

CREATIVE EXPERIENCE

by
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INTRODUCTION

THE social sciences are not gathering all the fruits of certain recent developments of thought; they are not all of them even using the most modern method of study, which is wholly to abandon the region of abstract speculation and to study the behavior of men. Many political scientists talk about conferring power without analyzing power; many economists talk about representation in industry without analyzing representation; there are sociologists who talk about individual and social interests without sufficiently analyzing the difference, if there is one, between individual and social interests. In a book by a recent writer on politics these four words are used in a sentence of three lines: power, purpose, freedom, service. But the author has not told us what these words mean – and we do not know. We can find out only by watching in thousands of cases the working of power, purpose, freedom, only by watching the behavior of men.

The greatest need of today is a keen, analytical, objective study of human relations. We preach “compromise” as the apex of the ethical life, we laud the “balance of power” as our political and international faith, we give our substance and ourselves to establish an “equilibrium” of nations. But compromise sacrifices the integrity of the individual, and balance of power merely rearranges what already exists; it produces no new values. No fairer life for men will ever be the fruit of such doctrine. By adherence to such a creed we bind ourselves to equivalents, we do not seek the plusvalents of experience. If experience is to be progressive, another principle of human association must be found. I know of but one way to seek it. The conceptions of politics, economics and sociology should be studied -while they are still living in the lives of men. We need to study not the “conception” of a general will but concrete joint activity. We should, without disregarding whatever light the past has thrown on these questions, now look at men in their daily occupations at factory or store, at town meeting or congress, and see what we can learn. We should abandon the region of mere statement and counterstatement where so much controversy takes place. We should take our language too from the concrete daily happenings; the words we now use have nearly always ethical connotations which prejudge, which merely in themselves attribute praise or blame to individuals or groups or state.

The biologist, the physiologist and the experimental psychologist are studying "response" in their laboratories. Infant behavior, the behavior of animals both in laboratory and field, the behavior of primitive tribes, have all been carefully observed, but much less study has been given to the relation of adults among civilized peoples. Thousands of students have watched birds building their nests and told us of their "purpose"; the same study has not been given to purpose in human relations and yet it is perhaps the most important conception of social psychology. I suppose we have thought we already understood sufficiently the behavior of men, that we knew how to make the intercourse of men serve the ends of men; yet the Genoa Conference broke up, labor and capital arrive at no peace, the farmers wage bitter war against the middlemen. To be sure, sociology tells us much of the crowd, but the large accomplishments of men are not made in crowd association. As for philosophy, this is not its richest moment: idealism is in disrepute, pragmatism has still bits of intellectualism sticking to it, and realism has not yet found itself. The time is ripe for empirical studies of human relations, social situations.

But we wish to do far more than observe our experience, we wish to make it yield up for us its riches; observation alone may give only negative results, prompt useful guesses, suggest interesting prophecies. Moreover, we must face the fact, if social research is to be made valuable for us, that it is seldom possible to "observe" a social situation as one watches a chemical experiment; the presence of the observer usually changes the situation. We need then those who are frankly participant-observers, those who will try experiment after experiment, and note results, experiments in making human interplay productive — in industry and business, in legislative committees and administrative commissions, in trade unions and shop committees and joint boards of control, in athletic committees and college faculties, in our families, in parliamentary cabinets and international conferences. Brilliant empiricists have poked much pleasant fun at those who tell us of some vague should-be instead of what is. We want something more than either of these; we want to find out what *may* be, the possibilities now open to us. This we can discover only by experiment. Observation is not the only method of science. The methods of physical science are observation and experiment; these should be the methods of the social sciences.

Above all, we should remember that good intentions are not sufficient to solve our problems. Sympathy with labor will not alone solve the labor question; a sympathy with labor that is not founded on understanding often makes matters worse, for any attempt to work out a method of industrial democracy must begin with a frank recognition that the interests involved are

different and must be dealt with as such. It is the ethics of the sentimentalist to say that men's interests are the same; if they were, life would stagnate. Our present experience invalidates all facile prescriptions for superficial reform. We want to know how men can interact and coact better: (1) to secure their ends; (2) to understand and so broaden their ends.

What is the central problem of social relations? It is the question of power; this is the problem of industry, of politics, of international affairs. But our task is not to learn where to place power; it is how to develop power. We frequently hear nowadays of "transferring" power as the panacea for all our ills. Transfer power to occupational groups, we are told, and all will be well; but the transference of power has been the whole course of history—power passing to priests or king or barons, to council or soviet. Are we satisfied to continue this puss-in-the-corner game? We shall certainly do so as long as we think that the transference of power is the way of progress. Genuine power can only be grown, it will slip from every arbitrary hand that grasps it; for genuine power is not coercive control, but coactive control. Coercive power is the curse of the universe; coactive power, the enrichment and advancement of every human soul.

We need a technique of human relations based on the preservation of the integrity of the individual. Of late years we have heard too much of the collective life as an aim in itself. But who cares for "the collective life"? It is usually a mere shibboleth of empty words. What we care about is the *productive* life, and the first test of the productive power of the collective life is its nourishment of the individual. The second test is whether the contributions of individuals can be fruitfully united. Moralists after moralist tells us to give ourselves to the general good, but we need to know far more than this, to do far more than this; our ideal of society is not a kaleidoscope of pretty *bits*.

The nineteenth century talked of the "will" of the people, the "rights" of man. The early twentieth based its hopes for social progress on the doctrine of interests, but long before that doctrine has grown cold, another is emerging. Psychology now gives us "desire" as the key word of our individual life. Students of social relations see desire as the basis of all the actions and interactions of men. It is the word used by Dean Pound in his latest books on law. The pregnant question for the social scientist becomes, then, whether we are to be ruled by the desires of the strongest, whether we are to live in a Power-Society, or whether there is any process possible by which desires may interweave. This is the problem of judge and statesman. The way to rid ourselves of economic determinism is not to deny that it exists; the way to weaken the domination of majorities is not by denunciation.

The object of this book is to suggest that we seek a way by which desires may interweave, that we seek a method by which the full integrity of the individual shall be one with social progress, that we try to make our daily experience yield for us larger and ever larger spiritual values. The confronting of diverse desires, the thereby revealing of "values," the consequent reevaluation of values, a uniting of desires which we welcome above all because it means that the next diversity will emerge on a higher social level—this is progress. With many writers "adjustment" has been the controlling principle of the social sciences, but the idea of adjustment has been broadened and developed by the term we have now gained, that of integration. This expression has large implications, some of which are given in this volume. To stick to the word adjustment keeps us enmeshed in the thought which this word once connoted, whereas our thinking has now gone beyond that stage. We do not want capitalism to "adjust" itself to trade unionism; we want something better than either of these. We want the plus values of the conflict. This is still adjustment, if you will, but with a more comprehensive meaning than of old. Or rather, if we used the word adjustment in the social sciences with scientific accuracy, it might still be a good word, but in the social sciences adjustment as the outcome of conflict has too often been used quite loosely, meaning not the method of evolution, but rather reciprocal abandonments based on the idea that by some system of magic subtraction may become a process of addition.

The acceptance of the doctrine of circular or integrative behavior which I have tried to give in this book, lends a new significance to adjustment. This doctrine gives us hints of that "mystery moment" which leads from the existing to the new, shows us a *progressive* experience, the way of individual and social development. Yet it is not from the psychological field alone that our thought is receiving this impetus. The rapprochement of results from widely different fields of research is as striking as it is significant. The psychobiologist and the political scientist, physiologist and philosopher, jurist and psychologist, are reaching certain conclusions which bear a most suggestive resemblance to one another. And these conclusions lead to a conception of creative experience which is perhaps seminal for our future thinking, a conception which is surely destined to influence largely the social sciences.

The pairings made above were not fortuitous ones: Lippmann, a student of politics, quotes Kempf, the psychobiologist; Bok, the Dutch physiologist, hints at a connection between his conclusions and a certain tendency in philosophy; the most progressive juristical thinking has marked kinship with recent psychological thought;¹ Köhler brings to us from his field of work some striking resemblances to the observations of the psychiatrists; the results of

one social worker² are in some respects most interestingly like the conclusions of some of our contemporary psychologists; the same might be said of the ideas worked out in regard to methods by a successful labor manager³ who, from his study of how to deal with the complaints of his workmen,

1 See pp. 268-9.

2 See pp. 105-7.

3 See pp. 79-80.

has discerned principles which are similar to some of the present-day psychological conceptions in regard to relation. In Chapters 111, IV and V, I have written of these conceptions, but as psychology is a domain in which the more general student may easily lose his bearings, I have tried to give some of the implications of recent psychological thought without venturing on difficult technicalities. If, however, an encounter with these has sometimes been unavoidable, and I have not been able to escape all the dangers involved, I hope it will be recognized that I am not writing on psychology, but merely indicating certain correspondences in different fields of thinking which seem to me suggestive. I do not wish to overwork these correspondences or to treat as more than analogy that which is only analogy. We have always to guard against substituting for observation of social relations facile and interesting analogies from psychological studies of the individual. We cannot equip ourselves with the results of research on one level and "apply" them to another. But, interested chiefly in the seeking of a new method, as are most students of the social sciences today, I have taken illustrations of a method which I think vital wherever I could find them; that is, I have used as illustrative material certain parallels (although not wishing to force their standing as parallels) which seem to me to indicate a new attitude towards method. The social sciences are in some respects in the state of the physical sciences before Newton. The great contribution of Newton to the physical sciences was his showing of the relation of quantitative analysis to qualitative analysis. This must be worked out for the social sciences where we have not always understood the relation between quantitative and qualitative analysis.

