OUTLINE OF A LOGICAL ANALYSIS OF LAW

FELIX E. OPPENHEIM

1. LANGUAGE OF LAW AS OBJECT OF LOGICAL ANALYSIS

This study purports to demonstrate the *possibility* of applying logical analysis in the field of jurisprudence, and the *usefulness* of this method for exhibiting some essential features of the law.

LOGICAL ANALYSIS applies to language systems. To carry out the logical analysis of a language, is to construct a simplified model language "in close connection with"[1] the given language, and to study the conditions of validity of the sentences of this model language. The given language is subjected to a kind of purifying chemical process. To deal with this simplified language seems to be a detour; it is, however, the most direct way to an ultimate insight into the logical structure of the given language.

Until now, logical analysis has been applied chiefly in mathematics, logic, and some of the natural sciences. In order to show that logical analysis can be applied to one of the social sciences, namely jurisprudence, we must first point out that law may be viewed as language.

Legal rules, decisions, commands, are generally expressed by words of a natural language, like English. If non-linguistic signs are used, e.g., the whistle of a policeman, stoplights, gestures, it is always possible to translate them into the word language.[2] We may therefore consider the law of any given community at any given moment as a class of *sentences*, constituting a *language* which expresses the legal rules, decisions, commands of that community at that moment.

Since systems of law are made of sentences of law, it follows that science of law consists of statements *about* sentences of law.

Law, viewed as language, can be the object of two kinds of science of law. EMPIRICAL SCIENCE OF LAW, like history or sociology of law, studies the relationship between sentences of law and human beings, who create, interpret, apply them. LOGICAL ANALYSIS OF LAW deals with sentences of law in their logical aspect. According to our previous explanations, this task consists in constructing a simplified model language in correspondence with a group of "given" sentences, which express the positive law of a certain community at a certain time. This second kind of science of law is the subject matter of this study.

One might make the objection that this view of the law as language takes into account only the "law in books" and neglects the "law in action." One might therefore prefer to "use the phrase 'the law' in the science of sequence of external facts and their concrete legal consequences, through the concrete operation of governmental machinery"[3] and to consider, accordingly, the science of law as a study, not of sentences, but of such "external facts," or more specifically, of "the

[1] R. Carnap, *Introduction to Semantics* (1942), p. 155.

[2] Cf. E. Hexner, *Studies in Legal Terminology* (1941), p. 39.

[3] J. W. Bingham, *What is the Law?* (XI Michigan Law Review (1912–1913), p. 109).

behavior of human beings."[4] But the behavior of human beings in general is the subject-matter of the sciences of psychology and sociology. The science of law deals merely with the behavior of human beings with respect to *law*. And to investigate human behavior with respect to law, is to ask why people comply with or disregard *rules* of law, or to inquire into the conditions under which such rules have been or will be applied. Those rules of law certainly appear in "books." The study of "Law in action," i.e., empirical science of law, is but a particular branch of the study of "law in books"—in the sense of written or spoken sentences of law—namely of their relationship to human beings. Both kinds of science of law deal with "law in books," the difference being merely that empirical science of law does refer also to "law in action," whereas logical analysis of law does not do so.

But is it legitimate to confine one's interest to the language of law in itself and to disregard thereby the fact that law is also, and primarily, a social phenomenon? We do not claim that logical analysis is capable of giving a complete picture of the law; but the point of view of empirical science of law is just as partial. The fact that this study is not concerned with empirical science of law does not involve the belief that it is less important. The extreme to which some of the "legal realists" have gone should caution us against a similar exaggeration in the opposite direction. Empirical and logical science of law should be regarded as complementary.

The opponent may, however, continue by claiming that this kind of approach gives not only an incomplete, but also an inexact picture of the legal phenomenon: Since you cannot perform the logical analysis of the law in general, but only of the law of a particular society, as it stands at a particular moment, your kind of investigation fails—and must fail—to take into account that the law is something living and changing. You are attempting to revive the doctrine of the law as a body of fixed, immutable rules, enacted by some real or supernatural sovereign. And if you cannot deny that the law sometimes changes, you are certainly deploring this fact; otherwise you would be less inclined to study the law, as it stands, and more, how it changes.

We would like to compare, in this connection, law with motion pictures: We can stop the projector at any time and concentrate our attention on the picture reflected on the screen at that moment. To construct and analyze a language which expresses the law as it stands today, is not to deny that this law may change tomorrow. Nor does the fact that we must take the law as it stands, involve any approval or disapproval of that law. In the nineteenth century, sociological jurisprudence arose as a weapon of attack on an established order which had as its defender analytical jurisprudence. But one should always distinguish between a theory itself and the historical reason of its appearance. Thus, it would be wrong to associate this kind of approach with reactionary or natural law tendencies.

[4] "For we as lawyers, like the physical scientists, are engaged in the study of objective physical phenomena. Instead of the behavior of electrons, atoms or planets, however, we are dealing with the behavior of human beings." W. W. Cook, *The Logical and Legal Bases of the Conflict of Laws* (33 Yale Law Journal (1928), p. 475).

There is a further misunderstanding which we must meet: One might fear that logical analysis of law leads to the assertion that "judges think in syllogisms." Many people—chiefly lawyers—believe that logic is identical with the conjuration of the old refrain: "All men are mortal; Socrates...etc." We have seen that "logical analysis" means something more than establishing syllogisms. Our previous explanations will have shown, furthermore, that the question, "how lawyers think," cannot be answered by logical analysis at all, but only by psychology, i.e., by empirical science of law. Indeed, to ask how lawyers think, is to investigate how they react to rules, i.e., to sentences of law.

As we pointed out at the beginning, we do not consider logical analysis of law as an aim in itself, but as a means for the better understanding of some essential features of the law. For this purpose it is sufficient to give an *outline* of the logical analysis of law; i.e., to lay down the *principles* which we have to apply in performing the logical analysis of *any* system of law. We shall carry out such an analysis only as far as it is helpful for answering certain general questions of jurisprudence. Besides, this limitation enables us to avoid the otherwise indispensable use of logical symbols.

It is merely for the sake of clarity that we shall use, as far as possible, the same examples as illustrations. But this does not alter the fact that logical analysis is applicable to any field of law.

2. SENTENCES OF LAW

Let us suppose we were to construct a model language expressing the rules and decisions of the Penal Law of New York, as it stands today, and let us call this model language: A.

Our first task should consist in determining the *vocabulary* of Language A. Of course, A will contain terms of logic such as: 'non', 'or', 'implies', etc.

