sighted notions of prerogatives and our petty jealousies; therefore, is it not high time that we took stock of our several problems and united in a sincere effort to regain our positions in society through being better able to serve society in its ever changing needs?” To such a proposal I am in most hearty accord. Let’s see what we can do with it.

As Mr. Ernst warns, the task will not be easy. It will not even be easy to enlist the concurrence and enthusiasm of the leaders of our several professions. It will not be easy to sell the idea to a foundation willing to undertake and finance a comprehensive analysis of the entire field. And it will be hard, indeed, to sell the conclusions arrived at through such a survey to professional leaders and laymen alike.

Surely, it will be a hard task, but it is a most worthwhile task. The need is pressing and the goal is invaluable. Let each of us do what he can.

Jerome Frank*

I’VE BEEN ASKED BY THE EDITOR and by Morris Ernst to comment on the latter’s paper. I’m doing so hastily and sketchily. Morris Ernst is one of my dearest and most respected friends. I delight in his many-sidedness, his inventiveness, and his eager, often effective, desire to aid not only humanity but also specific human beings. Moreover, I agree with many of his assumptions and prejudices.¹

Nevertheless, I have several criticisms of Ernst’s paper. If they seem somewhat abrupt in manner, the explanation is that I’m writing hurriedly and that, in effect, Ernst’s paper disagrees with much that I’ve said elsewhere and at length.² (I write here in the first person, because to do so is more honest and modest than to resort to the deceptively objective impersonal mode.)

1. It is unwise, I think, to speak of “law” as a “science.” Ernst doesn’t give his definition of “law,” although several dozen respectable definitions exist. The word “science,” too, is ambiguous. To most men, however, science means something like natural science, i.e., a body of techniques (which are constantly being revised), involving a very high degree of precision and usually yielding fairly reliable predictions. If, for instance, by “law” you choose to mean what courts decide, then surely “law” is not such a science.

2. It is even more unwise to talk of “social sciences” when you mean studies

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¹ Beginning in 1938, in many writings I’ve urged the creation of a semi-leisure society. (I have written a substantial part of an unfinished book on the subject.) And see Frank, Save America First 393-394 (1938); Frank, Fate and Freedom, 191-201 (1945); Frank, The New Sin, 28 Sat. Rev. of Lit. 3 (1945); Frank, Book Review, 15 Univ. Chi. L. Rev. 462, 474-5 (1948); Frank, Book Review, 38 Calif. L. Rev. 351, 358 (1950). I, too, am a “glandular optimist.” (Indeed, Ernst acknowledges that he borrowed the phrase from me). For more than 30 years, I’ve been one of the many lawyers who have urged that the law schools and lawyers should cooperate with the so-called “social scientists,” and also that there be more cooperation among the several kinds of “social scientists.” I agree that many (not all) of the leaders of the bar have been hostile to much needed reforms.

² I shall cite a few of my pertinent writings. Citation of others will be furnished the interested reader on request.
of society. Most students of society, when they speak of "social science," or "behavioral science," have in mind that such studies now or will soon resemble the products of the natural sciences. Usually (but not always) the model is physics, and an outmoded, nineteenth century physics at that. (One recalls Linton's remark: "The ghosts of defunct theories have a way of haunting the halls of other disciplines for at least a generation after they have been given a decent burial in their original homes"); and Russell's jibe that some psychologists "are apt to assume an old-fashioned physics which makes their problems look easier than they are." This attempted imitation of natural science has been a curse to the social studies:

(a) It has seriously impeded the use of insights necessary to an understanding of human conduct, poetic and moral insights not useful to, or used by, the physicists. Many of these insights—employed by a few, more sophisticated students of society like Riesman—are to be found in the writings of novelists, dramatists, poets and philosophers. The novel, says Marias, is "an essential means to evade the fallacy of defunct ideas." "The sciences use a cold language," writes Paul Weiss, "about the nature of things as they might be when all human interests, preferences and insights are suppressed. The language of science expresses the least common denominator of knowledge, the aspect of things which [in principle] anyone could observe at any time. It provides a minimum of content. . . . Artists present truths in a guise which most men fail to see. That does not mean that the artist is mistaken; on the contrary, those who take account of what the artist portrays learn truths they never knew or could have known."

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3 Consider Kurt Lewin's attempted application, as an analogy, of Newtonian physics to psychology; see criticism in Frank, "Short of Sickness and Death": A Study of Moral Responsibility in Legal Criticism, 26 N.Y.U. L. Rev. 545, 613-618 (1951).

Sometimes, the model is biology. The fallacy of that analogy has been exposed often.

4 Linton, Psychology and Authority, 5 J. of Soc. Phil. 115, 116 (1940).


6 See Frank, Courts On Trial 217 n. 79 (1949); cf. Frank, Both Ends Against the Middle, 100 U. of Pa. L. Rev. 20, 38, 44-45 (1951).


