And what the speaker refers to by the description 'my present action' is partly the act of sprinkling water, but partly also the very act of uttering the sentence he utters. The speaker's statement is true in virtue of the convention according to which sprinkling water on an infant (if

done by the proper person under the proper circumstances) while stating that one baptizes the infant does in fact constitute an act of baptism.

Still other sentences that are generally classified as explicit performatives may not be self-referential at all. For example, the sentence, 'I find the defendant guilty', intoned by a judge, may not be equivalent to the self-referential statement, 'My present action, including the action of uttering this sentence, constitutes an act of finding the defendant guilty', but is rather equivalent to the statement, 'I believe that the defendant is guilty'. In uttering, 'I find the defendant guilty', the judge may do nothing more than state that he believes the defendant to be guilty. This, it might be argued, is the most natural interpretation of the statement 'I find the defendant guilty'. When one person asks another, "How do you find the play?", what he wants to elicit is a true factual statement from the hearer regarding his opinion of the play in question. If the person responds, 'I find it very amusing indeed', then either he makes a true statement of fact if he does find the play amusing, or he utters a falsehood if, for example, he finds the play quite dull but in order not to offend his host says that he finds it amusing. In such a context, it seems clear that the respondent makes a true or false statement of fact. To say that he finds the play amusing is to state that in fact his opinion of the play is that it is amusing. Now, there seems to be no good reason for not interpreting the judge's apparently similar utterance, 'I find the defendant guilty' analogously. In saying 'I find the defendant guilty', the judge issues a report regarding

his belief as to whether the defendant is guilty or innocent. To say that he finds the defendant guilty is to state that he believes that he is guilty; and either it is true that he believes it or it isn't. But, to say that the judge makes a true or false statement of fact is not at all to deny that what he says has grave consequences for action. That is, society chooses certain individuals to listen to evidential statements regarding the actions of a person brought to trial; and then that person is punished or exonerated depending upon whether the individual (the judge) believes that he is guilty or innocent (more accurately, depending upon how the judge reports his beliefs). The judge's utterance, 'I find the defendant guilty' is simply a statement of fact reporting the judge's beliefs concerning the defendant. A judge may also lie if, for example, he has been bribed, and say that after considering all the evidence he finds the defendant innocent even though,in fact, he believes the defendant to be guilty; but the defendant will be exonerated all the same. This fact, however, in no way contradicts the analysis presented here. A defendant is punished or not depending upon whether a judge (or jury) believes that he is guilty or innocent. But the judge does not have to make a true report of his beliefs unless he happens to be honest.

A similar interpretation can be given to the action of a referee in a game. Certain individuals, that is, who are supposed to have no interest in the outcome of a game, are chosen to report their findings concerning occurrences in the game; and play continues on the basis of assuming that those findings are true. If the umpire says, 'You're out!', for example, he simply reports that the runner

was tagged by the ball before he reached a base. The umpire's judgment may be true or false. The runner may actually have reached the base before being tagged by the ball; but even so the runner must retire from the field because it is a rule of baseball that if a runner is tagged by a ball before reaching a base, then he leaves the field. If the referee judges that the runner is out, then the runner is treated as though he were out whether the referee's judgment, 'You're out' is true or not.

It might be objected that if the preceding is an accurate account of such utterances as 'You're out' and 'I find the defendant guilty', then such utterances are not in fact explicit performatives but are constatives since they are used to report a matter of fact. With this objection the present account of performatives is in complete agreement, since according to that account, performatives are in fact all constatives. Explicit performative utterances are suitable for use in performing various speech acts precisely because they are used to state a matter of fact. What one asserts in uttering an explicit performative sentence is either that the utterance of that sentence constitutes the performance of a certain speech act; or that the utterance of that sentence plus the performance of an action accomplished at the same time as the utterance constitutes the performance of the act; or that the performance of an action entirely distinct from the utterance of the explicit performative constitutes the performance of a certain action. It is not possible here to attempt to determine what explicit performatives fit which of the above categories. Nor is it even necessary to maintain that the analysis correctly categorizes those

performatives already considered. What is maintained is that explicit performatives are used to make a true or false statement of fact; and that they are either fully self-referential, partially self-referential, or not at all self-referential.

The preceding discussion, then, it is held, constitutes a plausible account of explicit performatives according to which performative sentences are true or false, and are used to perform an action precisely in virtue of their informative character. Now, although this position is not generally advocated, it is a rather remarkable fact that practically no arguments have been proferred against it. Austin himself in his work on performatives held that it was so obvious that explicit performatives are neither true nor false that no argument was required; and in fact Austin presented no arguments in support of his claim. To quote:

> In these examples ('I do take this woman. . .', 'I name this ship. . .', 'I give and bequeath. . .', and 'I bet. . .') it seems clear that to utter the sentence (in, of course, the appropriate circumstances) is not to *describe* my doing of what I should be said in so uttering to be doing or to state that I am doing it: it is to do it. None of the utterances cited is either true or false: I assert this as obvious and do not argue it. It needs argument no more than that 'damn' is not true or false.[19]

If a theory seems obvious and is in fact unchallenged, then the apparent obviousness of the theory is perhaps sufficient to justify its adoption. But once a theory has been questioned, as has the theory that performatives are not true or false descriptive sentences, then more needs to be said in its defense than that it is obvious. Although it may be true that an overwhelming number of ordinary language speakers believe that explicit performative utterances are neither true nor false

(actually, an empirical survey would probably reveal contradictory attitudes), theories are not to be accepted or rejected according to their popularity. This is not to say that the intuitions of ordinary language speakers should be totally disregarded. Such intuitions must be taken into account; but they are not the final arbiters. One can reject evidence on the basis of theory as well as theory on the basis of evidence. It seems possible to account for ordinary intuitions that explicit performatives lack a truth value. In the first chapter it was argued that common intuitions to the effect that imperative sentences lack a truth valid result from making a fallacious inference from the fact that the purpose for uttering an imperative is to induce a hearer to perform an action to the conclusion that imperatives are neither true nor false. A similar and equally fallacious inference accounts for ordinary intuitions regarding performatives. In the passage just cited, Austin says, "In these examples it seems clear that to utter the sentence. . . is not to describe my doing of what I should be said in so uttering to be doing or to state that I am doing it: it is to do it."[20] Similarly, Justus Hartnack writes, "The (explicit performative) sentence is used not to *describe* the performance of an act but to perform an act."[21] Although it is quite clear that in uttering an explicit performative one does what one should be said to be doing, it does not at all follow that one does not also state that one does it; or that one does not do it precisely by stating that one does it.

Also it might be mentioned that if certain intuitions militate against the theory that explicit performative utterances are used to make a true or false statement of fact, other, and quite strong intuitions militate

in its favor. Thus, Austin himself writes as follows: If you are a judge and say 'I hold that. . . then to *say you hold* is to hold."[22] And similarly, Searle has already been quoted as saying, "A man who says 'I (hereby) promise' not only promises, but *says* he does."[23] Further evidence of intuitions favorable to the theory that explicit performatives are used to make a true or false factual statement is provided by the common sense rejection of the inference from, e.g., 'I promise that I will repay you' to 'I will repay you' on the grounds that it does not follow from the fact that I promise that I will repay you that I will in fact repay you. If the premise of that inference were not used to state the matter of fact that I promise that I will repay you, then one would not be able to reject the inference on those grounds.

One positive argument designed to prove that explicit performatives are neither true nor false has been put forward by Gale and is worth consideration.[24] Gale begins the argument by defining the notion of a sentence being pragmatically self-verifying or self-falsifying. "A pragmatically self-verifying (falsifying) sentence type", he says "is one every use of which must say (in the locutionary sense) something that is contingently true (false)."[25] An example of a pragmatically self-verifying sentence type is the sentence 'I exist', since if anyone utters that sentence, it is true. Gale then argues that explicit performative sentences are neither pragmatically self-falsifying nor are they pragmatically self-verifying, since not every utterance of an explicit performative results in a true statement (assuming, for

purposes of the argument, that performatives are capable of being true or false). When the speech act performed by the utterance of an explicit performative misfires, as in the case of the drunk who says, 'I name this ship the *Mr.Stalin*', the performative sentence is false. One does not succeed in doing what one says one does.

Next, Gale claims that the negation of an explicit performative sentence is pragmatically self-verifying since every time the negation of an explicit performative is uttered it is true. If I say, 'I don't promise to do x', for example, then what I say is true because in fact I don't promise to do x. The conclusion that an explicit performative is neither pragmatically self-verifying nor pragmatically self-falsifying whereas its negation is pragmatically self-verifying, however, contradicts, says Gale, the true principle (the truth of which is established inductively, according to Gale) that: "A sentence type is pragmatically self-verifying if and only if its denial or contradictory is pragmatically self-falsifying."[26] Gale anticipates the possible reply that explicit performatives constitute an exception to the foregoing principle which, after all, is established only inductively, by stating that such a reply, "would be challenging the deeply rooted proposition that what is true of the logical status of a sentence is also true of its denial or negation -- if a sentence is meaningful (contingent, used to make a verifiable statement,etc.) then so is its denial or negation."[27] But this deeply rooted proposition does not seem to be true. Perhaps it is true if restricted to semantic properties such as Gale mentions, e.g., being meaningful, contingent, verifiable, etc; but it is clearly not true if extended to pragmatic properties.

It does not follow from the fact, for example, that a sentence is used to make an assertion that its negation is also asserted. Nor, by Gale's own admission, does it follow from the fact that an explicit performative is neither pragmatically self-verifying nor pragmatically self-falsifying that its negation has the same property since, again according to Gale, the negation of an explicit performative is pragmatically self-verifying. In calling the property of sentences he defines "pragmatic self-verifiability", Gale makes it clear that the property in question belongs to pragmatics; and for pragmatic properties it is not a deeply rooted proposition that what is true of a given sentence is also true of its negation. When applied to pragmatic properties, that principle is false; and one counterexample that proves it false, if Gale's analysis is correct, is provided by explicit performatives.

Finally, it might be objected that if explicit performatives were used to make a true or false factual statement regarding one's actions, then they would employ the present progressive tense rather than the simple present -- 'I am promising', for example, rather than, 'I promise'. But it is not at all clear what, if anything, to make of the fact that explicit performatives generally employ the simple present tense. Some languages don't even have a present progressive tense to contrast with the simple present. In French, for example, 'I am promising' and 'I promise' are both rendered, 'Je promets'. Secondly, it is not true that all explicit performatives employ the simple present. Thus, one can say 'I am warning you', 'I'm asking you', 'I'm telling you', and 'I am begging you', for example, as well as

'I warn you', 'I ask you', 'I tell you', and 'I beg you' respectively. And, finally, not all non-performative verbs are used in the present progressive tense. Thus, for example, one says, 'I see a ship on the horizon', and not 'I am seeing a ship on the horizon'. In fact, there are contexts in which even verbs that are generally employed in the present progressive tense are employed in the simple present. For example, a burglar outlining a plan of action to his accomplices might say "John shuts off the alarm while Jim waits by the exit and I open the safe", but not, "John is shutting off the alarm. . . etc.

This concludes discussion of explicit performatives. The upshot of this discussion, again, is that if it is necessary to postulate the possession of a special type of non-descriptive semantic content by normative ought sentences in order to account for their use in prescribing, they, apparently, are the only sort of sentence for which it is necessary to posit such content. Imperatives, interrogatives, and explicit performative sentences may all be used to perform an action without being construed as having anything other than ordinary descriptive meaning. Therefore, since the major types of sentences, including even those that have previously been thought not to be true or false descriptive sentences are in fact true or false descriptive sentences, then it is likely that ought sentences are true or false descriptive sentences as well. At the very least some argument is required to establish that normative ought sentences must be analysed as having a type of semantic content that other sentences lack.

8. General Theory of Speech Acts

Before presenting the final argument in favor of, and considering counterarguments to, the theory that ought sentences are always used for making a true or false statement of fact, and indirectly used for prescribing, it is worthwhile comparing the account of sentence use presented here in conjunction with the theories of imperatives, interrogatives, and explicit performatives with Austin's account in terms of locutionary and illocutionary acts. Although the present account may seem quite at odds with Austinian analysis, it may be argued that the two accounts do not conflict, apart from differences concerning the truth valuation of imperatives and explicit performatives. In fact, the present account might even be offered as a reconstruction of Austin's. According to Austin, whenever one utters a sentence one performs a locutionary act, which Austin defines as the act of uttering a sentence with a certain sense and reference. On the account of sentence use presented here, to perform a locutionary act is just to utter a sentence having certain truth conditions, or, alternatively, expressing a descriptive proposition which determines its truth conditions. Even in uttering an imperative sentence, an interrogative, or explicit performative, one performs the locutionary act of uttering a sentence with a certain sense (expressing a descriptive proposition) and reference (having certain truth conditions, or, on the Fregean view, a certain truth value).

There is one point, however, regarding locutionary acts that should be clarified. In the first three chapters, the account of sentence use

has been presented as though sentences themselves came already equipped with truth conditions, while the job of the speaker in performing a speech act of stating, commanding, or questioning consisted entirely in choosing a sentence with the appropriate truth conditions. The account of speech acts offered here, however, is not committed to such a view. Just as it has been insisted that sentences themselves neither make statements nor issue commands, that only persons can use sentences to perform such speech acts; so too may it be insisted that sentences also (or the words composing them) do not refer or predicate. Only persons can use sentences to refer and predicate. In fact, certain of the arguments designed to show that linguistic entities such as sentences cannot perform speech acts such as making statements or issuing commands might be adapted to show that the same linguistic entities also cannot perform speech acts such as referring and predicating. Only persons can do that. Since, however, the locutionary acts of referring and predicating are common to acts of commanding, stating, and questioning, it is not necessary here to pursue the matter further.

As Austin emphasized, one only performs a locutionary act in the context of performing an illocutionary act. One typical sort of illocutionary act is that of stating. Sentences with a given sense (expressing a certain proposition) and reference (having certain truth conditions) are used to make statements. If the analysis of stating presented in the first chapter is correct, then it is sufficient for an illocutionary act of stating to occur that a sentence with a given sense and reference is uttered by a speaker whose intention it is to induce a hearer to

believe that the sentence is true, following his recognition of the speaker's intention. The illocutionary act of stating must, as Austin and others have insisted, be clearly distinguished from the locutionary act of uttering a sentence with a certain sense and reference. That this distinction must be made is particularly clear in light of the proposed theory of imperatives and interrogatives; for in uttering an imperative sentence or an interrogative one performs the locutionary act of uttering a sentence with a given sense and reference (since imperatives and interrogatives are somewhat disguised indicatives with truth conditions); but one does not perform the illocutionary act of making a statement. The speaker's intention in uttering an imperative or interrogative is not to induce the hearer to believe that something is the case, as is his intention in making a statement, but is rather to induce the hearer to make something be the case, or else tell the speaker whether it is the case. But one need not appeal to the proposed theory of imperatives and interrogatives in order to manifest the need to distinguish between locutionary and illocutionary acts. When one utters a conditional, for example, although one asserts the entire conditional, one does not assert either the antecedent or consequent of the conditional. Although, that is, in uttering both the antecedent and consequent of a conditional one performs the locutionary act of uttering a sentence with a given sense and reference, one does not perform the illocutionary act of asserting either the antecedent or consequent. One asserts only the entire conditional as a whole.

