

LEGAL AND INSTITUTIONAL METHODS APPLIED TO THE DEBITING OF DIRECT DISCOUNTS—II. INSTITUTIONAL METHOD

UNDERHILL MOORE AND GILBERT SUSSMAN

THIS article is the second of a series addressed to the problem: What is the effect of the arrival of the maturity day of the customer's time note which had been discounted for him by his bank and credited to his account upon the bank's obligation to him to honor his checks? In the first article the conflict between the decision in South Carolina in *Callaham v. Bank of Anderson*¹ on the one hand and the decisions in New York and Pennsylvania in *Delano v. Equitable Trust Company*² and *Goldstein v. Jefferson Title & Trust Company*³ on the other—the only cases presenting the problem—was noted. That article purported to dispose of the problem by applying legal method. Implicit in the necessary conclusion from the argument made in the application of legal method was the forecast that the future decisions of American courts including those of South Carolina would conform to the New York and Pennsylvania decisions.

The application of legal method required as a first step the making of a judgment as to the category in which "the facts" of the principal cases should be classified. That judgment was that the cases fell within the category of contract. It followed that the obligations of the parties would depend on the terms

¹ 69 S. C. 374, 48 S. E. 293 (1904). A commercial bank's obligation to its checking account customer was held not reduced by the amount of a promissory note made by the customer to the bank and discounted by it, though the note was long past due, in the absence of notice that the bank had debited the note to his account. In an action brought by the customer for the dishonor of a check presented by a third person, a demurrer to the bank's answer setting up the maturity of the note as a defense was sustained.

² 110 Misc. 704, 181 N. Y. Supp. 852 (Sup. Ct. 1920). This was also an action by the drawer for dishonor of a check presented by a third person. The reply having admitted the allegations of the answer that the defendant held an overdue note which had been discounted for him, the defendant's motion for judgment on the pleadings was granted. It was ruled that the maturity of the note reduced or at least gave the bank a power to reduce its obligation by the amount of the note even in the absence of notice to the customer that his account had been debited.

³ 95 Pa. Super. Ct. 167 (1928). In an action by the drawer for dishonor of a check presented by a third person on the morning of the day of maturity, facts similar to those pleaded in the Callaham and Delano cases appeared by uncontradicted evidence. A judgment for the defendant was granted on a motion *non obstante veredicto*, the court formulating a rule like that stated in the Delano case.

of the bargain at the time of discount; that the terms of the bargain would be expressed in promises; that the parties might express their promises by behavior as well as words. The required manipulations by means of these abstractions were supposed to form the conclusion that in the case of a direct discount or loan transaction in the regular course of business of American banks the implied-in-fact promise of the bank was in such terms that the corresponding obligation of the bank to honor checks up to the amount of the note would terminate upon the arrival of the day of maturity.

At the outset when the judgment was made that the cases should be classified in the category of contract, a suggestion for their further classification within the subdivision of set-off or counterclaim (here a sub-category of the contract category) was rejected. It was believed that the problem was whether the customer did or did not have a cause of action and not whether the bank had a cause of action which might be set off or counter-claimed.

In applying legal method the less orthodox conception that the obligations of the parties to the discount transaction depended upon their status or relation as commercial bank and customer was not employed. It was judged that this conception would isolate the same factors, would give them the same weighting and would lead to their manipulation in the same way as the approach by way of the notions of contract and implied-in-fact bargain; and that whether the obligation of the bank be said to depend upon its implied-in-fact promise or the relation of commercial bank and customer, precisely the same facts would be marshalled in the same formation to attack the problem of how long that obligation continues.

I

The first article is typical of the procedure and the products of legal method. First, insofar as legal method is actually employed as a means of forecasting, its data and its methods are regarded as sufficient in themselves to yield a forecast. The two factors of "the facts" and the decisions of courts in past cases are segregated from the other factors constituting the litigation-situation and the attempt is made to state propositions of "law" which are the product of manipulation of these two factors alone. But the behavior of litigants and the decisions of courts are only two of the variables among the bewilderingly numerous constituents present in any litigation-situation. For this reason propositions derived from such a study can not be expected to state "laws," *i.e.*, predictions.⁴ Nor should the most

⁴ Moore and Hope, *An Institutional Approach to the Law of Commercial Banking* (1929) 38 YALE L. J. 703, 704.

sanguine do more than give them some uncertain value in the course of making an intuitional forecast of legal consequences.

Secondly, the article applies its method to "the facts" of the principal cases as they are stated in the law reports and not to "the facts" presented to the court as they appear in records and briefs. Thus no account is taken of the fact in the *Delano* case that the plaintiff had an account at each of two branches of the defendant bank and that the note which was debited at the one had been discounted at the other.⁵ Exclusive reliance upon law reports as sources is characteristic of legal method and must vitiate many of its results.