I should like to add, since my position in regard to some of the matters touched on in this volume might otherwise be misunderstood, that I have often referred to the results of psychological research in discussing social phenomena when my inclination would sometimes have been to refer to

philosophical discussion of the points involved. I have done this partly because the experimental verification which psychology is bringing to certain philosophical conceptions seems to me very valuable, and also because since what is called social psychology is coming to have more and more standing as a subject of study, it has seemed to me useful to bring together present psychological and social data as far as I could in regard to the one idea in this book. In addition to this I have thought that the correlation of the results of entirely independent observation in different fields might be interesting, that we might get an appreciation of the full import of certain conceptions in one field of study by a cognizance of their value in other fields, that the cross-fertilizations, so to speak, which are now going on in our thinking are worthy of recognition.

I have, therefore, because I have entered other fields of study than my own in writing this book, more acknowledgments to make than is usual. So many people have given me most generously of their time, either to discuss particular problems or to read and criticize manuscript, that their names would make too long a list to print here, yet my sense of indebtedness for the many suggestions they have given me is none the less great,

From Professor Sheffield, however, I have had a kind of help which should receive special mention, for Mr. Sheffield has conceived his own particular subject of study, that of discussion,⁴ so broadly, the technique he is working out is so valuable for all students of social conflict, that my talks with him have been most helpful to me. He has also read the whole of my manuscript and made many suggestions and additions.

4 See Alfred Dv Dwight Sheffield, *Joining in Discussion*.

With Professor E. C. Lindeman my work has been still more closely connected. For two years Mr. Lindeman has engaged in a study of marketing cooperatives, not only for the purpose of investigating an aspect of the cooperative movement but also in order to observe an acute form of social conflict, that between farmers and middlemen. Mr. Lindeman and I shared the hope that from this investigation certain conclusions might be drawn which would be valuable for social conflict in general, and also that there might be developed some fruitful methods of social research in line with the general advance in sociological thinking. In recognition of much that was common in our aims, we decided that it would be advantageous to maintain a rather close working connection, and we have therefore had conferences from time to time from which I have learned much. Moreover, Mr. Lindeman has very kindly allowed me to use his material as freely as I wished, material which

shows great discernment and which recognizes the difference between the dramatic moments and those more subtle and intangible workings that often reveal the real values of a situation. I have used certain illustrations which he has given me and others which I have gained from going over a large amount of printed matter (cooperative news organs, propagandist pamphlets, contract forms, contested cases, etc.) which he has sent me. Mr. Lindeman's own forthcoming book, *Social Discovery, An Approach to the Study of Functional Groups*, seems to me a valuable contribution toward that new technique of social research which is so badly needed today.

To Mr. Herbert Croly I owe deep gratitude for the interest he has shown in my work, and for his generous encouragement which has not only stimulated my efforts but helped to give direction to them. To his books, *Progressive Democracy* and *The Promise of American Life*, my thinking is much indebted, for they greatly enlarged my vision and opened for me entirely new vistas of the possibilities of the development of democracy, of the meaning of citizenship.

It is impossible to express what I owe to my friend, Miss Isobel L. Briggs, for her untiring help, day by day, in considering with me difficult points both of thought and presentation, in preparing manuscript and in reading proof.

PART I
EXPERIENCE AS SELF-SUSTAINING AND
SELF-RENEWING PROCESS

VICARIOUS EXPERIENCE: ARE EXPERTS THE REVEALERS OF TRUTH?

THE most striking characteristic of the thought of today is the trend toward objectivity: psychology has given us behaviorism, political scientists are emphasizing “accurate information” as the solution of all our difficulties, and jurists tell us that law must rest not on abstract principles but on social facts.

The present apotheosis of the expert, the ardent advocacy of “facts,” needs some analysis. The question of democracy is often discussed on the assumption that we are obliged to choose between the rule of that modern beneficent despot, the expert, and a muddled befogged “people.” If the question were as simple as that, most of our troubles would be over; we should have only to get enough Intelligence Bureaus at Washington, enough scientific management into the factories, enough specialists (on hygiene, transportation, etc.) into the cities, enough formulæ from the agricultural colleges into the country, and all life would become fair and beautiful. For the people, it is assumed, will gladly agree to become automata when we show them all the things—nice, solid, objective things—they can have by abandoning their own experience in favor of a superior race of men called experts.

While I am sure that in the present appreciation of “facts” we have the most hopeful promise for our confessedly fumbling world, the most needed corrective for certain attitudes of mind into which we have fallen, while I know from experience that we often waste time in conference arguing about things that are ascertainable, still there are several points which must be remembered: it is of equal importance with the discovery of facts to know what to do with them; our job is to apportion, not usurp, function (the “people” have a place, what is it?); and also we must warn ourselves that a little of the ready reliance on the expert comes from the desire to waive responsibility, comes from the endless evasion of life instead of an honest facing of it. The expert is to many what the priest is, someone who knows absolutely and can tell us what to do. The king, the priest, the expert, have one after the other had our allegiance, but so far as we put any of them in the place of ourselves, we have not a sound society and neither individual nor general progress.

To overemphasize the importance of the expert would be impossible, but after we have fully recognized his value to society, there still remains to be considered the legitimate relation between expert and people. For a generation the slogan has been investigation, research, survey of cities, scientific management, social engineering, etc. Yet through all this steadily increasing appreciation of facts, the question that has recurred to us again and again has been: what is the relation of all this to the rank and file of the people? This is what is in the mind of the president of the industrial plant as he reads the report of his scientific

manager; everyone who has taken part in any municipal reform finds this the crux of his problem.

I do not think that the solution of this problem is to be found in that doctrine known as “the consent of the governed.” To divide society on the one side into the expert and the governors basing their governing on his reports, and on the other the people consenting, is, I believe, a disaster-courting procedure. Yet this does not mean, on the other hand, that “the people” are to be unduly exalted. Formerly the supporters of democracy, concerned with the machinery of government, aimed to find those forms which should give voice to “the people,” but for some time now we have not given much thought to this consideration: the thinkers certainly have not, and the community centre movement, the workmen's education movement, the cooperative movement, to mention only two or three, are not based on the assumption that the will of the people is “instinctively” good, and that our institutions exist merely to get at this will, to give it voice, etc. The essential aim of these, the most democratic movements we have, is to train ourselves, to learn how to use the work of experts, to find our will, to educate our will, to integrate our wills.

The greatest flaw in the form the theory of consent sometimes takes today is the assumption that the automatic result of scientific investigation is the overcoming of difference. This view both fails to see the importance of diversity, and also ignores the fact that the accumulation of information does not overcome diversity. This seems to me a point sufficiently important to warrant some consideration. Daily, hourly I might say, we see the failure of facts to produce unanimity

of opinion. Our Supreme Courts try honestly to get the facts of each case, but the result is not unanimous decision. Boards are constantly sitting which employ experts and then view and discuss the facts obtained; those who have sat on such Boards know that difference of opinion has not been overcome. It is always the inexperienced man on the Board who brings in his "facts" and expects that the *impasse* of the previous meeting will be removed. Can you not see him in your various memories, smiling round at his companions in this happy expectation? And can you not see that smile gradually fade as the expectation fails?

We need experts, we need accurate information, but the object is not to do away with *difference* but to do away with *muddle*. When for lack of facts you and I are responding to a different situation—you to the situation as you imagine it, I to the situation as I imagine, it—we cannot of course come to agreement. What accurate information does is to clear the ground for genuine difference and therefore make possible, I do not say make sure, agreement. The object of accurate information is not to overcome difference but to give legitimate play to difference. If I think I am looking at a black snake and you think it is a fallen branch, our talk will be merely chaotic. But after we have decided that it is a snake, we do not then automatically agree what to do with it. You and I may respond quite differently to "black snake": shall we run away, or kill it, or take it home and make a pet of it to kill the mice? There is now some basis for significant difference. Difference based on inaccuracy is meaningless. We have not done away with difference, but we have provided the possibility for fruitful difference.

To be sure, we need certain scientific information to help us make this decision. We shall have less tendency to run away when we learn that black snakes are not poisonous; but then we learn that they belong to the constrictor class, and some of us do not like even harmless snakes wound round our throats; still the risk of that is slight and my house is overrun with mice and another scientist tells me both that you can make pets of black snakes and that, they are our best mice-hunters. And so on and so on. I am dwelling on this point because I want to make it clear that I think the possibility of a wise decision depends on just as much scientific information as we can acquire. I wholly agree that the number of decisions people are willing to make daily without such information is amazing, and yet I think that after we have obtained the greatest amount possible, there will still be difference, and that dealing with difference is the main part of the social process. President Lowell, in his recent book *Public Opinion in Peace and War*, says: "It might be supposed that men of equal intelligence without prejudice or bias would on the same evidence reach the same conclusion, but this is by no means always true."¹ The effect of the impact of facts upon us is not automatic, instantaneous and idea-levelling.