The only possible innovation in relation to Austin's theory of locutionary and illocutionary acts, apart from construing explicit

performative utterances as true or false statements, is in the postulation by the proposed theory of complex illocutionary acts. In uttering an ought sentence, for example, one not only performs the illocutionary act of making a statement; one also performs the illocutionary act of prescribing. More accurately, one performs the complex illocutionary act of prescribing by means of making a factual statemnt. Ought sentences are used prescriptively when they are used to communicate information to a hearer, the reception of which by the hearer is expected materially to influence his behavior, and when the hearer is expected to recognize that such is the speaker's intention. Similarly, in uttering an explicit performative one performs the complex illocutionary act of performing an action such as promising, swearing, etc. by way of making a true or false statement of fact. It is hard to imagine, however, how Austin, or anyone else, could deny the existence of such complex illocutionary acts. Surely, to take the example mentioned earlier, when a politician says, " I favor international understanding", he performs the illocutionary act of making a true or false factual statement; but he also performs an act of propagandizing. Similarly, the television announcer who says, "Vim cleans clothes whiter" makes a true or false factual statement; but he also attempts thereby to influence economic behavior. In a word, he advertises. It is worthwhile mentioning several other examples of complex illocutionary acts. It is possible to issue an apology, for example, either by stating that one apologizes (by saying 'I apologize') or else by stating that one feels regret for what one did, by saying, for example, 'I am sorry'. Similarly,

it is possible to insult a hearer by making a factual statement concerning him, e.g., 'You're as clumsy as an ox'. Or else, one can bestow affection upon a hearer by making a factual statement to the effect that one feels affection for the hearer -- by saying, for example, 'I love you'.

Distinguishing between illocutionary acts and perlocutionary effects presents no particular problem. Since to perform an illocutionary act is to utter a sentence having truth conditions, and with certain intentions in mind, the perlocutionary effects in which one is primarily interested are those that constitute fulfillment of the speaker's intentions. If one utters an indicative sentence, 'p', with the intention of inducing a hearer to believe that p, then the perlocutionary effect in which one is primarily interested is the hearer's subsequent belief, or lack of belief, that p. Similarly, if one utters the indicative sentence, 'p', with the intention of inducing a hearer to make it be the case that p, the perlocutionary effect of primary interest is whether or not the hearer makes it be the case that p, although other effects, of course, may ensue. Similarly, if a speaker utters a sentence of the form 'Op' with the intention that the hearer believe that Op, and that he make it be the case that p for the reason that Op, then the perlocutionary effect of primary interest is that of the hearer's believing that Op and making it be the case that p for that reason.

To summarize, following Lasswell's well-known formula (with one deviation), the analysis of a speech act specifies who says what to whom, with what intentions in mind, and with what effect.[28] In specifying who says what, one specifies what locutionary act is performed. Typical speaker's intentions in performing the locutionary act of uttering

an indicative sentence, 'p', include those of: inducing a hearer to believe that p; inducing a hearer to make it be the case that p; inducing a hearer to tell the speaker for what x, p; and inducing a hearer to believe that p, and to take the fact that p as a reason for performing some action.

9. Final Argument for Interpreting Ought Sentences Descriptively

The final argument in favor of the theory that ought sentences are true or false descriptive sentences derives from the fact that the normative expression 'valid' is generally defined in purely descriptive terms in the context 'x is a valid rule of deductive or inductive inference'. Thus, 'valid rule of deductive inference' is defined as 'a truth preserving rule of deductive inference'; while 'valid rule of inductive inference' has been defined in purely descriptive terms as, for example, 'a rule of inductive inference that will lead to predicting the limit of the relative frequency of a property in an infinite sequence'. Given these definitions, it follows that 'x is a valid rule of deductive inference' both implies and is implied by 'x is a truth preserving rule of deductive inference'; while 'x is a valid rule of inductive inference' both implies and is implied by 'x is a rule of inductive inference that will lead to predicting the limit of the relative frequency of a property in an infinite sequence'. And yet the statement 'x is a valid rule of deductive or inductive inference' seems to be a normative statement since to qualify a rule of inference as valid is to evaluate it. Thus we have a counterexample to the claim that a normative

statement can neither imply nor be implied by a descriptive statement, since 'x is a truth preserving rule of deductive inference' and 'x is a rule of inductive inference that will lead to predicting the limit of the relative frequency of a property in an infinite sequence' are both purely descriptive statements. Given, then, the falsity of the view that a normative statement can neither imply nor be implied by a descriptive statement, reasons of economy dictate treating ought sentences as having a univocal, descriptive semantic content and a prescriptive pragmatic use. It should be mentioned that this argument against the naturalistic (descriptive) fallacy has been presented by Searle, [29] and is mentioned also by Shaw.[30]

This argument may also be more directly related to ought sentences. for it is often held that sentences of the form 'It ought to be the case that p' (where 'p' is an indicative sentence) are synonymous with sentences of the form 'It is required by a valid rule (e.g., of morals) that p', or, alternatively, 'There is a valid rule (e.g., of morals) that requires that p'. Now, since the term 'valid' seems to be the same in the context 'It is required by a valid rule (e.g., of morals) that p' as in the context 'x is a valid rule of deductive or inductive inference', and since 'valid' is defined in purely descriptive terms in this latter context, it is reasonable to suppose that it is definable in purely descriptive terms in the former context as well. In short, there is good reason to hold that ought sentences are true or false descriptive sentences since there is reason to suppose that sentences with which ought sentences are synonymous, namely, sentences of the

form 'It is required by a valid rule (e.g., of morals) that p' are themselves true or false descriptive sentences (since the one normative term they contain is definable in purely descriptive terms).

Since it may be questioned whether the term 'valid' is a normative term in the context 'x is a valid rule of deductive or inductive inference', the following passages from logic texts might be cited in support of that position. Thus Kalish and Montague write:

> Logic is concerned with arguments, good and bad. . . In the realm of arguments it is (the logician) who distinguishes good from bad. Virtue among arguments is known as validity. An argument is valid if it is impossible for its premises to be true and its conclusion false.[31]

And Prior writes:

> Logic is commonly thought of as having something to do with argument, in fact as being the systematic discrimination of good arguments from bad; and as a first approximation this will do. 'Validity' is the technical term (for the) 'goodness' of an argument.[32]

According to Urmson it is even "obvious" that 'valid' in such a context is evaluative. To quote:

> I take it that once stated it is obvious that 'valid' is an evaluative expression. To speak of a good argument is in most contexts to speak of a valid argument. . .To call an argument valid is not merely to classify it logically, as when we say it is a syllogism or modus ponens; it is at least in part to evaluate or appraise it; it is to signify approval of it. Similarly, to call an argument invalid is to condemn or reject it.[33]

It also seems clear that to single out certain inductive rules as valid is to evlauate them. In fact, there is an analogy between inductive rules and moral rules. Rules of both kinds serve to guide conduct, though conduct of different sorts: the fixation of belief on the one hand, and overt behavior, particularly interpersonal conduct,

on the other. Braithwaite has drawn the comparison between the regulation of action by moral rules with the regulation of thought by inductive rules in the following words:

> The first and principal thesis maintained in this lecture is that if we think of the problems of inductive logic and of ethics in terms of how we would or might act in the future the problems present a remarkable similarity in that the whole conceptual apparatus of policies validating or invalidating behavior dispositions is applicable to both. . . Positive policies which validate or negative policies which invalidate preparedness-dispositions will be called predictive policies: positive or negative policies which validate or invalidate other dispositions, or the non-preparedness parts of complex dispositions, will be called non-predictive policies. The problems of the former translated into the language of beliefs fall into the traditional province of inductive logic and scientific methodology; the problems of the latter, also frequently treated in terms of beliefs, fall within the domain of traditional ethics.[34]

Moreover, the comparison between moral rules and inductive rules seems an apt one on any theory of inductive logic. Isaac Levi, for example, characterizes Carnap's logical interpretation of probability statements as follows:

> Carnap is not concerned with psychology but with a theory of rational credence as a system of norms or prescriptions controlling the manner in which men ought ideally to fix their probability judgments. He contends that such a theory makes prescriptions regarding how an agent ought to fix his credence judgments.[35]

And similarly, Nagel has written of Carnap's program that, "As Carnap makes clear. . . his logic is essentially a *proposal* that evidence for hypotheses be weighed in accordance with the rules which the logic postulates."[36]

On the subjective interpretation of probability, also, as was discussed in the second chapter, the formulae of the probability calculus are construed as rules for the fixation of belief. Thus, De Finetti has

already been quoted as saying:

> This (probability) calculus then appears as a set of rules to which the subjective evaluation of probability of various events by the same individual ought to conform if there is not to be a fundamental contradiction among them.[37]

Finally, Reichenbach has been very explicit in insisting that on the frequentist interpretation of probability the adoption of a particular inductive rule constitutes the adoption of a practical policy.[38] To qualify a rule of induction as valid is to endorse a certain kind of inductive behavior.

To summarize, rules of deductive and inductive inference, as well as moral rules, serve for the guidance of conduct, though conduct of different sorts. Whereas moral rules serve to guide alternative courses of action affecting human relations, rules of deductive and inductive inference serve to guide the fixation of belief. To single out certain moral rules as valid is to evaluate them, and to single out certain rules of deductive or inductive inference as valid is to evaluate them. C.I. Lewis has compared moral rules and rules of inference in the following words:

> Particularly I think that we should avail ourselves of any parallel which may be elicited between the norms and directives of concluding and believing and the norms and directives of our decisions to do. . . Right thinking and right doing are simply the two major subdivisions of our self-directed activities -- decisions as to fact and decisions to bring about. And the outstanding normative disciplines, logic and ethics, should show some such parallel.[39]

It should be emphasized, however, that the comparison of moral rules and rules of inductive and deductive inference does not commit one to the view that deductive and inductive logic are not theoretical sciences, but consist rather of an enumeration of practical rules. The fact that a piece of knowledge is theoretical does not entail that

it is not of practical consequence. The proposition that Beri Beri is caused by a vitamin B deficiency, for example, is a theoretical one, but is of great practical import for anyone interested in avoiding that disease. Similarly, deductive and inductive logic may be construed as systems of theoretical propositions, and even analytical propositions; but they are of practical import for anyone interested in inferring one proposition from another or in predicting future events.

It should also be emphasized that the comparison of moral rules and rules of inductive and deductive inference does not require that the definition of validity for moral rules be automatically forthcoming. There is no unanimity regarding the proper definition of validity for rules of deductive inference; and the question of the definition of validity for rules of inductive inference is perhaps as controversial as the question of the definition of validity for moral rules. What is implied by the comparison is that there is no greater difficulty in principle in analysing the notion of validity for rules of morals than there is in analysing that notion for rules of inference, whether deductive or inductive.

It may be objected to the preceding argument that so-called definitions of the expressions 'valid rule of deductive inference' and 'valid rule of inductive inference' do not preserve synonymy but are merely extensionally equivalent, and that, similarly, commonly proposed definitions of the expression 'valid rule of morals' as, e.g., 'a utility maximizing rule of morals', do not give the meaning of that term but merely its extension. One might reply to this objection by conceding it. In fact, it may be maintained that just as the sentences 'x is a tall man' and 'x is a tall giraffe' are materially equivalent,

respectively, to 'x is a man whose height exceeds 6 feet' and 'x is a giraffe whose height exceeds 15 feet' while both *mean* 'x is a man whose height exceeds the average' and 'x is a giraffe whose height exceeds the average', respectively, so too are the two sentences 'x is a valid rule of deductive inference' and 'x is a valid rule of morals' (switching for convenience from the terms 'valid rule of deductive inference' and 'valid rule of morals' to sentences containing those terms) only materially equivalent, respectively, to 'x is a rule of deductive inference that is truth preserving' and 'x is a rule of morals that is utility maximizing'. What 'valid' might mean in terms general enough to apply both to rules of inference and to rules of morals, however, in the same way that 'tall' means 'exceeding the average height' as applied both to men and to giraffes will not be speculated upon here. What is important to notice for present purposes, rather, is that if it is only admitted that sentences of the form 'x is a valid rule (of inference or of morals)' have material equivalences, and, therefore, that sentences of the form, 'It is required by a valid rule (of morals) that p' also have material euqivalences, then much of the proposed theory of ought sentences as true or false descriptive sentences has already been conceded (given synonymy of sentences of the form 'It is required by a valid rule, e.g., of morals that p' and 'It ought to be the case that p'). For even if it is held that ought sentences possess a sort of prescriptive meaning that makes them non-synonymous with any sentences not possessing that sort of meaning; such prescriptive meaning does not prevent ought sentences from having a truth value and, as has been argued, is neither necessary

nor sufficient for an act of prescribing to occur. Unless something interesting can be said about prescriptive meaning, then, to distinguish it from descriptive meaning, the prescriptivist position reduces to the tautology that normative ought sentences cannot be synonymous with any sentences not possessing the sort of meaning (referred to as "prescriptive meaning") that normative ought sentences possess.

One final objection must also be considered. It might be maintained that putative definitions of the expressions 'valid rule of deductive or inductive inference' are not definitions, or extensional equivalences, of all that is meant by those terms but only of their descriptive content, i.e., the non-normative part. Thus, the fact that 'valid' is defined in purely descriptive terms in the context 'x is a valid rule of inference' cannot be cited as confirmation of the theory that normative terms such as 'valid' and 'ought' are definable in purely descriptive terms, but, at best, may be cited as evidence for the theory that normative expressions have as part of their meaning a descriptive content. Now, although philosophers do not seem, generally, to have believed that they were analysing only part of the content of the expressions 'valid rule of deductive or inductive inference' in presenting definitions of those terms, it must be admitted that it is possible that that is what they in fact were doing. The upshot of the final argument, then, is to present a choice. One must either give up the view that normative statements can neither imply nor be implied by descriptive statements or give up the view that the normative statement, e.g., 'x

is a valid rule of deductive inference' implies and is implied by the descriptive statement 'x is a truth preserving rule of deductive inference'. Should the latter view be given up on the grounds that 'x is a truth preserving rule of deductive inference' implies only the descriptive *part* of the statement 'x is a valid rule of deductive inference', then we can fall back on the first two arguments presented in this chapter challenging the common assumption that there is a prescriptive component in the semantics of ought statements beyond their descriptive, propositional content.

10. Counterarguments

In the remainder of this chapter arguments that have been advanced to prove that normative ought sentences are not true or false descriptive sentences are critically discussed. The first such argument is the open question argument of Moore and Hare as applied to ought sentences. According to this argument, a sentence of the form 'It ought to be the case that p' cannot be synonymous with a sentence containing only purely descriptive terms, e.g., 'It is required by a utility maximizing rule that p' because then a sentence of the form 'If it is required by a utility maximizing rule that p then it ought to be the case that p', or, alternatively, 'It ought to be the case that p because it is required by a utility maximizing rule that p' would be analytic. It would mean nothing more than that if it ought to be the case that p then it ought to be the case that p, or, that it ought to be the case that p because it ought to be the case that p. But,

say Moore and Hare, and proponents of the naturalistic (descriptive) fallacy in general, this contradicts the fact that it is an open question whether it ought to be the case that p because it is required by a utility maximizing rule that p. According to them, it never follows deductively from the fact that something is the case that something ought to be the case. Tha gap between 'is' and 'ought' is unbridgeable by logical means. The arguments already presented, however, are the refutation of the open question argument. The only reason that is generally offered in support of the postion that an ought sentence cannot both imply and be implied by an 'is' sentence (in any sense of 'implies') is that ought sentences possess an element of prescriptive meaning that 'is' sentences lack. But the postulation of prescriptive meaning has been argued to be neither necessary nor sufficient to do the job it is intended to do, namely, account for speech acts of prescribing. Moreover, it has been argued that none of the other principal sorts of sentences possesses anything other than ordinary descriptive meaning. Therefore, unless some argument is offered for treating ought sentences differently, the presumption is that they too are true or false descriptive sentences expressing purely descriptive meaning.