Thirdly, the application of legal method required the choice of a legal category within which "the facts" of the litigation-situation might be classified. "Contract" with its abstractions of bargain, promise, implied-in-fact promise, etc., was chosen. But contract like the other categories which legal method provides is too inclusive to permit of adequate classification; and bargain, etc., like the other abstractions of contract, is too extended and elastic to permit of adequate manipulation of the data. Perhaps this inadequacy may be explained by the fact that lawyers in forming their categories are engaged in classifying litigated cases in which the situation and the behavior of one or both of the parties differs from the ordinary situation and the regularly followed patterns of behavior. Such deviational situations and behavior are likely to be "distinguished by dissimilarity rather than similarity one to another. Thus in order that the 'legal' categories might be multitudinous of individual cases, it was necessary that their differentiating concepts be exclusive of few individual cases. In consequence, the 'legal' categories are inadequate for classification, and the 'legal' abstractions (which were formulated with reference to those categories) are inadequate for manipulation of conduct typical and atypical."⁶ For example, by classifying the principal cases under contract they are grouped with all exchanges of land and goods made in the regular course of business in every stage of production and distribution, with transactions for long and short term financing, with successful courtships, etc. A rigorous application of legal method to the problem would take into account every such transaction, and by indiscriminately applying the abstraction of bargain make them comparable. By applying the abstraction of implied-in-fact promise to the principal cases, they and all other "wordless" transactions are viewed as significantly alike merely

⁵ The order for the entry of judgment for the defendant in *Delano v. Equitable Trust Company* was made in Special Term, Supreme Court, Kings County, March 1920. The venue was in the adjoining county of Nassau.

⁶ Moore and Hope, *op. cit. supra* note 4, at 705.

because of that quality. The more rigorous the application, the more apparent the inadequacies of the method. The less rigorous, as in the first article, the more facile the argument and conclusion.

Fourthly, though the first article purports to apply legal method it is not in fact restricted to a study of the two factors in litigation-situations which that method is devised to study. On the contrary, the manner in which other persons regularly behave in commercial banking transactions is given equal consideration. But the introduction of usual practice into the equations of legal method is felt to be illicit and is accomplished with averted eyes. Consequently this factor is not adequately and systematically weighted. An attempt is made to conceal the fact and manner of its introduction by labelling the process interpretation of the behavior of the litigants. But behavior is interpreted by observing the behavior which usually follows behavior like that being interpreted. Thus the process of interpretation in situations in which banks discount time notes would seem to be to observe the usual conduct thereafter of parties in similar situations. In the first article, however, the process of interpretation was conducted as follows. The discount transaction was compared with transactions in which professional lenders agreed to make loans. No attempt was made to discriminate between professional lenders nor to examine specific loan transactions. The discount was also compared with transactions in which commercial banks agreed to purchase investments. While the transactions were limited to those in which the purchasers were commercial banks, again no attempt was made to examine specific purchases. Complete reliance was placed upon general statements in a few secondary sources. It was concluded that the discount transaction was more like a bargain to lend than a bargain to pay a purchase price. It was next sought to find by a similar process of interpretation the terms of the loan bargain. It was assumed without inquiry that agreements to lend are usually limited in point of time and the inference was drawn that receipt by the bank of the discounted note meant a promise or assurance to lend during a definite period only. In similar fashion the day of maturity was taken to indicate the day for performance of the customer's assurance and therefore was seized upon as the day terminating the period during which the bank's promise or assurance was to continue. The crucial inquiry as to whether or not customers usually cease to draw for more than the amount of the credit balance of the current account on and after the day of maturity if they have no arrangement with the bank was not made. Why this inquiry was not made was not even indicated. Such unmethodical procedure is typical in cases in which extraneous factors are wittingly or unwittingly slipped into a system not

devised for their manipulation.⁷ In this respect the article is a good example of the misapplication or perhaps application of legal method.

Fifthly, the manner in which commercial banking is conducted is a factor which may vary with both time and place. Consequently forecasts made either in whole or in part on the basis of this factor are tenable only so long as it remains constant. Some recognition in the article of the variable character of this factor appears in the suggestion that perhaps the inconsistency between the decision in the *Callahan* case and the decisions in the other cases is due to peculiarities in banking practice in South Carolina at the time of the decision. Yet the argument and the conclusion, though based in part on banking practice, are stated in general and categorical terms without qualification in respect of local or changing practice. Here again the article errs in the manner usual in application of legal method. Conclusions which are in fact very specific are made misleading by their statement in the form of generalities.

Sixthly, while the making of a forecast seems to be the ultimate objective of the article no forecast is explicitly made. Rather it is left implicit in the conclusion which must necessarily follow from the argument. In this the article is characteristic of the literary expression of lawyers. They do not weaken the force of an argument by expressly drawing from it a conclusion which does not necessarily follow, a conclusion in fact reached by a process other than the method which is ostensibly applied. Very likely the tradition of advocacy, intellectual honesty, and insight into the process of forecasting account for this manner of stating conclusions.

The making of these observations upon the first article is not masochism. The article is taken to be an adequate sample of the methods and products of lawyers. But it is the application of a method so hopelessly inadequate to the purpose that the most generous rating of the article would class it among ingenuous post-rationalizations.⁸ In fact, the conclusion that the maturity of the customer's time note effected a reduction in the amount of the bank's obligation to honor his checks is an intuitive judgment based upon a composite of undisclosed and unanalyzed experience and evidence. Without

⁷ Legal literature is full of examples of the manner in which insufficient evidence casually evaluated is relied upon in treating a crucial point for which the postulate systems of legal method do not provide a pigeon-hole. One is chosen from FRANKFURTER AND GREENE, *THE LABOR INJUNCTION* (1930) 17, n.71 and Appendix VIII, because the clarity and precision of the book chisel the defects as well as the merits of legal method in high relief.

⁸ See Hutcheson, *The Judgment Intuitive: The Function of the "Hunch" in Judicial Decision* (1929) 14 CORN. L.Q. 274; FRANK, *LAW AND THE MODERN MIND* (1930).

inquiry it is judged that notes are usually lent upon or discounted only for checking account customers who receive the proceeds of the notes in the form of checking account credit and liquidate them by means of their checking account credit on the day of maturity unless arrangements for renewals are made; that is to say, that unless arrangements for renewals are made, customers on and after the day of maturity do not draw and banks are not called upon to honor checks beyond the credit balance of the current account.