Moreover, the difficulty of securing accurate information is very great as evidenced by the frequency with which experts disagree. Two experts talking together do not always impress us with their unanimity. We have most of us listened to the "facts" produced at

1 P. 15. Mr. Lowell then gives illustrations of this and adds, "Divergences of opinion result in a large part from attaching different weight to various factors in a problem." Mr. Lowell's discussion of the relation of opinion to facts throws interesting lights on this question.

legislative hearings by the experts on both sides. And the whole history of our courts gives multitudinous evidence in regard to the expert. Recall the testimony in negligence cases. In a suit brought a few months ago on account of an elevator accident, of two experts called in to judge the tensile strength of the cable, the expert on one side testified, after examination of the strands, that the condition of the cable was such as to make it reasonable to expect that the cable would not break; the other testified exactly the opposite. Again, a large molasses tank owned by the United States Industrial Alcohol Company exploded, doing much damage to life and property in the neighborhood. In the cases which resulted, testimony was taken from Harvard and Technology experts. The expert on one side testified that the fragments of steel plates of which the tank was composed showed that the force causing the explosion came from within; the expert on the other side, that it came from without, as, it might be, from a bomb. Of course the question of liability depended largely on this testimony. In the case of medical experts, the fact of two doctors of equal reputation giving directly opposed testimony makes many cases arising from accidents difficult to adjudicate. But we need not enlarge on the diverse testimony of experts in the courts, it is a matter of almost daily experience for every lawyer and judge.² Fact-finding bristles with difficulties. Let us look at some of the practical difficulties involved.³

Many seem to imagine the expert as completely denatured: one who has no emotions, no interests, no

2 See what Kohler, one of the greatest of continental jurists, has written on "the philosophy of testimony" in *The Philosophy of Law*.

3 Fact-finding as a generic term includes fact-gathering, fact-analysis, fact-interpretation, fact-handling, fact-presentation, etc.

memories and associations. Is there an island where such a race dwells?⁴ But waiving for the moment that different experts report quite differently on a situation, that they may have *their* prejudices, interests, stereotypes, that they too often seem mortal and find what they expect to find, or what “the habits of their eyes” lead them to see, or what fits in with their philosophy or moral code; waiving for the moment too that we have all known Commissions where the experts chosen to collect the information required were very carefully picked beforehand according to their probable or known leanings--waiving all this, still some difficulties arise.

First, facts do not remain stationary. A situation changes faster than anyone can report on it. The developing possibilities of certain factors must be so keenly perceived that we get the report of a process not a picture, and when it is necessary to present to us a stage in the process, it should be presented in such a way that we see the hints it contains of successive stages. Dean Pound, in speaking of the writing of legal history in the last part of the nineteenth century, says: “The details of legal and political institutions were described . . . so faithfully as they stood in detail on a given day that they had ceased so to stand before the book was off the press.”⁵

Moreover, names remain the same when what they stand for has changed. It often takes a nimble mind to perceive this.

4 Mr. Lippmann's brilliant chapter on stereotypes would completely dispel such an illusion. See *Public Opinion* by Walter Lippmann for a penetrating analysis of public opinion founded on inadequate information, on tradition, on emotion and “stereotypes.”

5 *Interpretations of Legal History*, p. 70.

Then of great importance is the danger of the expert's labels. When we are told of the accurate pictures of the expert, we remember that there are people who take their cameras to séances and then show us their photographs as conclusive proof of spirit faces! But these are accurate pictures, for "the camera does not lie." The retina of your eye, too, may not lie, but if you see a man strike his friend on the face, it is better to restrain your indignation until you find out whether he was perhaps killing a mosquito. An unprejudiced investigator says: "I am showing you a picture of men fighting for an eight-hour day." But perhaps the men were struggling for something else, such as higher wages or self-direction. You may say that the expert need not label his pictures. He is hardly ever known not to do so; our very language, overlaid with the ideas and emotions of the race, prevents it.

We must remember also that expert or official can choose which fact, of two, he will present to us. To say nothing of partisan assortment of facts, experts emphasize the one which fits into present needs or interests. For instance, when there is a scarcity of white flour, we are told that brown is much more nourishing; when white flour is plentiful, we are told that as it is more easily assimilated we really get more nourishment out of it,

We could carry this thought much further, for it is, from one point of view, the thing most necessary to remember in analysis of fact-finding, namely, that the interpretation of facts depends on needs. The interpretation of existence has always and will always serve our needs. The perception of facts, our "attention," is determined by our needs or desires. The amoeba

feels the internal drive of hunger and wraps itself round something which stills the hunger and this henceforth becomes "food" for him. He has discriminated between food and the acid in the upper part of the pool. In our own life, while the process is infinitely more complex, it is still the same: discrimination always goes on *pari passu* with needs. The satisfaction of human needs is the fundamental law of human existence. Since Freud, the importance of the "wish" has been before everyone's eyes, but many advocates of fact-finding have not seen the significance of the Freudian "wish" in its relation to the interpretation of facts.

As this is of great importance, let me state it again a little differently. Facts become such for us when we attend to them. Our attending to them is bound up in the situation. The kind of objectivity which some of the fact-worshippers are endlessly seeking will be endlessly hidden from them. We want, we say, "impartial," "impersonal" investigation of a fact, but the significance of that fact, by all the yet-known laws of the universe, must be part of the wish which demanded the "disinterested" (!) investigation. The implications of a psychology based on the "wish" are many and far-reaching.

Moreover, we often see the confusing of part of the facts with all the facts. No matter how accurate information is, if it is partial, decisions based upon it will be disastrous. In a book on business education containing problems for the student, his answer to one problem is expected to depend on the "fact" explicitly stated in the text as a "fact," that you can sell more soap at six cents than at seven. A business man I know was much amused at this; it assumed, he said, that the other

firms died meanwhile. What happens as a matter of “fact” when you reduce your soap from seven to six cents is that your competitors reduce it to five and three-fourths, and the question arises as to what you are going to do then. One activity leads to another, and the “fact” is sometimes as elusive as the button in the children’s game. As ardent an advocate of fact-finding as anyone, I want merely to insist that we must know what we mean by “fact” in any given situation, that we must not base our action on too narrow an outlook on the field of facts. Perhaps this point could best be summed up by saying that to view facts in relation to one another is of the utmost importance, and that fact-finding and fact-presentation must take this very seriously into account.

One might go further and say that the value of every fact depends on its position in the whole world-process, is bound up in its multitudinous relations. One might go further still and say that a fact out of relation is not a fact. Yet not all experts can see the relation. What has made the great decisions of the American bench great is that their authors have seen the relation of the facts before them to the whole structure of our social life, including its present stage of development and its ideals. As Mr. Justice Holmes says, “[It is not] the acquisition of facts [which is important] but learning how to make facts live . . . leap into an organic order, live and bear fruit.”

I might connect with this point a crude use of facts which misrelates them to the situation, for things to be “facts” must be facts within the same field. That fire consumes is a fact, but it is not a fact for this book. Thus statistics and facts are not necessarily synony-

mous, but subtle estimates, comprehensive boundaries of vision will be required in order to decide what is a fact for the situation.

Moreover, those who wish conclusions to be drawn always from precise measurements, forget that many of our problems defy the possibility of precise measurement. For instance, what is the minimum a girl can live on “in health and decency?”—the phrase used in the Massachusetts Minimum Wage Law.

Another difficulty which should be taken into account in fact-finding is the limited opportunity of the mere observer; different facts are usually elicited by the participant-observer. That is, experiment rather than *mere* observation often illumines facts, or is the best way of getting at facts. As an illustration of the participant-observer I might cite Prof. William Z. Ripley who, as chairman of the National Adjustment Commission during the war, elicited facts, handled facts and created facts.

The following warning it would perhaps seem superfluous to give if I had not several times recognized its necessity while reading certain expert reports which seemed to be based on the notion that the scaffolding of a situation constitutes the facts. Facts must be understood as the whole situation with whatever sentiments, beliefs, ideals, enter into it. The facts of the trade union are not the external organization, its constitution and by-laws, nor yet the strike, in its external features; these are the mere scaffolding of the facts of trade unionism. That this has not always been fully appreciated by investigators is the cause of some of our misunderstanding in regard to trade unionism.

Another very real danger in fact-finding is that

while you or I may both be responding to fact, we may be responding to quite different *kinds* of fact. For instance, I sat on a Board last winter where employers, employees and public cooperated to fix a wage scale to be based on the cost of living, taking into consideration what that particular industry could stand. It soon developed, however, that to a number on the Board cost of living and the condition of the industry were by no means the main facts of the situation, but the relative strength at that moment of labor and capital. When those members brought in a demand for a minimum wage of \$21.40, these figures did not represent the cost of living in Boston in 1922, they represented an estimate of labor strength in Boston in 1922. But this also was certainly a fact. Let us not be too naïve about facts.

Facts have intimate connection with the whole question of power. Parallel to the history of the use of facts must be written the history of the use of power. Think of the cave-man standing over his fallen foe. The prostrate savage might say, if he were a passionate fact-finder, "Let us look at the facts, it's a big bear, we can divide it and there will be enough for both of us; moreover, if you will study the scientific tables for the nutritive qualities of bear-meat, you will find that you need less of this creature than you thought." But the cave-man would surely reply, "If you want to consider facts, the most important one for you to give your attention to is that I can kill you in another minute; that is the fact that gives me the whole of the bear." As this is the way our international conferences and many others are conducted at the present moment, it seems to me indisputable that the last word has not yet been said

about fact-finding, or at least about facts producing unity. The integrating of facts and power is possible, but it would mean a different code from that by which we are at present living. Nations are at present power-organizations; trade unions are power-organizations; manufacturers' associations are power-organizations. They must be made into something else before "facts" can have their full value for us. It is interesting to watch in any controversy, particularly when it extends over a rather long period, the change in "facts" with the shift in power. Observation of various conflicts with this in mind would, I believe, be fruitful.