9 Nor are the physical scientists free from human frailties. Consult Frank, The Place of The Expert in a Democratic Society, 16 Phil. of Sci. 3, 11, 12, 13 (1949): "The ordinary man's view of 'nature' derives largely (at second-hand or third-hand) from what we call 'natural science.' But 'natural science,' what does it mean? Merely the current set of scientific theories, the current 'just-so stories,' which receive the approval of those scientists who have prestige. Those of us who are not scientists perforce accept their judgments on matters of science. . . . When a new theory departs too abruptly from the old, the scientific nabobs usually damn it as 'unscientific.' They have certain criteria, more or less 'private,' by which they judge a novel theory. Those criteria usually derive from the points of view (I would call them the 'just-so stories') to which the members of the ruling clique are accustomed. . . . The suppression of scientific ideas through the overawing dogmas of the smugly arrogant scientific elders . . . accidentally affects the very character of nature—both in mankind's knowledge of the 'facts' concerning nature and in mankind's transformations of nature. Here, then, we find one of the 'scandals' of science about which most scientists preserve a hush policy: Science is an all-too-human enterprise, not an aloof, calmly detached, body of objective laws and facts. In part, it is a function of the pride and prejudice of the scientific tycoons. Science, says
(b) The miscalled “social sciences,” for the most part, are but phases of cultural anthropology. For their generalizations relate to the customs, group beliefs, mores, folkways—matters which, especially in our modern changing society, are not readily predictable, because of the numerous elusive and accidental factors. “Economics,” for example, has, at best, been descriptive of the social habits, and changes in such habits, of some particular groups in particular times and places, coupled with some rather inadequate guesses as to how other social groups will act under other circumstances. What our economists have done is this: They have observed some selected customary conduct, attitudes and beliefs of a society within a limited period, the selected conduct, attitudes and beliefs having what the economists call an “economic” character. The economists have generalized these observations and then have drawn logical inferences from these generalizations. Those generalizations and deductions they treat as the equivalent of the natural scientists’ “laws.” Their error should be plain: A society is not a static entity. It does not stay put. Customs and social attitudes are neither unchangeable nor consistent within any society, nor alike as between different societies. The generalizations about them and the inferences derived therefrom are almost certain to be importantly false. For the consequences of the operation of certain customs or group attitudes are often cancelled out by the consequences of other conflicting customs and attitudes.

(c) The “social scientists” have developed a horrible esoteric, pseudo-scientific jargon, probably because in that way they have sought to conceal from themselves the uncertainty of their results.

Rogers quotes these samples: “Orientation to particular situations is only partially determined by institutional norms even within the realm where this is intrinsically possible.” “Fundamental psychological processes and reaction
patterns are involved in types of deviance from an established set of institutional roles and definitions of the situations which lead to structural innovation." "Institutions are the patterns which define the essentials of the legitimately expected behavior of persons insofar as they perform structurally important roles in the social system."

Orwell, after quoting from Ecclesiastes—"I returned, and saw under the sun, that the race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favor to men of skill; but time and chance happeneth to them all"—translates the passage into "social science" verbiage, as follows: "Objective consideration of contemporary phenomena compels the conclusion that success or failure in competitive activities exhibits no tendency to be commensurate with innate capacity, but that a considerable element of the unpredictable must invariably be taken into account." Ruby says, that instead of writing simply, "][I]t has been observed that small children do not all act in the same manner," many a social psychologist writes like this: "[C]linical observations and statistical correlations reveal that pre-adolescents exhibit multiform tendencies and predispositions toward variant and different patterns of behavior." Gertrude Himmelfarb justifiably complains that, for many "social scientists," "The fifth freedom seems to be the right to write badly."

It amazes one that many "social scientists," ostensibly much interested in "communication," have shown such remarkable expertness in blocking communication. Lawyers also have their jargon, but in recent years many of them have recognized that a seemingly precise vocabulary is often illusory and doesn’t yield precision.

Recurrently, some lawyers, goaded by a passion for an impossible legal certainty, have borrowed the vocabulary of contemporary natural science in the fatuous hope that they could thus import into the legal realm what they considered the methods of that science. And time was, centuries ago, when the dream of "quantifying" bemused the courts, when they believed it possible to measure evidence with marked exactness. That belief they expressed verbally in a way that has its vestiges in current lawyers’ talk of "weighing" evidence, of the "preponderance" of evidence. In the nineteenth century, Bentham, noting that the physical sciences used scales and micrometers, proposed the judicial use

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24 Ruby, Logic 31 (1950).

The "social scientists" should heed the warning of Dr. Oliver Wendell Holmes: "I would never use a long word . . . when a short one would answer the purpose. I know there are professors in this country who ligate arteries. Other surgeons only tie them, and it stops the bleeding just as well." An ancient writer expressed the same notion: "[E]xcept ye utter . . . words easy to be understood, how shall it be known what is spoken? . . . I had rather speak five words with my understanding, that . . . I might teach others also, than ten thousand words in an unknown tongue." 1 Corinthians c. 14, v. 9, 19.

25 Himmelfarb, Political Thinking: Ancient and Modern, 12 Commentary 76, 82 (1951).
27 See Frank, Law and The Modern Mind 90-98 (1930); and compare 285-288.
of a "thermometer of persuasion." Bitten by the natural science idea, Loevinger, a twentieth century lawyer, envisions a "Jurimetrics." But most lawyers now acknowledge that the phrase "weighing the evidence" represents but a loose metaphor.