In *The Language of Morals*, Hare presents a variation of the open question argument.[40] Hare's argument is that if we suppose that ought sentences may be defined in purely descriptive terms, e.g., to say that it ought to be the case that p is to say that it is required by a utility maximizing rule that p, then sentences of the form 'If it is required by a utility maximizing rule that p then you ought to make it be the case that p', or, 'You ought to make it be the case that p

because it is required by a utility maximizing rule that p' would be analytic and, thus, not suitable for use in prescribing; but such sentences are used for prescribing; therefore they are not analytic. The assumption that Hare's proof turns upon is the assumption that analytic sentences cannot be used for prescribing. This assumption, however, is false. Analytic sentences may be used for prescribing and to do other things as well. The sentence, 'What will be will be', for example, is often uttered for the purpose of counseling resignation. Similarly, the analytic statement 'We shall see what we shall see' is often used for counseling patience. But more to the point, sentences such as 'You have to because you have to', or 'You must because you must', which are analytic, may be used in speech acts of prescribing. A somewhat impatient parent, for example, may respond to a child's question, 'Why do I have to?' by replying 'You have to because you have to'; and in so doing the parent issues a prescription.

In order to butress his point, Hare says (changing his example from 'good' to 'ought') that if such a sentence as 'You ought to make it be the case that p because it is required by a utility maximizing rule that p' were analytic then its meaning would be preserved by the expanded sentence, "The English sentence 'You ought to make it be the case that p because it is required by a utility maximizing rule that p' is analytic"; and this sentence cannot be used for prescribing.[41] But, regardless of whether Hare is right about the synonymy of these two sentences, he seems wrong in maintaining that the expanded sentence could not be used for prescribing. On certain occasions, there is

hardly any better sentence one could utter with the intention of inducing a hearer to make it be the case that p (that is for prescribing that the hearer make it be the case that p) than the sentence "'You ought to make it be the case that p because it is required by a utility maximizing rule that p' is analytic". Suppose, for example, that a person asked, "I know that it is required by a utility maximizing rule that I make it be the case that p; but ought I to make it be the case that p for that reason?" There is hardly any better answer one could give than to say that it is analytic that he ought to make it be the case that p because it is required by a utility maximizing rule that p. And, clearly such an answer would be action guiding. A speaker, that is, could utter such a sentence with the intention of imparting information to the hearer which will cause the hearer to make it be the case that p, and with the intention that the hearer recognize that such is the speaker's intention. An analogous situation is the following. If a student who asked whether he should classify whales as fish since they swim or as mammals since they have mammary glands was told that 'If something has mammary glands then it is a mammal' is analytic, then he would have no doubt as to how to classify whales.

But now Hare would undoubtedly object that none of the sentences just considered such as 'It ought to be the case that p because it is required by a utility maximizing rule that p' or 'You must because you must' is truly prescriptive; for according to Hare, an ought sentence is prescriptive if and only if it entails an imperative. In fact, Hare makes it a matter of definition that an ought judgment is prescriptive

just in case it entails an imperative.[42] The sentences considered, however, do not entail an imperative but at best conversationally implicate one. That is, even if a speaker utters the sentence 'You have to do it because you have to' with the intention of inducing a hearer to perform a certain action, his utterance does not entail the imperative, 'Do it!'. It is rather up to the hearer to infer that the speaker's intention in uttering such an analytic statement is to induce him to perform the action. In fact, on the view of ought sentences and imperatives defended, an ought sentence never entails an imperative; for on that view an ought sentence such as 'It ought to be the case that you will honor your father and mother' is equivalent to the purely factual statement,'There is a valid moral rule that requires that you honor your father and mother', while the imperative 'Honor your father and mother!' is simply an elliptical form of the indicative sentence 'You will honor your father and mother'. And it does not follow from the fact that there is a valid moral rule that requires that you honor your father and mother that you will honor them.

Since Hare chooses to define a prescriptive statement as one that entails an imperative, and since on the proposed theory of ought sentences and imperatives, an ought sentence never entails an imperative, it follows that ought sentences are not prescriptive in Hare's sense of the term. But this result is not damaging unless it can be shown that ought sentences sometimes are prescriptive in Hare's sense of entailing an imperative. This, in fact, is how Hare views the issue between descriptivists and prescriptivists; for he explicitly states:

> The substantive part of the prescriptivist thesis is that *there are* prescriptive uses of these words, and that these uses are important and central to the words' meaning. . . Prescriptivism would be refuted if it could be shown that we do not ever use moral words in the way that I have characterized as prescriptive.[43]

Before criticizing Hare's thesis, it is necessary to guard against one possible misunderstanding. By "prescriptive use" Hare means, as indicated, "entails an imperative" and emphatically does not mean "conversationally implicates an imperative". Hare's attempt, however, to establish that ought sentences sometimes do have a prescriptive use in the sense of entailing an imperative fails. An ought sentence entails an imperative, according to Hare, if and only if, if the speaker assents to the ought judgment he must also assent to the command 'Let me do x!'. Again, to avoid another possible misunderstanding, by the command 'Let me do x!' Hare means the command that is obeyed by my doing x, and not the command that is obeyed by your allowing (letting) me do x'. And it will be remembered that for Hare, to assent to a command is to obey it. But now, is there any ought judgment which is such that if one assents to it, then one must also assent to the command 'Let me do x!' by doing x? Well, if ought sentences have prescriptive meaning and enunciate a norm, and if to assent to a sentence with this sort of meaning is to have a disposition to perform the action prescribed by the norm (provided one is physically and psychologically able to do so), then if one assents to an ought sentence with this sort of meaning it follows that one will assent to the command 'Let me do x!' -- that is, one will do x. But if, on the other hand, ought sentences are equivalent to the purely descriptive sentence 'It is required by a valid moral

rule that p', where 'valid' is definable in purely descriptive terms, then it does not follow that if I assent to an ought judgment, in the sense now of simply believing a certain sentence true, i.e., believing that a certain action is in fact required by a valid moral rule, I will perform the required action. It no more follows that I will do x if I believe that doing x is required by a valid moral rule than it follows that I will do y if I believe that doing y is required by a valid rule of baseball. I won't do x, even knowing that it is the moral thing to do, if I don't want to be moral, just as I won't do y, even knowing that it is required by a rule of baseball, if I don't want to abide by the rules of baseball.

Earlier the person who sells his soul to the Devil was cited as an example of someone who freely acknowledges that what he does is contrary to morality but does it nonetheless. Although the point may be debated indefinitely, it seems relatively clear that such a person does not suffer from weakness of the will. He does not exhibit the sort of divided personality that, according to Hare, frequently characterizes persons suffereing from *akrasia*, with the nobler part of the personality prescribing conformity with the moral law and the baser part successfully resisting. In fact, such a person may feel no compunction about pursuing gain or glory, etc. at the expense of morality. Thus Goethe's Faust tells the Devil,

> Be not afraid that I the contract break
> The strivings of my utmost power
> Tally exactly with the bond I make.[44]

And similarly, the character who sells his soul in Stephen Vincent Benet's

play, "The Devil and Daniel Webster" speaks as follows:

> WEBSTER. . . tell me one thing. Did you sign this precious document of your own free will?
> JABEZ. Yes, it was my own free will. I can't deny that.[45]

In short, it is possible to recognize that something has a certain property and not to favor it for that reason. It is possible, that is, to recognize that an action is required by a valid moral rule and not to favor doing it if one values a competing good more highly.

For there to be an entailment of the sort that Hare specifies -- if one assents to an ought judgment one must assent to a first-person command -- ought sentences must have prescriptive meaning; but it is precisely the existence of this sort of meaning that Hare is trying to establish. If ought sentences have descriptive, but no prescriptive meaning (though, again, they have a prescriptive pragmatic use), no ought sentence entails an imperative. Hare, however, tries to establish the existence of ought sentences with prescriptive meaning, thereby entailing an imperative, simply by pointing to one; for he says:

> Prescriptivism would be refuted if it could be shown that we do not ever use moral words in the way that I have characterized as prescriptive. To counter this attack, it is only necessary to produce examples of such a use, and to ask the reader whether he finds them at all untypical. I will produce just one. If a man is faced with a difficult moral choice, and asks a friend or advisor 'What do you think I ought to do?', is it not sometimes the case that if he says 'You ought to do A', and if the man then proceeds not to do A, he will be said to have rejected the advice?[46]

But it accomplishes nothing simply to point to an example of the use of moral language in order to establish the existence of prescriptive meaning and the consequent entailment of an imperative; for it is not the existence of cases of the use of moral language that is in doubt,

but rather the theoretical interpretation to be placed on such cases. Undoubtedly, the case Hare points to could be explained as a case of an ought judgment with prescriptive meaning being expressed, thereby entailing an imperative whose subsequent rejection occasions the remark that the speaker's advice has been rejected. What must be insisted upon is that the same case can also, and more economically, be explained as a case of a statement of fact, to the effect that a certain action is required by a valid moral rule, being made for the purpose of getting the hearer to recognize that the speaker's intention in making the statement is to induce the hearer to perform the required action, the frustration of which intention occasions the remark that the speaker's advice has been rejected. So, given that the case of the use of moral language to which Hare points can be explained more economically on the hypothesis that ought sentences are true or false descriptive sentences expressing no prescriptive meaning but having an indirect prescriptive use (by conversationally implicating a command) than on competing hypotheses, such is the hypothesis that ought to be adopted. By 'ought' here, and in conformity with the proposed theory, it is meant that adopting the hypothesis is required by a valid rule of inquiry, namely, the rule of economy in theory construction.

One final criticism that might be made of the proposed theory of ought sentences is that it neglects the decisional aspect of morality. The decisional character of ought judgments has been particularly emphasized by Hare, Paul Taylor, and Karl Menger, among others.[47] According to such writers, to assent to an ought judgment is to decide

to commit oneself to a moral principle. Ultimately, it is to commit oneself to a way of life. But, if ought sentences are descriptive 'is' sentences, then to assent to an ought judgment is not to subscribe to a moral principle, but is merely to acknowledge that there is a principle to which one may or may not subscribe. Assenting to the true or false judgment that a certain principle exists and subscribing to that principle are two different things.

The reply that might be made to this objection is that on the proposed theory of ought sentences the decisional aspect of morality is not so much neglected as it is displaced. Although on that theory ought sentences do not express norms to which one can decide to subscribe, they do express true or false judgments that one must decide to accept or not. Deciding to accept the judgment that there is a valid moral rule involves acting just as much as deciding to commit oneself to a principle. The aspect of decision involved in the acceptance of a factual hypothesis has been particularly emphasized by Hartland-Swann who writes, "Knowing, if it is knowing <u>that</u>, involves deciding, or accepting a decision, that something is, was, or will be the case";[48] and it is also quite explicit on the decision-theoretic approach to induction. The same remark can be made regarding the acceptance of a definition of 'validity' for moral rules. An act of decision is required for the acceptance of one definition rather than another.

It must be emphasized, however, that although an act of decision is required for the acceptance of a factual hypothesis, or for the acceptance of a defintion, the decision to accept does not make the

hypothesis true or the definition, if it is a "real" one, adequate. False theories and inadequate definitions may be accepted as well as true ones. And it must also be emphasized that the fact that ought judgments are true or false descriptive judgments does not entail that they are not of practical consequence. To repeat an example mentioned earlier, the theory that Beri Beri is caused by a deficiency of vitamin B_1 and not by a surfeit of evil spirits is of practical import for anyone interested in avoiding the disease. Similarly, the theory that there exists a valid moral rule prescribing a certain action, though simply a true or false judgment as to fact, is of utmost practical consequence for anyone interested in avoiding acting immorally. And once it is accepted that there exists a valid moral rule, a decision is required to act in conformity with it. Very briefly, one will act in accordance with the rule whose existence one asserts if one takes acting morally to be of greater value than acting immorally. And in case of a conflict, one will act in accordance with a valid moral rule if one places greater value on being moral than on maximizing some competing good such as being healthy, wealthy, and wise (or powerful, loved, respected, or skilled).

FOOTNOTES TO CHAPTER III

[1]This characterization of the naturalistic fallacy is due to John Searle, *Speech Acts* (London: Cambridge University Press, 1969), p. 132.

[2]R.M. Hare, *Freedom and Reason* (New York: Oxford University Press, 1970), pp. 16-18; and "Descriptivism," in W.D. Hudson, ed., *The Is/Ought Question* (London: Macmillan, 1969), pp. 240-258.

[3]John Austin, *How to Do Things With Words* (New York: Oxford University Press, 1970), p. 3.

[4]J.J. Katz,*Propositional Structure and Illocutionary Force* (New York: T.Y. Crowell, 1977), pp. 154, 158.

[5]J.K.K. Hintikka, *Logic, Language Games, and Information* (London: Oxford University Press, 1973); and "Surface Information and Depth Information," in Hintikka and Suppes, eds., *Information and Inference* (Dordrecht: D. Reidel, 1970), pp. 263-297.

[6]G.H. von Wright, "Deontic Logic," *Mind* 60(1951): 1-15.

[7]G.H. von Wright, *An Essay in Deontic Logic and the General Theory of Action* (Amsterdam: North-Holland, 1972), p. 16.

[8]Gilbert Harman, *The Nature of Morality* (New York: Oxford University Press, 1977) pp. 85-86.

[9]G.E.M. Anscombe, "Modern Moral Philosophy," *Philosophy* 33 (1958): p. 5.

[10]John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971).

[11]John Searle, *Speech Acts*, pp. 132-136, 187; and "Indirect Speech Act," in Peter Cole and Jerry Morgan, eds., *Syntax and Semantics* (New York: Academic Press, 1975), esp. p. 61; Roger Wertheimer, *The Significance of Sense* (Ithaca: Cornell University Press, 1972), esp. p. 119; Roger Hancock, *Twentieth Century Ethics* (New York: Columbia University Press, 1972), esp. pp. 210-212; Dorothy Mitchell, "Must We Talk About 'Is' and 'Ought'," *Mind* 77(1968): 543-549; Jeremy Walker, "A Naturalist Reply to Hare," *Philosophical Studies* 24(1973): 45-51; Ronald J. Glossop, "'Good', 'Doog', and Naturalism in Ethics," *Philosophy and Phenomenological Research* 34(1974): 437-438; Hans Fink,"Conditions for Logical Antinaturalism in Ethics," *Danish Yearbook of Philosophy* 5(1968): 60-70; Svetozar Stojanovic, "Hare's Argument Against Ethical Naturalism,"*Mind* 72(1963): 264-267; P.D. Shaw, "Arguments from Fact to Value-Judgment," *Philosophical Quarterly* 18(1968): 249-255; Mary Forrester, "A Note on Commendation and Approval," *Ethics* 85(1975): 148-150; Douglas Lewis, "'Good' and Naturalistic Defintions," *Analysis* 24(1964): 144-47; G.P. Baker and P.M. Hacker,

"Rules, Definitions, and the Naturalistic Fallacy," *American Philosophical Quarterly* 3(1966): 299-305.

[12]G.H. von Wright, *Norm and Action* (London: Routledge & Kegan Paul,1963).

[13]*Ibid.*, p. 13.

[14]Eric Stenius, "The Principles of a Logic of Normative Systems," *Acta Philosophica Fennica* 16(1963): 247-260.