Another point sometimes overlooked is that there is a time and place for fact-finding. And I mean more by this than merely that facts should be produced at strategic moments. The trouble with Lloyd George was often that he got a quantity of facts and went into conference with them. But France did the same. Then they pitted their facts over against each other. These facts did not agree. Of course they did not, as they were not the facts of the case as the case had developed in conference. From my experience on Minimum Wage Boards I see that there is possible a cooperative gathering of facts which is more useful to the resolution of conflict than for each side to get them separately and then try to integrate them, for when each side gets them separately there is a tendency for each to stick rigidly to its own particular facts. On one occasion when the employees were bringing in figures for a certain item, that of clothing, in the cost-of-living budget, and the employers another set, and the representatives of the public still another set, a sub-committee of three was appointed, one from each of these groups, to collect the

facts jointly. The figures brought in at the next meeting, thus cooperatively gathered, were accepted by the Board and the rest of the discussion based upon them.

Thus can facts be properly used in conference, not marshalled to bolster up partisanship. Moreover, since far more than honesty, disinterestedness, etc., is required in the gathering of facts and reporting of situations; since the greatest delicacy of perception, the ear to hear overtones, the sensitiveness to impressions as well as a certain imperviousness to impressions, are indispensable, our accurate information will probably always have to be gathered by a number of people. We must recognize also that the facts on two sides of a controversy are in part different, and will remain so except in those cases where the fact-finding can be a joint activity. It is true that even if we could have a cooperative gathering of facts we should still interpret them differently, but the initial difficulty would be avoided—we should at any rate be looking at the same facts. When the attention of each side is riveted on *its* facts, discussion becomes rather hopeless. When the middleman tells the farmer one thing and the Farm Bureau another, the farmer is puzzled even although both sets of information may be “facts.”

The use of statistics to suit one's purpose has been too frequently noticed to need any elaboration here, but an unusually interesting case has just come to my attention which has a bearing on this point of a cooperative gathering of facts. The research department of a tobacco cooperative association was asked for figures on the price of tobacco before the time of the formation of the cooperative. They began at 1866, taking five-year periods for their averages, and showed

that the average price was under 11 cents. Then an independent investigator made the same analysis, on the basis also of five-year periods, but began with 1868. The result was much higher. Of course it was in the interest of the cooperative to make the discrepancy before and since its organization as great as possible, yet this was not calculated manipulation to deceive, it was a tendency merely to make the best showing possible—the aim of both sides in every controversy. The result was two sets of figures confronting each other. This could have been avoided by making the investigation a joint affair; then it could have been decided what year it was fair to begin with, not fair to both “sides,” but a fair estimate of tobacco prices irrespective of “sides.”

One of the principal difficulties in fact-finding seems too obvious to mention: the deliberate withholding of facts. The chief weapon of the speculators is to keep facts from the public. If they can induce the public to think there is a shortage, so much the better for them. Much might be written on this question, for we have abundant material both for and against the advisability of opening business records to the public. The withholding of facts must be connected with the question of the seeking for power. Consider the attitude of the cooperatives on this point. They are trying to stand in two places at once in regard to open business: open for members, shut for the public—a difficult position to maintain. One of the leading principles emphasized by many different speakers at the National Milk Producers’ Federation at Springfield, was the need for every cooperative organization to keep its members fully informed

as to all its policies and all the details of its business. It was urged that while it is characteristic of big corporations and of business in general to be secretive for fear of putting information into the hands of competitors, the cooperatives ought to adopt a different policy. But one of the southern cooperative associations refuses to publish individual warehouse receipts for fear of their effect on prices, or to give in information as to their solvency, or to publish prices until the end of the year (the payments are made in installments); they have not yet told the overhead cost, the number of members, the number of contract violations or the amount of available credit. Any of this information, they consider, will give power into the hands of their opponents.

But above every consideration in the gathering of facts we must notice that the findings of experts can often be divided into the facts which are indisputable and those which can be looked at differently by different people. To illustrate. Experts from various agricultural colleges meeting in conference decide on the best balanced ration for milch cows. In that formula are two different *kinds* of information: (1) the analysis of the different grains showing the percentage in each of protein, carbohydrate, fat and fibre; (2) what proportion of each grain in combination furnishes the best mixture for milch cows. It is of the utmost importance to make this distinction. The farmer can have no opinion about the first: if two farmers should disagree in regard to the percentage of protein in oats, discussion would be futile; the only thing they could do would be to consult a chemical expert. But a farmer can watch the effect of the for-

mula on his cattle; he can vary the mixture and keep a record of results; a number of farmers doing this can compare results and report to the agricultural colleges. Thus each man's share in the matter would not be merely getting the best feed for his own cattle, but also contributing to the formula. Thus the formula may change with the experience (happily, or I should say significantly a word from the same root as expert) of all. This is all that democracy means, that the experience of all is necessary. There is no innate urge or abstract right which assures us the knowledge of how to feed our cattle, we find merely that the plus-idea is the best thing man has yet fallen on. This is as true in politics as anywhere else. Democracy is not "idealism" but plain common sense.

In this matter of cattle-feeding there has been a change in the last two or three decades parallel with our change in political ideas. Some years ago the farmer's attitude was, "I guess I know how to feed my own cattle." This reminds us of the every-man-can-govern species of democracy. The present aim of many agricultural experts—to get the farmer to follow their formulæ blindly—is in line with all the overemphasis today on the expert. But the better way is to find out how to combine the experience of the agricultural colleges and that of the farmers. The intelligent farmer does not take the formula of the colleges as revealed truth, but as a basis from which to begin his own observations. He knows that the expert is not one who has access to the secrets of the All-wise, but one who has a particular kind of experience which must be added to his own particular kind of experience, that both have their parts to play.

To carry this illustration a little further, let us note three parts in the process: the first entirely a matter for the expert (percentage of protein, etc.); the second a matter for expert plus farmer (the best mixture); the third entirely a matter for the farmer, that is, of two formulæ with equal proportions of protein, etc., but different ingredients, it is for him to decide which to use.

I have allowed myself this long illustration because of its significant suggestion for politics and industry. In politics we do not keep these different kinds of information apart; there we are always trying to change the proportion of protein and carbohydrate. To reduce this practice should be our aim. And our aim in the so-called democratic organization of industry should be, not to give the workmen a vote on things they know nothing about, but so to organize the plant that the workmen's experience can be added to that of the expert; we must see just where their experience will be a plus matter, and we must plan to have the workmen learn more and more of the industry as a whole. To think that a man can come from his particular machine and vote intelligently on the running of the business is exactly the mistake we have made in politics. The problem of most managers of industry is how to use their "objective measurements" after they get them; how to ensure that they will keep as much of their objectivity as possible, and how to make them operative through, not in spite of, the will of the workmen.

Every increase of technical knowledge and mechanical invention, as President Lowell has so well pointed out, increases our dependence on the expert.

The indispensability of the expert is accepted; what we need is a clearer understanding of his relation to ourselves.

Of all the many difficulties which arise in trying to connect the findings of the expert with the will of the people, perhaps the greatest is caused by the methods the expert is often willing to use in the presentation of facts. Secure in the belief that he is "right," he does not hesitate to stampede the general public into acceptance of his opinions, for in spite of our wish to think of the expert as an unprejudiced observer who has no opinion, we see little caffeine-less information presented to the public. And I ought to add in justice to the expert, that the public on its side has shown little inclination for nourishment without stimulant. But the fact remains, whether it is due more to the zeal of the expert or to the demand of the people, that there is a pernicious tendency to make the opinions of the expert prevail by crowd methods, to rush the people instead of educating them.⁶ Indeed there is often more of this in the select circle of experts than elsewhere, for those of us who are not experts are occasionally a little humble about our opinions and somewhat reluctant about forcing them on others. Not so with the expert. I have seen the method used subtly, insinuatingly, most cleverly, by one of the foremost economists of America, one who has done the best kind of research work, speaking before a meeting of the Amalgamated Clothing Workers at one of their national conventions. And after the war when the propaganda for the League of Nations

6 I am not forgetting the educational methods of the Red Cross and other societies, as well as of settlements and social workers in general,

began, there was in one city a committee composed largely of trained thinkers, one of them at least an expert in international matters, who had as part of their programme what they called a "whirlwind campaign" of the School Centres in various parts of the city where citizens' meetings were being held. "All we want," they said when asking for permission, "is for the people to stand up and be counted." But as one of the friends of the Centres remarked, "The Centres were not opened for men to stand up and be counted but to sit down and think." When the expert in international affairs is trying to "whirlwind" an audience into voting for the League of Nations, he is using exactly the same method as the demagogue.

There is much more in this point than appears on the surface: it is by no means enough to persuade the expert to give up crowd methods; he has to understand what the difference is between the crowd method and the non-crowd method. The essential difference is that the former creates wholes and the latter breaks up wholes. Let me explain. The object of the crowd-speaker is to get unanimity: the way he does this is to take all the different aspects of a situation, about which men might and do differ, and either combine them into something so vague that all can easily agree, or else get them under the roof of a single emotion. One emotion will cover a multitude of ideas. This point is delightfully made by Mr. Lippmann. The non-crowd method, as I shall show in Chapter IX, is just the opposite: it proceeds by analysis, differentiation, discrimination. And this matter of discrimination is concerned as much with the expert's investigation as with the process by which he communi-

cates his results. Generalization is often implicit interpretation. For any scientific accuracy we must use interpretative terms guardedly. Words should not be used which imply a judgment, which award praise or blame. We must seek a language without emotional content. For fact-finding we must invent a fact-language. To keep strictly to the observation of behavior, and to force our language to record that behavior, is what is necessary. Someone tells us that this workman "stubbornly" continued to do so and so; this is an interpretative term, not the language of the scientific accuracy. If situations could be reported with scientific accuracy, I believe it would have a very marked refluent effect on the expert's observation; it could not fail to make him observe more keenly, it could not fail to sharpen his perceptions, if he deliberately separated facts from interpretation and made his language correspond exactly to the facts. Few experts are alive to this.