II

It has been observed that the litigation-situation is a complex of innumerable variables of which the aspect of the behavior of the parties referred to as "the facts," and the aspect of the behavior of the court referred to as the decision are but two. What some of these other variables are is easily suggested.⁹ First, there are the aspects of the behavior of the court and the parties which are isolated for study by the biological sciences including psychology. They range from the processes of physical heredity to the data of psychiatry. Secondly, there are the aspects of the physical environment whose causal relation with human behavior is the study of anthropogeography. Thirdly, there are the elements of human culture as distinguished from human nature. These are the tools and the tangible equipment which is their product, the established patterns of behaving with this equipment and toward other men, and the propositions which are the sciences, philosophies, and religions. It is the study of the correlation between these cultural elements and particular human behavior which is, to those without curiosity, the ultimate end of anthropology, economics and sociology.

Even if the litigation-situation were to be narrowed by the exclusion of those aspects which on the basis of a tentative judgment were not causally related to decisions, the psychological and cultural factors would remain. Even if techniques were at hand for the study of the causal relation of each factor to decisions the joint manipulation of all is out of the question. It would be absurd to attempt to state a litigation-situation in terms of all the variables in causal relation with the decision. The formulation of such an equation is a day dream. Short of such a formula the forecast of a particular decision can be no more certain than the forecast of tomorrow's weather in New Haven.

"The more complex the phenomena the more difficult it is to foretell the future from a condition existing at a given moment,

⁹ OGBURN, *SOCIAL CHANGE* (1922) 3-51; Moore, *Rational Basis of Legal Institutions* (1923) 23 *COL. L. REV.* 613-614.

even if the essential laws governing the happenings are known. Supposing, for instance, we are studying erosion on a mountainside. Can we foretell which course it is to take, or how the present forms have resulted? We find a gulch. At its head is a large boulder that deflected the water and caused it to cut a channel for itself on one side. If the stone had not been there, the gulch would have had a different direction. It so happens that the soil in one direction was soft so that the running water cut readily into it. We are dealing solely with the laws of erosion, but even the most intimate knowledge of these cannot adequately explain the present course of the gulch. The boulder may be in its place because it was loosened by an animal walking along the mountainside. It fell down and rested at the place where it obstructed the course of the running water. . . .

"These conditions make prediction of what is going to happen in a special case exceedingly difficult, if not impossible. Accidental occurrences that are logically not related to the phenomena studied modify the sequence of events that might be determined if the conditions were absolutely controlled and protected against all outside interference. This condition is attained in a completely defined physical or chemical experiment, but never in any phenomenon of nature that can only be observed, not controlled. Notwithstanding the advances in our knowledge of the mechanics of air currents, weather prediction remains insecure in regard to the actual state of the weather at a given hour in a given spot. A general, fairly correct prognosis for a larger area may be possible, but an exact sequence of individual events cannot be given. Accidental causes are too numerous to allow of an accurate prediction.

"What is true in these cases is ever so much more true of social phenomena."¹⁰

But observation of the relation between any group of variables including the decision makes the sphere of intuitional judgment smaller; and the study of any one or more variables may disclose that their correlation with decisions is a useful index. The forecast of the course of decisions or even of a particular decision in some fields at least may perhaps be made as probable as the prediction of the meteorologist. The same course which was open to the weather prophet of the seventeenth century is open to the lawyer and the student of government today. The rigorous application of a defined method to measure defined variables in units as invariable as may be, and to state in terms of those units a relation between those variables is as available a procedure now as it was then. Is it not conceivable that the time will come when the lawyer in making his judgments will take into account the results of the methodical study of a few cultural and psychological factors as well as his law books and his intuitive valuations of such factors as he happens to think of just as today the American farmer in making his

¹⁰ BOAS, *ANTHROPOLOGY AND MODERN LIFE* (1928) 205-207.

judgments takes into account the weather forecasts as well as the Farmers Almanac?

If a piecemeal exploration of the litigation-situation is to be undertaken at what point should the beginning be made? Should it be directed at the causal relation between some aspects of the native psychological equipment of the court or at the correlation of cultural factors and decisions? It is believed that the most profitable beginning is a study of cultural factors. A reason for this belief has been stated by Ogburn:

"In conclusion, then, two factors in social phenomena have been recognized and their significance for analysis shown. Usually the cause of the phenomenon is inaccurately thought to be largely biological or psychological and only slightly cultural. The cause of unemployment, for instance, was thought by many to be due to human nature, that is, to laziness, to unwillingness to work, to a desire to loaf, to lack of ambition or to many other psychological traits of the unemployed. The cultural causes of unemployment are not the first to be seen. But as a result of investigation it is found that a vast amount of unemployment is due to the cyclical and seasonal nature of industrial life, and to a particular organization of business which could be greatly improved by a good system of employment agencies. While it is a fact that the general tendency is to overemphasize human nature as a cause in the whole field, still the preceding analyses do not warrant any dogmatic doctrines. The dogma of the pure environmentalist is as untrue as the dogma of the biologist as previously indicated in the study of crime. The investigation should concern both factors and the facts in each case will determine the relative significance of each factor. There are perhaps several reasons why good methodology should sanction as a first step a consideration of the cultural factor. In the first place the cultural factor is directly connected with a description of the phenomenon; a description being necessary before an analysis of causes is undertaken. An account of the cultural factor is in part a history and an account of contemporary cultural relationships. Furthermore, it is frequently possible to make such an account with a fair degree of accuracy. It is usually much more difficult to describe the factor of human nature. Human nature is very elusive; our ignorance of its laws is great; measurement is difficult; and prejudices are strong. Furthermore the influence of the factor, human nature, can be seen usually much more clearly after the cultural factor is understood. These remarks, while applying specifically to analyses of particular social phenomena, are also applicable to accounts of cultural development in general."¹¹

Other reasons lead to the same conclusion. It is very generally believed that there is a causal relation between custom and decision in the field of banking. The close connection between decisions and current social philosophies is not only recognized but emphasized.¹² Finally, in legal argument implied-

¹¹ OGBURN, *op. cit. supra* note 9, at 50-51.