[15]A.J. Ayer, *Language, Truth, and Logic* (New York: Dover Books, 1946), p. 108; Rudolf Carnap, *Philosophy and Logical Syntax* (London: K. Paul, Trench, Trubner & Co., 1935), p. 24; C.L. Stevenson, *Ethics and Language* (New Haven: Yale University Press, 1969), Ch. 2, esp. 21.

[16]Lennart Aqvist, "Performatives and Verifiability by the Use of Language," *Filsoofiska Studier*,no. 14, Uppsala, 1972; Kent Bach, "Performatives are Statements Too," *Philosophical Studies* 28(1962): 277-297; Sven Danielsson,"Definitions of Performative," *Theoria* 31(1965): 20-31; Jane Heal, "Explicit Performative Utterances and Statements," *Philosophical Quarterly* 24(1974): 106-121; Ingemar Hedenius, "Performatives," *Theoria* 29(1963): 115-136; E.J. Lemmon, "On Sentences Verifiable by their Use," *Analysis* 22(1962): 86-89; David Lewis, "General Semantics," *Synthese* 22(1970): 18-67; G.J. Warnock, "Some Types of Performative Utterances," in Isaiah Berlin, ed., *Essays on J.L. Austin* (London: Oxford University Press, 1973): 69-89; G.H. von Wright, "On Promises," *Theoria* 28(1962): 277-297.

[17]Austin, *How to Do Things With Words*, p. 71.

[18]Danielsson, "Definitions of Performative"; Aqvist, "Performatives and Verifiability by the Use of Language".

[19]Austin, *How to Do Things With Words*, p. 6.

[20]*Ibid.*, p. 6.

[21]Justus Hartnack, "Performative Utterances, " in Paul Edwards, ed., *The Encyclopedia of Philosophy* (New York: Macmillan, 1967), Vol. 6, p. 90.

[22]Austin, *How to Do Things With Words* p. 88.

[23]Searle, *Speech Acts*, p. 68.

[24]Richard M. Gale, "Do Performative Utterances Have any Constative Function?", *Journal of Philosophy* 67(1970): 117-121.

[25]*Ibid.*, p. 118.

[26]*Ibid.*, p. 118.

[27]*Ibid.*, p. 121.

[28]Harold D. Lasswell, "The Structure and Functions of Communication in Society," in Lyman Bryson, ed., *The Communication of Ideas* (New York: Institute for Religious and Social Studies, 1948), pp. 37-51.

[29]Searle, *Speech Acts*, pp. 132-136.

[30]*P.D. Shaw*, "Arguments from Fact to Value-Judgment, pp. 249-255.

[31]Donald Kalish and Richard Montague, *Logic: Techniques of Formal Reasoning* (New York: Harcourt, Brace & World, 1964), p. 3.

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[33]J.O. Urmson, "Some Questions Concerning Validity," *Revue Internationale de Philosophie* 25(1953), p. 223.

[34]R.B. Braithwaite, "Moral Principles and Inductive Policies," in J.N. Findlay, ed., *Studies in Philosophy* (London: Oxford University Press, 1966), p. 99.

[35]Isaac Levi, "Probability and Evidence," in Marshall Swain, ed., *Induction, Acceptance, and Rational Belief* (Dordrecht: Reidel, 1970), p. 134.

[36]Ernest Nagel, "Carnap's Theory of Induction," in P.A. Schilpp, ed., *The Philosophy of Rudolf Carnap* (La Salle, Ill: Open Court, 1963), p. 786.

[37]Bruno de Finetti, "Foresight: Its Logical Laws, Its Subjective Sources," in Henry Kyburg and Howard Smokler, eds., *Studies in Subjective Probability* (New York: John Wiley & Sons, 1964), p. 103.

[38]Hans Reichenbach, *Experience and Prediction* (Chicago: University of Chicago Press, 1949).

[39]C.I. Lewis, *Values and Imperatives* (Stanford: Stanford University Press, 1969), p. 108.

[40]Hare, *The Language of Morals*, p. 89-91.

[41]*Ibid.*, p. 91.

[42]*Ibid.*, p. 168.

[43]Hare, *Freedom and Reason*, p. 84.

[44]Goethe, *Faust*, translated by J. Birch (London: Black and Armstrong, 1939), p. 83.

[45]Stephen Vincent Benet, "The Devil and Daniel Webster," in Bennet Cerf and Van H. Cartmell, *24 Favorite One-Act Plays* (New York: Doubleday, 1963), p. 233.

[46]Hare, *Freedom and Reason,* pp. 84-85.

[47]Hare, *The Language of Morals,* esp. pp. 7, 54-55; Paul W. Taylor, *Normative Discourse* (Englewood Cliffs: Prentice-Hall, 1961), pp. 248-249; Karl Menger, *Morality, Decision and Social Organization* (Dordrecht: D. Reidel, 1974).

[48]John Hartland-Swann, *An Analysis of Knowing* (London: George Allen & Unwin, 1958), p. 14.

Chapter IV

THE ANALYSIS OF OUGHT SENTENCES II

In this chapter the notions of 'rule' and 'requirement' are discussed; and the proposed analysis of ought sentences is compared with similar analyses. Practical inferences are also discussed, particularly in conjunction with an examination of the good reasons analysis of ought sentences.

1. Rules

According to the proposed analysis, an ought sentence is always used to make the true or false factual statement that it is required by a valid rule that something be the case. In the last chapter it was argued that ought sentences and sentences of the form 'It is required by a valid rule that p' may be analysed in purely descriptive terms without committing the naturalistic (descriptive) fallacy. In this chapter a further problem with the proposed analysis is faced, namely, the problem of whether the notion of a rule may be analysed without engendering a regress. The problem arises in the following way. If a rule is analysed as a normative ought sentence, having prescriptive meaning, then the proposed analysis of ought sentences turns in a circle: to say that it ought to be the case that p is equivalent to saying that it is required by a prescriptive ought sentence that p. The solution

to this problem, however, has already been sketched in the second chapter. There it was argued that a rule (principle, norm) is a non-modal indicative sentence, e.g., 'One keeps one's promises', that, like an imperative sentence, is capable of being made true. To make the sentence true is to obey the rule. What remains to be done in order to complete the argument is to account for the fact that ought sentences may appear to enunciate rules in addition to being used in the inverted commas sense to state truly or falsely that a rule exists.

The reason, in brief, for which ought sentences appear to enunciate rules rather than simply stating that a rule exists is that ought sentences occur in normative documents such as constitutions, bills, etc., and are action guiding. From the fact, however, that an ought sentence occurs in the context of a normative document such as a written constitution, it does not follow that the ought sentence expresses a law. Juristic documents contain not only non-modal indicative sentences that are to be made true, i.e., the laws themselves. They also contain statements of fact concerning the laws. That is, they contain ought sentences that are used to make a true or false factual statement regarding the law.

A comparison might be made here to the situation that obtains in empirical science. In *The Logical Syntax of Language,* Carnap emphasized that scientific documents such as one finds in scientific journals do not contain only object language sentences concerning the topic at hand, whether it be gravitation, molecular structure, etc; but they also contain meta-linguistic statements about the object

language sentences. Thus, although the distinction between object language and metalanguage is of obvious importance, in practice one finds sentences belonging to the two domains mixed together. To quote:

> In all scientific discussions, object-questions and questions of the logic of science. . . are bound up with one another. Even in treatises which have not a so-called epistemological problem or problem of foundations as their subject but are concerned with specialized scientific questions, a considerable, perhaps even a preponderant, number of the sentences are syntactical, (meta-linguistic). They speak, for instance, *about* certain definitions, about the sentences of the domain which have hitherto been accepted, about the compatibility of different assumptions, and so on.[1]

In order to illustrate his point, Carnap considers the opening sentences of Einstein's *Zur Elektrodynamik bewegter Korper* and classifies them as belonging to the object language or to the metalanguage. According to Carnap's analysis, the majority of those sentences, though ocurring in a work of empirical science, belong in fact to the metalanguage of science. That is, the majority of those sentences are not about physical objects, but rather about the sentences of physics. Much the same situation obtains in normative discourse. Legal documents, treaties, written moral codes, etc. contain not only sentences in what might be called the object language of normative discourse, that is, non-modal indicative sentences that are to be made true. They also contain sentences of the metalanguage about sentences in the object language. Ought sentences, thus, although they appear in legal documents, for example, do not formulate norms, or laws. Instead, they are used to make true or false factual assertions concerning those indicative sentences that are the laws.

An example should make this clear. As has been mentioned,

the American constitution consists almost entirely of future indicative sentences. To obey the constitution is just to make those sentences true, i.e., to make reality correspond to the picture presented by the descriptive sentences of the constitution. The constitution, however, does contain sentences in addition to non-modal, future indicatives. The following is one example:

> All bills for raising revenue shall originate in the House of Representatives; but the Senate may propose or concur with amendments as on other bills.[2]

The first clause of this passage expresses a law. To obey the law is to make the sentence 'All bills for raising revenue shall (will) originate in the House of Representatives' true. The law is disobeyed if it is made false. If, for example, the Senate instead of the House of Representatives were to originate a bill for raising revenue, the sentence 'All bills for raising revenue shall originate in the House of Representatives' would be made false; which is to say that the law is disobeyed. The second clause in the passage cited, however, 'The Senate may propose or concur with amendments as on other bills', states a matter of fact. Although this second sentence is a 'may' sentence, given the interdefinability of 'ought' and 'may' it is replaceable by an ought sentence as follows:

> It is not the case that the Senate ought not to propose or concur with amendments as on other bills.

In accordance with the proposed analysis of ought sentences, this sentence may be paraphrased in the following manner:

> It is not the case that there is a law that requires that the Senate not propose or concur with amendments as on other bills.

And this sentence may be again restated, this time for greater intelligibility, by replacing 'requires. . . not' with 'prohibits', thus yielding:

> It is not the case that there is a law that prohibits the Senate from proposing or concurring with amendments as on other bills.

This sentence, then, is included in order to make a true factual statement concerning the law formulated immediately beforehand requiring that bills for raising revenue originate in the House of Representatives. What is stated is that this law (or any other law) does not prohibit the Senate from proposing amendments to a bill for raising revenue, although it does prohibit the Senate from originating such a bill. The purpose for including such a statement of fact in a document generally devoted to formulating the highest law of the land is to clarify that law. Without such a statement of fact to the effect that there is no law that prohibits the Senate from proposing amendments to bills for raising revenue, there is a clear danger that the law requiring revenue raising bills to originate in the House of Representatives would be interpreted as forbidding the Senate to propose amendments to such a bill. Had the framers of the constitution not included a statement of fact to the effect that no law prohibits the Senate from proposing amendments to bills for raising revenue, it is doubtful whether the Senate would today have such power. It is likely that the first time following ratification of the constitution that the Senate attempted to propose an amendment to a bill for raising revenue, the House of Rep-

resentatives, anxious to protect its prerogatives, would have argued that the power to propose amendments to bills for raising revenue is tantamount to the power to originate such bills, which power is granted to the House of Representatives. The amendments to a bill may be more extensive than the bill itself. The Senate in turn would have argued that although the constitution requires bills for raising revenue to originate in the House of Representatives, nothing in the constitution explicitly forbids the Senate to propose amendments to such bills. It was for the purpose of preventing such arguments as this, therefore, that the framers of the constitution included a statement of fact within the body of the constituiton itself concerning the intent, or scope of application, of the laws of the constitution.

Again, it must be emphasized that to say that an ought sentence is used to make a true or false statement of fact does not entail denying that it is action guiding in the fullest sense. Ought sentences are action guiding even though they do not possess prescriptive meaning. What, in fact, could be more clearly action guiding than a statement of intent by the framers of the constitution? The actions of lawmakers, judges, presidents, and of ordinary citizens are affected by a statement of fact clarifying the scope of application of a given law. Given a statement of fact to the effect that the law requiring that bills for raising revenue originate in the House of Representatives does not prohibit the Senate from proposing amendments to such bills, members of the House of Representatives refrain from challenging the right of the Senate to propose those amendments. And given such a statement of fact,

members of the Senate are indirectly encouraged to propose amendments to bills for raising revenue since they are assured that they will not violate any law of the constitution in doing so. The passage of the constitution that reads, "The Senate may propose or concur with amendments (to bills for raising revenue) as on other bills", does indeed confer upon the Senate the right to propose amendments; but it does so only indirectly. It does so, that is, by clarifying the content of the law that requires bills for raising revenue to originate in the House of Representatives, and not in virtue of any prescriptive meaning, or more accurately in this case "permissive meaning", possessed by that sentence.

Another example from the constitution of an ought sentence used not to enunciate a law, but rather to make a true or false statement of fact about the law is the following:

> The times, places, and manner of holding elections for Senators and Representatives shall be prescribed in each state by the legislature thereof; but the Congress may at any time by law make or alter such regulations, except as to the places of choosing Senators.[3]

Again, the first clause of this passage, the 'shall' sentence, enunciates a law. The law is obeyed by making true the indicative sentence that expresses the law. The second clause, the 'may' sentence, however, is used to make a true or false statement of fact. By the interdefinability of 'ought' and 'may', this second clause may be rendered as follows:

> It is not the case that the Congress ought not at any time by law make or alter such regulations. . .

And, again, substituting the proposed analysis of 'ought', the sentence reads as follows:

> It is not the case that there is a valid law that requires that the Congress not, at any time, by law make or alter such regulations. . .

And then,changing 'requires. . . not' to 'prohibits', for greater intelligibility:

> It is not the case that there is a valid law that prohibits the Congress from, at any time, by law making or altering such regulations. . .

The purpose for including such a statement of fact along with a set of laws is to clarify the content of the law enunciated immediately beforehand requiring that each state legislature itself prescribe the times, places, and manner of holding elections for seats in the national Congress. The ought statement is included for the purpose of making clear that this law does not prohibit the national Congress from making laws, or altering laws passed by state legislatures prescribing the manner of holding elections for seats in the national Congress. Such a statement of fact is clearly action guiding. Without such a clarification of the law, it is quite possible that the constitution would be interpreted as denying the national Congress the right to interfere in the activities of the state legislatures in prescribing laws regulating the times, places, and manner of electing members to the national Congress. Without this clarification, states' rights advocates would maintain that the right to regulate the manner of electing members to the national Congress was reserved exclusively to state legislatures.

Since the topic of 'may' sentences has been introduced, something more should be said concerning the notion of permission. In accordance with the theory advocated already, it is held that 'may' sentences, like the 'ought' sentences with which they are interdefinable, do not express

anything other than ordinary descriptive meaning. To say to someone that he may do something is to say that it is not the case that he ought not to do it, i.e.., that there is no law that prohibits his doing it. Generally, the speaker's intention in communicating such information to a hearer is to let him know that there is nothing standing in the way of his performing a certain action (in particular, no law prohibiting that he do it) so that he will not feel inhibited in doing it. The speaker's intention, that is, is not to encourage the hearer to undertake a certain action (though the speaker may have this intention), but simply to inform him that he is not prohibited from doing it should he want to. In issuing a 'may' statement, the speaker says, in effect, "I'm not recommending that you do this; nor am I recommending that you not do it. I am simply making sure you know that you are not prohibited from doing it should you so desire." The statement, 'Smoking permitted in parlor cars only', for example, informs its hearers (readers) that there is no law forbidding smoking in parlor cars, though there is a law forbidding smoking anywhere else. The purpose for making such information available is to provide a reason for smokers who wish to smoke in a place where smoking is not prohibited by law to go to a parlor car. Of course, no 'may' statement may be issued at all and the actions which are not prohibited by law are simply tolerated, i.e., not followed by punishment.