And we on our part, we like the crowd-words they give us; they have taken on so many consecrated ideas and approved-of emotions that we feel reinforced, unconsciously, by what they have gathered to them. Also the acceptance of crowd-words is enormously encouraged by our inertia; they save us the trouble of analysis.

I have been watching the presentation of facts in the farmer-middleman controversy in the South. In reading the literature of the cooperative movement in the South during the last two years, as found in newspapers, trade journals, propagandist pamphlets, etc., one notices on the one hand the "facts" presented to the farmers by the promoters of the tobacco and cotton

cooperative associations, and on the other hand the different "facts" given by those opposed to these associations, the warehouse men, speculators and bankers, who wish to maintain the old system. The official organ of one of these marketing cooperative associations boldly contradicts the "facts" of the middlemen. It sometimes does this with an emotional appeal, sometimes with a logical appeal, but there is no effort to convince the readers that the facts which are being used to controvert those of the other side have been gathered in such a way that one could be sure they were facts. As many academic controversies consist, alas, in statement and counterstatement of opinion, so here we have statement and counter-statement of fact. A method of presenting facts which should first establish the validity of their claim to be facts would both help in the resolution of the conflict and be educational.

This chapter must not be considered as showing any scepticism in regard to the value of facts. I know that much of our muddle today comes from a willingness to base our decisions and our actions on inaccurate information or mere assumptions. We see this daily. Any example that might be given seems too commonplace to mention. I recently served on a subcommittee to look into the matter of inexpensive boarding-houses in Boston, that way of living which most people consider the menace of the working girl in the large city. We found to our surprise that the working girls of Boston lived chiefly with their families or the family of a friend. There were exceptions, but these were taken care of by Brooks House, Franklin Square House and homes of that description, well

conducted and carefully supervised houses. The welfare worker at Jordan & Marsh's department store told me that of their two thousand women employees practically none boarded; they commuted from about sixty-three towns. She too had been much surprised at this, as she had supposed one of her chief tasks would be the boarding-house problem. My sub-committee reported these facts to the main committee, but for weeks afterwards that committee in its discussions assumed, as they had done all their lives, that working girls in a city lived chiefly in boardinghouses and ran all the dangers involved. We quietly hit that assumption every time it reared its head, but never killed it entirely. The mere fact, however, of a sub-committee being appointed to investigate this subject was a step towards "accurate information."

Another thing is interesting: we are advancing the boundary-line of ascertainable facts; while insisting that we shall not discuss as matters of opinion what are matters of fact, we are finding that more and more subjects can be taken from the field of mere opinion. In a meeting of the manufacturing committee in a large industrial plant the members were considering the advertising for the Christmas trade, and the discussion was over the question whether a three-line advertisement for six weeks attracted more attention than a longer advertisement for a shorter period. As the advertising was to cover the whole country, the cost was of some importance. The discussion went on, sides were taken, until the President of the company walked in, heard what was going on and said, "Why discuss what we ought to be able to find out? I will ask the department of psychology at Columbia to take

up this question. By getting their students to read magazine advertisements over an extended period and make careful notes of what attracts them, we may be able to get some information on the subject. Meanwhile let us not go through the farce of taking a vote on something we know nothing about; let us go on as we have done in previous years until we get something on which to base our opinions."

I give my full adherence to the doctrine of "accurate information." We see every day how necessary are warnings to us on this point. For instance, "applied psychology," of which we hear so much just now, means to many business men the consideration of the influence of personalities on each other rather than the responsibility of individuals to the situation—that is, to the facts. And when the politician relies on what he too calls "psychology," he means the handling of men instead of the facing of a situation—that is, the facts. And it is only too apparent that the weakness of diplomacy is that it puts a disproportionate emphasis on the understanding of the "psychology" of one's fellow diplomats as against an understanding of all the facts involved. The "psychology" of the individuals concerned is of course also a fact, and an important fact, of any situation; I am criticizing here merely the too exclusive use of this particular kind of fact.

We have been speaking of experts and people, and have neglected the middleman in government, the administrative official, and there are several things here to bear in mind.

First, administrative purpose usually outruns the

facts. Indeed the administrative official's ardor for facts usually begins when he wants to change the facts!

Then the overemphasis of investigation draws a line between the gathering of material and the interpreting of material: the expert is to gather and the official to interpret. No such sharpness of division is possible; the gathering is always in itself an interpreting. Interpreting is part of the vision, not something done with the vision. Where indeed can we look for the separation of fact and opinion? The Federated Press began its career by telling us that the Associated Press was partisan, but that it (the Federated Press) was going to be nonpartisan; that the Associated Press gave us opinions, but that it was going to give us facts. We can see how far they have been able to keep that promise.

Moreover, facts are not poured in on the administrative official in helter-skelter fashion, they undergo a certain process first, and fact-analysis is to some extent fact-interpretation. Condensation is implicit interpretation. Yet the official necessarily calls upon the expert to provide him with the facts of the case in condensed form.

Those who give us the trinity of accurate information, administrative policy and assent of people as the political process sometimes forget that their glorification of facts would tend to reduce the administrative officials to a shadow, would tend to make them mere mechanical appendages of the organized intelligence departments. And thus policy becomes as foreordained as consent. There must be a place for experts *and* administrative officials *and* people.

And I wish those who advocate a more extensive system of fact-gathering would tell us more of the subsequent fact-handling. Since the war, Washington as a store-house of steadily accumulating research-reports has become a joke. Consider the vast sums spent by the Shipping Board alone and the material gathered; if the administrative officials are making use of this, they have kept it a secret from the rest of us.

I have left to the last what seems to me the most serious flaw in any exposition which makes a chasm between the expert and the people to be bridged only by the frail plank of consent. But I wish here merely to state, what cannot be elaborated until a later chapter, that the "will of the people" is already in the situation which the expert investigates; that the investigation of the expert often changes the situation (an investigation of the standard of living often raises the standard of living); and that the people help to create and to develop, by their response, the situation to which they are responding. The expert's opinion, the administrative official's opinion, the people's opinion, all affect the situation, so that before the expert has finished reporting and the administrative official deciding and the people "willing," the situation has changed. In short, my argument against acquiescence as the people's part in the political process depends first on the fact, in my opinion basic and all-important, that different kinds of accurate information are required, that of the expert and that of the people; secondly on the changing character of the fact-situation; third on the activities of the people as integral with the changing situation.

The expert must find his place within the social process; he can never be made a substitute for it. Technical experience must be made a part of all the available experience. When we see expert and administrative official, legislator and judge, *and* the people, all integral parts of the social process, all learning how to make facts, how to view facts, how to develop criteria by which to judge facts, then only have we have a vision of a genuine democracy. We have not to choose between becoming an expert on every subject ourselves and swallowing whole the reports of experts. The training of the citizen must include both how to form opinion on expert testimony and how to watch one's own experience and draw conclusions from it.

I should like to say, as an indirect summing up of this chapter, that I wish we could understand the word expert as expressing an attitude of mind which we can all acquire, rather than the collecting of information by a special caste. While appreciating fully the necessity of more scientific observation, what we chiefly need I believe is not so much to increase the expertness of the expert in the hope that thereby we shall automatically increase the consensus of the consent, but for all of us to acquire the scientific attitude of mind, to base our life on actual experience, of my own plus that of others, rather than on preconceived notions. Much of our present clamor for the expert is, I fear, a "defence reaction," a confession of our own weakness. Many of us are calling for experts because, acutely conscious of the mess we are in, we want someone to pull us out. What we really wish for is a "beneficent" despot, but we are ashamed to call him that and so we say scientific investigator, so-

cial engineer, etc. Many of us are like the little girl who goes to her mother with her tangled knitting: she goes, often, not to learn to knit, but to be got out of a scrape. What we have to do is to learn how to use the findings of the expert: it is not by a blind acceptance; neither by balancing them against our own "innate" ideas; it is by learning how to unite experience with experience.

The social process is not, first, scientific investigation, then some method of persuading the people to abandon their own experience and thought, and lastly an acclaiming populace. The social process is a process of cooperating experience. But for this every one of us must first acquire the scientific attitude of mind. This will not make us professional experts; it will enable us to work with professional experts and to find our place in a society which needs the experience of all, to build up a society which shall embody the experience of all.

II
VICARIOUS EXPERIENCE: IS THE LEGAL ORDER
THE GUARDIAN OF TRUTH ?

THERE is no such thing as vicarious experience. The expert alone is not the revealer of truth. The judge alone is not the guardian of truth. Neither expert nor judge can be offered as the remedy for “the failure of democracy.”

I spoke above of the present-day seeking for reality in facts, in the “objective situation,” as only half our quest. We have, however, one great current of intelligence which is consciously striving to weld together into a reciprocally enriching unity principles and the objective situation. The legal order today is telling us that precedents are to be interpreted in the light of events always in flux. The philosophy of law today, in the hands of such men as Dean Pound, is contributing not only to jurisprudence but to the study of every aspect of human relations.