In constructing A, we have to specify which part of logic we presuppose; in our case: variables, logical constants, rules of formation and of inference of the sentential calculus and of parts of the functional calculus. We need thus only to draw up a list of primitive descriptive terms (names and predicates) and a list of primitive sentences, which includes definitions for the other descriptive terms.

As far as the specific terms of A are concerned, we need, first, as many symbols as there are categories of crimes provided for by the Criminal Code of New York. The words, by which the different kinds of criminal acts are designated in the "given" language, may function as corresponding symbols in A. Thus, A would contain terms such as: '*homicide*', '*gr.larceny*' (for: grand larceny). In the same way the words which designate, in the "given" language, the different kinds of punishment, may be taken over into A; e.g., '*p,imprisonment*' (for: punishable by imprisonment).

We adopt here a compromise between shortness and readability. "If a calculus C is constructed with the intention of using it mostly or exclusively with a certain interpretation S, it may often seem convenient to use as signs of C not artificial symbols but those words of the word-language whose ordinary use is approximately in accord with the interpretation intended".[5]

[5] R. Carnap, *Foundations of Logic and Mathematics* (1939), p. 30.

Terms such as '*gr. larceny*' or '*p. imprisonment*' are to be taken as *single* predicate-symbols. We shall point out later that predicates such as '*p. imprisonment*' have imperative character.

We also must choose a name for every single criminal act which has been committed in New York up to the present moment. The everyday-language has no names for single criminal acts. We may apply to them the names of the individuals who have committed them. Thus a term of A such as '*Smith*' may stand for the criminal act committed by Smith on January 1, 1944, in the lobby of the Astor Hotel.

The rules of logic determine, which combinations of terms belonging to a certain language constitute *sentences* in that language. According to those rules, an expression such as: '*gr.larceny*(*Smith*)'—meaning that the criminal act committed by Smith on . . . etc. constitutes grand larceny—is a sentence in A.

We have taken the name '*Smith*' as designating, not a person, but a certain criminal act. If the same Smith has committed two crimes, e.g., two different grand larcenies, then each of them must accordingly be designated by a different name; e.g., '*gr. larceny* (*Smith*)' and '*gr. larceny* (*Smith**)'.

If we did not intend to make concessions to readability, we would designate each criminal act by a sign such as 'a1', 'a2', 'a3', etc. and use names of persons only when we want to refer to human beings. There are, indeed, sentences of law which refer, not to *acts*, but to *individuals*. Thus, the sentence '*minor* (*Smith*)' would mean, that the individual Smith is minor. Similarly, the beginning of the 14th Amendment (cfr. infra, p. 36) refers to all *persons* born in the United States. Names for *things* may also occur; e.g., the sentence: '*contiguous* (*a*, *b*)' means that the estates a and b are contiguous.

Here are other examples of sentences in A, and therefore of SENTENCES OF LAW: '*p.imprisonment*(*Smith*)'—meaning that the crime committed by Smith on . . . etc. is punishable by imprisonment. '*gr.larceny*(*x*) implies *p.death*(*x*)'—meaning that any crime which constitutes grand larceny is punishable by death. '*homicide*(*x*) if and only if *murder*(*x*) or *manslaughter*(*x*)'—meaning that any crime constitutes homicide if and only if it constitutes murder or manslaughter. Thus, '*gr.larceny*(*Smith*)' is a sentence of law in this system, whether Smith has actually stolen or not, whether the corresponding sentence has been uttered by a judge in court or by an actor on the stage. '*gr.larceny*(*x*) implies *p.death*(*x*)' is a sentence in A, in spite of the fact that the New York Penal Law contains no provision prescribing death as punishment for grand larceny. On the other hand, expressions such as 'today is March 1', or 'Smith stole a lollypop at Woolworth's' is not a sentence of A, if we have excluded those terms from the vocabulary of that language.

We are now able to recognize, among all sentences occurring in the everyday language, those which constitute sentences of law. We need only to know whether the given sentence can be translated into an expression made up exclusively of terms of A or of another formalized language of law, and which constitutes a sentence according to the rules of logic. This criterion, however, is not an objective one, since we ourselves are supposed to have established the vocabulary of A. The legal system, the language of which we are setting up, indicates the minimum of terms which we must include into the model language; but

we are free to a large extent as to how "rich" we want to make this model language. Whether an expression is a sentence of law, is thus, to a certain limit, a matter of convention. But since the property of being a sentence of a language is a purely formal one, this is the only way to define the notion of sentence of law.

Therefore, we cannot agree with the following opinion: "We have an infallible method for distinguishing a legal statement from any other. It is a statement which a judge makes or refuses to make or can be contemplated as making or refusing, about any relation whatever between human beings, provided that the statement contains 'ought' or 'may' ".[6] Some sentences of law contain indeed words like 'ought' or 'may' or similar terms expressing commands or permissions (e.g.: *'p. imprisonment (Smith)'*); but there are others which do not contain such terms and which are of declarative character (e.g.: *'gr. larceny (Smith)'*). On the other hand, there are many sentences which contain 'ought' or 'may' and which are not sentences of law. Finally, there exists practically no statement (whether imperative or declarative) which a judge cannot be contemplated as making or refusing to make.

3. CORRECT SENTENCES OF LAW

Sentences of a formalized language can be divided into two categories: those which are *correct* and those which are *incorrect* within that language. A sentence is correct within a language if and only if it is either a *primitive sentence* of that language, or it can be *derived* from one or more primitive sentences according to the rules of logic. We may, accordingly, divide all sentences of a model language of law into CORRECT and INCORRECT SENTENCES OF LAW; the former being either primitive—or as we shall say in this connection, BASIC—or DERIVED SENTENCES OF LAW.

Since we want Language A to reflect the Penal Law of New York, as it stands today, we must take care that every article of the New York Criminal Code and every legally correct (and no legally incorrect) decision of the New York Criminal Courts becomes, if translated into A, a logically *correct* sentence within that language. But the converse does not hold; we shall find later on correct sentences of A which do not correspond to provisions or decisions of the given system of law.

We have, first, to draw up a list of those sentences of A which we want to function as *basic sentences* in A. We must make this selection in such a way, that from this subclass of basic sentences, *all* and *only* those sentences are derivable which we want to consider (together with the basic sentences) as correct in A.

The same class of correct sentences of a formalized language can be determined by different subclasses of primitive sentences. Thus, we may find in A correct sentences which we are free to take either as basic or as derived sentences. The given system of law determines the class of *correct* sentences in A; *we* choose the *basic* sentences among them, according to considerations of logical convenience. This shows that our basic sentences have nothing to do with so-called necessary or natural law principles.