2. Requirement

Given, then, that laws (rules, principles, norms) are expressed by non-modal indicative sentences that can be made true and not by ought

sentences which are used to make the true or false factual statement that there exists a law requiring that a certain action be performed, one other term that occurs in the proposed analysis of ought sentences, namely, 'requires', may be explicated. Very simply, what is required by a law is what is deducible from the indicative sentence that expresses it. For example, the moral law, 'One keeps one's promises' requires that Carter reduce unemployment, since the sentence 'Carter will reduce unemployment' is deducible from the indicative sentence, 'One keeps one's promises', that enunciates the law, plus the minor premise, 'Carter promised to reduce unemployment'.

It is important to notice that what is required by a law may not be what is deducible from the law alone (from the indicative sentence that expresses the law), but what is deducible from the law plus a set of indicative sentences describing the facts of the case. The situation that obtains with regard to moral or legal laws is analogous to the situation regarding laws of nature. That is, the consequences of a given law of nature cannot be derived from the law alone, but must be derived from the law plus a set of sentences stating initial conditions. Although rules or laws, it might be maintained, need not be general in form, they often are; and when they are, in order to derive the consequence that a certain action is required by the law, it is necessary to invoke a minor premise to the effect that the action is a member of the class of things to which the law applies.

This analysis of 'rule' and 'requirement' greatly simplifies and clarifies the nature of practical inference. In fact, there is no

particular logic of practical reasoning distinct from ordinary logic. So-called practical syllogisms are just ordinary syllogisms with the difference that certain of the premises, namely, those that embody rules, are not put forward as true or false independently of anyone's actions but, rather, are to be made true (or else false if the rule is disobeyed). For example, to consider another simple case, the sort of reasoning one might do in order to conclude that the rule requiring that one respect other human beings requires that one treat John with respect, given that he is a human being, is the following:

One respects other human beings.
John is a human being.
∴ One respects John.

In this syllogism the major premise expresses a rule requiring that one respect others. To obey the rule is to make true the indicative sentence, 'One respects other human beings' that expresses the rule. The minor premise, 'John is a human being', states the facts of the case; and the conclusion describes the particular action required by the general rule. If it is desired that the fact be taken into account that the major premise, 'One respects other human beings' is not asserted as true, but expresses a moral law to be made true, then one can form the following independent, but complementary inference:

It is a rule that one respects other human beings.
John is a human being.
∴ It is (required by) a rule that one respect John.

The inference, 'One respects other human beings and John is a human being; therefore, one respects John' is also interesting because it is the inference one most likely has in mind in making the statement

that one ought to respect John. To say that it ought to be the case that one respects John is to say that there exists a valid rule from which the conclusion 'One respects John' is deducible. Although in stating that there exists a valid rule from which the conclusion 'One respects John' is deducible one does not assert that any particular rule exists, it is probable that the rule one has in mind (if one has any particular rule in mind at all) is the rule expressed by the indicative sentence 'One respects other human beings'. Given this rule, and the statement of fact 'John is a human being', the sentence 'One respects John' is deducible.

It must not be objected to this view of practical reasoning that the major premise of such inferences as the one above is not in fact true since, for example, it is not true of the actual world that human beings are always treated with respect. The premises of an argument do not have to be true for the argument to be valid. What drawing the conclusion of a practical inference tells one is what must be true if the premises are to be true. This is precisely what constitutes the practicality of practical reasoning. By drawing the logical consequences of a law, enunciated by a non-modal indicative sentence, one discovers what is required by that law. That is, one discovers what must be made true if the rule itself is to be true; if, that is, the rule is to be obeyed. And for someone who wants to obey the rule, who wants, that is, the sentence expressing the rule to be made true, this is vital information indeed. Further examples of practical reasoning will be discussed in connection with the good reasons analysis of ought sentences.

It might also be mentioned in this context that if the statement 'One ought to respect John' may be interpreted as a statement to the effect that 'One respects John' is deducible from (i.e., required by) a valid law, namely, the law, 'One respects other human beings', plus suitable premises describing the facts of the case, the statement, e.g., 'There ought to be a full moon tonight' may be similarly interpreted. This latter statement is equivalent to the statement that 'There is a full moon tonight' is deducible from a true law of nature, plus a set of premises describing initial conditions. It is a virtue of the proposed theory of ought sentences that it construes moral ought sentences and ought sentences such as the latter as closely related rather than as merely homonymous. To say that there ought to be a full moon tonight is to say that the proposition that there is a full moon is deducible, given a set of propositions describing initial conditions, from a true law of nature. The difference, then, between the moral 'ought' and the 'ought' of expectation is simply that the law referred to in the one case is a moral law (a law to be made true) an in the other case a law of nature (a law that is true).

A word should also be said regarding the term 'moral' as it occurs in the context 'It is required by a valid moral rule that p'. In such a context the term 'moral' is not used evaluatively. That is, in characterizing a particular rule as a moral rule, nothing is implied as to the validity or lack of validity of the rule. The term is used, rather, purely descriptively in the way that a social scientist uses it when he identifies certain rules occurring, for example, among primitive

peoples as moral rules, and others as rules of etiquette, and still others as political laws, without either endorsing or condemning such rules. No particular analysis of what qualifies rules as being moral rules, however, is defended here, just as no particular analysis of the validity of rules was defended in the last chapter.

3. Other Analyses of Ought Sentences

In the rest of this chapter the proposed analysis of ought sentences is compared with various other proposals. Firstly, the proposed interpretation of ought sentences is essentially the same as the interpretation advocated by von Wright. According to him, to say that it ought to be the case that p is to say that there exists a rule that prescribes that p. To quote, ". . . the expressions of our deontic calculi are expressions for a kind of *proposition,* viz. propositions to the effect that there are such and such norms."[4] Von Wright's interpretation and the proposed analysis thus coincide; although von Wright probably would not agree with the further analyses given here of the terms 'valid', 'rule', and 'requires' occurring both in his and in the proposed interpretation of ought sentences. In fact, as has been mentioned, von Wright maintains that the formulae of deontic logic are ambiguous. A formula 'Op' may be interpreted, on the one hand, as used to make the true or false statement of fact that there exists a rule; or it may be interpreted prescriptively as the embodiment of a rule itself, in which case the ought sentence is neither true nor false. Since on the proposed theory of ought sentences

the prescriptive aspect of an ought sentence is a function of the speaker's intentions in uttering the sentence and is not part of its semantic content, this dual interpretation is unnecessary. Ought sentences are always used to make a true or false statement of fact to the effect that there exists a rule, and are used only indirectly for prescribing by means of providing information to a hearer for the purpose of giving him a reason for acting. As stated in the last chapter, it may be argued that it is a virtue of the proposed theory of ought sentences that it obviates the need for a dual interpretation of ought sentences and allows the notion of validity for formulae of deontic logic to be construed in terms of truth in every interpretation, as in ordinary, assertoric logic.

It is also important that the notion of the existence of a rule that figures essentially in von Wright's and in the proposed interpretation of ought sentences be explicated. Since, on the proposed analysis, rules are construed as indicative sentences that can be made true, there is no more difficulty inherent in the notion of a rule (e.g., of morals) existing that no one has ever prescribed, or perhaps ever will prescribe, than there is in the notion of an indicative sentence existing that no one has ever asserted or ever will assert. Although the rules of language allow for the formation of an infinite number of distinct, grammatical sentences, the number of sentences that have ever in fact been uttered, or ever will be uttered in the future is finite. So, just as one may speak of sentences that no one has ever uttered, or perhaps ever will utter, with the intention of

making a statement, so can sense be made of saying that there are sentences that no one has ever uttered, or perhaps ever will utter, with the intention of inducing a hearer to make that sentence true. That is to say, one can make sense of the assertion that there exist rules to which no one has ever prescribed obedience, or perhaps ever will. This fits in well with ordinary intuitions regarding morality. It is important to be able to say, for example, that although no one (historical inaccuracies aside) ever prescribed in ancient Greece that slavery be abolished, slavery was immoral nonetheless. This assertion can be construed according to the proposed analysis of ought sentences as a statement to the effect that the sentence 'One doesn't enslave other human beings' embodies a valid rule, although no one thought that the rule was valid in ancient times, and no one uttered that sentence then with the intention of inducing a hearer to make the sentence true.

Keuth also interprets sentences of the form 'It ought to be the case that p' as stating that there exists a norm that prescribes that p; and he suggest that such sentences be symbolized in logical notation as follows:

'Op' =df '(Ex)(Nx & xVp)'.[5]

Here 'Nx' is a unary predicate to be read 'x is a (valid) norm' and 'xVp' a binary predicate interpreted as , 'x prescribes that p'. Thus, according to Keuth, 'It ought to be the case that p' is the same, by definition, as, 'There is a (valid) norm that requires that p' (or, 'It is required by a valid norm that p'). It should be noted, however, that Keuth does not

explicitly include the qualification of the norm as a "valid" one; but hopefully he would not disagree with its inclusion here.

Smiley also makes essentially the same proposal. According to him, ought sentences may be symbolized in analysed form as follows:

'OA' =df '$(En)(Ep_1,\ldots,Ep_n)(T(p_1)\&\ldots\&T(P_n)\ \&\ L(p_1\&\ldots\&p_n \supset A))$'.[6]

Here, 'A' is a propositional constant, 'p_1'. . .'p_n' propositional variables, and 'n' a variable ranging over natural numbers. '$T(p_m)$' is a unary predicate taking propositions as arguments and interpreted, "It is part of the moral code that p_m" (e.g., 'It is part of the moral code that one does what one promises to do'); and 'L' is a necessity operator. Smiley's proposal, then, is to construe statements of the form 'It ought to be the case that A' (where 'A' is a propositional constant, e.g., 'One does what one promises to do') as meaning, 'There are a number (n) of propositions ($p_1 \ldots p_n$) such that it is part of the moral code that $p_1\&\ldots\&p_n$;and it is deducible from $p_1\&\ldots\&p_n$ that A'.

The difference between Smiley's proposal and Keuth's for symbolizing the analysed form of ought sentences is that for Smiley, '$p_1\ldots p_n$' are supposed to represent an exhaustive enumeration of the norms of a moral code, whereas in Keuth's proposal the obligatory action, or state of affairs, follows from a single existing (valid) norm of morality. Where this single norm is taken to represent the conjunction of all the separate norms, however, the two proposals coincide. Smiley's proposal also differs from Keuth's in using propositional variables rather than individual variables to stand for rules (norms).

In this, Smiley's proposal is more in accord with the analysis of ought sentences given here than is Keuth's since it has been argued that rules, or norms, ought to be construed precisely as indicative sentences (propositions) that can be made true or false. It also follows from Smiley's taking propositional variables to stand for norms that the relations of requirement is interpreted as one of deducibility; precisely as it should be according to the proposed analysis of rules. Keuth, on the other hand, since he takes individual variables to stand for norms, must introduce an unanalysed relation, symbolized 'xVp' to represent the relation of requirement.

One possible defect of Smiley's proposal is that it neglects the fact that sentences describing an obligatory action may not follow from the set of sentences comprising the laws of a moral code alone, but are derivable from those sentences only in conjunction with a set of sentences describing the facts of the case. In the example mentioned earlier, 'It ought to be the case that one respects John' was construed as meaning that there exists a valid rule ('One respects other human beings') from which 'One respects John' is deducible, *given that John is a human being*; although 'One respects John' is not deducible from the rule alone. This may not be a problem for Smiley, however, although the matter is not terribly clear, since he seems to allow '$p_1 . . . p_n$' to stand for "non-deontic" propositions as well as for those sentences forming part of a moral code. This problem does not arise on Keuth's analysis since the relation between a norm and that which is required

by the norm is not analysed as the relation of deducibility, but is left completely unanalysed. Whether or not a certain norm must be conjoined with factual premises in order to require that a particular action be performed is not represented in Keuth's symbolism.

The proposed analysis of ought sentences is also closely related to the possible world semantical analysis of ought sentences proposed by such writers as Montague, Kanger, and Hintikka.[7] Very roughly, according to those authors, sentences of the form 'It ought to be the case that p' are interpreted as meaning, "'p' is true in every deontically perfect world" -- where a deontically perfect world is one in which every (valid) norm of morality is obeyed. Hintikka has insisted that the hallmark of modal sentences is that their interpretation requires reference to more than one world. This is particularly clear in the case of ought sentences, since to say that something ought to be the case is to say that it would be the case were things not so imperfect as they are in the actual world. More specifically, to say that it ought to be the case that p is to say that 'p' is true in every possible world which differs from the actual world in having the property that in that world every valid rule of morals is obeyed. The technicalities of the construction of a possible world interpretation of ought sentences, however, need not be entered into here.

The important thing to notice, for present purposes, is the following. If norms are interpreted as indicative sentences that can be made true by an agent's action, then to say that 'p' is true in every

world in which all the valid norms of morality are obeyed is just to say that 'p' logically follows from the set of valid norms; and this coincides exactly with the proposed analysis of ought sentences. This is particularly clear in Montague's system. Montague constructs a set of ideal, deontically perfect worlds by taking them as the "class of models which, in Tarski's sense, satisfy the ten commandments (formulated as declarative, rather than imperative, sentences; the fourth commandment, for instance, becomes '(x)(y)(z)(x is a person & (y is father of x v y is mother of x)⊃ x honors y)')".[8] Now, it is not necessary to have to reformulate the ten commandments as indicative sentences rather than as imperatives; for they are already indicatives. God is reported to have said, e.g., not just 'Honor thy father and mother' but rather, 'Thou shalt honor thy father and mother';[9] and, as was argued in the second chapter, 'shall' sentences are simply future indicatives, even if they are uttered prescriptively, that is with the intention of inducing a hearer to make the sentence true. The French translation of 'Thou shalt honor thy father and mother' is 'Chacun de vous respectera sa mère et son père', which is simply a future indicative sentence; and that is evidence that the English sentence itself is a future indicative. Of course, even if God did say 'Honor thy mother and father!' rather than 'Thou shalt honor thy father and mother', if the theory of imperatives propounded in the first chapter is correct, then the sentence he uttered is an elliptical indicative sentence, but an indicative sentence nonetheless. What is required by this commandment, then, is just what is deducible from it; or in possible world terms, what is true in every possible world in

which the commandment, or rather the indicative sentence formulating the commandment is true.

It should also be mentioned, as Kanger points out, that Anderson's interpretation of the formulae of deontic logic coincides with the possible world interpretation of Montague, Kanger, and Hintikka.[10] Anderson's reading of sentences of the form 'Op' is just the contrapositive of that of Montague, Kanger, and Hintikka. That is, instead of interpreting sentences of the form 'Op' as meaning 'It follows from the set of valid norms that p', Anderson construes them as meaning, 'It follows from the fact that not-p that something goes wrong, namely, at least one of a set of (valid) moral rules is violated'. Anderson, however, does not give a possible world semantical interpretation to his reading of ought sentences as do the writers mentioned.