The founder of the modern theory of jurisprudence, Jhering, insisted that law is not a system of abstract principles, but rests on the objective purpose to be served. The acceptance of this view marked an important step in juristical thinking. Another step is now being taken, for that “objective purpose” is understood today as a purpose which is never static but

which changes as rapidly as life changes. One activity sets in motion many others; in the interweaving of these lies at any one moment the sought-for purpose. Innumerable examples spring to mind of the way in which purpose develops. Take the aims of English labor a few years ago: the eight-hour day, union recognition, safety devices for machinery, general health regulations, and the nationalization of mines and railroads. These were the interests labor wished secured. But now the eight-hour is changing to a six-hour demand, the demand for union recognition is changing to the demand for union control, health regulations are being brought about indirectly through insurance laws, and the wish for the nationalization of mines and railroads is giving way to the wish for guild control. Wherever one turns one sees examples of the evolving purpose. Credit Unions, begun in protest to bankers' contracts, became the sources for cooperative enterprise. Lockouts, begun as a weapon against strikes, became a way of breaking the union. Farmers cooperated to raise prices and then began to work for better schools. A capital illustration is the way shop-committees often develop. I asked the head of a big electrical plant where I went to learn something of its shop-committees what his purpose had been in starting them. He replied instantly: "To get the managerial policy across." But as I looked further into these committees, I found that the purposes they were serving—the purposes disclosed by their activities—were quite different from the one given me. This evolving purpose, rather than a preconceived purpose, is what the legal order has always to take into account, for while you are "securing" ends, life goes on to

make ends of its own very different perhaps from the original ones.

A teleological psychology sees an anticipatory purpose—the individual does so and so because it anticipates certain results; a teleological sociology is founded on anticipatory purposes; a teleological jurisprudence conceives the function of law as comparison of present activity with a preconceived purpose. But what the legal order has to do is not to hug its blueprints, but to recognize the purpose which the activity discloses. Yet while the judge can have no charted purpose, no architect's plan, by which to construct his decisions, still we must remember in considering what the evolving situation means for jurisprudence, that the decisions of the judge do far more than take note of its developing character—they contribute towards it. While the power of the legal order as something outside the social process imposing patterns upon it has been greatly exaggerated, its place within that process has often been underestimated. This will be referred to again in a later chapter.

But if one accepts the notion of an evolving purpose, the next question is one of valuation: who is to decide between the values of various purposes? I think here the function of the legal order is not always conceived with entire accuracy. One writer tells us that the validity of law "is determined by the end which the law seeks to realize." But who is to judge the validity of ends? We do not "decide" on ends, a word which occurs in much juristical writing today; ends appear from out our concrete activities. Again we hear that law is to meet real needs; many writers use this expression. But who knows what "real" needs

are? Still another jurist tells us that the question always to be asked in law is “Does it serve a *useful* purpose?” Who is to have the decision as to what is useful? Is not that just where our difficulty, our perfectly genuine puzzlement, usually lies? And when we hear that there is now to be a conscious attempt to make law conform to ideals, we are still left inquiring, Whose ideals? It is said: “The State secures those interests which it thinks most worth while to protect.” How does it know which are most worth while? Cardozo, thinking that “the interest that is better founded in reason and more worthy of protection should be helped to achieve victory,” asks specifically, “How is the judge to know when one interest outweighs another?” And we are told that he must learn it from the practice of his art, “from tradition, other judges, the collective judgment of the profession, the pervading spirit of the law.”¹ But the judge cannot learn how to weigh interests from legal tradition, legal reason, legal activity alone—as of course Cardozo knew.

In short, when we are now told that the problem has become one of valuing—of finding criteria of the relative value of interests—our first thought is: How is this valuing to be done, who is to do it? Mr. Justice Holmes brings in the word social. He speaks of establishing the postulates of law on “accurately measured social desires.” He tells us that it is because of the estimated relative worth of our different social ends that we extend the sphere of one principle and allow another gradually to dwindle into atrophy. Here again the question we naturally ask is, Who is to “accurately measure”? Who is to “estimate relative worth”? But

1 Benjamin N. Cardozo, *The Nature of the Judicial Process*.

Mr. Holmes gives us some hint of a process by which, in his opinion, these desires receive measurement when he says that the justification of a law must be found in some help which it “brings towards reaching a social end which the governing power of the community has made up its mind that it wants.”² But law is far more than either the weapon of the strong or the protector of the weak, as no one has better shown us than Mr. Holmes. Social interests are not exclusively the interests of the governing power, nor can they be declared by the legal order alone. The evaluation of interests involves the psychological development of an interacting people; it depends not on “the wisdom of the judge” except as he is part of that development.

Moreover, the distinction between individual and social interests needs careful analysis. The phrase social interest is, to be sure, now defined with precision by modern jurisprudence, but the legal meaning has not yet found its way into general usage, hence arises some confusion of thought. Moreover, while the word interest is today employed by jurists in its psychological sense, until recently that word has been used by the legal order as well as by economists not in its psychological meaning, but as connoting economic advantage. Many jurists have thought, as Pound has pointed out, that they could dispense with the most pressing human claims by demonstrating that no economic advantage was involved in them. The interest involved was what that particular jurist thought the people concerned ought to need, what they ought to want, what ought to be their economic advantage considering them in the abstract. Today however, the

2 *Law in Science—Science in Law in Collected Legal Papers.*

“interests” of the legal order are merely the de facto claims and desires of concrete individuals; “social interests” are such claims generalized. Yet even if interest is no longer employed by jurists in the sense of economic advantage, even if one of the contributions of contemporary jurisprudence to all the social sciences is the getting away from the “individual in vacuo” (as from those absolute rights which can never conflict), still I think that because the word social is used so loosely in general speech and writing, it would be well if either it could be avoided in legal literature, when possible, or else the sense in which it is employed more fully explained. In general literature the word social is often used as a pure abstraction; or it is used to express a personal estimate—what a man himself thinks the best way of acting he dignifies by calling it the social way; it is used as a blanket expression by all of us when we feel too lazy to think out what we really mean; it is used emotionally times without number. Therefore, while the jurists of today are not using the word social either sentimentally or subjectively, are not using it either as an abstraction or a rationalization, but merely, as I said above, in the sense of a concrete claim or desire generalized, still it seems to me that a distinction which is thought of by many people so vaguely and inaccurately as the distinction between individual and social interest might well be replaced by something else, as perhaps by the difference involved in the long and the short view.

One point I think is very necessary to note in this discussion, and that is that we sometimes go astray in our use of the word social because different uses of that word merge so imperceptibly one into the other; they

merge so imperceptibly that two sets of people dealing with the same situation may employ this word in different ways without its being noticed. It is often used as a “rationalization” when all the time there *is* a genuine social interest if it be employed in another sense. For instance, we are told that the organization of winter sports is a social interest because winter sports are good for the health, yet we all know that they are being encouraged in New England towns because they bring trade to the local stores and hotels. But this also is a “social interest” without any rationalization at all, for it is a concrete claim generalized. Again, when town planning is presented to the general public, it is presented as an æsthetic policy with an appeal to local pride based on a comparison with what other towns are doing. Yet the boards of trade in our small cities, most of the members of which are interested in local real estate development, accept town-planning after they have been convinced that it pays. After that we have town-planning bills in the legislature. When two of our state courts declared that such legislation should stand, had they recognized “social” or individual values? Social values, to be sure, in the sense in which jurists use that term—individual values generalized—but not in the sense in which that term was used when the social reformers or the architects or the legislators supporting the measure addressed the voters. These speakers used it with its emotional appeal, with its moralistic appeal of “sacrificing” your individual interests to the “general good.” I think, therefore, a term unfortunate which has this objection of double usage; it seems to me that often it would be well to substitute for individual and social interests, the

idea of the short and the long view. Whenever we are informed, as we often are in juristical writing, that the court has made a particular decision not in the individual interest of plaintiff or defendant, but in the social interest of the security of acquisitions and security of transactions, we recognize that that is an accurate statement, and yet the layman who has suffered much and long from the crowd orators' use of the phrase, from promoters of all kinds, might prefer the notion of an *individual* interest in the security of acquisitions and security of transactions divided into the short and the long view. When we are told by jurists that the Germanic peace which played so large a part in building common law—the peace, the peace of highways, the peace of festivals, the peace of markets—was a securing of social interests against individual self-assertion, it seems to me that here too we might prefer to make the distinction between what is to the interest of individuals for the moment, and in “the long run.” When it was found difficult to enforce the Rivers' Pollution Act in some towns in England, the mill-owners, who were the chief offenders, were finally won over not by urging them to sacrifice their individual for the social interest, but by showing them that their interest in the long run was unpolluted rivers.

What I am objecting to chiefly is the self-deception which the notion of “social interest” allows or even encourages. I saw it stated in a description of the cooperative movement among the fruit growers of California, that California had bankers and merchants so socially minded, so public, spirited, that they supported the cooperative movement because they saw that, however it might affect banker or merchant, it was better

for the community as a whole, they saw that they had an “opportunity to render a great public service.” But this was not the reason for their participation in the cooperative movement. It is obvious, and those merchants and bankers who went into the cooperative movement saw it, that the merchants will not do much business unless the growers are prosperous and have money to spend. It is equally true that the bankers’ prosperity is in the long run bound up with the prosperity of the farmer: whatever increases bank deposits, develops the farming industry and stabilizes real values, helps the banker; orderly marketing means orderly financing and avoids peaks and dips in the credit situation.