Logical analysis proves that there are no general or first principles from which the rules of positive law could be derived. A statement like the following is therefore misleading: "Among the first principles of law there are . . . axioms or fundamental assumptions (a) as to fact, e.g., that men desire their economic ad-

[6] M. Radin, *Law as Logic and Experience* (1940), p. 38.

vantage, and are deterred from actions to which penalties are attached, and (b) as to the aim of the law, e.g., that property should be protected."[7] An empirical statement such as 'men desire their economic advantage' is not a first principle of law in this sense, because it is not a sentence of law at all; there is no reason for including its terms into the vocabulary of any language of law. That property should be protected, may be a principle of law (cfr. the United States Constitution: 'No person shall be deprived of property without due process of law'), but not a *first* principle of law—in the sense that one could deduce from it alone other principles of law, such as 'larceny shall be punished (by imprisonment).' This latter sentence is not less a basic sentence than the former; neither can be derived from any other principle of the given system of law as formulated in A. There are thus no principles or axioms of law which are more "general" than those which correspond to basic sentences of a formalized language of law.

Most of the provisions of the New York Criminal Code which correlate certain categories of crimes to certain kinds of punishment, have to be taken into A as basic sentences. Indeed, sentences such as '*gr.larceny*(x) implies *p.imprisonment* (x)'[8] and '*f.murder*(x) implies *p.death*(x)'[9] cannot be deduced from each other or from other sentences in A; therefore, if we want to incorporate them into A as correct sentences, we have to take them as basic sentences.

Similarly, all *definitions* in A must necessarily be taken as basic sentences. Definitions can never be derived from other sentences; they are—from the point of view of logic—arbitrary conventions about the use of terms.

Thus, the definition '*homicide* (x) if and only if *murder* (x) or *manslaughter* (x)'[10] is a basic sentence in A. It stipulates that an expression containing the predicate '*homicide*' may be replaced by another expression in which this predicate does not occur.

When a judge is said to "interpret" a rule of law, he usually does not deduce from it another rule, but lays down a *definition* for one of its terms and creates thereby a *basic sentence*. When, e.g., Chief Justice Marshall, in a famous decision,[11] first quoted from the Constitution: "Congress shall have power to regulate commerce with foreign nations . . ." and then interpreted this provision by stating: "Commerce . . . is intercourse" and "comprehends navigation", he incorporated into the system of American Constitutional Law a new principle—in our terminology: a new basic sentence, namely his definition of "commerce"—although he might have thought that he had *deduced* this principle from the commerce clause. But no implication nor any other logical relationship holds between the pre-existing rule and the judge's definition. From a logical standpoint both have to be interpreted as arbitrary enactments; both are correct, not by deduction but by decision; both are basic sentences. By pointing out that "all

[7] Morris R. Cohen, *Law and the Social Order* (1933), p. 174.

[8] Section 1295 and 1297 of the New York Penal Code: "Grand larceny . . . is punishable by imprisonment. . . ."

[9] *Ibid.*, Section 1045: "Murder in the first degree is punishable by death. . . ."

[10] *Ibid.*, Section 1043: "Homicide is: 1. Murder; or, 2. Manslaughter. . . ."

[11] Gibbons v. Ogden—6 Wheat (1824).

America understands, and has uniformly understood, the word 'commerce' to comprehend navigation",[12] Marshall gave, not a logical proof of the correctness of his interpretation, but an empirical justification of its usefulness. The judge, by choosing between different possible definitions of a certain term (not previously defined within the system of law), creates thus a new rule of law. Sentences of law which are the result of this kind of judicial interpretation belong therefore—like all definitions—to the class of basic, not of derived sentences of law.

Another kind of basic sentence in A is illustrated by examples like '*gr.larceny* (*Smith*)', '*f.murder*(*Jones*)' and similar sentences provided that they correspond to legally correct decisions made in criminal matters in the courts of New York, up to the present moment.

It proves thus convenient to include among the basic sentences of language systems of law such as A also particular sentences, dealing with individual acts (or persons), whereas scientific theories, when presented in a deductive form, are usually construed as containing only general sentences as axioms.

We have emphasized that many sentences of law in a formalized system are correct because they constitute basic sentences. It is equally important to recognize that, once the basic sentences are established, all the other correct sentences of law are arrived at merely by *deduction*. To hold that the application of law involves no deduction is no less erroneous than the opposite view, viz. that everything can be derived from a few legal principles.

One of the most important tasks of logical analysis in the field of jurisprudence consists precisely in exhibiting the role of deduction in law. For that purpose it is especially important to deal with a formalized model-language, in which we are able to "calculate," i.e., to consider only "the kind of signs occurring in an expression and the order in which they occur,"[13] without referring to what they mean. But since, in this study, we do not carry out the construction of Language A, we must limit ourselves to a few examples of the simplest and most obvious kinds of deduction which might occur in A.

The deduction which occurs most frequently in criminal law consists in deriving from two basic sentences such as '*gr.larceny*(*x*) implies *p.imprisonment*(*x*)' and '*gr.larceny*(*Smith*)' the sentence '*p.imprisonment*(*Smith*)'; the latter is thus a derived sentence in A.[14] This shows that concrete cases are always decided by general principles, in the sense that particular sentences of law—like '*p.imprisonment*(*Smith*)'—are always derived from premises which include general sentences of law—like '*gr.larceny*(*x*) implies *p.imprisonment*(*x*)'. These general sentences may, on their part, be derived from other sentences or may themselves be basic sentences; they may be statutes, or precedents, or they may be enacted by the judge for the purpose of deciding this particular case (like in the example

[12] Gibbons v. Ogden—6 Wheat (1824).

[13] R. Carnap, *Introduction to Semantics* (1942), p. 10.

[14] The fact that the first and third sentence has imperative character will be discussed in the next chapter.

on p. 13); they may or may not have been explicitly stated. "Whenever a court makes a decision, it implicitly (and sometimes explicitly) decides a class of cases";[15] i.e., it always enacts either itself a general rule or quotes a rule enacted before, and then deduces from it the sentence which decides this particular case. This does not mean that "judges think in syllogisms." We do not deny that the judge often arrives at his decision first and tries afterwards to justify it by some general principle of law. But we have seen that the question, "how lawyers think," belongs to the empirical science of law. Here we are concerned with the logical question of validating statements of law; such validation consists in stating "reasons" for decisions, i.e., premises from which the latter can be deduced. From the point of view of logical analysis, every decision consists thus of premises —among them at least one *general* (mostly basic) sentence—and conclusions—among them at least one *particular* sentence.

