The phrase "application of law" may be used to designate employment of a legal rule to aid in the decision of a specific case. "Elaboration of law," on the other hand, which is a term less familiar in Anglo-American than in continental legal usage, is a convenient expression for the formation of a new rule of law to "fill up a gap" in an existing rule or between rules. Under any legal system the process of elaboration has close affinities with that of application, but the nature of the connection varies in detail with the mechanics of the particular system, as for example whether it is a statutory system like those of continental Europe, or a system of predominantly judge-made rules like the common law; whether or not under a statutory system the doctrine of precedent is in force; and finally whether the determination of so-called issues of "law" is differentiated from that of issues of "fact," and the two processes entrusted to separate agencies like the judge and jury of our Anglo-American system, or the magistrate and judex of classical Roman law.

I

At the threshold of the inquiry we are met with the contention of some recent jurists that no valid distinction can be made between the two processes of "application" and "elaboration." Every case, it is said, differs from every other, with the result that the same rule when applied to two successive cases is always elaborated into, and becomes in fact, two different rules. The logical consequence of this reasoning is that there must be a separate rule for every case, and that therefore no rule can ever

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1 See, e. g., Jean Dabin, La Philosophie de l'Ordre Juridique Positif (1929) sec. 1, c. 1, Le Problème de l'Elaboration Juridique.
2 This view is strongly stated in Frank, Law and the Modern Mind (1930) pt. I, c. xiv, Illusory Precedents.
be applicable to more than one case. To accept such a view would necessitate the abandonment of the idea of a "rule" in the common sense of the term; for the notion of a rule requires that it should apply to a number of instances. It is true that in certain fields of law, notably our judge-made American constitutional law, which is a body of rules for testing other rules rather than specific private acts or transactions, litigated cases are seldom enough alike for a new case to fall squarely under any rule already laid down without requiring its further elaboration. This is, however, an accident, due to practical considerations which limit the quantity of litigation; there is no inherent reason why substantially identical statutes should not come successively before the Supreme Court; and even if this does not happen, and the rule is never actually applied by the Court save in the one case where it was first laid down, it still stands as a rule, giving notice to legislatures and executives as to the constitutionality or unconstitutionality of a statutory provision of the specific kind passed on.

If we are to assume that we can reason toward the decision of cases by the aid of rules, we must understand the term "rule" in such a sense that it is at least potentially applicable to more than a single case. Admitting this, however, there remains a sense in which it is open to question whether the elaboration of a rule can properly be distinguished from its application. Is it not true that whenever we apply a rule, we do in fact elaborate it? Suppose, for example, an established rule that a contract requires mutual consideration, and that for the first time a court was called upon to apply this rule to a case where money was exchanged for a promise. If in such a case the court should hold that a valid contract existed, would it not thereby elaborate the initial rule into the two more specific rules (a) that a promise is good consideration, and (b) that a transfer of money is good consideration? Undoubtedly it seems desirable to call this an elaboration of the rule. Suppose, however, another instance, where the rule that one who endorses his name on a note becomes surety for the maker is applied by a court in a case where the surety's name was Jones; does the court thereby elaborate the
rule because the rule had previously been laid down in a case where the surety's name was Smith? Clearly there would here seem nothing entitled to be called elaboration of the rule in any useful sense; and a comparison of the two cases illustrates the meaning which can be usefully reserved for the term "elaboration." Whenever two cases to which a rule is applied, or sought to be applied, present elements of distinction striking enough to raise the question whether they are entitled to legal significance, so that if one case is brought within the rule the other might possibly be excluded, we have a case creating an opportunity for elaboration of the rule. Thus if it were conceivable that we might have one rule of suretyship for persons named Jones and another for persons named Smith, then the fact that in one case the rule is applied to Jones and in the other to Smith would amount to an elaboration of the rule; but not otherwise. There is accordingly no clean-cut logical test of where application ends and elaboration begins; the test is the practical one of whether the purported application of an old rule does in fact amount to the enunciation of a new and more specific one. The test of whether this is so or not is again pragmatic—it is nothing less than whether or not in later cases the courts resort to the new and more specific rule as a guide for reaching decisions. If so, elaboration has taken place, with the result of permanently lending clearer definition to the former rule.

Under the common-law system the distinction between the application and elaboration of a legal rule is facilitated by the distribution of functions between court and jury. So long as the application of a rule is left to the jury under no other guidance than the statement of the rule as such by the court, application does not result in elaboration because there emerge from the verdicts of successive juries no precedents which control the contour of the rule in future cases. At the same time the moment of elaboration of a rule is definitely isolated and registered as that at which a court for the first time instructs a jury that a rule does or does not apply to a particular state of facts, and this instruction is tested and approved on appeal. This is an important and powerful aid in minting new law into stable and recognizable
form, and offers one of the cogent arguments for the preservation of the jury-system.  

What has so far been said has tacitly assumed the operation of the Anglo-American legal system; it has taken for granted that judicial decisions have the force of precedents, and that the application of a rule by the courts in one case will be controlling in later cases. Under an exclusively statutory system of law, where the doctrine of precedent is not accepted, the procedure is different, but the substantial relation between application and elaboration remains the same. The practice of the courts under the name of "jurisprudence," or usus fori,\(^2\) does the work of precedent; and a succession of applications by way of inclusion and exclusion has the effect of elaborating new rules. The chief difference lies in the fact that the process starts from statutory rules which are usually more clean-cut, and hence more stable, than the frequently more or less vague "unwritten" rules of the common law. There can be no doubt that this difference is substantial. It lies, however, not so much, as has sometimes been supposed, in the fact that a common-law rule is not encased in a particular form of words, as in the fact that continued elaborations of the original common-law rule may leave doubt as to whether the latter is not completely eaten away and supplanted by the elaborations. This is another question to which only a practical answer can be given. If in fact the decisions of courts are stated in terms of, or are otherwise clearly seen to be influenced by, the original rule in cases to which the more specific elaborations of the rule do not apply, then there can be no substantial doubt of the continued authority of the rule. Perhaps more frequent is the difficulty of determining whether or not a new common-law rule has come into existence. It is well to point out, as an acute critic has

\(^2\) "One of the chief advantages of civil trial by jury with a view to fixing the rules of law with greater certainty is that more than any other contrivance it facilitates the analysis of complex issues into matter of fact and matter of law." Speech of Francis Horner in the House of Commons, March 6, 1815, in MEMOIRS AND CORRESPONDENCE OF FRANCIS HORN (1853) v. II, 534 at 538-539. See also JOHN DICKINSON, ADMINISTRATIVE JUSTICE AND THE SUPREMACY OF LAW (1927) 203 et seq.

recently done, that a single precedent cannot determine a rule much broader than the specific facts of the particular case which created the precedent, "since every individual case can be subsumed under any number of rules of varying generality. It is only because a case is related more or less to previous cases that a decision on it tends to fix the direction of the stream of legal decisions. The relation between decisions and rules may thus be viewed as analogous to that between points and a line." There is thus likely to be more doubt as to the existence of any particular rule under the common law than under a statutory system; but this does not necessarily mean, as some sceptics assume, that there cannot be rules under the common-law system. There may be relatively fewer rules which can be identified as definite and stable, and they may change more readily; but at any given time there is a vast number of precepts which are as clearly and definitely stamped as authoritative rules of law as any statutory rules could be.

From what has been said it appears that the elaboration of a rule grows out of the process of its application. It results from the fact that in testing whether or not a rule is applicable, it may be found that the rule as it stands does not supply a reasonably clear indication of how a point at issue is to be decided. If it is felt to be desirable that there should be a rule specifically governing the doubtful point it is therefore necessary that a new rule should be formulated. In this connection it is important to note that such a new rule often operates to elaborate not one but two or more existing rules. For example, the question before the court may take the form of which of two possibly applicable existing rules should be applied to the point at issue where one of these rules would lead to one result, and the other to an opposite result. Where this is the case a decision one way or the other will have the effect of establishing at the point in question a boundary between the existing rules, thereby lending further definition to each, and extending the operation of one by inclusion and limiting by exclusion the operation of the other.

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The processes of elaboration so far described apply mainly to cases where a rule of relatively greater generality is elaborated into other rules of a relatively lower order of generality. The process, however, may work in the opposite direction. Usually the earliest rules established in any legal system are rules of a relatively high degree of particularity. Where only such rules are in existence, new case after new case will arise which falls outside the clear meaning of any rule. Before a rule can be provided for such a case, some one or more of the existing specific rules must be read into a new generalization broad enough to reach out and embrace the new case within its scope. This process is superficially the reverse of that involved in particularizing the operation of a more general rule. When it occurs for the first time, it need not have the effect of establishing as a rule of law the higher generalization by means of which the transition is made from the existing specific rules to the ground of decision chosen for the new case. The only result may be to establish by aid of the generalization a new specific rule restricted in application to the narrow situation presented by the new case, thus merely adding another relatively specific rule to those already in existence. This is true, for example, where a number of relatively specific rules are made to yield such a generalization as that there can be no liability without fault, and where this generalization is then employed to establish a rule that in a particular type of situation where there is no fault there shall be no liability. Whether the process of reasoning employed shall thus have the effect of merely establishing a new specific rule applicable to a narrow type of case, or on the other hand will establish as an authoritative rule of law the generalization by means of which the transition is made from the existing rules to the new case, can seldom be determined from the initial precedent for the reason already given, but ordinarily only after a series of precedents has disclosed whether or not the higher generalization is authoritatively resorted to as a rule of law. Whether this occurs or not depends always in part on the degree of generality of the generalization in question. Some legal generalizations are so

6 Pound, Introduction to the Philosophy of Law (1922) 101.
broad that obviously they can never be treated as legal rules, because if so treated they would have to be applied to govern decisions in types of situations where firmly established rules are squarely in conflict with them. This would seem to be true, for example, of the generalization of "no liability without fault." In these instances the generalization can most conveniently be regarded as a mere logical bridge for reasoning from established rules to a new rule in cases where the courts choose for reasons of policy to bring the new rule within the scope of that particular generalization, rather than under some competing generalization which would conceivably be applicable. They are thus theoretical materials for the elaboration of rules rather than rules themselves.6

The process of elaboration of rules may thus operate in either of two opposite directions—it may proceed downward by way of developing more specific from more general rules, or upward by developing more general rules from more specific. It is in the former case that the connection between the application and elaboration of rules is most obvious. Closer examination discloses, however, that in both instances the connection is substantially the same. Quite frequently the application of a rule involves its extension to a new case not at first sight falling clearly within it. The extension of the rule to such a case involves necessarily the further generalization of the rule, and thus a resort to some generalization of a higher order than the rule itself. This is substantially the same process as the elaboration of a rule of higher generality from a rule or rules of lower generality.