¹² *Infra* note 13.

in-fact bargains are constructed from the usual patterns of behavior observed in the same or similar contexts. How the first article in this series exemplified this process has already been pointed out.

The cultural elements in a litigation-situation with which decisions might be correlated are the tangible equipment, the regularly followed patterns of behavior and the propositions which are the sciences, philosophies and religions. Tangible equipment and ideas were rejected. The rejection of tangible equipment resulted from a judgment that there was less likelihood of a significant correlation of this element and decisions than of patterns of behavior and decisions. The shape and material of a court house seemed to be of slight significance as compared to the institutional behavior of people in the vicinity. Science, philosophy and religion were rejected because of the signal failure of that group of brilliant intuitionists who have focused so long on current economic theories and social philosophies to do more than point out over and over again the very great probability of the very great significance of these factors.¹³

The regularly followed patterns of behavior were selected. Their importance in law has been described elsewhere:

"It is the habitual character of the behavior which we call an institution upon which we rely in inferring that the behavior will continue, *i.e.*, that the legal institution is permanent or relatively so. We may not be able to account for the fact that men's actions move along the well-cut channels or straggling ruts of habits, but that they do is the conclusion of the philosopher, the psychologist, and the common man. In consequence of its predictability, an institution becomes along with the sun, the tides, the rain, one of the constant factors among the welter of variables which are taken account of in making a judgment. One may be far from certain of what will be a neighbor's behavior when he is asked for his daughter in marriage, but at the same time confidently judge how the neighbor would feel and act if his horse were, without his consent, used for plowing another's land. But in both cases, in view of the institutions of marriage and of private property, one could count with sufficient certainty on the behavior of the community when stimulated by the courses of conduct supposed."¹⁴

Another reason for the choice of regularly followed patterns

¹³ Pound, *Do We Need a Philosophy of Law?* (1905) 5 COL. L. REV. 339, 345; *Mechanical Jurisprudence* (1908) 8 COL. L. REV. 609; *Scope and Purpose of Sociological Jurisprudence* (1911) 24 HARV. L. REV. 598 ff., (1911) 25 HARV. L. REV. 140; *THE SPIRIT OF THE COMMON LAW* (1921) 33, 118; *AN INTRODUCTION TO THE PHILOSOPHY OF LAW* (1922) 90; *INTERPRETATIONS OF LEGAL HISTORY* (1923) 22, 64, 92; *The Theory of Judicial Decision* (1923) 36 HARV. L. REV. 642, 952; *Jurisprudence, RESEARCH IN SOCIAL SCIENCES* (edited by Wilson Gee, 1929) 181. CARDOZO, *THE NATURE OF THE JUDICIAL PROCESS* (1921) 31, 54; *THE GROWTH OF THE LAW* (1924) 22, 32.

¹⁴ Moore, *op. cit. supra* note 9, at 609-610.

of behavior is the common sense notion of lawyers that such patterns are of peculiar importance. It is unusual to find an elaborated statement of the law applicable to business transactions which is not in part description of the regular ways of doing business. Lawyers in making their intuitive judgments in the field of business weight this factor more heavily, perhaps, than any other. For example, in advising a bank that its obligation to a customer was reduced by the amount of his check which the bank had paid to the holder, a lawyer's chief reliance would be the observed fact that the amount up to which checks are drawn and honored is almost always reduced by the amount of checks previously paid. Certainly there could be no reliance on precedent; there is none.

III

A method for the systematic study of the relation between the decision in a particular case and the type and degree of deviation of the behavior followed by that decision ("the facts in the case") from current institutional behavior patterns was formulated some time ago.¹⁵ That method provides, first, a procedure for analysis of behavior (institutional and non-institutional) into transactions. Secondly, it provides for the determination of what transactions are sequential (institutional). Thirdly, it provides a procedure for the choice of the sequence with which each of the transactions is to be compared in finding the type and degree of its deviation. Fourthly, it provides a gauge for measuring the degree of deviation.¹⁶

It is proposed that this method and its underlying hypothesis be tested by the application of the method to the principal cases. They are peculiarly apt for such a study. They are the only decisions "in point." They are but three in number. As reported, and even as disclosed by the records, their "facts" are as much alike as the facts of distinct litigation-situations can be expected to be. Each case was decided by a different court and in a different state. In South Carolina the decision was for the customer; in New York and Pennsylvania, for the bank. The South Carolina decision was rendered in 1904; the others in 1920 and 1928 respectively.

¹⁵ Moore and Hope, *op. cit. supra* note 4.