Judges and other lawyers—including Francis Bacon, Mr. Justice Johnson and Mr. Justice Holmes—have been leading skeptical semanticists. Many lawyers are now acutely aware—as many "social scientists" are not—that no language can be ambiguity proof. As that great lawyer Corbin puts it, there exist no methods which will "infallibly lead to one correct understanding" of another's words because, in reading other's words, "men certainly see through a glass darkly;" that the trouble with the belief that words have "one true meaning" is that the phrase "one true meaning" lacks "one true meaning"; that to "elucidate the meaning of the word 'mean' requires fourteen long columns of fine print in the Oxford Dictionary"; that "it is the universal custom of mankind to speak elliptically and to assume the existence and the understanding of things not expressed in words"; that it "may be unfortunate, but it is true, that men often use written and spoken words without having any clear notion of what they want to say." Corbin's report accords with what sagacious laymen—not "social scientists"—have said: "Our speech is a compromise between the ultimate incommunicability of one person with another and the conventional communication values attached to certain symbols." "Ambiguity, indefiniteness, vagueness and equivocation are ever with us. [We should] learn to curb the arrogance, the presumption, that we necessarily know what others are saying." The greatest enemy of communication . . . is the illusion of it. To quote the poet, Trumbull Stikney, "You lean over my meanings edge / And feel a dizziness of the things I have not said." Hayakawa insists that we live in a "world of not words." "There is no contradiction in speaking of the inexpressible," declared Morris Cohen, "since it is the essence of all expression to point to something beyond itself." The "success of language in conveying information is vastly over-rated, especially in learned circles," wrote Whitehead.

Many judges and lawyers have learned, and can teach the "social scientists," the "resources of ambiguity." The ability of courts wisely to adapt old legal rules to changed conditions is "due to the fact that the same norm is used but with a changing meaning, the same formula with an apparent identity of substance which is verbal only."

1 Bentham, Rationale of Judicial Evidence, Bk. I, c. 6, S. 1 (J.S. Mill ed., 1827).
2 Loevinger, Jurimetrics, 33 Minn. L. Rev. 455 (1949); see also Loevinger, An Introduction to Legal Logic, 27 Ind. L. J. 471 (1952).
3 Cf. the phrase "weight of authority."
4 See Frank, A Lawyer Looks At Language, in Hayakawa, Language In Action 322, 329 (1941).
9 Richards, How To Read A Page 22 (1942); Richards, The Philosophy of Rhetoric 40, 72-73 (1938); Burke, A Grammar of Motives, Introduction, 56 (1945).
10 Stone, Fallacies of the Logical Form in English Law, in Interpretation of Modern Legal Philosophy 696, 721 (Sayre ed., 1947); consult Frank, If Men Were
Ernst, I think, has overlooked the fact that, in the 1920's, Johns Hopkins Law School undertook much of the job he proposes, and that, after that school went out of business (for want of funds), many other law schools have had "social scientists" on their teaching staffs. But one unfortunate effect of the resultant fraternizing of law teachers and "social scientists" has been the adoption by some of those teachers, and by some of their students, of "social science" gobbledygook. The wiser lawyers and law teachers, however, may teach the "social scientists" to abandon their long-winded, long-worded statements in favor of simpler and more intelligible remarks.

(d) Few long range social predictions have panned out. The utterly unexpected pops up to confound the predictor. New medicines poke holes in the life tables. Accidentally discovered scientific ideas revolutionize a society. A banker once defined an invention as something which ruined his investments. Sometimes a short range social prophecy is more accurate; yet some of the ablest American economists went badly wrong in their prophecies of grave unemployment in 1946-1947. John Maynard Keynes, surely no slouch as an economist, made one of the worst misguesses in history: On October 25, 1929, he said that the stock market break would liberate credit for nonspeculative purposes and halt the deflation in world commodity prices. Precisely the opposite happened; the Great Depression was then just beginning.

Arthur Burns, economic adviser to the President, said recently that "consumer spending is the most uncertain factor in determining the general inflationary outlook for 1952. This declaration would have invited ridicule a few years ago, but today few economists are any longer disposed to question the capacity of consumers to change their rates of spending and savings without prior notice. Indeed there is some danger that the whimsical character of consumer-spending will now be as roundly exaggerated as was its mathematical determinacy a short time back."

The very fact of publishing a forecast of a future social happening may, indeed, have a transforming effect on that happening, so that it may turn out quite differently from what it would have been if the forecast had not been published. Thus, as J. M. Clark has suggested, the increased knowledge by businessmen of an expected business trend may undesirably hasten and intensify it. If, says Neurath, a scientist were to publish a prediction that a meteorite would fall and kill some people at a certain time and place, the people might leave and the prediction would be false; if he merely wrote the prediction in his notebook, it might be accurate; on the other hand if he published it, the people might think he had a selfish purpose in trying to induce them to move and they might therefore remain, with the result that this prediction would be correct. Johnson refers to "that inescapable irremovable factor that every logician faces when he assumes to deal with human beings. He may predict the movements of a planet . . . for a thousand years with almost absolute accuracy. He may predict the development of fruit flies, or of guinea pigs, through many generations with a

factor of error of negligible proportions. But the moment humanity enters the equation, mathematical calculation loses its authority. . . ."\(^{81}\)

As I have written elsewhere:

The "Brandeis briefs," using statistical and related "data," were, for a long time, used by government lawyers to win law-suits against private corporations. Those court victories were due largely to the fact that the opposing lawyers did not file briefs containing contradictory data of the same kind. A few years ago, the engineering firm of Ford, Bacon & Davis published a pamphlet urging corporate executives to retain "experts" to prepare such briefs to favor corporations in litigations with the government. Whatever the cause, the fact is that now, in many such suits, both sides present material of that sort, and government victories have become less certain.

In such cases, or elsewhere, when "experts" with contrasting views collate statistics, each expert can often assemble figures which plausibly confirm his position. Referring to the "Brandeis briefs," Sigety, a teacher of statistical method, writes me, "There are ways of rigging your statistics so that almost any conclusion can be reached from the same basic information. . . . [T]he statistician may [consciously or unconsciously] 'fudge' his 'trend' curve." Of course, sometimes the "fudging" of a curve can be exposed; but frequently . . . it is difficult to prove the "objectivity" of one interpretation of figures as against another.