Another proposal for the analysis of ought sentences has been made by Castaneda.[11] Contrary to the analysis of ought sentences developed herein, Castaneda regards ought sentences as formed by prefixing a deontic operator to an imperative sentence rather than to an indicative. Mark Fischer, it might be noted, in one essay also construes ought sentences in this way.[12] That is, ought sentences are not, according to Castaneda, of the form 'Op' where 'p' is an indicative sentence and 'O' the deontic operator 'It ought to be the case that'. Rather, ought sentences are analysed as of the form 'O!p', where '!p' is an imperative sentence, e.g., 'Close the door!' and 'O' a deontic operator such as 'Person x ought to'. More accurately, according to Castaneda the canonical form of an ought sentence is:

It ought to be the case that person x does the following: !p (e.g., Close the door!).[13]

If the theory of imperative sentences presented is correct, however, Castaneda's analysis of the logical form of ought sentences and the proposed analysis coincide. If, that is, what are called imperative sentences are stylistic variants of indicative sentences, then ought sentences are of the form 'Op' , where 'p' is an indicative sentence, after all, and are only apparently, by Castaneda's lights at least, of the form 'O!p', where '!p' is an imperative sentence, since that imperative is simply a stylistically variant form of the indicative sentence 'p'.

Apart from this difference, however, Castaneda's interpretation of ought sentences is very similar to the analyses previously summarized. According to Castaneda, a sentence of the form 'O!p' is equivalent to the true or false factual statement, "There is a consistent set of both true propositions and at least partially endorsed practitions (imperatives) which implies the practition (imperative) 'X to do p'". That is, 'It ought to be the case that p' is true, according to Castaneda, if and only if the imperative 'Make it be the case that p!' is implied by a set of at least partially endorsed imperatives plus a set of true propositions describing the facts of the case. Now, if imperative sentences are simply elliptical indicatives, and rules, or norms, are also indicative sentences that can be made true, then to say that the imperative 'Make it be the case that p!' is implied by a set of at least partially endorsed imperatives is just to say that the elliptical indicative

sentence '(You will) make it be the case that p' is implied by a set of elliptical indicative sentences that express the at least partially endorsed rules of a moral code (plus sentences describing the facts of the case).

Castaneda's notion of the "endorsement" of a practition (imperative) has been briefly discussed in chapter two. Although the definition of endorsement is complicated, it appears that it may be construed as roughly equivalent to the notion of validity. The imperatives, or rules, that imply a given imperative sentence, when one ought to do what the imperative prescribes, must be at least partially endorsed; that is, they must be valid. According to one part of Castaneda's definition of 'endorsement', an imperative is endorsed if performance of the action required by the imperative is a necessary condition for the achievement of certain agents' ends. In fact, Castaneda is bold enough to conjecture what the ends of a moral agent in a deontically perfect world are; for he says:

> Morality is the ideal underlying the conception of a consistent maximal harmonization of everybody's maximal self-realization. If a man's maximal self-fulfillment is happiness, then morality is concerned with the ideal of the maximal consistent happiness for everybody.[14]

Presumably, then, for Castaneda, to say that it morally ought to be the case that p is equivalent to saying that the imperative '!p' follows from a set of imperatives (rules) that prescribe actions the performance of which is necessary for the achievment of a consistent maximal harmonization of everybody's maximal self-realization. It should be mentioned, however, that Castaneda does not claim that his analysis

of ought statements maintains synonymy. In fact, he thinks that ought judgments are unanalysable in this sense. But he does maintain that ought sentences are used for making true or false statements of fact, and that his explication is at least materially equivalent to the statement made in uttering an ought sentence.

The reason for which Castaneda analyses ought sentences as composed of an deontic operator prefixed to an imperative sentence is to avoid certain paradoxes in deontic logic. The first paradox that Castaneda claims is resolved by his analysis of ought sentences is the good Samaritan paradox.[15] This paradox arises from an application of the relatively intuitive principle that if it ought to be the case that p, and p implies that q, then it ought to be the case that q. This principle is more plausible than the similar principle discussed in chapter two that if it is commanded (asserted) that p, and p implies that q, then it is commanded (asserted) that q. Since requirement, it has been argued, is a matter of deducibility, to say that it ought to be the case that p is just to say that 'p' is deducible from a set of valid rules (expressed by indicative sentences); so if 'q' is deducible from 'p', then by the transitivity of deduction, 'q' must be deducible from (required by) the same set of rules. This principle in deontic logic does not suffer from the same defect as the analogous principle in the logic of the pragmatics of imperatives and in assertion logic since no speaker need realize that 'q' follows from 'p' for 'q' to be required by the same rules that require that it be made the case that p. The good Samaritan paradox results from an application of this principle

to the sentence, 'The good Samaritan ought to help the person who was robbed'. Since the sentence, 'The good Samaritan helps the person who was robbed' implies 'Someone was robbed', it would seem to follow by the principle just mentioned that it ought to be the case that someone was robbed. If, however, the ought sentence in question is analysed, as Castaneda proposes, as composed not of a deontic operator and the indicative sentence 'The good Samaritan helps the person who was robbed', but rather of the deontic operator 'It ought to be the case that the good Samaritan does the following:', and the imperative, 'Help the person who was robbed!', then since, according to Castaneda, it does not follow from that imperative that someone was robbed (this might be presupposed by the imperative but is not implied) it does not follow that it ought to be the case that someone was robbed.

There is, however, a principle analogous to the principle, 'If Op, and p implies that q, then Oq' that Castaneda holds to be valid. This is the principle that if it ought to be the case that person x does the following: !p, and the imperative '!p' implies the imperative '!q', then it ought to be the case that person x does the following: !q. An application of this principle to the statement, 'It ought to be the case that the good Samaritan does the following: Help the person who was robbed!', however, does not result in paradox since the imperative 'Help the person who was robbed!' does not imply the imperative 'Rob someone!', or alternatively, 'Let there be someone who is robbed!. Therefore, it does not follow from the statement, 'It ought to be the case that the good Samaritan does the following: Help the person who

was robbed! that, 'It ought to be the case that the good Samaritan does the following: Rob someone!'.

It is somewhat odd, however, that Castaneda in his book *Thinking and Doing*[16] should maintain that this construal of ought sentences as composed of an imperative sentence and a deontic operator is necessary to avoid the good Samaritan paradox; for in an earlier article, "On the Semantics of the Ought-To-Do",[17] he claimed, as have others, that the paradox may be dissolved by a correct reading of the scope of the deontic operator in the formula, 'The good Samaritan ought to help the person who was robbed'. That is, it does not follow from the proposition that the good Samaritan ought to help the person who was robbed that it ought to be the case that someone was robbed, if the first ought statement is construed in the following way (using a numerically definite quantifier, 'E_1x', in place of the definite description 'the person who was robbed'):

> (E_1x)(x was robbed and it ought to be the case that the good Samaritan helps x),

instead of:

> It ought to be the case that (E_1x)(x was robbed and the good Samaritan helps x).

It is only if the proposition 'The good Samaritan ought to help the person who was robbed' is incorrectly symbolized in the second manner that the paradoxical consequence 'It ought to be the case that someone was robbed' may be derived.

It should also be said that even if something like Castaneda's construal of ought sentences were necessary in order to avoid the good

Samaritan paradox, if the proposed theory of imperatives is correct then Castaneda's solution would be unavailing. That is, even if the sentence 'The good Samaritan ought to help the person who was robbed' is construed as composed of a deontic operator prefixed to the imperative 'Help the person who was robbed!', since this imperative is an elliptical form of the indicative sentence 'You will help the person who was robbed!' it does follow from this imperative, contrary to Castaneda's expectation, that there is someone who was robbed, and, therefore, that it ought to be the case that there is someone who was robbed.

In his earlier article and in *Thinking and Doing,* however, Castaneda claims that there is another related paradox that cannot be so easily dissolved by a proper reading of the scope of the deontic operator. This is the paradox of the knower formulated by Aqvist in his "Good Samaritans, Contrary-to-Duty Imperatives, and Epistemic Obligation."[18] The paradox is the following. Suppose in a certain office there is a person, John, whose job it is to know what infractions of company rules take place. Suppose also that in this company it is against the rules to take a two hour lunch break, and let 'q' represent the true proposition that Jones took a two hour lunch break, and 'Kq' the proposition that John knows that Jones took a two hour lunch break. It ought to be the case, then, that John knows that Jones took a two hour lunch break ('OKq'), since it is his job to know; but since Kq implies that q, it follows by the principle that if Op, and p implies that q , then Oq, that it ought to be the case that Jones took a two

hour lunch break ('Oq'), which contradicts the supposition that two hour lunch breaks are against company rules. According to Castaneda, this paradox cannot be resolved by making scope distinctions, but is solved by his analysis of ought sentences as formed from an imperative sentence and a deontic operator. For if the ought sentence 'It ought to be the case that John knows that Jones took a two hour lunch break' is construed as follows:

> It ought to be the case that John does the following: Know that Jones took a two hour lunch break!

then it does not follow that it ought to be the case that Jones took a two hour lunch break since it does not follow from the imperative 'Know that Jones took a two hour lunch break!' that Jones in fact took a two hour lunch break. (Again, it may be presupposed by this imperative that Jones took a two hour lunch break, but is not implied by it.) Nor does the imperative, 'Let it be the case that Jones takes a two hour lunch break!' follow from the imperative 'Know that Jones took a two hour lunch break!', so 'It ought to be the case that John does the following: Let it be the case that Jones takes a two hour lunch break!' does not follow from the statement,'It ought to be the case that John does the following: Know that Jones took a two hour lunch break!' by the principle that if it ought to be the case that person x does the following: !p and the imperative '!p' implies the imperative '!q', then it ought to be the case that person x does the following: !q.

It may be argued, however, that Castaneda is mistaken in claiming that the paradox of the knower cannot be resolved by a scope distinction. The person whose job it is to know what infractions of the rules take

place in his company does not have an absolute obligation to know certain things, but only a conditional obligation. That is, he is not required to know something absolutely, but only to know it on the condition that it occurs. The statement that it ought to be the case that John knows that Jones took a two hour lunch break, thus, should be symbolized not as the simple obligation 'OKq', but rather as the conditional obligation 'O(q⊃Kq)'. That is, John is not required unconditionally to know that Jones took a two hour lunch break, but is required to know it on the condition that the event occurs.

It is important to note that John's obligation should also not be symbolized as 'q⊃OKq'. The proof is simply the paradox of the knower itself; for if it were in fact the case that q, then one could detach the conclusion, 'OKq', and from this derive the further conclusion that Oq, which contradicts the assumption that it ought not to be the case that q . In short, Castaneda's proposal to construe sentences of the form 'It ought to be the case that p' as composed of a deontic operator and an imperative sentence, '!p' is unnecessary in order to resolve the good Samaritan paradox and the paradox of the knower; and even if those paradoxes could not be resolved by a scope distinction, Castaneda's solution would be unavailing since it consists in substituting an elliptical form of an indicative sentence (an imperative) for a non-elliptical indicative sentence.

Hare's analysis of moral judgments may also be elucidated in light of the proposed analysis. According to Hare, "'ought' always refers to some general principle." A moral judgment such as 'You ought

to tell him the truth', Hare suggests,may be analysed as having the following semantic content: 'If you do not tell him the truth you will be breaking a general ought principle to which I hereby subscribe.'[19] Apart from two features, this is in perfect harmony with the proposed analysis. Hare's analysis, in fact, is essentially the same as Anderson's analysis of ought judgments which, it was pointed out, is the contrapositive of the analysis according to which 'You ought to tell him the truth' is equivalent to, 'It is required by a valid principle (rule) that you tell him the truth' (i.e., 'You will tell him the truth' is deducible from a valid principle).

Hare's analysis does differ, however, from the proposed analysis in two ways. Firstly, Hare refers to ought principles, whereas if the thesis argued is correct, ought sentences do not formulate principles (rules), but are used to state that a rule exists. Rules, or principles, again, are analysed as non-modal indicative sentences to be made true. If one omits 'ought', then, Hare's analysis reads as follows:

> If you do not tell him the truth you will be breaking a general. . . principle to which I hereby subscribe.

Hare's formulation also differs, then, in the addition of the expression 'to which I hereby subscribe'. Hare's explanation for this addition is the following:

> If I say 'I hereby subscribe to such and such a principle', that is as good as actually enunciating the principle; the words 'hereby subscribe', as it were, cancel out the inverted commas. . . Thus in the sentence 'If you do not tell him the truth, you will be breaking an ought principle to which I hereby subscribe'. . . there is a live imperative element.[20]

If the proposed analysis of ought sentences is correct,

however, this addition is unfortunate. The expression 'to which I hereby subscribe' is obviously, as Hare explains, added in order to introduce, as he says, "a live imperative element" to the ought statement. In order to add a live imperative, or prescriptive, element to ought statements, however, it is not at all necessary to add an expression such as 'to which I hereby subscribe'. An ought statement has a live imperative element, it has been argued, if it is uttered by a speaker with the intention of inducing a hearer to act by communicating information to him the knowledge of which is a sufficient reason for acting, and if the hearer is able to infer that it is the speaker's intention to induce him to act.

In uttering an ought sentence for the purpose of causing a hearer to act by giving him a reason for acting, however, the speaker does not state that such is his intention. The hearer must infer, inductively, on the basis of contextual information, what the speaker's intention is. The hearer, that is, must ask himself for what reason the speaker chooses to supply him with the information that a certain action is required by a valid principle. In fact, Hare himself says in another context that in making a moral judgment one expresses one's adherence to a principle, but one "never states that he accepts or adheres to it."[21] (Hare may be taken as consistent on this point, however, since he regards explicit performative utterances such as 'to which I hereby subscribe' as not used to make a true or false statement of fact to the effect that one adheres to a certain principle.) Adherence to the principle whose existence one asserts in making an ought statement is

only conversationally implicated by one's utterance. To assert, for the purpose of inducing the performance of a certain action, that there is a valid principle (rule) that prescribes that action is part of what it is is to adhere to the principle. It might be argued that a necessary condition for adhering to a principle is that one calls attention to the existence of the principle on those occasions on which the principle applies for the purpose of inducing conformity with it. It is, however, no more a part of the semantic content of an ought statement that one adheres to the principle to which one refers than it is a part of the semantic content of the statement 'You're standing on my toes' that the speaker wishes the hearer to remove his foot. According to Hart, "The distinctive function of such (ought) statements is to apply such a general rule to a particular person by calling attention to the fact that his case falls under it."[22] In calling a person's attention to the fact that his case falls under a general rule (by stating that it does so fall), the speaker no more states that his purpose is to induce the hearer to perform the action falling under the general rule, than the utterer of the sentence, 'You're standing on my toes' states that his purpose in uttering the sentence is to prevent his toes from continuing to fall under the hearer's foot. If one tells a person that he is standing on someone's toes, he will easily infer what the speaker expects him to do. Similarly, if one tells a person that there is a valid moral rule that requires the performance of a certain action, the hearer will have no greater hesitation in inferring the speaker's intent.

To summarize briefly, then, the descriptive content of an ought statement, according to Hare, is that it follows from the fact that a certain action is not performed that a general principle is violated, or, by contraposition, that it is required by a general principle that the action be performed. According to Hare, it is because of this descriptive content that ought judgments are universalizable. To quote:

> . . . the feature of value-judgments which I call universalizability is simply that which they share with descriptive judgments; namely the fact that they both carry descriptive meaning.[23]

What Hare probably intends here may be somewhat clarified on the proposed analysis. Consider the ought judgment, 'It ought to be the case that John is treated with respect'. This statement is equivalent to the statement that it is required by a valid general principle that John is treated with respect, or, more formally, 'John is treated with respect' is deducible from (required by) a valid general principle, namely, the principle expressed by the indicative sentence 'Human beings are treated with respect'. According to Hare, one cannot without inconsistency assent to this ought judgment and at the same time dissent from an ought judgment that is similar to the first ought judgment in certain relevant respects, e.g., 'It ought to be the case that Jones is treated with respect'. It is somewhat of a problem for Hare to specify what is meant by "relevant respects"; but this may be explained on the proposed analysis. An ought judgment 'Oq' is similar in the relevant respects to the ought judgment 'Op' if an only if 'q' is deducible by universal instantiation from the same general principle from which 'p' is deducible by universal

instantiation. The moral judgment 'It ought to be the case that Jones is treated with respect', for example, is similar in the relevant respects to the moral judgment 'It ought to be the case that John is treated with respect' since 'Jones is treated with respect' is deducible by instantiation from the same general moral principle, namely, 'One treats other human beings with respect' as is 'John is treated with respect'. In short, one should not assent to the judgment that it ought to be the case that John is treated with respect and dissent from the judgment that it ought to be the case that Jones is treated with respect, because treating Jones with respect is required by the same general principle that requires treating John with respect. 'John is treated with respect' and 'Jones is treated with respect' are both instantiations (applications) of the same rule.