Any derived sentence is correct in A, no matter whether or not it corresponds to a statement of the legislator or the judge. Thus from the basic sentence '*gr.larceny*(x) implies *p.imprisonment*(x)' we can deduce 'non *p.imprisonment*(x) implies non *gr.larceny*(x).' This latter sentence is thus a derived (and as such a correct) sentence of law, although probably no court has ever stated it. This shows, that there are derived sentences in A, which do not correspond to explicitly enacted statements of the given system of law. On the other hand, decisions might have been rendered or statutes enacted which contradict certain correct sentences in A and which correspond therefore not to basic or derived, but to *incorrect* sentences in A. Thus, the subclass of derived—and therefore the whole class of correct sentences in A includes *not necessarily only and not necessarily all* provisions and decisions of the New York Penal Law. The interest of the logical analysis of a language of law consists precisely in finding out which of the rules and judgments of a given system of law, and which statements besides them, constitute correct sentences of law.

4. IMPERATIVE, DECLARATIVE AND TRUE SENTENCES OF LAW

Let us compare the meaning of the two sentences 'grand larceny *will be* punished by imprisonment' and 'grand larceny *is to be punished* by imprisonment.' Whereas the latter is a sentence of A—'*gr.larceny*(x) implies *p.imprisonment*(x)'—the former does not belong to our language of law; the vocabulary of A does not contain terms such as 'will be punished by imprisonment.' The first sentence expresses an empirical hypothesis according to which whoever steals will be imprisoned. This is contingent on such factors as whether the police force works efficiently, whether there is a law punishing larceny by imprisonment, whether the courts are impartial. The sentence stating this hypothesis is either true or false. The second sentence, on the other hand, does not assert anything about any matter of fact. It expresses a command according to which all thieves should be imprisoned. Unlike the former sentence, the latter has no DECLARA-

[15] Morris R. Cohen, *A Critical Sketch of Legal Philosophy in America* (in: Law, A Century of Progress (1937), Vol. II, p. 295).

TIVE, but IMPERATIVE meaning. As such, it cannot be verified by experience; it is not capable of being either true or false.[16]

Similarly, the sentence 'Smith *will be* punished by imprisonment' (which does not belong to A) states an empirical hypothesis. If it appears that Smith is really imprisoned, this prediction is confirmed and the sentence by which it is expressed is considered true. But the sentence 'Smith *is to be* punished by imprisonment' (which belongs to A: '*p.imprisonment(Smith)*') has imperative meaning. When the judge condemns Smith by uttering this sentence, he thereby implicitly orders an officer to confine him in a jail. Since this sentence has imperative meaning, it is impossible to state conditions under which it is true or false.

In order to show that expressions such as *'punishable by imprisonment'* have imperative character, we could also use a special logical constant, e.g. '!', and write *'imprisonment!'*. This would however have the disadvantage of compelling us to deal with the question whether the ordinary rules of formation and of inference can be applied to those sentences in A which have imperative character. The logic of imperative sentences has not yet been established in a satisfactory manner.

To avoid this difficulty, we consider imperativeness not a SYNTACTICAL, but a SEMANTICAL property of certain sentences of law.[17] We therefore take expressions such as *'punishable by imprisonment'* and *'grand larceny'* both as predicates of single criminal acts. Thus, two sentences in A such as *'p. imprisonment (Smith)'* and *'gr. larceny (Smith)'* have both the same syntactical *form*, but the former has imperative, the latter (as will be shown below) declarative *meaning*.

There are sentences in A with declarative meaning, e.g., all those which state definitions. But definitions, being mere resolutions how to use certain terms, do not increase our factual knowledge. Like sentences with imperative meaning, definitions cannot be verified by experience and are therefore not capable of being factually true or false.

Let us consider now the sentence of A: *'gr.larceny(Smith)'*—and let us call this sentence for the sake of brevity: S. Not only has S declarative meaning; it also concerns an empirical fact which can be verified by experience; it is therefore possible to state its truth-conditions. Indeed, S is true if Smith's action constitutes grand larceny, i.e., if Smith has stolen. S states thus an empirical hypothesis just as well as the sentence 'Smith will be punished by imprisonment'; the difference being only that the latter does not belong to A, whereas the former may occur in A as well as in the everyday language.

Is the truth of S a necessary condition for its correctness? If we remember how we defined the notion of correctness with respect to sentences of law, it becomes obvious that if S is to be correct within a language of law, it is neither

[16] One could, of course, take the expression 'is to be punished . . .' in the sense of 'there are agencies charged with punishing. . . '. In this case, the latter sentence would also have declarative meaning, but it would not be a rule of law. As such, it can only be taken in the imperative sense.

[17] For the distinction between syntactical, semantical and pragmatical (infra, p. 24) features, cfr. C. W. Morris, *Foundations of the Theory of Signs* (1938). Many valuable ideas of this book have been used in the present study.

necessary nor sufficient that S be true. If, e.g., a jury has stated S, and if there is no basic sentence in A which contradicts S or from which S can be derived, S is itself a basic sentence in A, no matter whether it is true or false, i.e., whether or not Smith has actually stolen. According to the New York Penal Law, Smith's action is now punishable by imprisonment, even if he has not stolen. If it appears later on that Smith had not committed grand larceny and that therefore the court's statement S is false, S does not therefore cease to be correct. S remains correct within A, unless this decision is reversed by a higher court, stating non-S, i.e., 'non *gr.larceny*(*Smith*).' In this case, a change has taken place within the system of law. If we want A to reflect this modified system of law, we must replace S by non-S in the list of basic sentences. S becomes now incorrect in A, and non-S becomes correct—again, not because it is true (it may be false: the higher court may have been mistaken in assuming that Smith has not stolen), but because it is a basic sentence in this modified language A.

Consequently, it is misleading to speak of testing rules of law by experience. Many sentences of law are not even capable of being verified by observations of facts, because they have imperative meaning or state definitions. And those sentences which could be verified are correct—within a language of law—independently of their truth. What can be tested by experience is not their correctness, but, e.g., their usefulness—i.e., the correctness of an empirical hypothesis asserting, e.g., that the enactment of a law which punishes larceny by imprisonment is an effective means for the prevention of larceny. We are then concerned with the correctness and truth of sentences, not of law, but of the empirical science of law.