Social statistics which, to the unsophisticated, may seem indubitably certain and "objective," always rest on someone's selection of "data," and the selector's choice is seldom indisputably "objective" and reliable, for a variety of reasons. Chance, we are advised by able statisticians, frequently determines the statistical results. We are told that the investigator "may be compelled to employ data" which are fragmentary merely "because of their availability"; or that "his preconceptions" concerning the subject may lead him to believe that certain significant relationships existed, and, without sufficient verification, he may smuggle those preconceptions into both his "data" and his conclusions. "Disturbing" factors may be present but wholly undetectable, with effects that cannot be estimated or eliminated by the investigator's techniques. The undetected relationships may be more significant than those he can perceive. His "sampling" may not be representative, may involve the "fallacy of selection," the attribution, to an entire class of phenomena, of characteristics which pertain to the selected instances alone. His "data" are then not really "data," that is "given"; and his inferences ("extrapolations") may thus be fatally mistaken guesses.

Dorothy Swaine Thomas, an eminent social statistician, says that even carefully chosen "data" will frequently allow of several reasonable alternative interpretations, that one who plots a curve of a social trend

should “not fail to admit that the determination of the ‘best’ trend is largely subjective.” Often, she confesses, “convenience has dictated” the statistician’s procedure.\(^2\)

With some reason, Sumner and Keller asserted in 1927: “One of the ways for disconcerting even an intelligent adversary is to overwhelm him with mathematical formulas, graphs and other esoteric devices which he cannot withstand because he cannot understand them. They are similar to the secret, fetichistic jargon of the medicine man.”\(^3\) In 1948, Hayes, an economist, wrote that some economists have “developed the techniques of mathematical statistics to a high degree of complexity and subtlety”; they “sit at their calculating machines fitting second-order parabolic curves, frequently forgetting that the data to which they fit those curves are to a considerable extent unreliable, lack precision and adequate detail. . . .”\(^4\)

(e) Since the “social sciences” are but phases of cultural anthropology, necessarily, too, they are phases of social psychology. Now social psychology, insofar as it has attempted to ape physical science, has been singularly unfruitful. “If,” says Professor Langer, “we follow the method of natural science, our psychology tends to run into physiology, histology and genetics; we move further and further away from those problems which we ought to be approaching. That signifies that the generative idea which gave rise to physics and chemistry and all their progeny . . . does not contain any vivifying concept for the humanistic sciences. The physicist’s scheme, so faithfully emulated by generations of psychologists, . . . is probably blocking their progress, defeating possible insights by its prejudicial force. The scheme is not false—it is perfectly reasonable—but it is bootless for the study of mental phenomena. It does not . . . excite a constructive imagination, as it does in physical researches. Instead of a method, it inspires a militant methodology.”\(^5\) Erich Fromm remarks that many social psychologists “believe that unless phenomena can be studied in a way which permits of exact and quantitative analysis, they must not be studied at all.” Eager to be “scientists,” they choose for study those problems that fit the laboratory method. “Their choice of problems is determined by their method instead of the method being determined by the problem.”\(^6\) Thereby, it should be added, they develop a “methodolatry,”\(^7\) and “are drawn into social blindness by the glare of the laboratory.”\(^8\)

The notions (1) of “interaction” between “personality and culture,” (2) of the “basic personality” of a culture, and (3) of “patterns of culture” are valuably suggestive. However, they become misleading when exploited as if they were highly precise, or when (a la Gorer or Margaret Mead) glibly applied (as, for example, in the form of “diaper determinism”) to a large modern nation con-

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\(^2\) Frank, Courts On Trial 211-12 (1949).
\(^3\) Sumner and Keller, Science of Society 1305 (1927).
\(^5\) Langer, Philosophy in a New Key 18-19 (Pelican ed. 1948).
\(^6\) Fromm, Sex and Character; the Kinsey Report Viewed from the Standpoint of Psychoanalysis, in About the Kinsey Report 47, 58 (Geddes and Curie ed., 1948).
\(^7\) Vivas, Two Notes on the New Naturalism, 56 Sewanee Rev. 477, 483 (1948).
\(^8\) Dennis, in Language, Culture and Personality 259 (Mandebaum ed., 1941).
taining many "subcultures." Linton says, "The use of psychological or, more frequently, psychoanalytic terminology makes such works appear more authoritative without contributing toward the validity of the result."

"Social science" (or its currently fashionable variant, "behavioral science") is a metaphor. Of course, no one can speak—and most men cannot think—without metaphors. But danger lurks in the literal use of a metaphor, in treating it as a complete statement of actual fact rather than as an analogy or "fiction" (i.e., an "as if" or "let's pretend");40 such literalism has subtle consequences that are dangerous because the fictional or analogical character of the metaphor is not adequately recognized. Too many students of society have taken literally the "social science" metaphor. There are good and bad metaphors;41 a good metaphor, it has been said, is neither too farfetched nor too nearly fetched.42 "Social science" is much too farfetched.43

The physical sciences are now acknowledged to be far less exact than they seemed to be to all but a few thinkers during the preceding three centuries. It might therefore be argued that the difference between the physical and the "social sciences" is merely one of degree. This is a tricky suggestion: It has been said that the difference between a difference in kind and a difference in degree is not itself a difference in kind but one in degree—a violent difference however.44 The difference here under discussion is peculiarly violent.