¹⁶ It should be noted that this method takes into account institutional patterns of behavior *current* within the jurisdiction of the court at the time of a decision. It is not designed to determine the causal relation between either patterns of yesterday and decisions of today, or decisions of yesterday and patterns of today, or patterns of yesterday and patterns of today. It is not a method for the study of social lag, of social trends, or of development of institutions. Its perfection, if it can be accomplished, should be one of the preliminary steps towards the techniques for the more precise study

The fact that the South Carolina decision is contrary to the others makes the South Carolina study a control or check on the New York and Pennsylvania studies. Thus if any significant correlation or causal relation between the decision and the type and degree of deviation of the behavior of the litigants from the institutional patterns current in the jurisdiction at the time of the decision should be observed, the same relation should be observed in all three litigation-situations, provided all the unobserved significant factors were the same or similar. If these were the same or similar, whatever the differences between the patterns in South Carolina, New York and Pennsylvania might be, the type and degree of deviation of the behavior of the litigants in all three litigation-situations should show the same causal relation to the decision. For example, if in New York and Pennsylvania one of the institutional patterns which might institutionally follow the arrival of the customer's time note at maturity be one in which the check drawn and honored is in an amount not more than the ledger balance less the amount of the note, whereas in South Carolina the pattern which may follow is one in which the amount of the check is not more than the ledger balance without deduction of the amount of the note, the same causal relation should be observed in the three jurisdictions. If it should not be observed, it would indicate either a defect in the method, a mistake in its application, or a variation in the variables not under observation.

The fact that the South Carolina case was decided in 1904, the New York case in 1920, and the Pennsylvania case in 1928 is an advantage in that it makes their comparative study a more rigorous test of the method. But it makes the problem of collecting reliable and comparable data as to institutional patterns difficult. This difficulty is not, however, inherent in the method. If the method or some development of it, proves to be useful, it would ordinarily be applied to strictly contemporary litigation-situations.

The application of the method requires the finding of the institutional patterns in each of the three states. Since a comparison of the behavior of the litigants with patterns of institutional behavior is the objective, the investigation in each of the three states may be limited to a search for those institutional patterns, if any, with which the behavior of the litigants should be compared.

The comparison which the method requires is a comparison in detail of the successive segments of the behavior of the parties with corresponding segments of institutional behavior.

of such problems—problems which are so important (BOAS, in *THE NEW SOCIAL SCIENCE* (edited by L. D. White, 1930) 96-97) as well as so alluring (Ogburn, *op. cit. supra* note 9, at 213-237).

The segments which have been chosen as units are transactions.¹⁷ In order therefore to plan the investigation in each of the three states it is necessary: first to arrange the behavior of the litigants in transactions; secondly to conceive all the possible transactions which might be sequences¹⁸ with which the behavior of

¹⁷ "The subject-matter of any field of investigation may be considered as a class of entities possessing the common factors by which the field is defined. The subject-matter of a field of investigation whose subject-matter is behavior may be considered as a class of segments of behavior possessing the common factors by which the field is defined. A segment of behavior is a succession of events of behavior. A segment of behavior which is an entity is a succession of events of behavior in some relation with each other. The relation chosen to determine the events constituting such a segment of human behavior might have been, but was not, solely a space-time relation (e.g., all events occurring *today* in *this room*). The relation chosen was rather that often crudely referred to as the relation of cause and effect, or the causal relation.* The greatest segment of human behavior in causal relation and possessing the common factors by which the field is defined will be referred to as a *transaction-series*. The least segment of behavior in causal relation and possessing the common factors by which the field is defined will be referred to as a *transaction*. A transaction-series is obviously a succession of one or more transactions in causal relations with each other."

* "A particular event *E* may be said to be in causal relation with another particular event *e* if the likelihood that event *E* will be succeeded by events *e*, *e*₁, *e*₂, *e*₃, etc., at particular intervals of space and time is greater than the likelihood that it will be succeeded by other particular events.

"The likelihood referred to is not an *a priori* mathematical probability. That cannot be computed since the equally likely cases cannot be enumerated. It is not an *a posteriori* statistical probability. That has not been observed. It cannot too strongly be intimated that the judgment as to likelihood which is here supposed in a qualitative subjective judgment, and not a quantitative objective judgment. The word likelihood is used in this same sense hereafter. It refers neither to the result of a mathematical inference nor to the result of a statistical observation." Moore and Hope, *op. cit. supra* note 4, at 706.

¹⁸ "Classes of transactions may also be organized with reference to descriptive similarity (looking alike, rather than having like consequences). Such classes are defined by a generalized description of the transactions of which the class is composed. An hypothetical transaction corresponding point for point with such a generalized description is, if the class of transactions which is defined by that description is sufficiently large, referred to as a sequence. An actual transaction which would, if hypothetical, be a sequence, is referred to as a *sequential transaction*. An actual transaction-series constituted of sequential transactions is referred to as a *sequential transaction-series*.

"Institutional behavior (*i.e.*, behavior which frequently, repeatedly, usually occurs) may thus be defined as a class of sequential transactions. Actually, transactions are preceded, accompanied, and followed by other transactions. Some sequential transactions may frequently succeed certain series of sequential transactions. The relation of frequently following—frequently preceding is referred to as the institutional relation. The class of transactions which satisfies the condition of being sequential transactions in institutional relation is referred to as the institution. Sequences in institutional relation are referred to as *institutional sequences*.

the litigants should be compared; and thirdly to limit the inquiry by confining it to those possible transactions which, on the basis of a preliminary judgment, seem likely to be found to be sequences.