The process of the application or elaboration of rules either upward or downward, either from the more general to the more specific or from the more specific to the more general, involves the same basic procedure. Primarily it involves the employment of what we are accustomed to call "logic"; but to understand it as it needs to be understood requires more than tacit acceptance of the layman's traditional view of what logic means. What

are the steps by which a court can determine whether or not a general rule shall be treated as embracing a specific case? What are the steps for determining whether a general rule shall always so apply to a specific type of case that we can in effect say that there should be elaborated a new specific rule applicable to the particular type of case in question? On the other hand, what are the steps by which it can be determined whether a specific rule involves a generalization which can be extended to cases not definitely falling within the specific rule itself; and how are we to determine whether such a generalization should apply not merely to some but to all cases falling within its possible scope and thus be itself erected into a rule of law? These are basic problems of the art of legal reasoning, and to understand them requires some examination of the processes of logic as applied to the kind of problems with which law is concerned.

II

Logical reasoning owes its place in human habits to the same considerations of convenience and economy of mental effort which in part account for the establishment of rules of law. It is a common observation that practical administrators in fields like business or education find it possible to make decisions more easily and quickly if they are provided with rules prescribing appropriate decisions for different kinds of typical questions. In the same way we all carry about in our heads a large number of generalizations by more or less unconscious resort to which we form quick decisions for action, and ready expectations of what will happen in particular circumstances. Thus some people never cross a street except at a corner, or always wash their hands after riding in a public conveyance; or when invited to ride in an automobile twenty years old anticipate the possibility of a breakdown, or when coming out-of-doors on a cloudy day give thought to the likelihood of rain. All these are instances of a kind of rough and ready elementary deduction which lies at the basis of rational conduct. Alfred Sidgwick has pointed out that the old proverb "Where there is smoke, there is fire," illustrates the practical utility of this

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kind of deduction. It is the vehicle through which men profit by their past experiences. It consists simply in noting that when fact A is present, fact B has been found to be so uniformly present also that we can pack away the inseparableness of the two facts into a rule or generalization for future reference. Then, when in some later specific instance we observe the presence of one of the facts, we apply the generalization, and without the necessity of special investigation draw the deduction that the other fact, though not immediately present to the senses, is somewhere in the offing. Practically everything that we call thought proceeds in this way with varying degrees of refinement and elaboration of the crude elementary process.

Attention is attracted to the validity and mechanism of the process in those instances where for some reason or other it does not work satisfactorily in the way we expect of it. For example, we note on leaving the house that the sun is obscured and accordingly take an umbrella with us, and then find that it does not afterwards rain and that we are encumbered with the umbrella unnecessarily; or we leave home on a long trip in a very old automobile and find that the trip is made without mishap. Such experiences call attention to the possible "incorrectness" of our established generalizations, or to the possibility that the case in hand may not correctly fall under the generalization which we apply to it. Thus the question arises of the proper scope and limits of a generalization, and on the other hand, what is substantially the same question from a different angle, of how to determine whether or not a given particular falls properly within the scope of a given generalization. These questions lie at the heart of the processes of reasoning, but they do not happen to be the ones to which traditional lines of logical investigation have been directed. Formal logic has concerned itself for the most part with the question of what conclusions may validly be drawn from applying a generalization to a particular instance which is assumed to fall properly within the generalization. Important as this question is, it does not arise in the practical conduct of reasoning until the assumption has first been tested and sustained. In

8 Sidgwick, The Application of Logic (1910) 19.
so far as legal thinking is directed to the application of rules to particular cases, the question of how to determine whether the rule applies to the case, or conversely the propriety of subsuming the case under the rule, is always the point of central difficulty. It may therefore be admitted that much of the traditional body of logic has little light to shed on some of the most pressing problems of legal thought, without taking the position of some modern jurists that logic may be neglected or discarded. The true situation is that there are problems which must be cleared up, and a whole field of thinking set in order, before the problems with which traditional logic has concerned itself become pertinent. The question of whether or not a specific case for which we require a decision is one falling properly within the generalization on which we propose to rely for aid in making the decision, leads back into issues more fundamental than those with which lawyers have been in the habit of concerning themselves. It requires nothing short of an examination of some of the general processes of what we call thought.

All mental activity seems associated with a basic capacity on the part of the organism displaying it which may conveniently be designated by the word “attention”. In the lowest organisms there is nothing but a physical action or reaction of the organism or some part of it in a unified direction in response to some part of the environment. In somewhat higher organisms there emerges definite tissue to which this capacity for response is mainly confined, and which responds more delicately and certainly. In still higher organisms this response mechanism is brought under centralized control of a specific organ like the brain, which is capable of selecting one or another from a number of possible responses, and thereby unifying more freely and certainly the response of the organism in a definite direction. The whole evolution is toward a more selective and powerful capacity of concentration. This capacity of concentration of the resources of the organism may be described when it becomes selective as “attention”, and is the beginning of what can properly be called “mental” activity. Viewed from the standpoint of the relation of the

organism to its environment, it consists in seizing and responding to a particular aspect of the environment to the exclusion of other aspects. The sense of distinction between the aspect of the environment thus seized and other aspects felt as excluded seems to be at the bottom of what we mean by consciousness. The very essence of consciousness is a sense of something grasped or seized by attention as distinguished from what is experienced as not so grasped or seized. It is, accordingly, of the essence of conscious mental life to form and hold what may be called "units of attention". More and more philosophers of different schools have been coming to note this capacity to form "units of attention" as a basic trait of mental activity. Such units seem to be substantially what Höfidding calls "totalities", and Santayana "essences". No doubt different philosophers by these and other terms mean somewhat different things, but the point of agreement is that the formation of "units of attention" is basic. So basic, indeed, does it seem to be that it has been maintained that a continuous field is beyond the power of human observation—that to be observed it must be broken up into units.

To some extent the outlines of units of attention are probably dictated by the structure of the organism and that of the external environment in relation to one another. This seems true, for example, of the physical objects of perception. The structure of the eye, ear, nose, and muscular and nervous systems of ordinary healthy human beings causes the attention of all alike to carve out as units the gross physical objects of the environment in a substantially uniform way. Any normal human being when presented with a room in which there is a window, table, and chair will mentally shape the window, table, and chair as physical objects, and their spatial relations to one another, into roughly the same units as other normal human beings. It is, however, quite conceivable that somewhat different units might be formed by beings endowed

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29 Höfidding, La Relativité Philosophique (1924) 8, 9.
30 Santayana, The Realm of Essence (1927) passim. Santayana notes a further appearance of the idea in Whitehead’s "eternal objects." Throughout what follows I am indebted to suggestions initially due to Santayana, in both the Realm of Essence and The Life of Reason (1927), but I hesitate to acknowledge a debt which might imply identity between the borrowed gold and that into which it as been transmuted.
with differently constituted organs, as is suggested, for example, by the radically different appearance of the world when presented through the lens of a fish-eye as contrasted with its appearance through a human eye. Again it is noteworthy that external objects take on a somewhat different shape and form in accordance as attention is differently focussed on the field in which they lie. Emphasis has been laid on this latter fact by the school of so-called "Gestalt" psychology, whose theory is largely based upon it.\textsuperscript{13} It accounts for much of the art of caricature and the cartoonist.

When we speak in this way of differences in the "focussing" of attention, another fact is disclosed which is of great importance for understanding the thought-process. This is that attention has a caliper-like quality which enables it to seize for its unit practically any portion of a given possible field, neglecting more or less completely for the time being the remainder of the field. Thus in the case of the room containing the window, table, and chair the attention may at one moment grasp as its unit the totality of all three objects taken together in their spatial relations, while at another moment it may seize or "focus upon" a single one of the objects and allow the balance of the field to fade into irrelevance. Similarly in concentrating on so simple a unit as a straight line with definite termini, attention may focus on the entire line or only on some portion of it. What is true of sight is no less true of touch and hearing. By running my hand up and down a foot-rule my attention may grasp the fact of the whole rule, while again by pressing upon a single part of it, I may concentrate my awareness upon an experience to which the balance of the rule is irrelevant.