Unfortunately, the same word 'law' is applied to two different kinds of general sentences: to sentences of *empirical science* stating *descriptions* (of empirical uniformities) and to sentences of "*law*" stating *prescriptions*. It is a common error to confuse two different things which have the same name.

The fact that those sentences in A which have declarative meaning are correct independently of their truth, does not imply that the law is not interested in their being true or false. We shall deal later with the rule of law according to which all factual statements enunciated by legal authorities *should* be true, according to which, e.g., a court should create the basic sentence '*gr.larceny* (*Smith*)', if and only if Smith has committed grand larceny.

In order to "understand" the meaning of the expressions of A, we have to lay down *semantical rules* for its primitive terms. Semantical rules for those primitive terms which have declarative meaning state the truth conditions of sentences in which those predicates occur. Example: '*murder* (*Jones*)' is true if and only if Jones' act consists in killing a human being with the design to effect the death of the person killed. There are thus definitions in the New York Criminal Code[18] which we may prefer to take, not as basic sentences into A, but as semantical rules into the language of the logical analysis of A. This shows again that we ourselves establish the limit between the everyday language and the language of law.

[18] Art. 1044 and 1046 of the New York Penal Code: "The killing of a human being is murder . . ., when committed . . . from a design to effect the death of the person killed or of another. . . ."

The court's application of a certain law to a certain fact can thus be viewed as a translation of an empirical hypothesis, stated in everyday language—e.g., that Jones has killed a human being with . . . etc.—into a basic sentence of A—e.g.: '*murder (Jones)*'—by applying a semantical rule of that language.

5. OFFICIALLY AND COMPETENTLY STATED SENTENCES OF LAW

Let us suppose that somebody says, casually, 'Smith is guilty of grand larceny; therefore he is punishable by imprisonment.' These two sentences belong to A. Both may be correct, and the first one may be true. Nevertheless, such an incidental utterance will involve no legal consequence whatsoever. Let us assume, on the other hand, that a New York Criminal Court decides: 'Smith's action is grand larceny; he is punishable (not by imprisonment but) by a fine.' We know that the New York Penal Law prescribes imprisonment as the only punishment for grand larceny, and that, accordingly, A contains the basic sentence '*gr. larceny*(x) implies *imprisonment*(x).' The sentence 'non *p.imprisonment* (*Smith*) and *p.fine*(*Smith*)' is incorrect in A; it cannot be deduced from the basic sentence: '*gr.larceny*(*Smith*)' in conjunction with any other correct sentence in A. This incorrect sentence of law has nevertheless legal significance, because it has been stated by a New York Criminal Court. It has, as we shall say, OFFICIAL QUALITY.

The *correctness* of sentences in A depends upon their SYNTACTICAL properties; SEMANTICAL features determine the *truth* conditions of those sentences in A which assert facts; in order to find out whether sentences in A have *official quality*, we have to study their relationship to authorities which have stated them, i.e., their PRAGMATICAL properties. Pragmatical rules of A may be stated as follows:

A sentence in A has official quality in A if and only if it has been stated by the legislature of the State of New York, or the New York Court of Appeals, or . . . etc.—no matter whether it is correct or incorrect, true or false. This notion of being officially stated must however be taken in a broad sense, such as to include not only sentences of law which have been explicitly stated by certain authorities under certain circumstances, but also sentences of law which are only tacitly assumed, but applied in fact, by those authorities. There may be, on the other hand, sentences of law which have been explicitly enacted, but which, in fact, are not, or not any more, applied; such sentences have no official quality.

We must choose our basic sentences in A exclusively among those sentences which have been—explicitly or implicitly—stated officially. But the subclass of derived sentences in A contains both sentences which have official quality and others which lack it. Thus, the sentence '*p.imprisonment*(*Smith*),' uttered incidentally (cf. our example, p. 145), has no official quality, but is a derived sentence in A.

These considerations demonstrate the fundamental difference between the language of science and the language of law. Science is interested merely in the correctness or truth of its statements. But sentences of law may be 1. correct or incorrect, 2. true or false (those which have declarative meaning), 3. officially and not officially stated. Even a correct and true sentence of law has no legal significance unless it has official quality; even an incorrect and false sentence of law is, from the point of view of the law, relevant, if it has been officially stated.

According to most legal systems, we have to distinguish, not only between sentences having and lacking official quality; we must divide the former class into two subclasses, according to whether or not they have been stated by an authority which is COMPETENT to enact it. Thus, a sentence of A may have been stated by someone whom the system of law under consideration has vested with authority to enact officially sentences of law, but not with the competence to enact this particular sentence.

Article I, section 8 of the United States Constitution is an example of such a rule of competence: "The Congress shall have power to regulate commerce among the several States." This means, in our terminology: A sentence of law is competently stated if it has been enacted by Congress and concerns interstate commerce. All similar conditions, taken together, would constitute a complete definition of: competently stated sentences of law (within this system).

The fact that we mention the rules of competence, together with the rules of official quality, in this chapter about the *pragmatical* features of sentences of law, must not prevent us from recognizing that such rules of competence may also contain *semantical* elements. The first condition in our example is indeed pragmatical: the statute must have been *stated by* Congress. But the second condition is a semantical one: the statute must *concern* interstate commerce; i.e., it must regulate the kind of things which the term 'interstate commerce' designates.

We shall point out later that sentences stating such pragmatical rules of official quality and competence do not belong to a language of law such as A, although they express rules of law.

6. VALID AND ENFORCEABLE SENTENCES OF LAW

Let us remember that, if a sentence in A is either a basic or a derived sentence, it is correct, and that a declarative sentence in A may be correct without being true, or correct and true without having official quality, or stated officially but by an incompetent authority. If, however, a sentence in A is at the same time *correct, not false* (i.e., either true or imperative), *and competently stated*, we call it a VALID sentence in A (cfr. fig. 1). Thus, if a penal statute is neither in contradiction with nor derivable from another provision of the New York Penal Law, it is a basic sentence in A and as such correct; but it may at the same time be non-valid, because it has been enacted by an incompetent authority. The sentence '*gr.larceny(Smith)* implies non *p.imprisonment(Smith)* and *p.fine(Smith)*' (cfr. p. 22) contradicts the basic sentence '*gr.larceny(x)* implies *p.imprisonment(x)*'; it is incorrect and therefore non-valid. If a jury decides that Smith is guilty of grand larceny, when in reality he has not committed that crime, the sentence '*gr.larceny(Smith)*' is false and therefore non-valid, although it may be a basic sentence in A and thus be correct, and although the jury may have been competent in the case.