There is, however, no *logical* inconsistency, as Hare seems to think, in assenting to the moral judgment 'It ought to be the case that John is treated with respect' (that is, the judgment that 'John is treated with respect' is deducible from a valid general principle), and at the same time dissenting from the judgment that it ought to be the case that Jones is treated with respect, even though 'Jones is treated with respect' is deducible from (required by) the same general principle as is 'John is treated with respect'. If it is true that it ought to be the case that John is treated with respect (i.e., it is true that there is a valid rule from which 'John is treated with respect' is deducible), and if it is true that 'Jones is treated with respect' is deducible from (required by) the same rule, then in dissenting from the judgment that

it ought to be the case that Jones is treated with respect, one dissents from a true proposition; but one does not contradict oneself. What would be contradictory is to assent to the moral judgment that it ought to be the case that John is treated with respect, and dissent from the judgment that it ought to be the case that Jones is treated with respect, and at the same time affirm that the two moral judgments are similar in the relevant respect, i.e., affirm that 'John is treated with respect' and 'Jones is treated with respect' are both deducible from (required by) the same moral rule.

4. Good Reasons

The proposed analysis of ought sentences may also be compared with the good reasons analysis of ought sentences.[24] On close examination the two analyses are seen to be essentially the same, at least on one possible interpretation of the good reasons approach. This may not be apparent at first glance, but is explained as follows. On the good reasons approach, to say that it ought to be the case that p is equivalent to saying that there are good, moral reasons for making it be the case that p. Now reasons are matters of fact described by indicative sentences (propositions) and so, under the proposed analysis, are rules (norms, principles). Both reasons and rules are represented by true or false indicative sentences.

Secondly, the rules that require that a certain action be performed, if it ought to be performed, are not just any sort of rules, but *valid* ones. Similarly, the reasons for doing something, on the good reasons analysis of ought sentences must not be just any sort of reasons; they must

be good, i.e., valid reasons. And just as it was argued in the last chapter that the notion of the validity of rules can be defined in purely descriptive (naturalistic) terms without committing a fallacy, so can the notion of the 'goodness' or 'validity' of reasons be defined in purely descriptive terms without committing the so-called naturalistic (descriptive) fallacy.

Finally, on the proposed analysis of ought sentences, to say that the action described by the indicative sentence 'p' is required by a valid rule is to say that 'p' is deducible from the rule (expressed by an indicative sentence) plus a set of true sentences representing the facts of the case. Now, it is clear that the relation of a reason to that for which it is a reason is some sort of implicational relation. As Castaneda writes:

> Ordinarily to speak of reasons, or good reasons, when these reasons are not analogous to motives, is to speak of premises which in a relevant mode of inference (perhaps together with certain assumptions and presuppositions) imply a given conclusion, a formulation of which follows the proposition 'for'. . . Whatever is said to be a reason for 'p' is said to stand in some kind of inferential relationship with p. Thus, insofar as they are taken to refer to reasons, 'X's doing A is right' and 'X ought to do A' are taken to say that there are true premises which imply in *some* manner X's doing A.[25]

Just what sort of implicational relationship it is that obtains between a reason and that for which it is a reason is controversial. According to some authors, for example Toulmin, the relationship is a *sui generis* relationship analogous to deducibility, but not to be identified with that relation.[26] It is here contended, however, that the relation between the premises that embody the reasons for an action, and the conclusion that describes the action to be performed is precisely one of deducibility,

as is the relation between a rule and that which is required by the rule. The parallel, then, between the good reasons analysis of ought sentences and the proposed analysis is complete.

It may be said in support of this construal of the good reasons approach that the proposal to interpret the relation of "being a reason for" as the relation of deducibility is not at all a new one, in non-moral contexts at least, and that this usage is entrenched in philosophical literature. In an article written in 1912, Lukasiewicz classified the forms of inference as being of two types which he called deduction and reduction. In a deduction the inference is made from a premise, which Lukasiewicz calls the "reason", to a conclusion; whereas in a reductive inference the direction of the inference is reversed in that one infers from a given proposition, another proposition, called the "reason", from which the first proposition may be drawn as a logical consequence. To quote:

> The inference which starts from the reason and goes in the direction of the conclusion is called deduction; and the inference that starts from the conclusion and goes in the direction of the reason for that conclusion is called reduction. In the case of deduction, the direction of the logical implication and the direction of the inference coincide; in the case of reduction the two directions are diametrically opposed.[27]

It may also be noted that Cournot spoke of giving the reason for something as giving the principle, or premise, from which the proposition describing that thing may be deduced. As Robert Blanché writes, "The capacity of reason which we possess is the capacity to grasp that which Cournot called the reason for something, that is to say, to grasp, in the presence of a given fact, expressed by a proposition, that to which

it is related in the manner that a conclusion is related to the premise from which it is derived."[28] Leibniz's principle of sufficient reason, in fact, may be understood as the principle that for every event there is a proposition, the "reason" for the event, from which the proposition describing the event may be deduced. The principle of sufficient reason may be understood as the principle that for every event there is a deductive-nomological explanation. In short, the proposal to construe the relation between a sentence describing a reason for an action and another sentence describing the action which there is reason to perform as one of deducibility is not a proposal to give a new meaning to the term 'reason', but merely to widen the application of an already established sense of the term.

This should be clearer in the context of an example. Consider the ordinary language statement, 'The fact that John is a human being is a good reason for respecting him'. This statement, it is argued, is a metastatement to the effect that the true sentence 'John is a human being' deductively implies the sentence 'One respects John' describing the action which there is reason to perform. Quite obviously, however, the statement so interpreted is false since 'John is a human being' does not by itself deductively imply 'One respects John'. The deductive inference referred to must, therefore, be construed as an enthymematic inference the suppressed major premise of which is the following: 'One respects other human beings', or somewhat more formally, 'For all x, if x is a human being, then one respects x'. This major premise is not asserted as true, but is to be made true. The major premise 'One respects other human beings' formulates a rule, or norm, to be obeyed. Again, if the objection is made that a rule

must be enunciated by an imperative, e.g., 'Respect other human beings!', it will be recalled imperatives themselves are elliptical indicatives. The imperative 'Respect other human beings!' is a stylistically variant form of the indicative sentence 'You will respect other human beings'; and this sentence, in conjunction with the minor premise 'John is a human being' implies the conclusion 'You will respect John'. The deductive inference referred to,then, by the statement 'The fact that John is a human being is a good reason for respecting him' is the following:

One respects other human beings.
John is a human being.
∴ One respects John.

This inference will be recognized as the same inference that was discussed earlier in the chapter in connection with a brief discussion of practical syllogisms. There it was argued that to say that it ought to be the case that one respects John is equivalent to saying that there is a valid rule, namely, the rule 'One respects other human beings' (though, again, it must be emphasized that it is not part of the content of the ought statement that this particular rule exists) from which the sentence 'One respects John' is deducible, given a set of sentences describing the facts of the matter (in this case the single sentence 'John is a human being').

The only difference, then, between the proposed analysis of ought sentences and the good reasons analysis is simply one of emphasis. According to the proposed analysis, to say that it ought to be the case that p is equivalent to saying that 'p' is deducible from a valid rule (represented by an indicative sentence). On this analysis, it is simply

understood that the sentence 'p' describing the obligatory action may not be deducible from the indicative sentence enunciating the rule alone, but is deducible from the rule only in conjunction with a set of sentences describing the facts of the case. On the good reasons analysis of ought sentences, on the other hand, to say that it ought to be the case that p is equivalent to saying that 'p' is deducible from a sentence (or set of sentences) representing a good reason for making it be the case that p. In the case of the good reasons analysis, the sentence that represents the good reason is a sentence (or set of sentences) describing the facts of the case; and it is simply understood that the sentence may have to be conjoined with another indicative sentence (or set of sentences) expressing a rule in order to yield the desired conclusion, i.e., the sentence describing the action which there is a good reason to perform. In short, on both the proposed analysis of ought sentences and on the good reasons analysis, to say that it ought to be the case that p is equivalent to saying that 'p' is deducible from a set of premises. Whereas on the proposed analysis, however, the premises explicitly asserted to exist express rules and may have to be supplemented by premises describing the facts of the case to yield the conclusion 'p'; on the good reasons approach the premises referred to describe the facts of the case and have to be conjoined with premises expressing rules in order to yield the conclusion. When fully spelled out, however, the deductive inference referred to is exactly the same on the proposed analysis of ought sentences as on the good reasons approach.

Statements containing an occurence of 'because' may also be

interpreted as meta-statements concerning inferential relations. For example, the statement 'He quit smoking because his doctor told him to do so', which is synonymous with 'He quit smoking for the reason that his doctor told him to do so', may be construed as a statement to the effect that 'He quit smoking' is deducible from the true sentence 'His doctor told him to quit smoking'. Again, the deductive inference referred to is enthymematic. The missing premise which makes the inference valid is the rule of prudence, 'If one's doctor tells one to do something then one does it' ('One listens to one's doctor').

It is important to note that a statement such as 'He quit smoking because his doctor told him to do so' must not be identified with the statement 'He ought to quit smoking because his doctor told him to do so'. Since this latter statement is synonymous with the statement 'He ought to quit smoking for the (good) reason that his doctor told him to do so', it must be construed as a statement to the effect that the sentence 'He ought to quit smoking' is deducible from 'His doctor told him to quit smoking', and not to the effect that the sentence 'He quit smoking' is deducible from that latter statement. Again, the deductive inference referred to, from 'His doctor told him to quit smoking' to 'He ought to quit smoking', is enthymematic. The major premise that makes the inference valid is the premise, 'One ought to do what one's doctor tells one to do'. The inference referred to, thus, is the following:

One ought to do what one's doctor tells one to do.
His doctor told him to quit smoking.
∴ He ought to quit smoking.

Since both the conclusion and major premise of the foregoing

inference are ought sentences, they may be further analysed in accordance with the proposed theory of ought sentences. Thus, to say that he ought to quit smoking is to say that 'He will quit smoking' is deducible from a valid rule, namely, the rule 'One does what one's doctor tells one to do', plus the statement of fact, 'His doctor told him to quit smoking'. Similarly, the major premise may be interpreted as follows: To say that one ought to do what one's doctor tells one to do is to say that 'One does what one's doctor tells one to do' is deducible from a valid rule. Although this rule may be a very general one, such as 'One does what is most likely to better one's health', which deductively implies the less general rule, 'One does what one's doctor tells one to do' (given that doing what one's doctor tells one to do is most likely to better one's health), it is also possible that the rule referred to is not a more general rule, but is simply the rule, 'One does what one's doctor tells one to do' itself. That is, 'One ought to do what one's doctor tells one to do' may mean, "'One does what one's doctor tells one to do' is deducible from a valid rule", namely, the rule 'One does what one's doctor tells one to do'. Thus, in deducing an ought conclusion from an ought premise one need not refer to a higher order rule.

Sentences containing an occurrence of 'so', like sentences containing 'because', may also often be interpreted as concerning reasons for action and, therefore, as expressing a deducibility relation between a premise enunciating the reason for action and a conclusion, following the expression 'so', describing the action to be performed. For example, 'He promised to do it, so he did it', may be interpreted as expressing an

inference from the reason for action 'He promised to do it' to the proposition 'He did it' describing the action which there is reason to perform. The enthymematic major premise that makes this inference valid is the rule, 'If one promises to do something then one does it' ('One does what one promises to do').

A particularly interesting example of a 'so' sentence that may be construed in this way is the following. Streets in New York City are sometimes adorned with signs reading, 'Littering is filty and selfish, so don't do it!'. This sign may be interpreted as expressing an inference from the indicative sentence 'Littering is filty and selfish' to the imperative 'Don't do it!'. Now, if the imperative, 'Don't do it!' is construed as an elliptical form of the indicative sentence, 'You won't do it', then the inference expressed is 'Littering is filty and selfish; therefore, you won't do it'. The suppressed major premise that makes this inference valid is the rule of conduct, 'If something is filthy and selfish then one doesn't do it'. The fact that littering is filthy and selfish is a good reason for not littering assuming the enthymematic major premise, 'If something is filthy and selfish then one doesn't do it'. This major premise expresses a rule of conduct that is obeyed if and only if the sentence expressing the rule is made true. The purpose, then, for shortening one of the deductive consequences of this rule from 'You won't do it' (i.e., litter) to 'Don't do it!' is to indicate to the hearer that he is to contribute to making the rule 'If something is filthy and selfish then one doesn't do it' true by making its deductive consequence 'You won't do it (i.e., litter)' true.

In order to further clarify the good reasons analysis of ought sentences as well as the proposed analysis, it is worthwhile considering an example of a practical inference closely related to one mentioned by Castaneda. Castaneda's example is the following. According to him, "to say that there are reasons for believing, supposing, saying that the earth is flat is to say that there are true propositions which (assuming certain laws of nature) inductively imply that the earth is flat."[29] Castaneda's analysis, however, is not quite right; for in saying that *there are* reasons for believing that the earth is flat, one does not specify what those reasons are. The reason might be that one's head will roll for not believing it. Similarly, in saying that one ought to believe that the earth is flat one says that it is required by a valid rule that one believe that the earth is flat, but one does not specify by what particular rule it is required. The statement Castaneda is analysing, thus, seems to be the following: 'The fact that there are true propositions which (assuming certain laws of nature) inductively imply that the earth is flat is a reason for believing that the earth is flat'.

Instead of considering this statement, however, for reasons which will be explained in a moment, let us consider instead the following statement: 'The fact that there are true propositions which (assuming certain laws of nature) deductively imply that this thread will break if a weight of two pounds is applied to it is a good reason for believing that the thread will break under those conditions'. As has been argued, to say that the fact that p is a good reason for q, is equivalent to saying that p deductively implies that q. In the case in hand, then,

if the fact that there are true propositions which deductively imply that this thread will break if a weight of two pounds is applied to it is a good reason for believing that the thread will break under those conditions, then it must be the case that the proposition 'There are true propositions which, given certain laws of nature, deductively imply that this thread will break if a weight of two pounds is applied to it' deductively implies the conclusion, 'One believes that the thread will break under those conditions.' As Castaneda says, "to speak of reasons. . . is to speak of premises which in a relevant mode of inference. . . imply a given conclusion, a formulation of which follows the preposition 'for'"; and what follows the preposition 'for' in the example under consideration is "believing that the thread will break if a weight of two pounds is applied to it", or, in the form of a complete sentence, 'One believes that the thread will break if a weight of two pounds is applied to it.' Clearly, however, the sentence 'There are true propositions which deductively imply that the thread will break if a weight of two pounds is applied to it' does not by itself deductively imply 'One believes that the thread will break if a weight of two pounds is applied to it.' Again, the inference referred to must be construed as enthymematic. The missing major premise is the following: 'If there are true propositions which, given certain laws of nature,deductively imply a certain conclusion, then one believes (accepts) that conclusion'. This major premise formulates a rule. It is a descriptive sentence to be made true. In fact, it is none other than the rule discussed in chapter two that one believes the logical consequences of what one believes. If, that is, one accepts

certain laws, and also accepts certain statements of fact describing initial conditions, then one accepts the deductive consequences of those laws. The deductive inference to which one refers, then, (the inference which, as it were, is "in the back of one's mind") in making the statement, 'The fact that there are true propositions which, given certain laws of nature, deductively imply that this thread will break if a weight of two pounds is applied to it is a good reason for believing that this thread will break if a weight of two pounds is applied to it' is the following:

> If there are true propositions which, given certain laws of nature, deductively imply a certain conclusion, then one believes (accepts) that conclusion.
>
> There are true propositions ('This thread is of a certain type') which, given certain laws of nature ('All threads of this type will break if a weight of two pounds is applied to it'), deductively imply that the thread will break if a weight of two pounds is applied to it.
>
> ∴ One believes (accepts) that this thread will break if a weight of two pounds is applied to it.