This caliper-like quality of attention as applied in the field of sense-perception accounts on the one hand for the infinite divisibility of space and time which caused the Greek philosophers so much difficulty; while at the same time the fact that experience accrues in the form of units of attention explains that other aspect of our knowledge of space and time which the Greeks found so hard to reconcile with their infinite divisibility, namely, the pos-

\textsuperscript{13} Wolfgang Köhler, Gestalt Psychology (1929) \textit{passim}. 
sibility of regarding them as a series of successive units. It is this fact that experience comes in units, taken together with man's capacity for memory, and hence for focussing on units not directly stimulated by the environment, which makes possible the comparison of units accruing at different times, and so the recognition that one particular unit may be like another and substituted for it. This possibility of comparing units and substituting one for another prepares the way for what we call the reasoning process. Perhaps the simplest illustration is to focus attention on a particular portion of a straight line as a unit, and then carry the attention forward along the line in successive like units, thus dividing the line into a series of "equal" segments. If we regard these segments as self-existent entities out of which the line is composed absolutely and independently of our successive acts of attention, it becomes impossible, as the Greeks realized, to reconcile this result with the infinite divisibility of the line. On the other hand if the successive units are recognized as having been only carved out by acts of attention, it is evident that this process may be successively focussed on smaller and smaller portions of the line without regard for the divisions formed by previous acts of attention focussed on other segments of greater length.

The possibility of recognizing likenesses between different units of experience formed by different acts of attention and treating them as potentially interchangeable in thought enables the individual to organize his world of experience into a relatively orderly whole. It introduces into what would otherwise be a wilderness of single instances the possibility of some approximately constant features which establish connections between past and present, and control expectations of the future. So far as the individual recognizes the recurrence of units of experience he is on the way towards rationality. So far, however, as his recognition of recurrences is purely private to himself, he cannot be said

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15 "Water does not run downhill more persistently than attention turns experience into constant terms." SANTAYANA, THE LIFE OF REASON, REASON IN COMMON SENSE (1927) 74.
16 SANTAYANA, op. cit. supra note 15, at 69-70, 77-78.
to have reached the point where rationality in the full sense begins. The extent to which a human being's recognition of recurrences remains private is directly connected with the fact, already noted, that attention is caliper-like, and may grasp or focus upon practically any area whatever out of a total environmental field. For example, an individual may grasp as a unit the whole of a winter landscape, with the snow and trees and sky related as they can only be from the particular focus which that individual brings to bear upon them, and with the whole enriched by the quality of his contemporary mood, and by the vestiges of his past experiences. Such a totality can rarely find repetition even in the experience of the same observer,—it is obvious that it is a unit which can never be more than approximately reproduced for any other individual. At the opposite extreme stands the impression of a black spot on a square of white cardboard, which is capable of practically exact reproduction in the experience of any number of normal human beings, and therefore constitutes a unit capable of forming a common element in the experience of human beings in general. It is units of this latter kind, units which can be taken repeatedly into the experience of many human beings, that form the basis of rationality among beings who live in groups. By means of such units there is established not merely a thread of sequence which binds the life of the individual together, but also a series of horizontal threads which enable one individual to grasp something of the life and situation of others, and hence to live in communion and cooperation with them. Clearly such public sequences cannot be formed by all units of experience, not even all which are capable of recurrence. The units shaped by acts of attention are absolutely infinite. Thousands occur every day in the experience of each individual. The selection of those which are public, and which relate the experience of one individual to that of others, is largely a social process, which is connected with, and could not have taken place apart from, the symbolism furnished by language.17

A word is a symbol which by appeal to ear and eye seeks to fix for the purpose of public communication and reference the

17 Lorimer, op. cit. supra note 9, 26-31.
content of a particular unit of attention.\textsuperscript{18} A word as a public symbol always tends to react on the particular unit of experience which it is made to symbolize. The fact that a word has been fixed as symbolizing a particular unit of attention tends to cause the attention of all individuals within the group employing the word to fall into focus upon the unit in question rather than on other possible units which might equally well be carved from the same field. Herein lies the decided influence which different languages have in shaping the special character of the thought-processes of the peoples using them.\textsuperscript{19} At the same time the existence of a word tends to bring within the area of attention which it symbolizes elements which might not be present if the word were not a recognized public symbol.\textsuperscript{20} The fact that the word "chair" is generally employed as designating a particular kind of physical object inevitably associates with the perception of any object of that kind elements which are drawn from our recollection of other objects to which the name is also given. Any particular individual experience is thus possibly enriched and possibly distorted by the existence of a word which is applied to it. It may, for example, become entirely impossible for me to receive the normal sensory impressions from the face and figure of a man standing before me if I am informed that he is a Russian Communist. Recollections of other units of attention symbolized by the same name color and add content to the particular unit which is introduced to me under that name.

The relation between words as symbols and the thought-units they symbolize is therefore complicated from two directions. On the one hand the caliper-like quality of attention, with the resulting infinity of possible objects of attention, makes many significant thought-units, so far as the details of their boundaries and content are concerned, essentially private. Thus a unit of attention to which the symbol "chair" is appropriate may include in my own personal experience elements of spatial association with particular

\textsuperscript{18} \textsc{Allport, Social Psychology} (1924) 416.
\textsuperscript{19} See \textsc{Vossler, Frankreichs Kultur im Spiegel Seiner Sprachentwicklung} (1913).
\textsuperscript{20} \textsc{Lorimer, op. cit. supra} note 9, 72-73.
windows and tables, elements of temporal association with particular acts of reading or writing, emphasis on a particular kind of chairs such as oak or wicker chairs; and these different components of the unit may vary with different recurrences of it from time to time, so that what I have in mind when I employ the word “chair” today may, and practically always will, differ somewhat from what I had in mind when I used the word yesterday. Hardly any unit except those which are artificially and rigorously constructed for the purpose of mathematical reasoning can be chosen simple enough and pure enough to form an absolutely constant term for a series of exact repetitions in thought. At the same time the public and social elements which the application of a verbal symbol to an experience imports into that experience are themselves more or less fluid and unstable. A word to be useful as a medium of communication will ordinarily cover so many somewhat different units of experience that inevitably it is at times more deeply shaded by some of these and at other times by others. A double element of uncertainty thus infects practically all verbal discourse; on the one hand the uncertainty due to difference between the thought-units themselves which are identified by having the same word applied to them, and on the other the uncertainty due to the different elements introduced by differences in the meaning of the same word when used at different times. Verbal discourse is therefore never more than approximation; and this fact has a most vital bearing on the practical conduct of deductive reasoning or inference of the kind already outlined.

III

Elementary inference or deduction consists, as we saw, in noting what may be taken as an established connection between two different thought-units and then going on to conclude that whenever one of the units is present as a unit of attention, the other, though not itself falling for the moment within the field of attention as an observed unit, is nevertheless present in its usual connection with the observed unit. This whole process depends for its basis on the correctness of the identification of the supposedly connected units. In order to be assured in the first in-
stance that the connection between unit \(A\) and unit \(B\) may be taken as established, we must be clear that it is really \(A\) which we have successively noted in connection with \(B\), and that we have not mistakenly concluded that \(A\) was present when in fact the unit present was in one instance \(A\), and in another \(A'\) and in another \(A''\). In other words, we must identify \(A\) as an identical unit actually recurring in each of the instances on which we base the generalization. Secondly, we must identify \(A\) as the unit present in the specific instance to which we seek to apply the generalization for the purpose of inferring the presence of \(B\). Accuracy and stability of identification is presupposed in and essential to all the more elaborate logical processes which have been developed by analysis and reflection from the crude form of elementary common-sense inference.21

To escape the pitfalls for discursive thinking involved in the merely approximate character of the identities between thought-units and between the symbols representing them has been a constant objective in the elaboration of human thought. The effort has proceeded along two different lines. On the one hand it has taken the form of attempting to isolate and identify units of attention so simple and shallow that they can constitute true identities capable of repeating themselves indefinitely in the experience of any individual and any number of individuals. This is the method of mathematics. Mathematics has limited itself on the one hand to the mere fact of number, or in other words the relation between units conceived solely as units, without regard to content, and on the other to elementary spatial intuitions like points and lines and areas. Such units of attention exclude the

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21 There has been controversy as to whether or not mathematical and syllogistic reasoning rest upon different bases (Meyerson, De l'Exlication dans les sciences (1921) tome I, 122 et seq.). H. Poincaré and others distinguish mathematical from syllogistic reasoning on the ground that it depends on the logic of “recurrences” rather than upon the logic of “inclusion and exclusion”. See also Höfding, op. cit. supra note 10, at 75. However, both the logic of “recurrences” and the logic of “inclusion and exclusion” would seem to rest ultimately on the manipulation of identities. In most mathematical reasoning, as in the proof of the so-called Pythagorean theorem, the reasoning proceeds by a series of direct substitutions of units treated as identical. In the case of the syllogism the possibility of including one term within another rests also upon treating the former as one of a series of identical units all of which fall within the latter.
deposit of experience which shifts and changes at different moments of attention and under different circumstances of environment and focus. Furthermore, units of this character have such stability and simplicity that they lend themselves to representation by symbols like numerals and letters which escape the connotative ambiguity of words encrusted with the meanings of life.