When the behavior of the litigants in each case is arranged in transactions the *Callaham* and *Delano* cases disclose two transactions and the *Goldstein* case three. The behavior of the litigants ("the facts") which is considered is that appearing in the briefs and records and not in the published reports. The report in the *Delano* case is an incomplete statement of the facts;¹⁹ the *Callaham* and *Goldstein* reports are quite adequate. The records and briefs rather than the reports are of necessity resorted to because the behavior of the parties which is presented to a court, and not merely so much of their behavior as the court thereafter happens to mention in its opinion, must be considered in an institutional analysis. In the *Callaham* case the first transaction includes the discounting of the customer's note and the debiting of the amount to his checking account at or after maturity. The second transaction consists of the drawing, presentment, and dishonor of the customer's check. In the *Delano* case, the discount of the note and pledge of collateral at the Colonial branch, the demands of the bank for payment at and after the maturity of the note, the reply of Delano stating his inability to pay, and the making of a debit entry for the full amount of the credit balance of his checking account at the Madison branch is the first transaction. The second transaction consists of the drawing, presentment, and dishonor of the customer's check. In the *Goldstein* case the first transaction includes the discount of the customer's note and the debiting on the morning of the day of maturity of the amount of the note to his checking account; the second, the drawing, presentment, and dishonor of the check; and the third, the tender and acceptance of cash for deposit. It will be noted that in each of the three litigation-situations the first transaction is one which begins with the discount of the customer's note and ends with the debiting to his checking account. Also, the second transaction in each case consists of the drawing, presentment, and dishonor of a check. The arrangement of the behavior of the parties in transactions will be discussed in the final article of this series.

It will be observed that all of the transactions disclosed by an analysis of the principal cases have the likelihood of conse-

¹⁹The institutional analogue to a transaction series is referred to as a *sequence-series*.

"Any actual transaction which does not satisfy the condition of being a sequential transaction in institutional relation is referred to as a *deviational transaction*." *Ibid.* 707.

¹⁹ *Supra* note 5.

quences which bring them within the deposit currency field.²⁰ The three transactions beginning with the discount of the customer's note and concluding with the debiting of the amount of the note to his checking account, by virtue of their having the likelihood of extinguishing deposit currency, are within the extinguishment subdivision. The three transactions also have the likelihood of liquidation of the note by means of deposit currency.²¹ Therefore the investigation in each of the states must

²⁰ "Deposit currency is but one among many forms of commercial bank credit; it is credit on the current checking account. Deposit currency of a particular bank in favor of a particular customer exists in the amount of the balance of the current checking account of that customer with that bank. The term balance is here used in a special sense, to refer to the *amount of deposit currency of a particular customer*. The balance may be described as the limiting amount up to which checks are likely to be drawn by the customer and honored by the bank. This description is obviously incomplete; nevertheless, it sufficiently approximates a description which to be exhaustive would of necessity enumerate many other sorts of behavior.

"Deposit currency of a particular customer is created when the balance of that customer increases. Deposit currency of a particular customer is extinguished when the balance of that customer decreases. Deposit currency of a particular customer is transferred when the balance of that customer decreases and the balance of another customer (the transferee) of the same or another bank increases. Accounts between, for example, buyers and sellers are liquidated when it becomes unlikely that thereafter payment will be either demanded or offered.

"The field of investigation is constituted of transactions which have either resulted in the creation of deposit currency, the extinguishment of deposit currency, the transfer of deposit currency, the liquidation of accounts by means of transfer of deposit currency, or which have created a likelihood that one or another such result would follow but, without any such result, have terminated by its becoming no longer likely.

"The field of investigation is divided into four main subdivisions. A transaction may fall within more than one subdivision. As between some subdivisions this is obviously true; it could readily be shown to be true as among any subdivisions. If a particular transaction falls in more than one subdivision, in each of those subdivisions particular attention is paid only to that aspect of the transaction which brings it within that subdivision." Moore and Hope, *op. cit. supra* note 4, at 710.

²¹ The fact in the Delano case that the ledger balance of the customer did not equal the amount of the note and that subsequent to the day of maturity his account was debited with the account of the balance rather than with the amount of the note does not make the transaction which was concluded with the making of the debit entry one which has the likelihood of partial reduction. Upon the basis of experience it is judged that notwithstanding what happened in this particular case the likelihood of this transaction is liquidation in full out of the checking account and not the application of an insufficient ledger balance in partial liquidation. The basis for this judgment and the extent to which it is sustained by the evidence will appear in a following article. Consequently in making the list of likely possible transactions for this investigation it is not necessary to include transactions which do not have the consequences of both extinguishment and liquidation in an amount equal to the amount of the note.

be directed at finding the sequences, if any, which have both consequences.²² The three transactions beginning with the drawing and ending with the dishonor of a check have the likelihood of extinguishment and the likelihood of liquidation of a third person's account even though these consequences were not actualized. These transactions are therefore comparable to a sequence or sequences from the extinguishment subdivision having the same consequences. Obviously in the United States the drawing and honoring of checks given to a third person is the comparable sequence. It would be a waste of time to attempt to verify by systematic investigation the judgment that the drawing and honoring of a check was in South Carolina, New York, and Pennsylvania a sequence with the consequences indicated. Therefore the investigations will not include such an inquiry. The same considerations have led to the same conclusion as to the deposit transaction in the *Goldstein* case. Experience is a sufficient basis for the judgment that the tender and acceptance of cash for deposit was a sequence in Pennsylvania. The inquiries therefore will be planned so as to find all the sequences in the class of transactions having the consequences of both extinguishment and liquidation in an amount equal to the amount of the note, *i.e.*, the sequences for the dis-

²² A study which is organized from a point of view which discloses the data as means to an end, as devices leading to consequences, must make consequences rather than formal similarity the common factors upon which major classifications are made. But unless subdivision of major classes on the basis of special consequences is made, the classifications will not be as refined as the qualities of the data permit. Consequently the concepts and symbols used in manipulating the data will be less adapted to their purpose than they would otherwise be. In subdividing a class within the deposit currency field, any special consequence is relevant which is a consequence serving to define one of the other subdivisions of the deposit currency field. When the possibilities of subclassification on the basis of special consequences is exhausted the data should then be arranged in further subclasses on the basis of formal similarity. This is because the object of the study is to determine first the behavior patterns within the subclass and second which of them are sequences.