The difference here is clearly between a short and a long view. It is true that the old “time-merchants” who charged exorbitant prices to cover bad debts and long accounts, being able to do so because they had the farmers in their power, made something out of the farmers’ extremity, but in the long run it is obvious they stand to gain by the farmers’ prosperity. The same is true of the bankers: temporary high rates of interest are not to the bankers’ advantage in the long run because the conditions on which they are founded are to the advantage of no one in the community.

Examples could be multiplied indefinitely. Any plan made to initiate or stimulate joint effort in small towns is usually presented to the townspeople as an appeal to their sense of “social” values as against individual values, which they are told they must “sacrifice.” How often we hear that *cliché*! But the difference between competition and joint effort is a difference between a short and a long view. When

we become enlightened enough to realize that we individually get more out of joining with people than by competing with them, we do it. For instance, formerly the local stores in a small town competed sharply with one another. Now, in some places they are beginning to join in an effort to secure the trade of the outlying farming districts and of the summer residents who tend to buy from the city by mail order. They do this by saving capital through common store-houses, through dividing specialties and thus increasing stock without increasing expenditure, by improving local service through cooperative deliveries, etc.

I should like to say, too, in support of the suggestion that the short and the long interest is perhaps a conception fraught with less possibility of self-deception than that of individual and social interests, that I do not find the distinction between individual and social made anywhere in actual life. I telephoned to my bank this morning and asked what my balance was. They replied that they could not tell me unless there was someone there who could recognize my voice, and added, "This is to protect you." If I ask them in a shop to give me some article although I have not my charge coin with me, and they refuse, they always say, "We have this rule in order to protect you." In neither case do I hear anything of the social interest. In both cases, however, they show me that my immediate is against my long-run interest. Nowhere in actual practice do I find the categories of individual and social interest.

Another difficulty in the Distinction between individual and social interest is that even after you have decided on the validity of social interests, it is not al-

ways possible to tell what the social interest is. For instance, is our law in regard to illegitimate children an illustration of the sacrificing of individual interests for the social interest in the security of domestic institutions? There are people who think the social interest better secured by laws which legitimize the children of the unmarried mother. I am giving no consideration to this question; I mention it merely to point out that there would be a difference of opinion here in regard to the social interest. Agreements on such points will come not through accepting the wisdom of one man, the judge, or of the legal order, but through the interweaving of many desires and attitudes, emotions and, ideas, through much trial and error.

There is one consideration alone which should show the undesirableness of the separation of social and individual. When society is given an interest, this tends with some writers to make an entity of the "social soul," the "group mind." "Social interests," "general security," "public safety," is it possible for these to be other than individual interests, individual security, individual safety? If we are looking to the future, social interest may be merely a synonym for the unborn—individuals. One of the ways in which Kohler allowed his conception of Hegel to influence him unduly was when he conceived the development of society as separate from the development of individuals "each trying to perfect itself." This very markedly influences his philosophy of law, but there should be no separation between development of individual and development of society.

Moreover, it seems to me that in some of the writ-

ing of today which tells us of “social ends,” we are bound to a certain extent by deterministic assumptions. Do we see, as we should, that social ends are not preexisting things but eventual things, to use an illuminating expression of Dr. Kallen’s? Do we not run the risk of making the *same* error which Graham Wallas tends a little to make in *The Social Heritage*, where he sometimes seems to invoke the “Good Life” as an abstraction? The arbitrary determination of interests may lead us into as many errors as the doctrine of “rights.” To declare that certain interests, aims, are “social,” and therefore valid, and that some are not, is exactly as arbitrary as when any jurist of the past chose certain principles and declared them “right.” The arbitrary choice of interests is no more legitimate than the arbitrary assumption of rights.

But if the expression social interest has seemed somewhat unsatisfactory of late, and if the distinction between the short and the long view given above is not adequate to cover all cases, or cannot be invoked when we are dealing with a sharply drawn conflict the immediate issues of which for the persons involved overshadow all other considerations, there seems to be some reason in the development of recent thinking for substituting the term integrating interests—the integrating of individual interests—for that of social interests, or to give the latter term this more concrete meaning. With English, American and German psychologists, physiologists, and physicists too, now employing the term integration, it may certainly be considered in good use, and the students of the social sciences may well ask if it is not exactly the word they need to describe what their own observations note. And as for

some years now jurisprudence has seemed in advance of the other social sciences, so here too we find it in the forefront of thinking. We see a theory of law now emerging which goes as far beyond social interest in the looser usage of that phrase, as that conception was an advance on individual interests in the sense of private or personal interests. We see signs of this newer theory in our courts, in legislation, in juristic writing. This theory rests on a recognition of the fact that opposed interests are not necessarily incompatible interests.

In Massachusetts the judges of our Small Claims Court have the opportunity to show us law as not inevitably a struggle resulting in victory for one side and defeat for the other, but as a struggle which may show the way by which each side can attain its desire. The following shows the point. Smith brought suit against Panotti, a small fruit-dealer, for a debt of forty dollars and attached his business for that amount. Panotti claimed that the payment of that sum would ruin his business. The judge ruled (he could not have done it before the law which went into effect January, 1921) that the amount be paid in installments out of the defendant's earnings. What is the result? Smith gets his money; Panotti's business is not injured. Both are satisfied. I believe that in every conflict—between persons or nations, classes or races—this method should be tried. We cannot always reach such happy conclusions as in the case of Smith vs. Panotti, but I think we should succeed much more often than we now think possible; at any rate it seems as if the method were worth a trial. I wish someone would make a study of recent decisions of the bench to see what evidence could

be found of the recognition of the fact that cases brought to court, while showing apparently clashing desires, may at the same time reveal to a perceptive judge the way by which the desires on both sides can be fulfilled. Dicey says that the history of law has been the history of "rough compromises" between "conflicting rights." It does not seem now as if that need always be true. The illustration I have given was not a compromise; it would have been if Smith had had to be satisfied with twenty-five dollars. I believe that the legal order is now beginning to see that there may often be found by acute, fair-minded, and inventive judges ways of settling disputes which give to both sides what they really want. The increasing powers given to the judges in the municipal courts may give the opportunity for this.

There have been of recent years many integrations made by legislation; there seems happily to be a growing tendency in that direction. Take the Workmen's Compensation Act; the active cooperation between employers and workmen to carry out this law shows its value to both. The employer has the following advantages: he had formerly to pay much more when the employee's lawyer succeeded in winning the case than he pays now; and there was an uncertainty hanging over a business that might be wiped out if a serious accident occurred. On the other hand, the employees under the old system either did not get anything if the other side won, or even if they themselves won, they had to wait a long time for the award and payment, when it was at the moment of the injury or illness that they needed the money. Since the negligence of fellow-workmen has been included, the employee has been

fully protected. This is a good example of the integrating of individual interests.

Moreover, the doctrine of integrating interests does away with that of the balance of interests which has so many advocates. And this modifies Adams' theory of law as the resultant of the struggle for power. When Adams points out that contradictory precedents register the points of dominant power he says, "You will find that the law is regularly wrenched, more or less violently, from its logical path, to facilitate the rise of each new species of the competitive man, and that it is again dislocated to accelerate that species' fall." And since lawyers "may be assured that that party will prevail before courts of justice whose cause embodies power rather than logic," his advice to them is "to measure intelligently the relative energy of the forces locked in the controversies" in which they may participate.³ While I am sure that there is much truth in this, I do not think it is wholly true. In fact, observation of industrial controversy for the last ten years leads me to think that those disputes which are "settled" merely by the balance of power are not really settled at all. The slightest shift of power brings the matter up again with accumulated rancor and hard feeling. The balance theory gets us nowhere in law or politics or international relations.

The illustration just given of the Workmen's Compensation Act shows the important thing about integration. The moment you try to integrate loss, you reduce loss; as when you try to integrate gain, you increase gain. This is the whole claim of integration over either domination or compromise, the three ways of dealing

3 Brooks Adams, 19 *Green Bag*, 32-33.

with conflict. In either of the latter you rearrange existing material, you make quantitative not qualitative adjustments, you adjust but do not create. In the case of the Workmen's Compensation Act, you have done more than distribute loss, you have prevented loss. This is creating. You have not balanced or weighed interests, those of industry, workers and community. By integrating these interests you get the increment of the unifying.⁴

A further aspect of such legislation is of great significance in showing one of the essential functions of legislation to be adjusting conflicts in advance of the conflicts by providing the means of integrating before the conflict has taken place. It would take another book to unfold the implications of this thought. We are now given a conception of politics which can so vitalize our political life that it, may yet emerge from the slough of greed and strife in which it is so largely immersed at present.

We have been considering legislation which tries to integrate interests instead of choosing between them. From this point of view do we want "labor legislation"? It is at any rate an unfortunate term. Labor legislation is called social legislation. It cannot be both. If it were truly labor legislation it would be class legislation, and class legislation does not become social by legislature or court so declaring it. Of course the interdependence of society is recognized in most labor legislation; it is not therefore labor but social legislation. This is however a good illustration of one of the dangers of this word; it shows the temptation to call what we think good "social." "Social behavior" usu-

4 This is taken up at length in Chaps. III and IX.

ally means the behavior of which the person using the expression approves.

I have said that we now see the theory of integrating interests emerging in legal writing as well as in legislation and legal decision. I refer chiefly to what Pound has written of relation. All that he says of relation implies that we must seek and bring into use those modes of association which will reveal joint interests those between employer and employee, landlord and tenant, master and servant. Law, he tells us, must find the essential nature of the relation; this seems to me a more profound truth than some of the vaguer theories of social interests. Moreover, Pound defines social interests as “the claims or demands involved in the existence of society,” and here we have nothing vague or abstract. “The social interest in the individual,” “the individual interest in the social,” must become coordinate expressions. Thus does the individual preserve his integrity through all our “social” theories. Thus also we do not discard the abstract man of the nineteenth century only to put in his place an abstract society; social interests are the interests of men in their multitudinous and ever-varying *relations*.