3. Judges have sometimes declared that if a designated rule were abolished, social catastrophe would ensue. In so declaring, the judges have relied on "judicial notice." But, ordinarily, such purported judicial knowledge has a scant foundation. Often it is "cocktail hour knowledge." As Gibbon said, usually a man who speaks of "the opinion of the world at large" really refers to "the few people with whom he had happened to converse." It is most desirable, then, that courts should have reliable information concerning the social consequences of existing legal rules and the probable consequences of changes in those rules. If the students of society delivered such information, most judges would be delighted to receive it. To date, those students have delivered little that courts can use. I think it most unlikely that Ernst's proposed "commission of inquiry" would do the trick.

Some courts have begun, somewhat gingerly, to utilize "opinion polls."

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38 See Linton, The Concept of National Character, in Personality and Political Crisis 133 (Stanton and Perry ed., 1951). For further criticisms along those lines, see Parsons, Personality and Social Structure, ibid., at 61. We have been warned by Dr. David Levy, New Fields of Psychiatry 32 (1947) against "excessive psychologizing, of fantastic conceptual structures, erected on a few clinical observations." See also Rieff, History, Psychoanalysis, and The Social Sciences, 63 Ethics 107, 117-118 (1953), and Bell, Bolshevik Man, His Motivations, 19 Commentary 179 (1955).

39 See, e.g., Vathinger, The Philosophy of 'As If' (translated 1925) (passim); Fuller, Legal Fictions, 25 Ill. L. Rev. 370, 380, 383, 387, 388, 389 et seq. (1930); Tourtoulon, Philosophy In The Development of Law 385 et seq., 644, 653 (translated 1922); Frank, Law and The Modern Mind 160-167, 312-322 (1930).

40 The metaphor "social engineering" is a bad metaphor since it treats human beings as if they were inert things.

41 Brooks and Warren, Modern Rhetoric 426 (1949).

42 The subject of this paragraph is developed in Larson v. Jo Ann Cab Corp., 209 F.2d 929 (C.A.2d 1953) and in Frank, Some Tame Reflections On Some Wild Facts, in Vision and Action 71-75 (Ratner ed., 1953).

43 Williams, Law and Language, 61 L.Q. Rev. 179, 192 (1945)
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Whether they should be received as evidence or in aid of "judicial notice" is still an open question. In any event, they should be used most circumspectly and selectively. Riesman, an experienced lawyer, former law teacher, and keen student of society, who has had much to do with such polls, has cautioned that they include a multitude of dubious subjective factors.44

4. When "political economy" was divided into "political science" and "economics," each was gelded; as usual, gelding caused sterility. I remember attending a conference late in 1933 of economists in the Agricultural Adjustment Administration. One of them observed that they had been so busy with administrative problems, Congressmen and farm leaders, that they had neglected their economics. Another answered, dryly, that they had become "political economists." And well it was that they had.

Those studying a society from one angle do, not infrequently, borrow ideas from those who have studied it from another angle. But often the borrowed ideas are out of date. Repeatedly, lawyerdom has made that error. Note, for example, the adherence of some courts to outmoded economic theories, and the stubborn judicial retention of the M'Naghten Rule in criminal cases.45

Accordingly, there is considerable merit in the notion of the "cross-fertilization" of the "social scientists" and the lawyers. Yet, long ago, Alvin Johnson sagely warned that this might lead to "cross-sterilization." For the effort to achieve uniformity may result in a sort of totalitarianism46 and thereby stifle originality. Kallen, criticizing the movement for "unification of the sciences," observes that it has its roots in a dread of novelty, variety, creativeness, in a "compensatory passion... for a One to rule over the Many," which issues in the stifling harmonies of a closed system.47 Any such movement may bring about the widespread, uncritical, acceptance of a harmful dogma. (Thus, if the courts, in the nineteenth century, had been swayed by the determinism then fashionable among physicists and social philosophers, the judiciary would have concluded that no man has any margin of "free will"; fortunately, the judiciary, by then remaining old-fashioned, anticipated the new-fashioned conception of "partial indeterminism" accepted by many twentieth century physicists.)48 The drive for uniformity may also induce a neglect of valuable differences between the divers areas of study.

Nevertheless, the fraternizing of the specialists in the several areas with one another, and with lawyers, is eminently worthwhile. The several specialists can, fruitfully, pool their wisdoms—and better detect their ignorances (both

45 Consult also Roth v. Goldman, 172 F.2d 788, 795-796 (C.A.2d 1949) (concurring opinion).
46 Consult Durham v. United States, 214 F.2d 882 (C.A.D.C., 1954) for a recent departure from that rule.
49 As to the power of fashions in ideas, see Frank, Fate and Freedom, c. 7 (1945).
the avoidable and the inescapable). The invitation to joint studies should be extended to philosophers and literary artists.49

In the past, lawyers have learned much from scientists, psychologists, philosophers, poets and others. Also the lawyers have contributed ideas which (for good or ill) have affected nonlegal thinking: The idea of "cause" emanated from the Greek law courts; "average" was originally a legal concept; the "Socratic method" derived from lawyers' questioning of witnesses; the "logic of discovery" (or of "invention") has its roots in lawyers' techniques; lawyers were among the "founders" of pragmatism.60

Today, in many ways, the lawyers can be helpful to other specialists. For example, when I served in the executive branch of our federal government, I frequently worked with other lawyers and economists. I discovered that many of the economists lacked the ability (a) to present competently the evidence on which they rested their premises, (b) to differentiate between the evidence and their unproved assumptions, and (c) to reason rigorously in moving from their premises to their conclusions. The government lawyers often taught those economists how to do these jobs.