Since one of the conditions which sentences of law must fulfill in order to be legally valid is that they must have been competently and thus officially stated, it follows that only persons in authority, such as legislators and judges, are capable of stating legally valid sentences of law. Sentences of law uttered by scientists, or by lawyers in their offices, cannot be valid, but only correct and true.

One of the particularities of any language of law consists thus in the fact that the *validity* of its sentences depends not only upon syntactical and semantical, but also upon pragmatical conditions. In analogy to Carnap's distinction between descriptive and pure syntax and semantics, we may distinguish between DESCRIPTIVE and PURE PRAGMATICS: The *empirical* study of the relationship between signs and those which use them is the object of *descriptive* pragmatics. The *logical* study of the pragmatical conditions of the validity of sentences belongs to *pure* pragmatics and as such, together with pure semantics and pure syntax, to logical analysis—sometimes called (pure) semiotic. Empirical science of law is an instance of descriptive pragmatics; logical analysis of law deals with pure pragmatics, semantics and syntax.

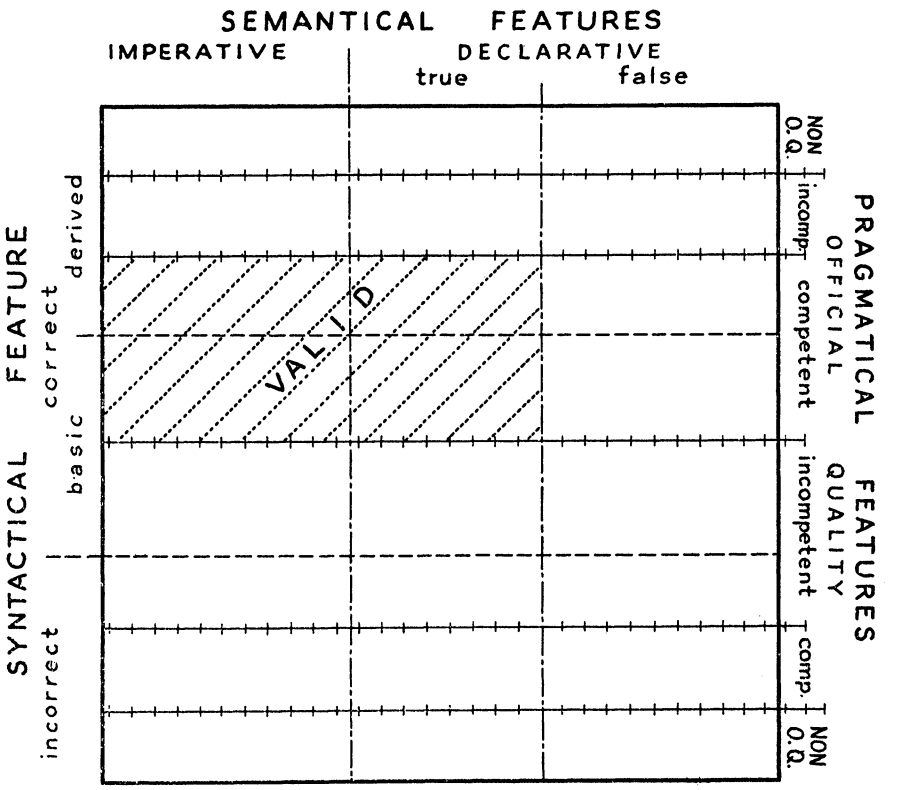

FIG. 1

We have seen that, in our example, the sentence 'non *p.imprisonment(Smith)* and *p.fine(Smith)*' has official quality, but is incorrect and therefore non-valid. However, "an erroneous decision is as binding as one that is correct, until set aside or corrected in a manner provided by law".[19] Thus, in our case, Smith, instead of being imprisoned, is to be merely fined, unless this incorrect and non-valid decision is reversed.

Similarly, "a judgment of a court of competent jurisdiction naturalizing an

[19] A. C. Freeman, *On Judgments*, fifth edition (1925), p. 744.

infant in the absence of any law permitting infants to be naturalized, though erroneous, is not void"[20]—in our terminology: this judgment, *though incorrect and therefore non-valid, has to be enforced.*

Or let us suppose, the legislature of New York enacts a statute regulating interstate commerce which contradicts a certain federal statute. Such a state statute is unconstitutional, thus incorrect and non-valid. Under a strict application of the principle of stare decisis, this statute must nevertheless be applied by any lower court of New York, if a higher court in the same state or the United States Supreme Court has declared it to be in accordance with the Constitution, by rendering a decision which experts in constitutional law would recognize as false, thus non-valid, e.g.: 'This statute does not regulate interstate commerce.' We have also to take into account the possibility that no case involving this statute comes before the courts. In both cases this statute, *although non-valid, continues to have force of law.*

There are also non-valid laws and decisions which it is not possible to annul, because they have been enacted by authorities whose statements are final and cannot be reversed by any other power.

It might also happen that the United States Supreme Court erroneously declares a valid statute to be unconstitutional. The lower courts are bound by that non-valid decision and are thus prevented from applying this valid statute.

Thus, a *non-valid* sentence of law may be *enforceable*, because a certain authority incorrectly states that it is valid, and no higher authority decides that it is non-valid. On the other hand, a *valid* sentence of law may be *deprived of its force of law* by an incorrect decision of a competent authority, which declares it to be non-valid.

This shows that we must distinguish between validity and ENFORCEABILITY of sentences of law. What are the conditions under which any sentence, e.g., of A, is enforceable? It must have been officially stated. We have seen that, if a sentence of law has not been officially stated, it involves no legal consequence. But if the sentence S^1 in A has official quality, S^1 is also enforceable—whether or not it has been stated by a competent authority, whether it is true or false, correct or incorrect—in other words: independently of its validity. This holds in all cases, except if some higher authority than the one which has enacted S^1 enacts a sentence S^2 which asserts that S^1 is non-valid.[21] S^2, too, must have official quality, but need not be valid. S^2 may, e.g., be a decision of the United States Supreme Court, reversing a decision S^1 of a lower court, or declaring a state statute S^1 unconstitutional.

But what is the use of rules of law, if sentences of law which contradict them have the same force of law as those which have been enacted in accordance with

[20] *Ibid.*, p. 747. The court argued in this case: "This judgment, even if it be erroneous, is not void; it . . . can only be annulled or set aside by appeal or writ of error, taken for that very purpose. Courts have the inestimable privilege of rendering wrong decisions, and these decisions . . . pass muster and pass current until (possibly and perhaps) reversed on error brought or appeal taken." (Lacy v. Brandhorst (1900), 156 No. 457).