The deposit currency field has been organized on such a basis, and there is within it a class of transactions distinguished by possessing either the common factor of extinguishment or the likelihood of extinguishment. This class may obviously be further subdivided into those transactions which possess the consequence of extinguishment. Since one of the objectives of this study is to determine the behavior patterns which result in extinguishment the actual transactions studied lie within this class. This class should be further subdivided on the basis of some relevant special consequence, if any, if the transactions within it have a common consequence in addition to that of extinguishment. The sub-class of extinguishment transactions to which the actual transactions studied here belong is one in which the bank which has discounted its customer's time note no longer makes any demands upon the customer for payment. This is the special consequence which marks off or defines the liquidation field.

count and liquidation in full out of the checking account of notes of customers.

Whether a particular hypothetical transaction is a sequence depends upon the frequency with which the actual transactions, from whose description the hypothetical transaction is derived, actually happen. For example, an hypothetical transaction beginning with the discount of the customer's time note and including among other aspects of behavior the making by the bank of debit entries on the day of maturity upon the receipt of the customer's memorandum check for the amount of the note is a sequence if actual transactions of that type happen with sufficient frequency. Whether transactions of a particular type happen with sufficient frequency depends upon the answers to two questions.

It will be recalled that transactions are classified on the basis of their consequences and that the class of transactions to be observed is determined by the fact that each transaction has the likelihood of both extinguishment and liquidation in an amount equal to the amount of the note and not by formal similarity of the transactions to each other. The first question is: Does the class itself occur with sufficient frequency? This question would have to be answered even if every transaction in the class were identical. The answer depends upon the absolute frequency of the total number of transactions within the class. While it is probable that the large majority of time notes which mature during a given period are liquidated in part only and renewed for the balance and while it is true that some of those which are paid in full are paid in cash or by a check upon another bank, nevertheless practically all direct discounts, which are not renewed or paid in either of the ways just indicated, are liquidated in full out of the checking account. The total number of direct discounts in existence at any one time is conceded to be very large. Consequently it is judged that the class of transactions having the consequences of extinguishment by liquidation is so large that it is safe to conclude without investigation that there are regularly conformed-to patterns, *i.e.*, sequences, having these consequences.

The second question to be answered is: Does any transaction of a particular type occur sufficiently frequently within the class of transactions having the determinative consequences to be sequential? An examination of 100 observed transactions within the class may show results ranging from 100 patterns of transaction each occurring once to a single pattern occurring 100 times. For the present it is assumed that any hypothetical transaction is a sequence if actual transactions of that type are observed to occur with a percentage frequency of, say, 10 per cent. in a class of transactions which itself is sufficiently large

to disclose regularly conformed-to patterns. Any degree of frequency hypothetically suggested as a test for determining sequences must remain hypothetical until the conclusion of this and other studies.

The first step in planning an investigation is to enumerate the possible transactions which imagination prompted by experience suggests might happen and might have the consequences determinative of a class, however unlikely the happening of many of these transactions may seem to be. In the enumeration many transactions will inadvertently be included which are likely to happen but not likely to have the consequences. The next step is to strike from the enumeration all such transactions. In this study among the transactions so excluded were the large number of transactions beginning with the discount of a customer's time note and ending with liquidation of the note by means of the payment of cash, or by the use of a check upon another bank, or ending with the liquidation of part of the amount of the note and the renewal of the balance. The final step is to strike from the list of possibilities remaining those which judgment indicates are so unlikely to be found with sufficient frequency to be sequences that inquiry respecting them does not seem worth while. In this study an example of such possibilities is the transaction beginning with the discount of the customer's time note and ending with the making of debit entries by the bank prior to the day of maturity in the absence of a check or instructions from the customer. The result of this process is that in this study there remain eighty possible transactions any one or more of which might be sequences.

In the enumeration of these possible transactions certain abbreviated symbols of behavior are used. The symbols and the behavior they refer to are:

Discount: The customer tenders and the bank accepts for discount or makes a loan upon a time note made by the customer payable to the bank.

Credit: The bank makes a credit entry for the amount of the proceeds of the loan or discount in the customer's account.

Security: The customer pledges collateral with the bank as security.

Notice: The bank prior to the day of maturity sends the customer a notice of the approaching maturity of his note.

Hold: At the opening for business on the morning of the day of maturity the bank places a hold for the amount of the note against the customer's account.

Check-on (before, after): The customer on (before, after) the day of maturity gives the bank a memorandum check (a writing in the form of a check drawn on his checking account.

at the bank and made payable to it for an amount equal to the amount of the note).

Instructions-on (before, after): The customer on (before, after) the day of maturity instructs the bank to make a debit entry in his account for the amount of his note.

Debit-check: The bank on the day (before, on, or after the day of maturity) on which the memorandum check is dated, makes a debit entry in the customer's account for the amount of the memorandum check.

Debit-instructions: The bank on the day (before, on, or after the day of maturity) on which it is instructed to do so makes a debit entry in the customer's account for the amount of the note.