5. Our governments have already recognized the value of specialists, in the establishment of administrative agencies, each of which consists of specialists, in some particular area, who are advised by expert staffs. No one would think of proposing that all those agencies be merged into one; that, for instance, a single agency should take over the functions of the NLRB, the SEC and the ICC.

This indicates the unwisdom of Ernst's proposal of a single "commission of inquiry." Ernst, apparently, would jumble together a host of importantly different problems to be considered by such a "commission." The result, I fear, would be Babel. Among other things, the several social studies—in their theoretical and applied aspects—have not developed equally; they vary in respect of accuracy, utility and empirical verification.

6. The relation of our judges to the several administrative agencies discloses, I think, an intelligent approach to specialists. As I said for our court in 1942:61

Because administrative officers, if not always themselves experts, are specialists, advised by experts, in a particular field of facts, inferences drawn by those officials from the data before them are to be given unusual weight by the courts. The Supreme Court has long ascribed to their findings "the strength due to the judgments of a tribunal appointed by law and informed by experience," and has said that "Congress entrusted the Board, not the courts, with the power to draw inferences from the facts." It is precisely in drawing such inferences that administrative specialized skill is of unique value. It is as if a judge were reviewing a physician's diagnosis.

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Lawyers and judges should be the last to deny the value of a specialist's reactions, for our profession's position in society rests on the fact that we are specialists in our field. In truth, we lawyers sometimes make too much of a mystery of our methods, as did Coke when James I remarked that if "law was founded upon reason, he and others could reason as well as the judges," and Coke replied,\(^2\) in words which many lawyers delight to quote, that lawsuits "are not to be decided by natural reason, but by the artificial reason and judgment of the law, which law is an art which requires long study and experience before that a man can attain to the cognizance of it." The king, an intelligent amateur, was annoyed, for doubtless he saw that, as McIlwain observes, "if . . . the law was to be supreme, and at the same time a mystery open only to the initiated, it is clear that, if the claim of the lawyers was to be admitted, the supreme authority would be their exclusive possession." Coke doubtless went too far, as specialists often do in attaching too much inscrutable esotericism to their own techniques. Yet his attitude, within limits, was justified; what Pound has called "the trained intuition of the judge," resulting from his experience and education, does give him, as to "questions of law," an edge over the layman.

Awareness of that truth should induce the judge to recognize his inferiority to those who are specialists, possessed of trained intuition, in matters as to which he is less experienced. For the value of the specialist is that, in dealing with a selected area of experience, he is able to make inferences quickly—because in part intuitively—and with more likelihood of accuracy than his fellow men, since many of the criteria of judgment have, with him, become semi-automatic, having been transferred, so to speak, from the conscious processes to the spinal column (or, to use highbrow terms, from the cerebral cortex to the cerebellum). He acquires unusual "insight" and "discernment" which are "the funded outcome of long familiarity with like operations in the past. Possession of this ability to seize what is . . . significant and to let the rest go is the mark of the expert, the connoisseur. . . . Long brooding over conditions, intimate contact associated with keen interest, thorough absorption in a multiplicity of allied experiences, tend to bring about those judgments which we then call intuitive; but they are true judgments because they are based on intelligent selection and estimation. . . ."\(^3\) Such intuitions, although seemingly "inspirational," are not antirational, as many scientists, inventors and other specialized thinkers have pointed out. It was in that vein that Mr. Justice Holmes, in a case in which a State Board's action was attacked, said that the Board's "action does not appear to have been arbitrary except in the sense in which many honest and sensible judgments are

\(^{2}\) Or so he says. There are those who doubt the authenticity of this report. It was written many years after the event, was published posthumously, and is contradicted in important respects by reports of others which were written when the events were still fresh.

\(^{3}\) Dewey, How We Think 104-105 (1910).
so. They express an intuition of experience which outruns analysis and sums up many unnamed and tangled impressions, impressions which may lie beneath consciousness without losing their worth.\textsuperscript{54}

But, just as the non-lawyer can perceive gross errors in a judge's conclusions, so an administrative "diagnosis"—like that of a physician's—may be so wanting in any possible logic that judges can say that it lacks all cogency; the lack of administrative cogency, however, must be fairly gross before judges may reject the diagnosis; there is room for judicial review of administrative fact-finding, yet such judicial review, if it ignores the element of administrative "professionalism," strikes at the very reason for having administrative hearings and findings. . . .

To put it differently, the capacity of judges to determine that the inferences of a jury—a body of amateurs fortuitously assembled—are not reasonably supported by the evidence is better than their capacity to reach a like conclusion as to the inferences of a specialized administrative agency. . . .

That does not mean that many a judge, if he had specialized in the same fields and were assisted by the same staff of experts as an administrative agency, could not be just as expert; indeed, beginning with Judge Cooley's days in the Interstate Commerce Commission, many lawyers have served as competent members of such bodies. But, as Chief Judge Lehman has observed, "The judge is not presumed to have specialized scientific training outside of the law, and evidence which might be conclusive to the mind of a specialist might exercise no persuasive force upon the mind of a man not fitted by training to comprehend it. . . .\textsuperscript{55} As we said several years ago: "One of the principal reasons for the creation of such a bureau is to secure the benefit of special knowledge acquired through continuous experience in a difficult and complicated field."