[21] Unlike S^1, S^2 which states: 'S^1 is non-valid', does not belong to A, since it speaks about a sentence of A. Cfr. infra, p. 34.

them? Why not condense the law into a single principle: Whatever x and y enact is enforceable, unless it is reversed by the higher authority, z, which may declare void, for whatever reason, whatever x and y have decided?

The answer is given by pointing out that every system of law contains implicitly the principle: Any sentence of law which has force of law ought to be valid.[22] According to this command, all officials which the legal system under consideration vests with authority to enact sentences of law, should, when acting in their official capacity, enact only sentences of law which are correct, not false, and which they are competent to enact. This implies that the United States Supreme Court should deprive a statute of its force of law only if it is unconstitutional, i.e., non-valid; otherwise the Supreme Court's decision would itself be a non-valid sentence of law. If, on the other hand, a statute is unconstitutional, the Supreme Court ought to declare it void.

This distinction between valid and enforceable sentences of law reflects two antagonistic aims which the law tries to attain: security and expediency. Security requires that everybody knows in advance the legal consequences of his acts, and that therefore no sentence of law should have force of law which contradicts the rules of law which can be known by everybody. But such a law would be very inexpedient; authorities may often disagree about the validity of sentences of law. Legal validity does not depend always upon correct reasoning alone; it may be a question of appreciation or decision: where a matter is not already settled by a rule of law, the authorities may choose which basic sentence they want to enact.

The law adopts a compromise. It insures *security* by creating a system of rules, one of them stating that all its sentences which may be officially stated in the future should be valid. It achieves *expediency* by designating certain authorities whose statements shall have—provisional or definitive—force of law, independently of their validity.

Of course, the majority of sentences of law which have force of law are at the same time valid. And if a legislator or judge gives force of law to a sentence which is non-valid within the system, he has in general certain reasons for doing so; e.g., because the valid rule, enacted previously, does not correspond any more to certain new social conditions. In such cases the law itself will have the tendency to substitute the new, more "just" rule for the old one. If we want our model language still to correspond to the given system of law, we must change it accordingly, by substituting a new basic sentence for the old one. The previously valid rule will not be valid any more in that new system, and the newly enacted rule will be both valid and enforceable.

The distinction between valid and enforceable sentences of law is of importance for answering the question whether or not a given system of law is *consistent*. The class of those sentences in A which have force of law is certainly full of state-

[22] Like the definition of enforceability, this principle does not belong to A. Cfr. infra, p. 36.

ments which contradict each other: conflicting precedents; laws which are unconstitutional but which have not been held to be so; enforceable decisions which contradict certain legal rules without depriving them of *their* force of law. But the class of basic sentences of law, e.g., in A, must form a consistent system. If the list of basic sentences of A contained two contradictory sentences—e.g. '*gr.larceny(Smith)*' and 'non *gr.larceny(Smith)*'—every sentence of A would be correct in A, because from two contradictory sentences every other sentence is derivable. Obviously, a language of law in which it would not even be possible to formulate any incorrect sentence would be of no practical use. It should be possible to construct, for every system of law, a model language whose basic sentences—and consequently whose derived and valid sentences—form a consistent system. If so, two contradictory sentences of law cannot both be (correct and) valid, although they may both be enforceable.

7. SENTENCES OF LAW OF DIFFERENT LEVEL AND SENTENCES OF SCIENCE OF LAW

We have seen that the statement according to which sentences of A are competently stated, if they are enacted by Congress and concern interstate commerce, corresponds to a provision of the United States Constitution. This statement *about* sentences of A expresses therefore a rule of law, just as the sentence *of* A '*gr. larceny*(x) implies *imprisonment*(x)' states a legal principle. The same applies to most assertions about the correctness, truth, official quality, validity and enforceability of sentences of A. Such sentences about sentences of law may therefore themselves be viewed as sentences of law.

We could thus construct a model language capable of expressing not only a system such as the Penal Law of New York itself, but also the conditions under which sentences of such a system are correct, true, officially and competently stated, valid and enforceable. Such a language would consist of TWO LEVELS; it would include our former *Language A*, and a *Language B* consisting of sentences about sentences of A.

The vocabulary of B would contain designations for all sentences of A; as previously, we may take as *names* for sentences of A, about which we speak (now in B), those sentences themselves, placed between single quotation marks. *Predicates* of B may express properties of sentences of A—e.g. *''gr. larceny (Smith)' is true'*—or relations between sentences of A and authorities—e.g. *''gr. larceny (Smith)' is stated by the N. Y. Supreme Court'*. B contains also variables for sentences of A—e g.: *'S is basic* implies *S is valid'*.

We can now state the conditions under which sentences of A are correct, true, etc. as basic sentences in B:

'*S is correct* if and only if *S is basic* or *S is derived*'

'For all x: '*murder*(x)' *is true* if and only if *x has killed a human being with . . . etc.*'

'*S concerns interstate commerce* and *S is stated by Congress* implies *S is competently stated*'

'*S is valid* if and only if *S is correct* and *S is not false* and *S is competently stated*'

'S^1 *is enforceable* if and only if S^1 *is officially stated* and there is no S^2 such that S^2 *is stated by a higher authority than* S^1 and S^2 entails 'S^1 *is non-valid.*' "[23]

We consider all those statements as valid sentences in B, and consequently as sentences of law having official quality. One might object that some of those basic sentences of B do not correspond to explicit legal provisions; the definition of correctness seems even to express a rule of logic rather than of law. We have however pointed out that the language of logic is contained in every formalized language of law, and that to be applied in fact is sufficient to give to sentences of law official quality. One of the principal tasks of logical analysis of law consists precisely in discovering such hidden principles of law and in stating them explicitly in the model language.

For the same reason, we have to include the rule: '*S is enforceable* implies *S should be valid*' as basic sentence into B. We have seen that this principle is tacitly assumed by every legal system. Needless to say that this has nothing to do with natural law.

When the judge states '*p. imprisonment* (*Smith*)'—i.e., Smith is to be imprisoned—he addresses a command to an executive officer; the sentence stating this command belongs to A. But the command addressed *to* the judge (and to all other authorities): '*S is enforceable* implies *S should be valid*'—i.e.: all statements which you make officially are to be valid—belongs to B.