The other method of stabilizing thought-units may be called the method of logic or rhetoric, and has sought to attain stability not by taking refuge in simple intuitions and non-verbal symbols, but by the more ambitious method of introducing identity into words themselves by a process of rigorous definition. It has been the dream of human thought since Socrates to establish once and for all what stable unit of attention each given word is to symbolize, so that the word when used at any time will register a recurrence of precisely the same unit as that registered by any previous use of the word. In all attempts to pin down words as fixed identifications of fixed units of attention, what has commonly been neglected is that men in their living cannot escape having to communicate with one another about units of attention wider and deeper and richer than elementary numerical and spatial intuitions. The moment we undertake to deal with these richer units we let loose on the field of attention from the past history of our own organism and from the social experience of the group elements of content which so individualize each recurrence of a unit that exact identity between the units becomes an idle dream. The hope of being able to fix the approximate symbolism of ordinary words into a rigorous instrument of thought is vain, but this does not mean, as disappointed absolutists sometimes suppose, that life at the non-mathematical level must be purely irrational. The caliper-like quality of attention comes to our aid and supplies a way whereby the larger and deeper units which are unique and subjective, but with which we still must deal, can be reduced to a rough approximate kind of order in somewhat the same way in which the calculus enables us to approximate some of the characteristics of a curve by conceiving it as composed of an infinite number of infinitely short straight lines.
To reduce a gross experience which never repeats itself to some kind of order we narrow the focus of our attention to some simpler aspect or feature of it which has a better chance of being repeated, and for the moment neglect the rest. The identification of a common element in a number of discrete experiences makes possible the formation of a new unit of attention which will cover the different experiences in so far as attention is focussed exclusively on the common element. This is the way in which those "general" or "class" terms are formed which are the ordinary units of language and at the same time the basic tool of reasoning. They are units which purport deliberately to exclude all characteristics of their components except those by virtue of which the components are members of the class. The content of a class-unit depends on the nature of the selective process by means of which it has been formed. Because of the infinite divisibility of the field of attention, the nature of the units which can be treated as "general" with reference to other units is infinitely various.22

Many general units are formed by a process of more or less unconscious selection of identities and elimination of differences in the field of physical observation. This is true, for example, of such units as "man," "dog," "horse," "fish," "house," "tree," and the like. Such units represent the grouping of separate items of experience on the basis of similarities too numerous and interwoven to be consciously and distinctly isolated. General units of this kind have such solidity and definiteness of outline as to become of themselves items of perception, so that one can very well see a tree or a dog without being conscious of other details than that it is a tree or a dog. However, it is noteworthy that even such units are artificial in the sense that there are primitive peoples who have no single word for "tree," but only words for different kinds of trees. A person whose thought-processes are locked up in such a language will obviously not focus ordinarily on a given unit of attention as a tree, but only as a pine tree or

22 "A class may be almost always described as the result of an operation, namely, an operation of selection." Venn, Symbolic Logic (2d ed 1894) 33.
maple tree or some other specific kind of tree which is identified by its own verbal symbol.

A somewhat different sort of general unit includes those which are formed by loosely grouping together a large number of experiences which present some more or less vague common element or elements, usually from the point of view of a special human interest. Of this character are units like "food," "clothing," "shelter," "tool," and the like. Such units enter much less definitely into the more specific units of experience which constitute the members of the class than, for example, such a unit as "tree" enters into our awareness of a maple tree. We can focus upon a maple tree, for example, without being aware of much more than it is a tree, but it is ordinarily difficult to be aware of a beef-steak without being aware of more details than the fact that it is "food."

At the opposite extreme from such "blanket" units stand class-units which are formed deliberately on the basis of highly specific and narrow differentiations, so that they include only items of attention presenting a fixed and definite feature or features of observation which can be identified and tagged. Scientific classes form units of this character. An example would be the "three-leaved pine" or the "pinus strobus."

In suggesting the various foregoing types of generalizations it is not intended to imply that they are exhaustive, or that the differences they illustrate are more than differences of degree in the generalizing process. There is probably an indefinite number of types of possible generalizations, in each of which the relation of the generalization to the specific instances falling under it will be somewhat different from that in other types. Logical theory has only recently begun to take note of such differences. W. E. Johnson, for example, in one of the most important recent contributions to logical theory, has pointed out the peculiar nature of the relation between such a general term as "color" and the particular colors which fall under it, as contrasted with the relation between such a term as "man" and any particular human being. The reason for this variety is that the units which at-

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Attention can seize upon as possible principles of classification are infinitely various and stand accordingly in all manner of different types of relationship to other units with which they coexist in the same field. The selection of a unit of a particular kind as a principle of classification inevitably establishes a different relationship between the class and the units forming it from that which would exist if a unit of different type were chosen as the principle of classification.

For the conduct of practical reasoning the central point of interest in connection with the formation and use of general terms is how to decide whether or not a particular instance falls within the term. In the vast majority of instances this is not difficult, or life would not be livable in an orderly way. For example, there is ordinarily no doubt as to whether an observed unit is a man or a food or a "pinus strobus." Borderline instances, however, constantly occur where doubt does arise. For example, is a particular collocation of leaves and stems and branches eighteen inches high a tree or something else? Is a particular animal which has certain characteristics of a horse and others of a donkey, a horse or a donkey? Is sawdust "food"? In short, we frequently wish to know what are the outside limits of a generalization, and whether or not something not habitually treated as falling within the generalization may properly be included under it. This is, of course, the problem which is most directly and importantly involved in legal thinking, and in the whole question of the application and elaboration of rules of law. If generalizations perform the functions and are shaped in the manner above suggested, what way is there to determine whether or not a generalization applies to a particular case?

In so far as a generalization rests on a single element of difference, and includes all instances which possess the solitary differential element while rigorously excluding all which do not possess it, it is theoretically possible to determine whether any given instance falls under the generalization by determining the relatively simple question of whether the differential element is present or absent. The rules of logic in their everyday form take this possibility for granted. It is at once apparent, however,
that because of what we have called the caliper-like quality of attention, the possibility is purely theoretical. The single specific element of difference which is selected as forming the test of inclusion or exclusion must itself be some unit of attention, and because of the caliper-like quality of attention, it is always possible within such a unit to focus upon a still narrower unit. Thus suppose that in some field of scientific classification there has been established a class differentiated by the possession of a special bone or spine. In order to determine whether a given specimen falls within the class, attention concentrates upon whether or not the bone or spine is present, but it need not stop there—it may focus on the bone or spine with the possible result of discovering that in some specimens the bone is an inch long, and in others only half an inch long, and in still others is rudimentary. Shall all three specimens be grouped together within the same class, or shall three separate classes be established, and those which fall within one be excluded from the others? The more minute and accurate investigation becomes, the more frequently problems of this character arise.

What is thus true of a class marked out with a high degree of precision is of course even more true of the vast number of generalizations in daily practical use. Such generalizations are not differentiated with any such careful accuracy. They represent the crude and more or less unconscious concretions of experience and not the careful and conscious product of analysis. Take for example such a general term as "tree" or "house." We all know in a rough way what we mean by a tree—it is something that has a fairly stiff stem or trunk, branches, twigs, and leaves, and ordinarily when full-grown is of considerable size. But how big does a tree have to be in order to be a tree? Is there a difference between a bush and a tree? Is a young maple two feet high a tree or a bush? Is it a tree because some day it will be a tree? Is the distinction between a tree and a bush the fact that a tree has a central trunk while most bushes send a number of stalks together directly from the ground? If this is so, what are we to say of certain varieties of birches which grow in clusters from a common root? Or again take the case of food. In gen-
eral we know what we mean by it. We mean beef-steak and lamb-chops and filet of sole and apple-pie and other objects which are commonly served on private tables or found on the bill of fare of public restaurants. But are snails food? Are acorns food? Are scraps of old leather food? In other words do we mean by food anything which can be taken into the human body and, when so taken in, will provide some sustenance, or do we mean only objects from which human beings seek sustenance under normal circumstances? If so, what do we mean by normal circumstances?

These and similar questions arise constantly respecting the boundaries of most of the terms which are employed in the daily processes of thought. Such terms are almost never built on the principle of selecting a single fairly definite element of differentiation from other general terms; rather they are concretions from normal experiences which present a variety of more or less identical elements in unanalyzed combination. Thus in the case of the word “tree” we are familiar with countless instances of objects having a central trunk and branches, and standing from ten to sixty feet high, and we call all these objects “trees” without specifically inquiring whether or not they possess some common element or elements which would bring within the class smaller objects or objects departing in some other way from the general group of properties constituting the normal. In any given instance, a particular object, while possessing some of these properties to a full extent, may, however, to a greater or less extent lack some one or more of the others included in the normal combination, and if this defect goes beyond a certain degree, the question inevitably arises as to whether or not such an object is entitled to be included within the meaning of the general term.