In the courts' approach to administrative agencies, we have an excellent analogy for the judicial approach to all specialists or experts: Their competence should be carefully scrutinized, their logic examined, and their findings should be rejected when reached arbitrarily or irrationally. I venture the following tentative suggestions:

(a) Not alone the competence of the specialists but also the limits of their competence needs attention; whatever exceeds those limits should be treated by the courts like any other layman's views.

(b) Where there are—and usually there are—conflicting positions as between the specialists in respect of any particular social study, the courts should beware of adopting any one position without considering the opposing positions.

(c) A court should ascertain whether a specialist's opinion rests on a doctrine


\textsuperscript{55} Lehman, Technical Rules of Evidence, 26 Col. L. Rev. 509, 511 (1926).
that has won the substantial, if not general, acceptance of his fellow-specialists.56

7. Thanks to the "social scientists'" obsessive desire to imitate the natural scientists, many products of the former have been little more than reports on the trivial or, worse, elaborate efforts to prove the obvious. Rogers writes, "A distinguished sociologist, Louis Wirth, has said: 'The findings of social science are sometimes regarded as elaborate statements of what everybody knows in language that nobody can understand.' Mr. Wirth might have added that the reader frequently is unaware that what is being said is something that he already knows."57 Riesman has suggested "the existence in the social sciences of a sort of Heisenberg ('indeterminacy') principle: the more accurately we can measure a phenomenon and reduce the measurement to statistics, the less significant the finding; conversely, the more significant the finding, the more vague will its statement appear, the less susceptible of experimental verification, the more dependent for authority on the wisdom and humanity of the observer."58 He maintains that reliance on "critical and ethical insight" has been frustrated by "the superstitious worship of natural science, the desire in a friable society for certainty of statement—to be backed by the universe or a Hollerith machine." In the same vein, Bendix writes: "It has been observed that [in the social sciences] methodological rigor can be obtained only at the price of dealing with relatively insignificant problems, whereas the investigation of significant problems suffers from a lack of this rigor. We can obtain agreement on social science propositions, but the content of the propositions makes us question whether this knowledge is worth obtaining. Yet, when we deal with propositions which we feel are worthwhile, we find it almost impossible to 'prove' them. Modern social science reveals a cleavage between (1) propositions which are significant and (2) propositions which command assent, and there is no sign as yet that this condition will be improved."59 Consider the studies of The American Soldier, in which a group of eminent "social scientists" employed elaborate questionnaires and IBM machines for the purpose of giving the Army command reliable information useful in predicting what would make for high or low fighting morale. Glazer reports that the results were "hardly at all" useful to the Army command. "We might," he concludes, "take every statistic in this book, halve or double it: the Army could have done little about it, or would have wanted to do very little about it," for "all the attitudes 'measured' did not matter when it came to fighting, which was the ultimate purpose for which the studies were undertaken."60

Such studies are often time-wasting and expensive. More important, when offered in litigation, they may be pernicious: The use of medical and other experts in litigation has not been too happy; in the courts, we witness daily the sorry spectacle of hired, partisan experts disagreeing with one another. We

59 Bendix, Social Science and The Distrust of Reason, Univ. of Calif. Publications in Sociology and Social Institutions, No. 1 (1951).
60 Glazer, "The American Soldier" As Science, 8 Commentary 487 (1949).
should beware lest we have partisan "social science" experts engaging in such performances. If judges were foolish enough to accord high esteem to social studies relating to the obvious, such conflicts of partisan "social scientists"—with some reporting against and others for the obvious—might persuade the judges to become doubtful about their own good sense, resulting from common human experience, concerning the fundamentals of a decent civilization. For a brilliant discussion of this thesis, see Edmond Cahn's paper recently published in the New York University Law Review.61

I am not saying that all ideas or theories must be justified as useful or practical. Men may legitimately play with ideas, contrive them just for fun. And, paradoxically, the natural sciences owe many of their most practical achievements to "playful" thinking that had no empirical, utilitarian aim, for example, non-Euclidean geometry and Pascal's theory of probability. However, most contemporary "social scientists" purport to be at work on useful projects, not to be merely playing with ideas.62

8. I happen to believe—and have often so written—that the courts have much to learn from the psychologists and psychiatrists with reference not only to the treatment of convicted criminals but also to witnesses and litigants; that lawyers who are to become judges should, while law students, engage in voyages of self-exploration, aided by psychiatrists, so that they will be conscious of their otherwise unconscious prejudices; and that there should be government psychiatrists to whom government officers, including judges, could turn (with no more concern than visits to dentists) in periods of emotional disturbance.63 Yet it will not do for courts—or for anyone else—to regard psychiatrists as infallible demigods, since psychiatry is still in its infancy or early adolescence.

I might add that, for everybody's sake, there is need for psychiatric and anthropological studies of lawyers, judges, social psychologists, sociologists, economists, political scientists, historians, and other students of society. (Compare Kubie's paper on the Psychoneurotic Problems of The American Scientist,64 and Riesman's on the psychology of lawyers.65)

9. It may be that, as Dr. Lawrence Freedman suggests, an effective fusion of legal and psychiatric knowledge must await the time when both kinds of knowledge are in one skull. That day is approaching.66

Perhaps in some way, rather than through Ernst's proposal, we will arrive at what he envisions. For instance, in respect of a fusion of accounting and legal knowledge, we have already arrived there: Several law schools now adequately teach accounting for lawyers.