The sentence "Do not steal!" occurs neither in A nor in B. Such orders do not belong to the language of law at all. The legislator does not attempt to prevent larcency by saying: "Do not steal!", but by enacting explicitly '*larceny* (*x*) implies *p. imprisonment* (*x*)' and implicitly: '*S is enforceable* implies *S should be valid*'. Thus, he orders the judge to order '*p. imprisonment* (*Smith*)' only if '*gr. larceny* (*Smith*)' is true (or if Smith has committed another crime which is punishable by imprisonment).

Whether a sentence of the given language is to be translated into a language of the type A or B depends merely upon whether it concerns "things" or sentences. A provision of the United States Constitution may illustrate this point: "All persons born . . . in the United States . . . are citizens of the United States and of the State in which they reside. No state shall make or enforce a law which shall abridge the privileges or immunities of citizens of the United States. . , ." The first rule will be translated into a language of type A: '*born in U. S.* (*x*) implies *citizen of U. S.* (*x*)'. The second provision will appear in B: '*S is basic* (*in A*) implies *S does not abridge . . . etc.*'.[24]

The latter example shows that, whereas A contains a list of its basic sentences, B states general conditions under which *any* sentence of A, enacted in the future, should be regarded as a basic sentence in A. Thus, S is a basic sentence in A, either if there is a basic sentence in B which asserts explicitly that S is a basic sentence in A, or if S fulfills all conditions, stated in B, for being a basic sentence in A.

We must, of course, always keep in mind the distinction between sentences of law of any level and sentences which do not belong to the language of law, because

[23] Strictly speaking, this last sentence does not belong to B, but to a language which we might call C: it is a sentence about sentences about sentences of A. How many levels we need depends upon the field of law whose model language we intend to construct and to analyze.

[24] Our distinction between levels is thus a purely logical one and has nothing to do with Kelsen's "Stufenbau."

they contain terms which we have decided not to include in the vocabulary of our model language.

We have seen that sentences *of law* may refer either to *things* such as larceny, imprisonment, etc., or to *sentences* of law. *Science of law*, on the other hand, always refers to *sentences* of law. There are statements of science of law which may contain exclusively terms of a language of law (cf. Fig. 2). In other words,

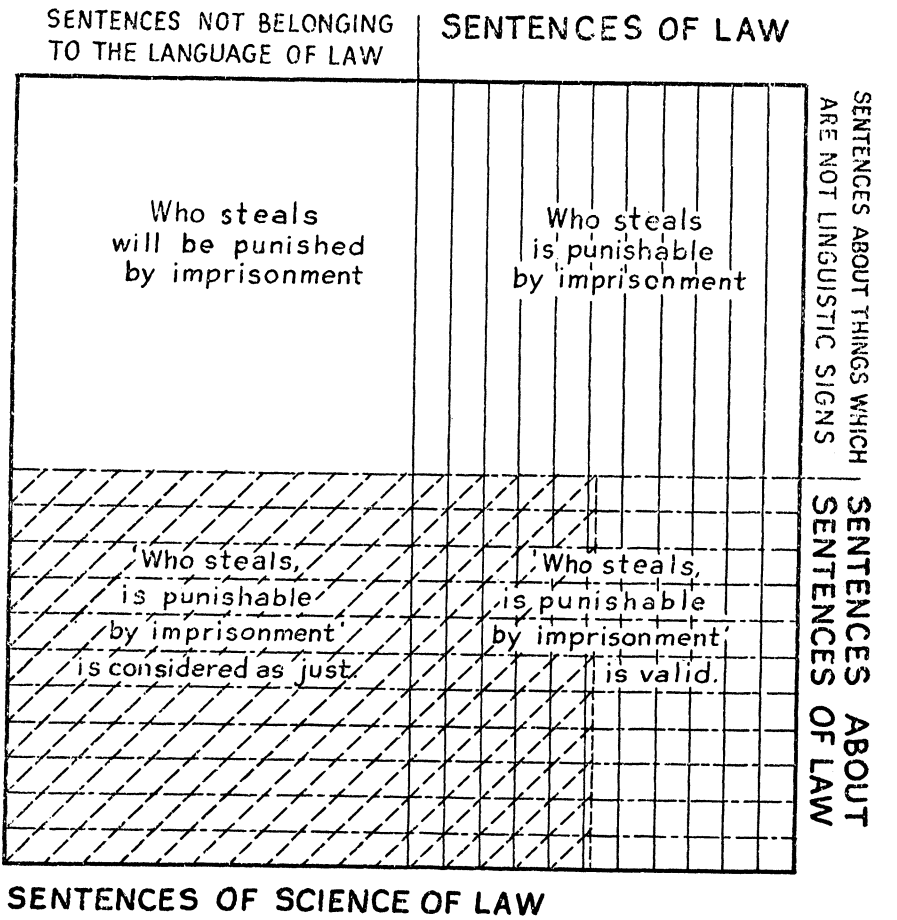

FIG. 2

there are sentences of law about sentences of law which belong to science of law.

Thus, if a scholar asserts, that a certain legal principle is considered just, or that its enforcement will lower criminality, he formulates sentences of *empirical science of law* which cannot be stated in terms of our language of law. But a scholar can also make empirical statements about sentences of law which are themselves part of the language of law; he may say, e.g., that a certain sentence of A is true, or officially stated, or enforceable. Such sentences are thus at the same

time sentences *about* sentences of law (namely of A), sentences *of* law (namely of B) and sentences of empirical *science* of law.[25]

This study has been concerned, not with empirical science of law, but with *logical analysis of law*. Everything *about* which we have spoken—i.e., everything which appears here between single quotation marks—belongs to one of the levels of a language of law. To those sentences of the present study which are not enclosed between single quotation marks, we can apply the same distinction as with respect to the statements of empirical science of law: When we said, e.g., that a sentence of A is valid if it is correct, not false, and competently stated, we formulated a sentence of logical analysis of law which itself belongs to the language of law. Indeed, later the same statement appears between single quotation marks, as basic sentence of B. Other assertions occurring in this paper remain outside of the language of law; e.g., when we said that a certain statement belongs to empirical science of law, or to language A, or B, or that a certain sentence of A has imperative meaning, or that language A is consistent.

But every statement about sentences of law in this study—whether or not it belongs itself to a language of law—purports to prove the existence and the usefulness of a science concerned with the logical analysis of law.

Princeton University

[25] But as sentences *of* law they have no official quality and are therefore neither enforceable nor (legally) valid; they may only be correct and true.