Given the possibility of infinitely subdividing any class-term, and of so narrowing or broadening the differential elements which mark it off as to exclude what might otherwise be included or to include what otherwise might be excluded, it becomes obvious that the possibility of fixing an absolute and definitive content for any term is beyond the range of possibility. For example, the term “tree” may be used to include only full-grown
trees and to exclude young trees, or to include young trees and exclude bushes, or to include or exclude trees already felled and lying on the ground. All that logical thinking demands is that in any thought-sequence the scope of the term which runs through the sequence and holds it together shall be the same throughout; in other words, that at the different stages of a piece of reasoning the attention shall remain fixed at substantially the same focus, so that what is included and excluded at one stage shall be included and excluded at the others. Here again we cannot be certain of securing identity with absolute accuracy, but we can make progress towards attaining it by recognizing, when we commence to use a term, some principle of inclusion and exclusion which is to govern the scope of the term throughout the thought-sequence upon which we embark. In short, we lend a reasonable amount of definiteness to one generalization by cutting across it with one or more other generalizations to give sharper contours to the first. For example, if we are employing the term "tree" in a discussion of landscape we expressly or tacitly resort to the generalization that landscape is concerned with the distribution of masses of color and form, and not with the life history of particular organisms, so that the term will not include relatively small objects which are on the way to becoming what landscape would regard as trees. On the other hand, it is precisely the life history of organisms that botany and arboriculture are concerned with, so that in any discussion from the point of view of the latter sciences the term "tree" will include instances which are excluded from the point of view of landscape. Instances might be multiplied to show that in the same way the content of every general term is a variable dependent on other generalizations, express or implied, in connection with which it is employed in thinking. This is the truth which underlies the logical doctrine of the so-called "universe of discourse",—the doctrine, i.e., that the mean-

24 Santayana, The Realm of Essence (1927) 96-97; Berry, Scientific Habit of Thought (1927) 169 et seq.
26 "As regards their conceptual meaning, terms are very closely analogous to points in space. A point is nothing whatever apart from its relation to other points. Likewise the conceptual meaning of a term is nothing whatever apart from other such meanings." C. J. Lewis, Mind and the World Order (1929) 82.
ing of any given term or proposition is relevant to the context of other terms and propositions, tacit or express, in connection with which it is used.25

The doctrine of "universe of discourse" is simply the application to the focussing of thought of the same principle on which Gestalt psychology insists in connection with the focussing of observation. It means that the content of a unit of attention varies with the nature of the total field focussed upon. If this is so, it seems clear that no process of successively more minute definition, no matter how far carried, will ever lend absolutely fixed content to a term—the content will always be affected by the other generalizations in connection with which the term is being employed. The latter principle supplies the reason for the always surprising and often unsatisfactory results (so especially frequent in a certain kind of legal reasoning) of "hypostatizing a term", which means treating it as an absolutely stable bundle of content, so that anything which is admittedly contained within it in one connection may be validly treated as contained in it in any other connection.

IV

The foregoing sketch of the formation and nature of the units of discursive thought sheds light on the connection between the application and "elaboration" of legal generalizations, or rules, as distinguished at the beginning of this article, and also on the reason why an almost infinite succession of further elaborations of any given rule is possible. The applicability of a generalization to a specific instance depends on the possibility of focussing the generalization at a scope which will include the instance. If the generalization so applied is then "fixed", or permanently focussed, at that scope in preference to other possible limits which might be given it, a new and more specific description of the generalization can be expressed as a "new" rule—in other words, the initial generalization can be said to have been "elaborated" into a new generalization more definite in contour, and standing under the

25 See Venn, op. cit. supra note 22, 247 et seq.
initial generalization at a subordinate degree of generality. Every legal rule may be regarded as such a fixation of a generalization at a particular focus. The broader possible scope of the generalization is excluded on the one hand, and, on the other, narrower possible limitations of focus are ignored and left indeterminate. Each rule is thus capable of being regarded as the result of a process of elaboration or "fixation" of some higher and wider "possible" rule, and at the same time as itself capable of further elaboration into a series of narrower and more specific rules. It is a fixation for relatively permanent reference at a given point along a scale of infinite degrees of particularity and generality, which point has become fixed as the starting-place for processes of reasoning directed toward the decision of controversies according to law.

The practical problem of "applying" a rule of law thus involves (a) determining the outside scope at which the generalization embodied in the rule has been, or should be regarded as, authoritatively fixed (this process may be designated as the "interpretation" of the rule); (b) determining whether or not the particular case falls within the rule as so interpreted (this process may be called "application" in the narrower sense). "Elaboration" means fixing as permanent and authoritative for future reference a particular application of the rule to a situation treated as typical, and therefore likely to repeat itself.

The processes of interpretation and application are thus correlative. We interpret a rule by asking whether it applies to a particular case; we apply a rule by determining that the particular case falls within the rule as interpreted. The total process thus outlined requires constant regard for the principles above developed concerning the nature and employment of generalizations. In the process of interpretation and application we must, in other words, bear in mind that the content of a rule and of the words which compose it is not a matter of absolutely fixed meanings,

26 The slight value of much of the discussion of "interpretation" in works on jurisprudence is due to the assumption that a legal rule has a discoverable absolute meaning. This seems, for example, to be the basis of the distinction between "genuine" and "spurious" interpretation as usually understood.

27 See DICKINSON, op. cit. supra note 3 at 313, n. 20.
but is brought into focus by reference to other generalizations which may remain tacit in the mind of the agency applying the rule, or which may, of course, have been made explicit. If one generalization or set of generalizations is chosen to cut the rule into cleaner definiteness, the rule will include instances which will be excluded by choice of a different principle or principles of relevance; and vice versa. The problem of interpreting and applying the rule is therefore to determine the focus of the rule as found established,—in other words, to determine by what other generalizations, tacit or express, its content and scope are to be taken as limited. This is the task which confronts judge and counsel whenever it becomes necessary to decide whether or not a recognized rule applies to a particular fact-situation to which it is not clearly established by precedent that the rule does apply. Does cruelty as a ground of divorce include refusal of sexual relations? Does the contributory negligence of the plaintiff which bars a recovery in tort actions include a case where the defendant had “the last clear chance” to avert the injury? Does the rule excluding parol evidence to vary the terms of a written instrument cover a case where the evidence goes not to the details of the terms, but to an understanding subject to which the instrument was delivered? Does the requirement that a promise to pay the debt of another must be in writing include cases where the promise was made in return for consideration moving to the person making the promise? In every such instance when it first came before a court, the rule had to be “interpreted” and its applicability determined by bringing to bear upon it some generalization or generalizations which fixed its focus so as to include or exclude the particular type of situation in question.

The nature of the problem which confronts a tribunal in interpreting and applying a legal rule varies directly with the character of the generalization which the rule embodies, and with the terms in which the rule is expressed. The mechanism of the process is not, and cannot be, the same for all rules. Juristic thought still needs to awake to a more definite sense of this diversity in the same way that recent logical thought has become aware that not all its problems can be solved by the single procedure
developed for the syllogism. It is only by examining some typical kinds of rules that appropriate methods of interpretation and application can be understood.

Many legal rules have been fixed in terms whose focus may be described as stable, in the sense of corresponding to units which for relevant purposes are identical in the minds of all normal human beings to whom the term is suggested. The simplest illustration is where the rule makes a legal consequence depend on the establishment as a fact of (a) a definite number of (b) simple and stable units of observation, such as the two or three signatures of witnesses required for the validity of a will, the three or five years required to bar an action under a statute of limitations, or the twenty years necessary to establish a title based on adverse possession. In all these instances nothing more is needed for application of the rule than a numerical count of the recurrence of a practically fixed identical unit like "signature" or "year". The content of the unit-term "year" is so definitely established in all relevant respects as to leave practically no room for doubt as to what it includes or excludes; so also, though in relatively less degree, with the term "signature", where, however, the possibility may have to be considered of whether a "mark" or a rubber-stamp shall be included within the meaning of "signature". In most instances of this kind the question of the application of the rule, once the facts are ascertained, is so simple as to be practically mechanical. The same thing is true where the rule makes a legal consequence depend solely on the presence or absence in a written instrument of particular verbal symbols, as in the case of many rules of property law, like that which raises a fee-simple wherever in a deed or will the name of the grantee or devisee is followed by the words "and his heirs", or the rule of commercial law which makes the negotiability of an instrument depend on whether or not it is expressed to be payable to "order". Other rules make the attachment of legal consequences depend on a specific fact or facts so simple that they can be identified without much room for doubt. Such are the rules which provide that a will is revoked by the subsequent marriage of the testator followed by birth of issue; or that it is contributory negligence for a person to step from a street-car while in motion. Further instances are the so-called
"stop, look, and listen" rule, and the "rule of the road" requiring drivers to keep to the right or left.

Highly specific rules of this character have an obvious advantage over others in facility of application. Whether or not they are applicable depends purely on direct physical observation of matters as to the identity of which practically no room is left for difference of opinion. As a French jurist has pointed out, the application of law "depends almost entirely on that which the rule 'evokes' in the mind of the judge,—the reading of the rule causes a living picture to arise." 28 The advantage of rules which normally "evoke" only one "picture" is indubitable 29 from the standpoint of security, celerity, certainty, and equality in the operation of law, and of enabling those who are subject to the rule to anticipate the legal consequences of their acts. This is, beyond doubt, the reason why modern law still favors rules of this character to determine the legal effect of formal instruments like deeds, wills, and negotiable instruments where the parties act with the definite intention of producing a legal result, 30 and where they are consequently entitled to expect the law to furnish them with a clear indication of how to produce that result. Even in fields of conduct not intentionally directed toward producing legal results, but to which legal consequences may have to be attached, as in tort law, it has been argued by Mr. Justice Holmes that the same considerations apply and that rules should be specific in order to notify individuals of the legal consequence of definite conduct. 31