62 The unintended by-products of their projects may stimulate valuable speculative ideas; and, too, such a project may, desirably, prove a negative.
63 Probably James Forrestal could have been saved if such a psychiatrist had been easily available to him in the early days of his emotional fatigue.
64 2 Chicago Rev. 65 (1954).
66 In Yale Law School, at the moment, we have a student who has had considerable experience as a practicing clinical psychologist and is well versed in psychiatry; and I know one lawyer who has become a practicing psychoanalyst.
10. I think we should forego the dream of anything remotely like "social science." But to surrender that dream is not to despair of vastly improving our knowledge of mankind and of individual human beings. Such knowledge demands modesty and constructive skepticism, or what may be called the "scientific spirit" which entails the discipline of suspended judgment; the rigorous examination of all the evidence; a consideration of all possible theories; the questioning of the plausible and the seemingly self-evident; a passion for verification and a recognition of the unverifiable; what Fries describes as a willingness to "doing one's damndest to poke holes in one's theoretical assumption," plus a desire not to be deceived. Illustrative is a paper published in 1947 by Hansen and Eldridge, expert social statisticians, on future urban growth in this country. Their "estimates," they say "are projections, not predictions," and are "presented . . . in accordance with varying assumptions" which represent "great oversimplification." They notify the reader that "the only thing of which we can be certain is that (our) assumptions will not hold." Our problem vis-a-vis specialists is like that of the young lady to to whom Bernard Shaw's Bishop said that she would be making a mistake if she married but a worse mistake if she didn't. We must have specialists. But we must democratize them, see to it that they admit their all-too-human characteristics. Too many judges in the past have been authoritarian, arrogantly undemocratic. The present tendency of American judges is candidly and modestly to confess to the public that they are human and therefore fallible. Only if the students of society disclose such modesty and skepticism, concerning their own work, should they, and will they, gain the confidence of the courts. The courts will then use the insights of those students, thus tentatively ventured, for what they are worth (which then may be considerable). The danger, at the moment, is that the more brash among these specialists, by their very brashness, may make the courts suspicious of all the social studies. As Edmond Cahn points out in his New York University Law Review article, some of the "social scientists" who, on behalf of the successful plaintiffs, testified or contributed to briefs presented to the Supreme Court in the Segregation Cases are now immodestly boasting that their contributions brought about the Supreme Court's decision. They base this boast on the citations of books and articles by "social scientists," in footnote 11 to the Court's opinion. But Cahn remarks that in the latest of the cited works—Witmer and Kotinsky's Personality in the Making—the authors modestly say: "Unfortunately for scientific accuracy and adequacy, thoroughly satisfactory methods of determining the effects of prejudice and discrimination on health of personality have not yet been devised, nor has

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67 Fries, On The Unification of Science, 3 Am. J. of Econ. & Soc. 193 (1944).
68 See also Notestein, The Economics of Population and Food Supplies, in Proceedings of The Fourteenth International Conference on Agricultural Economics 13 (1954). Notestein's views concerning the effects of contraceptives on population growth should be compared with Ernst's.
69 Courts often undertake historical studies. Max Radin said that, as most judges are poorly equipped for that task, they should seek the counsel of professional historians. Most professional historians, however, are undemocratic, i.e., usually do not reveal, to others than members of their own craft, how dubious are many of their "facts." See, e.g., Frank, Fate and Freedom, c. 1-7 and passim (1945).
a sufficient number of studies dealing with the various minority groups been made."

Happy to relate, this chastened mood of modesty is taking hold of a substantial minority of the professional students of society. They no longer allow themselves to be beguiled by the dehumanized "social engineering" metaphor. The anthropologist Redfield, for example, has recently described the painful struggle of some students of society to break away from the thralldom of the natural science analogy, to become more humanistic and less "scientific." In the struggle, says Redfield, "Sometimes the social scientist seems a man divided against himself, half mathematician and half poet"; when he attains "maturity," he "may see that in accepting too often and too uncritically the identity of his ways of work and those of the natural scientists, he asserted or implied that he had a power of describing reality more accurate and significant than it was. He may see that some of the claims to scientific precision . . . and to the importance of his generalizations were overblown."71 Talcott Parsons, speaking of developments in the study of "personality and social structure," remarks, "I think . . . the most important thing to be said at this stage is that what is not known is immensely more than what is known. There are starting points so that really serious and competent research has promise of producing extremely important results. Therefore, I would put my hope in what can be produced in the future rather than in being in too great a rush to apply what we have now; while what we can do now is something, the dangers are also considerable and we need to know a lot more than we do."72

Ernst's proposal might be beneficial if all concerned were to approach the undertaking in that spirit. I incline, however, to believe that frequent informal talk-fests of open-minded lawyers and modest, imaginative students of society offer more promise than any formal "commission of inquiry."

THE IMMEDIATE REACTION of a Northern Ireland law teacher—myself—to Mr. Ernst's paper is that they order these things better in America. The perennial philosophy of my law teaching has been the very old, but never stale, theme that for the study of law it is not enough to be acquainted with the words of legal rules, one must be aware of the characteristics of society and of the ideals of man. It is folly to believe that such knowledge can be acquired without an awareness of the disciplines treating of those matters—a good lawyer cannot ignore the social sciences or philosophy. I have pointed out that this has been not alone the teaching of academic lawyers but also of the great judges. Holmes has been quoted with reverence, and it has been suggested that perhaps his prediction has

72Parsons, Personality and Social Structure, in Personality and Political Crisis 61, 75 (Stanton and Perry ed., 1951).
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