Debit-opening (close, after): The bank at the opening for business on (at the close of business on, after) the day of maturity, makes a debit entry in the customer's account for the amount of the note.

Notice-debit: The bank subsequent to the making of a debit entry for the amount of the note (without either instructions or check) sends the customer a notice advising him of the debit entry.

Symbolized in this manner the eighty possible transactions are:

1.	Discount	credit	security	notice	hold	check-on	debit-check
2.	Discount	credit		notice	hold	check-on	debit-check
3.	Discount	credit	security		hold	check-on	debit-check
4.	Discount	credit			hold	check-on	debit-check
5.	Discount	credit	security	notice		check-on	debit-check
6.	Discount	credit		notice		check-on	debit-check
7.	Discount	credit	security			check-on	debit-check
8.	Discount	credit				check-on	debit-check

Transactions 9 to 16 are identical with transactions 1-8 respectively except that "instructions-on" appears in place of "check-on" and "debit-instructions" appears in place of "debit-check." For example transaction 9 is:

9. Discount credit security notice hold instructions-on debit-instructions

Transactions 17 to 20 are identical with transaction 5 to 8 respectively except that "check-on" and "debit-check" do not appear and "debit-opening" appears instead. For example:

17. Discount credit security notice debit-opening

Transactions 21 to 24 are identical with transactions 17 to 20 respectively except that "notice-debit" appears after "debit-opening." For example:

21. Discount credit security notice debit-opening notice-debit

Transactions 25 to 32 are identical with transactions 1 to 8 respectively except that "debit-close" appears instead of "check-on" and "debit-check." For example:

25. Discount credit security notice hold debit-close

Transactions 33 to 40 are identical with transactions 25 to 32 respectively except that "notice-debit" appears after "debit-close." For example:

33. Discount credit security notice hold debit-close notice-debit

Transactions 41 to 44 are identical with transactions 5 to 8 respectively except that "check-before" appears in place of "check-on." For example:

41. Discount credit security notice check-before debit-check

Transactions 45 to 48 are identical with transactions 13 to 16 respectively except that "instructions-before" appears in place of "instructions-on." For example:

45. Discount credit security notice instructions-before debit-instructions

Transactions 49 to 56 are identical with transactions 1 to 8 respectively except that "check-after" appears instead of "check-on." For example:

49. Discount credit security notice hold check-after debit-check

Transactions 57 to 64 are identical with transactions 9 to 16 respectively except that "instructions-after" appears instead of "instructions-on." For example:

57. Discount credit security notice hold instructions-after debit-instructions

Transactions 65 to 80 are identical with transactions 25 to 40 respectively except that "debit-after" appears instead of "debit-close." For example:

65. Discount credit security notice hold debit-after

This enumeration of likely possible transactions is of necessity tentative. As investigation proceeds it may well be expanded or contracted. Thus almost at the threshold of investigation, it may appear that certain of the likely possible transactions happen not at all or so rarely that attempts to find whether or how often they happen will be abandoned. Another factor may lead to modifications in the list of transactions. Only certain aspects of the behavior of banker and customer are referred to in the descriptions of the behavior in the likely possible transactions which have been set forth. For example, these transactions do not include a description of what was

said and done by the parties at the interview or interviews during which the note was discounted or the loan was made other than the tender by the customer and the acceptance by the bank for discount or loan of his note. Similarly, whether collateral was pledged by the customer is noted but no attention is paid to the quality of the collateral. The resulting restriction of the investigation to the particular aspects referred to is based upon the judgment that those are the only aspects which are at all likely to have consequences within the deposit currency field. But this judgment does not imply that those aspects do have such consequences, but rather that a decision for or against their retention or exclusion is deferred. Thus, for example, the aspect of behavior referred to in some of the transactions as "notice-debit" might later be excluded. Consequently, there would be but one likely possible transaction where there now appear to be two transactions, differentiated only by the presence or absence of the behavior symbolized by "notice-debit."

Having defined the class of transactions to be studied, and tentatively enumerated the possible transactions within the class which are likely to be found to be sequences, the next step is to plan in detail and to execute the actual work of investigation. In the investigations which have already been made a wide variety of methods were utilized in securing the data. In some investigations banks were visited by investigators who secured personal interviews. Some of the personal interviews took the form of answers to a list of questions submitted in writing; a few were not so organized. In one investigation, a list of questions was mailed to selected banks. Again studies, called day studies, were made in a number of banks. In some of these an investigator spent the business day in the discount cage; in others the information respecting each transaction was secured by him at the close of the day or on the succeeding day from the note teller or person in charge of the department who was guided by memoranda on his note tickler; in still other cases the information was recorded by an officer or employee in the discount department on worksheets supplied by the investigator. Finally, data were secured by examination of individual ledgers, discount registers, and note and liability ledgers. A detailed discussion of the various methods employed and an attempt at an evaluation of each will appear in the succeeding articles of this series.

In order to make more effective the planning and execution of the investigations in South Carolina, New York and Pennsylvania, a preliminary investigation was made in Connecticut. Since perhaps the chief value of the following articles in this series will be in their presentation and criticism of methods of

collecting data as to banking patterns, a report of the work in Connecticut will appear in the next article in this series. Later articles will detail the methods and the results of the investigations in South Carolina, New York and Pennsylvania. Finally an attempt will be made, on the basis of the findings in these jurisdictions, to determine the type and degree of the deviation of the behavior of the litigants in each of the principal cases from the comparable sequences found to have been current in the jurisdiction at the time of the decision and to observe the correlation between the decision and the type and degree of deviation. A report of this attempt will constitute the final article.