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29 The emphasis which Mr. Frank places on the purely private and personal character of the picture evoked by each separate case in the mind of the judge who decides it (op. cit. supra note 2, at 150) fails to take account of the caliper-like quality of attention, which can segregate units so relatively colorless that such differences as may characterize them in different minds can be ignored for legal purposes as irrelevant. This is true of the units mentioned in the foregoing paragraph. Of course even such units may be incrusted in any given mind with private elements; but ordinarily it is possible to isolate these elements without difficulty, and disregard the.
30 This has been repeatedly emphasized by Pound, e. g., op. cit. supra note 5, at 140, 141.
31 Holmes, Common Law (1881) 111-114. Mr. Justice Holmes has recently borne witness to his continued adherence to this belief in the Goodman Case, where the Supreme Court established the "stop, look and listen rule" as the common law of the Federal Courts. Baltimore & Ohio R. R. Co. v. Goodman, 275 U. S. 66, 48 Sup. Ct. 24 (1927).
When a rule is thus highly specific, the number of cases to which it is applicable is necessarily narrowed. Furthermore, since a specific rule must owe its content, as has been pointed out, to a number of higher generalizations cutting across one another and determining the scope of the rule within their area of intersection, it is always difficult to reason from such a rule to other cases falling outside its scope because of the difficulty of agreeing upon any particular one of these various generalizations to bridge the gap between the rule and the new case. The progress of law from its primitive stage toward a more developed jurisprudence has therefore in all legal systems proceeded in a direction opposite to that suggested by Mr. Justice Holmes,—it has moved from more specific toward less specific rules, by selecting and erecting into rules of law higher generalizations under which previously unconnected specific rules can be subsumed as particular instances. Such rules of higher generality are illustrated by those which provide that there shall be liability for “negligence”, that a promise to be legally enforceable must be given in return for “consideration”, that “cruelty” is ground for divorce, that the seller of an article warrants its “merchantable quality”, and the like. Rules of this character make up much of the body of any developed system of law. Their application to a particular case turns on the content covered by such terms as “negligence”, “consideration”, “cruelty”, and “merchantable quality”. The chief problems connected with the application and elaboration of law relate to establishing a connection between such terms and the facts of specific cases.

Rules embodying such relatively broad terms have the double utility of making explicit the “principle” supposed to underlie more specific rules and so releasing that principle for operation in a wider variety of instances, while at the same time by direct appeal to principle they seem to afford a “rational” justification for the more specific rules. The construction of rules of higher generality assumes that there runs through a number of specific rules some common feature which can be isolated and made the differential element forming the basis of a new and more inclusive rule. Thus, from a number of specific rules attaching liability to different acts done with innocent intent, but of such a nature as to
create a likelihood of consequences injurious to others, there can be generalized the idea of liability for acts done without proper regard for such consequences,—in other words, the idea of liability for "negligence".

The whole effectiveness of this procedure has usually been supposed to depend on the possibility of isolating the common element underlying the use of the broader term—in this case "negligence"—with sufficient clarity. In this process we are confronted with our previous observation that the content of a generalization always needs to be marked off by some other generalization or generalizations. Thus in the case of negligence the question inevitably arose as to whether want of foresight meant want of such foresight as could be expected of the particular individual whose negligence was in question, or whether it meant want of such foresight as could be expected of an average individual. In the law of torts, our common-law system chose the latter alternative. The problem of application in every case is therefore to determine what precautions can be expected of an average individual under the circumstances. Obviously, however, this still leaves to the agency applying the generalization very wide freedom to decide what sort of an individual an average individual is, and what precautions such an individual would take under the circumstances of the case. In each specific situation the question of whether or not particular conduct measures up to the standard of precaution which can be expected of an average individual depends on a group of generalizations appropriate to that specific type of situation and inapplicable to situations of a different type. In the course of time particular generalizations may come to be regarded as compelling in connection with particular situations, and thus lead to the crystallization of definite rules that under such and such circumstances particular conduct is "negligent per se", as has happened, for example, in the case of the "stop, look, and listen" rule, and the rule that it is negligence to board or leave a street-car while in motion. In this way what Holmes has called the "featureless generality" of the term "negligence" gives place at particular

points to specific rules. What is significant, however, for the purpose of the present argument is that these specific rules are not a parthenogenesis from the pure content of the term "negligence", but are brought into existence by union of the content suggested by that term with a variety of other generalizations suggested by particular types of situations.

When we turn to a rule like that which permits divorces for "cruelty" we are again confronted with a thought-unit of more or less undefined contour. The term "cruelty" suggests the central idea of intentional infliction of suffering. Suffering, however, is a term appropriate to states of feeling ranging all the way from the actual physical pain which results from a blow or burn, to the anguish produced by expectation of serious financial loss. Legal thought has attempted to give clearer meaning to "cruelty" by distinguishing between "physical" and "mental" cruelty. The limits of "physical" cruelty, however, are not clean-cut. Clearly it includes actual physical force applied to the body of the complaining spouse. Where such force has been applied, there would be practically unanimous agreement that cruelty in the legal sense has occurred, and that the rule permitting divorce is applicable. Suppose, however, that the only cruelty put in evidence consists of unfounded threats of criminal prosecution, or of violent and abusive language. Whether or not the meaning of cruelty is to be extended to include such instances will depend on generalizations suggested by the facts of different concrete situations.

It seems clear, in short, that the attempt to make the applicability of a fairly wide generalization like "negligence" or "cruelty" depend on discovering the presence or absence of some definite directly observable physical unit which runs through all the cases in identifiable form is impractical. Terms like negligence and cruelty suggest rather a variety of concrete facts-situations. Some of these they suggest to all minds equally; there will be practically no disagreement that striking a wife is cruelty or stepping from a moving street-car is negligence. Each term, however, suggests to any one mind many other concrete acts which it would not suggest to another mind. A fruitful approach toward understanding the operation of such a term is offered by a recent
writer who has compared its content to a bunch of keys on a ring, thereby emphasizing the fact that its meaning is not ordinarily separable from a bundle of typical instances. Some of these types have hardened by social habit into close association with the term, so that they are suggested by it to practically everyone; many are more or less private, in the sense that they will be suggested to some individuals but not to others.

If we regard that part of the content of a term which social habit has made more or less stable as its central core, and the various elements of more private content as its outlying fringe, the question of whether or not some particular part of this fringe will be suggested to any given individual will depend on the nature of the connection which exists for that particular individual between the central core of the term and the outlying content in question. The nature of the possible lines of connection is infinitely various. For example, to some individuals, the most impressive element in the blows administered by a brutal husband to his wife will be the anguish and pain experienced by the wife. Such an individual is likely to regard other acts causing the wife similar anguish and pain as on a par with physical violence, and therefore to bring them within the scope of his reaction to the word "cruelty." Another individual may focus his attention on the mere bodily contacts without regard for the reactions of the wife and will therefore not associate with his understanding of "cruelty" any conduct from which physical violence is absent. Nothing is more essential to understanding the way in which legal terms of broad import are applied than this variety of possible connections between the stable typical instances of a term and its outlying fringe of possible meanings. Nowhere is this more true than in the case of some of the broad terms of constitutional law like "property" and "liberty." There can be no doubt, for example, that some judges closely associate the idea of "property" with "that which Socialists are attacking," with the result that they tend to

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23 "Concepts are not something uniform all through their structure. They have none of the nature of a monolith, but are more like a bunch of different connections united only by a common center like a bunch of many keys on the same ring. As we use only one key at a time, so only one aspect of a concept functions in any judgment, not the concept as a whole." BOGOSLAVSKY, TECHNIQUE OF CONTROVERSY (1928) 119.
bring within the scope of the term any relationship the validity of which is being questioned by those whom they are in the habit of regarding as "Socialists." There is no more fruitful or important field for investigation by students of law than the chains of possible connection which may be set up between the central core of content of a legal term and other particular instances which such connections may draw into the body of that content, and so into the ambit of the term.

V

Legal terms like "negligence," "cruelty," "reasonable rate," "restraint of trade," which form the component elements of so many rules of law, are not peculiar or different from other terms of ordinary discourse in having a central core of habitually established content surrounded by a penumbra of doubtful border-line cases. We have seen, for example, that the same thing is also true of terms like "tree," and "tool." It is important to note, however, a significant difference in the nature of the identity on which the class-term is founded in each of these instances. The similarities and differences which govern the inclusion or exclusion of a particular physical object in or from the class of "trees" are similarities and differences in size, composition of parts, structure of organs and the like. On the other hand, in the case of a term like "tool" there is no question of resemblance between the physical properties of the different objects whose title to be included in the term is in issue. The element of identity on which the term is built is not identity of physical properties as between objects falling under the term, but identity in their possible use by human beings. There is no more physical resemblance between a pen and a wheel than between a pen and a picture-frame; yet both the pen and the wheel fall within the term "tool," while the picture-frame is excluded. When we turn to legal terms like "negligence" and "cruelty" we find that the item of resemblance bringing particulars together under the term is of still a third variety. It is not physical resemblance between objects, as in the case of trees, nor resemblance in respect of the use to which the particulars can be put, as in the case of tools, but funda-
mentally it is resemblance in the reaction of approval or disapproval which particular acts evoke in a disinterested observer. There is no element of externally identifiable physical similarity between an omission to stop on approaching a railroad track and the act of swinging on board a moving street-car. The resemblance consists in that both indicate absence of a quality which we call "due care," and which is simply something that we say is present in an act of any kind when done in a manner which we approve as tending to prevent injury or damage. Similarly the indefinite variety of acts which can be subsumed under the term "cruelty" are identified as falling under the term by our reaction toward them as producing a degree of suffering which we disapprove.