This inference is exactly the inference referred to in making the statement that one ought to believe that this thread will break if a weight of two pounds is applied to it. This statement is equivalent to the statement that there is a valid rule which, in conjunction with sentences describing the facts of the case, deductively implies that one believes that this thread will break if a weight of two pounds is applied to it. The rule in question is the rule that if there are true (and accepted) propositions that deductively imply a given conclusion, then one accepts the conclusion. In brief, one accepts the logical consequences of what one accepts. And the minor premise presenting the facts of the case is the proposition, 'There are true and accepted propositions which, given

certain laws of nature, deductively imply that this thread will break if a weight of two pounds is applied to it'.

The reason for not considering Castaneda's own example initially is the following. Castaneda's example, it will be recalled, is the statement, 'The fact that there are true propositions which, assuming certain laws of nature, inductively imply that the earth is flat is a good reason for believing that the earth is flat'. In order for the proposition representing the good reason, namely, 'There are true propositions which inductively imply that the earth is flat' to deductively imply the conclusion describing the action which there is reason to perform, 'One believes that the earth is flat', it must be conjoined with the following major premise formulating a rule for the fixation of belief, 'If there are true propositions which inductively imply a certain conclusion, then one accepts (believes) the conclusion'. However, the question of whether there are any such valid rules of acceptance in inductive logic is a very controversial one. Compliance with such simple acceptance rules as this leads to such paradoxes as the lottery paradox: The fact that a given lottery ticket is only one of, say, a million tickets inductively implies that the ticket will not win. But, since the same sort of reasoning applies to every single lottery ticket, the conclusion follows that no ticket will win, which contradicts the assumption that at least one ticket will win.

Some authors such as Carnap maintain in the face of such paradoxes that it is a mistake to think that inductive evidence ever leads to the acceptance of an hypothesis.[30] The best that one can do, given a body of evidence for a statement, is to assign a degree of confirmation to the

statement. One cannot, however, detach the conclusion from the evidence. Thus, although ordinary language favors the existence of rules of acceptance in inductive logic (witness Castaneda's example of such ordinary usage) whether any such rules of acceptance are valid is controversial. Thus, the fact that there is good inductive evidence for the conclusion that the earth is flat may not be a good reason at all for believing that the earth is flat, but may be at best a good reason for assigning a high degree of confirmation to that conclusion, In other words, if Carnap is right, then all such statements as 'There is good reason to believe that the earth is flat', or 'One ought to believe that the earth is flat' are literally false. What, according to Carnap, there is good reason to do, i.e., what one ought to do, is not to believe those propositions for which there is good inductive evidence, but rather assign them a high degree of confirmation.

One might consider in this connection, the following ordinary language statement, 'The weather ought to be good tomorrow'. Earlier it was said that the similar statement, 'There ought to be a full moon tonight' may be interpreted as equivalent to the statement that 'There is a full moon tonight' is deducible from a true law of nature, plus sentences stating initial conditions. In the case of the present example, however, this sort of interpretation is not possible since the sentence 'The weather will be good tomorrow' does not follow deductively from a universal law of nature, but may only be inductively inferred from a statistical law of nature such as '85% of the time when meteorological conditions are such and such, the weather is good the following day'.

Thus, although the moral ought statement 'It ought to be the case that one respects John', for example, may be interpreted as meaning, "'One respects John' is deducible from a valid moral law", the statement, 'It ought to be the case that the weather will be good tomorrow' must be interpreted as meaning, "'The weather will be good tomorrow' is inductively inferrable from a valid (i.e., true) statistical law of nature". Thus, although earlier in this chapter the 'ought' of expectation was said to be analogous to the moral 'ought', it now appears that there is a difference between the two. Whereas 'It ought morally to be the case that p' is construed as meaning "'p' follows deductively from a valid law of morals", a statement of the form 'It ought to be the case that p', if 'ought' is the 'ought' of expectation must be construed as meaning "'p' follows deductively from a universal law of nature or inductively from a statistical law of nature". Therefore, it appears that in order to offer a completely general analysis of ought sentences, including the moral 'ought' and such examples of the 'ought' of expectation as 'The weather ought to be good tomorrow', the analysis of ought sentences must be generalized in the following fashion: 'It ought to be the case that p' means 'It follows deductively or inductively from a valid law that p' (where the law in question may be a law of morals, prudence, inquiry, etc., or a universal or statistical law of nature).

If this generalization of the analysis of ought sentences is thought undesirable, one might try to construe such ordinary language statements as 'The weather ought to be good tomorrow' as asserting the existence of a deductive relation between some strictly universal law

of nature and the statement 'The weather will be good tomorrow'. In ordinary parlance, what are really inductive inferences are often mistaken for deductions. Thus, Sir Arthur Conan Doyle attributed to his character, Sherlock Holmes, the capacity for making brilliant deductions when what he generally made were inductions. For example:

> . . . in her statement she said that her sister could smell Dr. Roylott's cigar. Now, of course that sugguested at once that there must be a communication between the two rooms. . . I deduced a ventilator.[31]

Another example of a case of inductive reasoning mistaken for deductive reasoning is the following: "One can deduce that U.S. policy towards the Middle East will not change fundamentally from what it has been since the 1967 war."[32] Even Newton spoke of "deducing laws from the phenomena to be explained." It is possible, then, to interpret statements of the form 'Op' as signifying uniformly that 'p' is deducible from a valid law, and to interpret ordinary language statements such as 'The weather ought to be good tomorrow' as literally false since asserting a deductive relation between the categorical statement, 'There will be good weather tomorrow' and what is only a statistical law of nature.

Since, however, the expedient of regarding all such ordinary language statements as 'The weather ought to be good tomorrow' as literally false is rather unappealing, and since inductive inference is so important in modern science, a more promising way of maintaining the analogy between the moral 'ought' and the 'ought' of expectation is to attempt to find cases of inductive inference in normative discourse. One might, that is, attempt to find cases of statistical moral laws. One such example is the

statistical moral law, 'One keeps almost all of one's promises' (or, if forced to be more precise, 'One keeps 90% of one's promises'). Because there are circumstances under which it is better to break the universal moral law, 'One keeps all of one's promises' than to obey it, such a statistical moral law as 'One keeps almost all of one's promises' may be argued to be of more practical value than the universal rule. Certainly one could try to make this statistical law into a universal law by building possible exceptions to the universal law 'One keeps all of one's promises' into the law itself, e.g., 'One keeps all of one's promises when doing so will not result in doing harm to another person'; but it is questionable whether it is possible beforehand to foresee all possible circumstances under which it might be better to break a promise than to keep it. Proponents of a situational ethics have argued that it is in fact impossible to foresee all such circumstances. The best sort of moral knowledge one can have, according to them, is a rule of thumb to guide conduct; and perhaps one way of interpreting their position is as the position that besides moral laws of universal form there is a need for statistical moral laws such as, 'One usually does what one promises to do'.

The notion of a statistical moral law might also be used to elucidate the notion of a *prima facie* obligation. One might, for example, interpret the statement that there is a *prima facie* obligation to repay one's debt to John as equivalent to the statement that the proposition 'One will repay one's debt to John', describing the action to be performed, follows inductively, given that one promised to repay one's debt to John, from the statistical moral law, 'One keeps almost all one's promises'.

Because the statement, 'One will repay one's debt to John' follows only inductively from the statistical moral law, 'One keeps almost all one's promises', one cannot detach the conclusion 'One will repay one's debt to John' from the premise 'One keeps almost all one's promises' as one could do if there were an absolute obligation to keep one's promises: if, that is, 'One will repay one's debt to John' followed deductively from the universal moral law, 'One keeps all of one's promises'. Despite the attractiveness of this solution, however, it will be left an open question whether sentences of the form 'It ought to be the case that p' always mean 'It is deducible from a valid law that p', or whether in the case of the 'ought' of expectation it may also mean 'It is inductively inferrable from a valid (statistical) law that p', whereas in the case of the moral 'ought' it only means that 'p' is deducible from a valid moral law.

4. Conclusion

This concludes discussion of imperative and ought sentences. To summarize very briefly, in chapters one and two it was argued that what are generally classified as imperative sentences are best regarded as stylistically variant (because elliptical) indicative sentences that are true or false as are ordinary indicatives, and are uttered by a speaker with the intention of thereby inducing a hearer to make the sentence true. To make an imperative sentence true is to obey the command issued by means of the imperative. This conclusion was then used in chapters three and four to support the thesis that one does not commit

a fallacy -- the naturalistic (descriptive) fallacy -- in analysing normative ought statements as true or false descriptive statements. It was argued that ought sentences are always used to make the true or false statement of fact that a certain action is required by a valid rule, and only indirectly to prescribe. The prescriptive force of ought statements was accounted for not as a matter of semantic content, but as a function of the speaker's intention (which the hearer is expected to recognize) of communicating information to the hearer for the purpose of providing him with a reason for action, the having of which will result in his acting. Ought sentences, thus, are not disguised imperatives; nor do they entail one. The overall conclusion of the present work may be concisely expressed as the thesis that the semantical apparatus elaborated for the treatment of cognitive statements is directly applicable to imperative and ought sentences. What distinguishes the sentences of practical discourse from those of cognitive discourse is not their semantic content, but rather the speaker's intentions in uttering them. Imperative and normative ought sentences have descriptive semantic content; but in addition they have a prescriptive pragmatic use.

FOOTNOTES TO CHAPTER IV

[1]Rudolf Carnap, *The Logical Syntax of Language* (London: Routledge & Kegan Paul, 1971), p. 328.

[2]Article 1, Section 7.

[3]Article 1, Section 4.

[4]G.H. von Wright, *An Essay in Deontic Logic and the General Theory of Action* (Amsterdam: North-Holland, 1972), p. 93; and von Wright, *Norm and Action* (London: Routledge & Kegan Paul, 1971), pp. 106, 165, 189.

[5]H. Keuth, *Deontische Logik und Logik der Normen.* This is familiar to me only through the discussion in Georges Kalinowski, *Du métalangage en logique: réflexions sur la logique déontique et son rapport avec la logique des normes,* Università di Urbino, Centro Internazionale de Semiotica e di Linguistica, numéro 48, 1975, p. 14.

[6]T.J. Smiley, "The Logical Basis of Ethics," *Acta Philosophica Fennica* 16(1963), p. 243.

[7]Richard Montague, "Logical Necessity, Physical Necessity, Ethics, and Quantifiers," *Inquiry* 4(1960): 259-269; Stig Kanger, "New Foundations for Ethical Theory," reprinted in Risto Hilpinen, ed., *Deontic Logic: Introductory and Systematic Readings* (Dordrecht: D. Reidel, 1971), pp. 36-58; J.K.K. Hintikka, "Deontic Logic and its Philosophical Morals," in Hintikka, *Models for Modalities* (Dordrecht: D. Reidel, 1969): 184-214; and Hintikka, "Some Main Problems of Deontic Logic," in Risto Hilpinen, ed., *Deontic Logic: Introductory and Systematic Readings,* pp. 59-104.

[8]Montague, "Logical Necessity, Physical Necessity, Ethics, and Quantifiers, " p. 263.

[9]*Leviticus* 19.3

[10]A.R. Anderson, "Some Nasty Problems in the Formal Logic of Ethics," *Nous* 1(1967): 345-360.

[11]Hector-Neri Castaneda, *The Structure of Morality* (Springfield: Charles C. Thomas, 1974), pp. 77-78; and Castaneda, *Thinking and Doing* (Dordrecht: D. Reidel, 1975), pp. 201-207.

[12]Mark Fischer, "A System of Deontic-Alethic Modal Logic, " *Mind* 71(1962): 231-236.

[13]Castaneda, *The Structure of Morality*, p. 77; *Thinking and Doing*, pp. 201-207.

[14]Castaneda, *The Structure of Morality*, p. 186.

[15]For discussion of the good Samaritan paradox see especially: A.N. Prior, "Escapism: the Logical Basis of Ethics," in A.I. Meldon, ed., *Essays in Moral Philosophy* (Seattle: University of Washington Press, 1958), pp. 135-146; and P.H. Nowell-Smith and E.J. Lemmon, "Escapism: the Logical Basis of Ethics," *Mind* 69(1960): 289-300. Castaneda's discussion of the paradox is in *The Structure of Morality*, pp. 80-81, and *Thinking and Doing*, pp. 214-218.

[16]Castaneda, *Thinking and Doing*, pp. 214-218.

[17]Castaneda, "On the Semantics of the Ought-To-Do," *Synthese* 21(1970): 449-468.

[18]Lennart Aqvist, "Good Samaritans, Contrary-to-Duty Imperatives, and Epistemic Obligations," *Nous* 1(1967): 361-379.

[19]R.M. Hare, *The Language of Morals* (London: Oxford University Press, 1969), pp. 176, 191.

[20]*Ibid.*, p. 194.

[21]*Ibid.*, p. 135.

[22]H.L.A. Hart, *The Concept of Law* (London: Oxford University Press, 1961), p. 83.

[23]R.M. Hare, *Freedom and Reason* (London: Oxford University Press, 1970), p. 15.

[24]Good reasons analyses have been presented by Kurt Baier, *The Moral Point of View* (Ithaca: Cornell University Press, 1958), esp. Ch. 3; and Stephen Toulmin, *Reason in Ethics* (Cambridge: Cambridge University Press, 1970), esp. pp. 28, 43, 57.

[25]Castaneda, "Imperative Reasonings," *Philosophy and Phenomenological Research* 21(1960), p. 22.

[26]Stephen Toulmin, *Reason in Ethics*, p.38.

[27]Jan Lukasiewicz, "On the Creativeness of Science," (in Polish), quoted in Robert Blanché, *Le raisonnement* (Paris: Presses Universitaires de France, 1973), p. 105. (my translation).

[28]Robert Blanché, *Le raisonnement*, p. 79 (my translation).

[29]Castaneda, "Imperative Logic," p. 22.

[30]Rudolf Carnap, "The Aim of Inductive Logic," in Nagel, Suppes, Tarski, eds., *Logic, Methodology and Philosophy of Science* (Stanford: Stanford University Press, 1962), pp. 303-318.

[31]Arthur Conan Doyle, *The Complete Sherlock Holmes* (New York: Doubleday, 1930), p. 270.

[32]Habib Boulares, "The Limited Options in the Middle East," *The Middle East* 29 (1977), p. 104.

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