On examination, most of the relatively broad terms which form components of legal rules will be found to rest on the type of identity which consists of an identical reaction of approval or disapproval. This is true not merely of the terms already suggested, but even of such a term, for example, as "consideration" in the law of contracts. The test of "consideration" is said to be "detriment," but "detriment" is found to turn not on mere resemblance between physical facts, but essentially on a reaction of approval or disapproval to the facts. Is it "detriment," for example, for a promisee to give up nothing more than a power to make the promisor sue him on a pre-existing obligation? Certainly he gives up something, but is it something which it is a "detriment" to him to give up? Is there consideration where the promisor says, "If you will come and see me, I will let you have land" and the promisee does come and see him—is it "detriment" to "come and see"? Again the answer turns ultimately on a judgment of approval or disapproval of the sufficiency of the thing given up.

Kirksey v. Kirksey, 8 Ala. 131 (1845). See also Ames, Two Theories of Consideration (1899) 12 Harv. L. Rev. 517-519. The same principle applies to determine whether or not a contract is so divisible as to entitle a party who has only partially performed to recover; or whether performance so departs from the terms of a contract as to prevent recovery. Hillyard v. Crabtree's Admr., 11 Tex. 264 (1854); Hayward v. Leonard, 7 Pick. (Mass. 1828) 181; Ellis v. Hamlen, 3 Taunt. 52 (1810). Again the element of approval or disapproval of the consequences is ultimately one of the determining tests as to what is a "mistake of fact" or "mistake of law" so as to permit or bar recovery in quasi-contract; and as to what is "proximate cause" in the law of torts. In the latter instance the scope of the term "cause" cannot be made to depend on purely physical tests.
Of course a rule of law may definitely attach a legal consequence to an act identified solely by its physical characteristics, thereby merging the judgment of approval or disapproval of the specific act in the rule itself. This occurs in the case of the "stop, look, and listen" rule, the rule that to board a moving street-car is negligence, and wherever else a more general rule has been elaborated into a specific rule whose application is made to depend solely on the presence or absence of identifiable physical facts. In these cases the applicability of the rule turns simply on the test of physical observation, and does not leave open the question of whether or not the conduct occurring in any particular instance is to be visited with the kind of approval or disapproval which will bring it under the rule. However, when the operation of a rule is left dependent on the direct application of terms like "negligence," "cruelty," "detriment," and the like, the applicability of the rule will depend not so much on discovering mere physical resemblances between the case and other cases already established as falling within the rule, but rather on the resemblance which the reaction of approval or disapproval to the case in question bears to the reaction aroused in cases forming the habitual and well-established central content of the rule. The difficulty of establishing resemblances and differences between such reactions as contrasted with resemblances and differences between observed physical phenomena accounts for the essential difference in the application of legal rules and the whole process of legal reasoning as contrasted with the application of so-called scientific rules and the resulting processes of scientific reasoning.

The concern of "science," in the usually understood sense of "natural science," is with thought-units which can always be identified as standing in constant relations with displacements in space and time.\(^{35}\) Whether the question is as to the production of heat, color or sound, the combination of chemical elements, or the growth and deterioration of living organisms, natural

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\(^{35}\) Meyerson, op. cit. supra note 21, 151-152. It is not necessary to assume that science deals only with changes in space and time, but only that it deals with events which can be treated as standing in some constant relation with changes in space and time. See Morris Cohen, Reason and Nature (1931) 209 et seq.
science is interested solely in what concerns, or can be expressed in terms of, changes of position in space in intervals of time. Heat is a matter of expansion and contraction, of waves of radiation, of friction and pressure; chemical elements are defined in terms of specific gravity, melting point, solubility in other chemicals and the like; life is a matter of expansion and scission of cells; nerves and muscles, of electrical charges and potentials. All these thought-units are selected with deliberate and careful reference to their correspondence with possible readings along some scale of identical spatial units. Heat is defined in terms which correspond to readings on a thermometer; mass and specific gravity in terms which correspond to readings on a balance; electricity in terms which correspond to readings of an ammeter or galvanometer. The correspondence is not arbitrary; the events registered by the readings are precisely the events in which science is interested. Even the broadest and most ambitious generalizations constructed for the purpose of scientific reasoning, such as "energy," "electricity," "magnetic field" and the like, are kept in constant relation to identities which can be reduced to measurable displacements in space and time. All differences reducible to such displacements can be stated as numerical differences of degree, and therefore graded as greater or less. Instances can accordingly be ranged along a scale of increasingly great difference from the instance or instances chosen as typical of the term. Wherever a class-term is composed of instances whose differences can be thus stated numerically, a numerical test can be set up at some point chosen as appropriate to determine the outer limit of the term, so that when this point is once established the term will not include instances which fall numerically beyond it. The same thing is true wherever the law of statistical averages makes possible the determination in numerical terms of a standard of normal occurrences so that deviations from the normal can also be determined numerically, and a line drawn at some point which will exclude instances lying too far from the normal to be useful for the purposes of the inquiry. All generalizations of a scientific character depend on the possibility of thus establishing their outer limits by a numerical test.
When we turn to thought-units not definitely constructed to have a constant relation to spatial displacements or to groups of numerical repetitions, the possibility of grading degrees of resemblance and difference on a numerical scale disappears. If, for instance, the human organism functioned in such a way that the reaction of disapproval which we express by calling an act "negligent" was accompanied in all human individuals by the twitching of a certain nerve or muscle, it might then be possible to establish a numerically graded scale of degrees of "negligence" depending on measurable physical differences in the twitchings accompanying each reaction. This would be permissible because by measuring the twitching we would in fact be measuring the very thing we were interested in measuring, namely, the reaction. Actually, however, different kinds of judgments of approval and disapproval do not seem to be registered by any measurable correlate in the physical world.

Even, however, if conceivably a gross judgment that a particular fact-situation fell within a legal term could be physically measured in terms of degrees, it would by no means follow that such measurements would supply a proper test for determining the contour of the term. This is because the same ultimate judgment reached by different individuals might well rest on altogether different grounds. One judgment might be reached by a mere "hunch", another by careful analysis. The same judgment might be reached by one person by way of one set of generalizations, and by another person by way of a different set. The process of arriving at that ultimate judgment of approval or disapproval which brings a case within, or keeps it without, the scope of a broad legal term like "negligence" or "cruelty" is not simply automatic, but is inevitably the result in large measure of intelligent processes. The nature of these processes, no less than the ultimate result to which they lead in any particular case, is important not merely in connection with the application of the rule in that case,

56 "For purposes except that of general and extensive translation of one conception into another, it does not follow that the scientific way is the best method of thinking an affair. The nearer we come to an action which is to have an individualized unique object of experience for its conclusion, the less we think the thing in question in exclusively metric terms." Dewey, op. cit. supra note 12, 135-136.
but also in connection with its influence on future cases. For example, if in a constitutional case the term “property” is given a meaning influenced by such a generalization as that “property is that which the Socialists are attacking”, the result for future cases will be very different from what it would be if a meaning based on other generalizations were applied. In other words, even if we admit that the meaning given to certain broad legal terms in any particular case rests ultimately on what may be summarized as a reaction of approval or disapproval, or, if arrived at by a more conscious process, as a value-judgment, this does not mean that the mere ultimate reaction or value-judgment of itself is all that counts; equally important are the subordinate judgments, implicit or explicit, on which this ultimate judgment is based, as well as the generalizations employed in reaching such subordinate judgments. Only by striving to make these subordinate generalizations and judgments more or less explicit can the process of application be intelligently carried out, or carried out in a way that leaves room for the clarification and conscious growth of the law. The application of a legal rule can no more be treated as the registration of automatic human reactions than it can be treated as the automatic registration of physical fact-situations. It consists in applying value-judgments to fact-situations; but because of the potentially infinite divisibility and extensibility of the field of attention, the resultant ultimate judgment on any given fact-situation will be influenced by the extent to which the gross initial situation is analyzed into subordinate elements to which subordinate judgments of both fact and value are applied.\footnote{No one has been more concerned to distinguish between a gross “motor-affective” reaction of “liking” or “disliking” and a thoughtful analytical process of valuing than Dewey, who emphasizes the influence on value-judgments of processes of thought and analysis. See his papers, \textit{Values, Liking and Thought} (1923) 20 \textit{J. PHILOSOPHY} 617; \textit{Valuation and Experimental Knowledge} (1922) 31 \textit{PHILOSOPHICAL REV.} 325. For what can be said in favor of an “intuitional” application of law see Pound, \textit{The Theory of Judicial Decision} (1923) 36 \textit{Harv. L. Rev.} 940 at 951.}

The chief dangers to which the application of legal terms of relatively broad import is subject are on the one hand the danger of making their application dependent in all instances on the mere
presence or absence of unduly simple identical physical facts, and, on the other, dependent on a mere gross reaction of approval or disapproval to the unanalyzed and more or less unconscious suggestions of the term. The former danger has been well illustrated in the application of the term "public utility".

It has frequently been attempted to make the presence or absence of some relatively simple fact-situation the test of whether or not to bring a particular business within the scope of the term "public utility". Thus some judges have sought to make the application of the term dependent on whether or not the business in question enjoys a permanent right of user of the public streets or of the soil underlying the streets. The test is derived from the fact that many businesses which admittedly have the status of a "public utility" are characterized by the enjoyment of such a right, as in the case of railroads, telegraph and telephone companies, and companies supplying water and electricity. The difficulty is that other types of businesses, like that of operating a hotel, which do not require any use of public property, have also been traditionally included in the class of "public utilities" or "common callings". Hotels, however, have a physical resemblance to certain types of public utilities like railroads in that they are links in the chain of transportation. Another possible factual test of public utility character might therefore be that the business was concerned with transportation. This test would, however, exclude admitted instances of public utilities like water and gas companies. Accordingly, neither test, taken by itself, is satisfactory. Neither, for example, could be safely used to include in, or exclude from, the meaning of the term such businesses as the operation of taxicabs or livery stables, which are concerned with

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38 Thus all the well-known tests of public-utility character laid down by Judge Cooley in his extremely influential work on CONSTITUTIONAL LIMITATIONS (8th ed. 1927) consist of the presence or absence of a comparatively simple fact-situation. The third test is the presence or absence of a right of user of public property. Cooley's tests are substantially the same as those used by Judge Field and Judge Brewer in their dissenting opinions in Munn v. Illinois, 94 U. S. 113 (1876), and Budd v. New York, 143 U. S. 517, 12 Sup. Ct. 468 (1891), respectively. In addition Judge Field would admit the test that the particular business had previously been held to be a public utility, thereby boxing the term up in its already established instances and depriving it of power of growth.
transportation, but do not enjoy a right of occupying public property.

A more fruitful method of determining the content of a term like "public utility" would proceed not by seeking in this way for some simple factual identity observable on the surface of the instances to which the term is admittedly applicable, for there seems to be no identity of that character, but would rather undertake by analysis to probe under the surface for a common element underlying the different instances which will account for the identical value-judgment with regard to all of them that a higher measure of public regulation should be imposed than in the case of businesses recognized as private. What basis is there for applying the judgment of desirability of public regulation which the term "public utility" connotes to fact-situations as dissimilar as the user of public property in the conduct of a business on the one hand, and the connection of a business with transportation on the other? Must there not be, in other words, a common element underlying the application to apparently dissimilar instances of the identical ultimate judgment of the desirability of regulation?

The answer is clearly that there must be, but that the element of similarity in such instances may be, and usually is, not one which is directly disclosed on the surface of the physically observable facts, but rather one which requires a chain of successive fact-judgments and value-judgments to establish the ultimate connection or absence of connection between the legal term and the situations to which it is sought to be applied. Thus the applicability of the term "public utility" to a business employing the public streets on the one hand, and to a business connected with transportation on the other, would seem to rest on the presence in both situations of the common element that businesses belonging to both types may, if unregulated, have it in their power to exert undesirable pressure on the social processes of the community. The fact of the existence of such power, combined with the value-judgment that it is undesirable, thus becomes the test of the applicability of the "public utility" concept. Whether or not these elements are present in the case of any particular business is obviously dependent on time and place and circumstances, and
requires for its determination a large number of judgments of fact, and judgments of value applied to these judgments of fact. Two businesses may both be held to satisfy the test, but as a result of a chain of substantially different reasons. Judgments based on the technology of a particular type of business, judgments as to what is unduly wasteful and what is required by efficient management, must be combined with other judgments as to how far competition can be expected to hold its own against pressure for efficiency, judgments as to what effects a tendency towards monopoly in the business may have on other interests of the community, and judgments as to the relative importance of these other interests in comparison with the possible disadvantages of subjecting the business in question to the limitations of public utility status.

In this way fact-judgments are interwoven inevitably with value-judgments, value-judgments call for fact-judgments, and these fact-judgments call in turn for further value-judgments. The generalizations involved in the various judgments applicable to any particular business at a particular place and time aid in elaborating the public utility concept by establishing a specific rule of inclusion and exclusion for that type of business. Over and above these highly specific rules placing particular types of business definitely within or without the class, certain of the generalizations employed in generating the specific rules will in time come to be so frequently resorted to as in fact to become established as rules themselves, as would seem already to have become the case, for example, with the generalization that a business requiring an extensive transmission plant, like the water supply business or the telephone business, is one in which the maintenance of competition is not socially desirable. In this way there grows up a hierarchy of generalizations with definite rules as to the character of particular businesses at the bottom, with the broad "public utility" concept at the top, and with an intermediate body of generalizations tending to harden into rules between.

The process just outlined illustrates the way in which legal rules in the course of application and elaboration are constantly growing in two directions; from top to bottom, and from bottom to top, from specific to general and from general to specific, at the
same time. Existing instances of businesses subject to more than the ordinary amount of regulation suggest the generalization of "public utilities" as a class; the creation of such a class suggests the formulation of generalizations to determine the inclusion or exclusion of new types within the class; the combination of certain of these generalizations in the case of a particular business establishes a rule that that business is or may become subject to regulation. The judgments of value required throughout this process usually take the form that certain interests are to be preferred and others subordinated, as, for example, that the interest of consumers in free competition is to be subordinated to the interest of an industry in maintaining its efficiency, and on the other hand, that the interest of the owners of certain businesses in obtaining the highest possible profits is to be subordinated to the interest of consumers in paying a lower price for service than they might be willing to pay if they had no alternative. This evaluation and balancing between interests, this choice of one interest to be preferred at certain points and in certain respects to another, is the central and ultimate process in the formation, elaboration and application of all legal rules.\textsuperscript{39} It is inevitable that this should be so, since the whole purpose of legal rules is to draw the line between competing human interests by marking out their limits in advance of controversy or in the course of decision once controversy has arisen. This process of evaluating interests tends to be concealed after it has resulted in the formation of a specific rule which makes legal consequences depend on the existence of definite facts. If its presence is neglected, however, even in the application of such rules, decisions are likely to result which cause dissatisfaction as being "formal" and "mechanical". The application of even highly specific rules can never afford to leave completely out of account the fact that the rule itself has been formulated at its particular scope because of generalized value-judgments affecting the type of interests which it is designed to adjust; and these value-judgments remain always in reserve to restrict, if it should seem

\textsuperscript{39} See Dickinson, \textit{op. cit. supra} note 6, at 296-307.
necessary, the operation of the rule in cases to which it might be formally applicable.  

The danger of "mechanical" decisions is especially great in the application of that broad class of artificial legal terms like "subrogation", "equitable conversion", "universal succession", "freedom of contract", "privity" and the like, which represent generalizations of purely legal relations, and which have sometimes been called legal "constructs". These terms are sometimes treated as if they represented only generalized fact-situations, with the result that their application is made to depend on the satisfaction of exclusively factual tests without regard to the solution of a conflict of interests. An illustration of such an application of the term "subrogation" is afforded by the decision in Skinner v. Tirrell.  

There the question was whether the plaintiff, who had advanced money to a deserted wife to purchase "necessaries", was "subrogated" to the right of action against the husband which would have accrued to a tradesman who furnished the "necessaries" on credit. It was held, contrary to a long line of authority, that he was not, since the tradesman being paid in cash had nothing to which anyone could be subrogated, and since furthermore the plaintiff had advanced the money not to the tradesman, but to the wife. It would seem clear, even apart from authority, that thus to limit the meaning of a term like "subrogation" is to erect a purely formal test of the applicability of a concept which exists solely for the purpose of providing a remedy in cases where relief might otherwise be barred by formal requirements. On the other hand, as Gény has pointed out, it not infrequently happens that to apply the full factual implications of a term like "universal suc-

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40 This is particularly true where the specific rule takes form of a "fiction", i. e., that where specific facts are present the same legal consequence is to be attached to them which would be attached to certain other facts. Such a rule is satisfactory and convenient where the surrounding circumstances are such that the two fact-situations can be treated satisfactorily as identical. Where, however, there is something in the circumstances which establishes a pertinent difference between the two fact-situations from the standpoint of effecting the necessary interest adjustment, the application of the fiction becomes mechanical.

41 159 Mass. 474, 34 N. E. 692 (1893).
cession" would go far beyond the accomplishment of the desirable adjustment of interests which the term exists to effectuate.42

The final outcome of what has here been suggested is that the application of any legal term is dependent on the employment of a greater or smaller number of independent generalizations to fix the contour of the term. This is most obviously true in the case of terms of relatively broad scope and import, but it may occasionally be true also where a highly definite term has to be limited in order to prevent a rule from accomplishing a result at variance with the kind of interest-adjustment which the rule exists to bring about. These independent generalizations to which resort is had for the purpose of fixing the limits of a legal rule need not be themselves, and usually are not, rules of law. Often they are factual generalizations relating to the manner and circumstances in which particular human activities are carried on. Often they are generalizations of value relating to the comparative worth of different kinds of conduct or of different interests. Many such generalizations, both of fact and of value, must necessarily be borrowed directly from other organized departments of human thought like the social and natural sciences. Above and beyond such generalizations, however, and frequently resorted to as in the last analysis controlling their applicability, lies another special group of generalizations, more tenuous and abstract, which may be called considerations of "justice". The nature and content of these generalizations and their bearing on the special generalizations of fact and value applicable to particular types of situations have a central rôle in determining both the application of legal rules to particular cases and the elaboration of new rules.

Errata

Dickinson, Legal Rules: their function in the Process of Decision (1931) 79 U. of Pa. L. Rev. 833: page 857, lines 2 and 3 reads "... can and do determine particular decisions.\" should read \"... can and do determine particular decisions with certainty.\"; page 861, line 19 reads \"... conformity to observed fact, and the reason for applying the rule \...\" should read \"... conformity with the rule, and the merit or 'correctness' of the rule \...\".

42 I Geny, Science et Technique en Droit Prive Positif (1922) 139-145, especially 139.