Pound tells us also that relation is taking the place of contract in modern law, that the duties of public service corporations are not contractual, flowing from agreement, but quasi-contractual, flowing from the calling in which the public servant is engaged. Social in its doubly concrete significance—in the sense of interdependence, and as the authority derived from the activity involved—is happily a conception which is gaining ground. Much remedial legislation rests on the growing realization of the interdependence of commu-

nity life. When certain bankers and welfare agencies in Massachusetts decided a few years ago that the loan shark was a social evil which ought to be curbed, and banded together to secure the passage of the Small Loan Act, it resulted not in benefit to themselves directly but to the group of workingmen who were the borrowers. Yet it was felt that the community life as a whole was more sound. Pound gives a number of examples of the recognition of community of interests, such as the limitations on building laws, limitations on the part of creditors to exact satisfaction, limitation on water rights, etc.⁵ A community of interests understood as a unifying of interests benefiting and developing individuals, benefiting and developing society, is the true social interest. In this sense the conceptions of the social function of property, the social functions of industry, have been very valuable ones in the progress of the last twenty years because they acted against "special" and "private" interests.

Perhaps, indeed, the prejudice against individual interests has come from the fact that they are often associated with the bad meaning we give to "special" interests, but this is unfortunate. If some years ago we began to use social as a blanket word which meant anything that was not "private" or "personal" or "special," if then and therefore it came unhappily to be considered the opposite of individual also, surely the time has come now for a closer analysis, and for us to realize that the opposite of all particularity may yet keep its oneness with everything individual, that in fact its authority is derived from nothing else but interweaving *individual* activity.

5 Harv. Law Rev., 28, 195-234.

The greatest objection perhaps to the word social has not yet been touched on. We live today in a power-society; therefore social interest by its very wording *might* mean the interest of the most powerful class or individuals. What we sometimes hear called “the social recognition of an individual interest” may be merely the legalizing of a particularly private interest. When we abandon our power-society, we can perhaps use the expression social interest without ambiguity; it can then mean the interest involved in, evolved by, relation.

Moreover, if we should substitute the conception of integrating individual interests for that of social interests, I think we should avoid the fallacy involved in the idea of “as many interests as possible to be secured.” For here we come dangerously near involving ourselves in regard to social and individual interests in Rousseau’s distinction, between the general will and the will of all. Society flourishes through the satisfaction of individual human desire, yet not through as many as possible, but through interweaving human desires.

To sum up this section. The chief objections to the term social interests are: with too zealous advocates it may mean the abandonment of the individual; with some it opens too easily the gates of the ever-ready stream of sentimentality in us all—it has been vitiated or at any rate weakened by platform and propagandist use; and especially, it is very difficult not to connect the social interest with the interest of the governing class. It seems to me that the phrase integrating individual interests, as referring both to the possible outcome of conflict and the anticipation of conflict, both

to the measure of value and the developing of value, is a more fruitful and more legitimate expression than that of social interests, and one supported by both recent legal and psychological thinking as well as by our most profound philosophy. The gravest danger in the word social is that society tends too readily with all of us to become an abstraction. Social interests are often either an abstraction or a “rationalization”; integrating interests are both concrete and genuine.

Yet I realize that both philosophically and practically there may be advantages in the word social: philosophically because we need a word to indicate that integration is not mere coordination, practically because it is sometimes better to re-define an old term than to invent a new one. What we must be careful about, if we do use it, is that we do define it carefully. Perhaps we shall be rid of some of the objections I have noted to the term social when there has been time for those two doctrines of contemporary psychology—the *Gestalt* theory and what I have called the theory of circular behavior—to penetrate our thinking in the social sciences. For the implications of these doctrines confirm our philosophical thinking, our empirical observations in the social field, in regard to the unity of individual and society. Many people who embrace the doctrine of social interests advocate the “sacrificing” of the individual to the social, but these can never be sufficiently opposed for one to be “sacrificed” to the other, since the social interest is not merely an interweaving of individual interests, it is an interweaving *with* the parts as well as an interweaving *of* the parts. This makes it impossible to pit individual and society against each other. This at the same time saves us

from the suggestion of atomism in the word individual and from the suggestion of abstraction in the word social.

We can now answer the questions asked at the beginning of this chapter. We see now at the same time the function of the legal order and in what way that function is limited. Social interests, as now defined, emerge *as* social interests through a certain process; the inestimable service of the judges is to open the way for and to promote this process. They can never take a step beyond; they can never substitute themselves for the process. The judge must understand the life of his day, but he can live life for no one. Not in the wisdom of the judge nor the facts of the expert nor the “will of the people,” but in life itself do we put our trust. A more penetrating analysis of the interactivities of men in their daily lives is what is needed today.

To be sure the judge must know and consider all three essentials: (1) the principles, (2) the precedents, which include both the application of principle and the emergence of principle—it is important to notice this double aspect of precedent—and (3) the particular case in hand. The interpretation of the Anti-Trust Act is an example of the emergence of principle from legal enactment. In applying the statute, the first cases appeared to prevent certain useful forms of combination. The court therefore resorted to what has been termed the rule of reason, and decided in particular cases that the monopoly was beneficial and should be allowed to continue. The wiser the judge the more ability he shows in uniting principle, precedent and case in hand. Any reading of legal history shows us

that when the legal order is not able to do this, the principle tends to become choked by the precedents. Thus our view of the origin of law does not reduce the obligation of judges to be very closely in touch with the social facts of their day—on the contrary it increases many times that obligation—but we must also remember, what is often forgotten, that the integrating of principles and facts has taken place to some extent before the matter comes to court. Law has its origin in the concrete daily activities of us all.

We need not commit ourselves to *laissez-faire* doctrine, nor, on the other hand, entrust to the legal order a too exclusive guardianship of our “rights” or interests. Another doctrine is emerging. The social agency of the law is not something *outside* the democratic process, an apparatus of safeguards provided as a check upon misdirections of “will.” Still less can we think that there are patterns of what is socially valid which can be invoked from time to time to be superimposed upon the changing order in order to correct its aberrations. Law must be integral with the social order.

And yet this does not take away from the function of the legal profession, but rather adds to it. The legal order by helping to integrate purposes is helping to produce larger purposes. The judicial decision must anticipate this process, it must meet the larger purpose even although the larger purpose does not exist until the contribution of that very decision has been made. Thus the difference between declared and *de facto* purpose is more subtle than is always seen: the judge is working for an end which does not exist as an end, wholly, until he begins working for it.

III

EXPERIENCE IN THE LIGHT OF RECENT PSYCHOLOGY: CIRCULAR RESPONSE

THE principle of integrating interests is not yet sufficiently recognized and acted on by jurists and economists, the principle of integrating *power* is not sufficiently acknowledged by political scientists. But while many political scientists and economists as well as statesmen and labor arbitrators have stuck to the theory of the balance of power, of the equilibrium of interests, yet life continually escapes them, for whenever we advance we slip from the bondage of equilibrium.

This view, which springs so insistently to the eye with every fresh study of social situations, is supported by our recent psychology which is giving us more than hints of a truth that may mean large changes for politics, economics and law. The heart of the truth about integration is the connection between the relating of two activities, their interactive influence, and the values thereby created. This chapter will be devoted to a consideration of that point, or rather to the contribution of psychology on this point; a separate chapter (IX) will take up, chiefly by illustration, what the study of social situations yields on the subject of integration as the creative principle.

Progressive experience, I say, depends on the relating. The ardent search for objectivity, the primary task of the fact worshippers, cannot be the whole task of life, for objectivity alone is not reality. The crux of philosophical controversy we have seen mirrored everywhere. As the subjective idealists have overemphasized the subject, and the realists, the object, so there are the historians who deny “economic determinism” and those who give it more than its place; there are the political scientists who talk of “the will of the people” and those who, in reaction to “empty will,” give us the “objective situation” as always our ruler; there are the jurists who exaggerate abstract conceptions and those who see all truth in “social facts.” In the arts, especially in painting, the swing of the pendulum between “subjectivity” and “objectivity” is most interestingly apparent. In psychology we have the introspectionists and the behaviorists.

I do not see how such opposing tendencies can be avoided while we see reality either in subject or in object; I do not see how we can run fast enough from one to the other to keep ourselves within the region of truth. But our latest psychology is taking a step beyond this and putting itself in line with the oldest philosophy. Holt,¹ more clearly perhaps than any other recent writer, has shown us that reality is in the relating, in the activity-between.² He shows us

1 Edwin B. Holt: *The Freudian Wish, The Place of Illusory Experience in a Realistic World* (one of the studies in *The New Realism*), *The Concept of Consciousness*. I have also had the privilege of reading some of Dr. Holt's unpublished lectures as taken down by students. There are undoubtedly many things in this book with which Dr. Holt would not agree, some inferences which he might think mistaken, but I have given what for me are the implications of his thought.

2 *The New Realism*, p. 366, he defines reality as “some very comprehensive system of terms in relation.” He expresses this more actively later, although nowhere explicitly as a definition of reality. In fact the word reality is now very little used; it does not fit in with our present mode of thinking.

how in the “behavior-process” subject and object are equally important and that reality is in the relating of these, is in the endless evolving of these relatings. This has been the grain of gold of the profoundest thinkers from Aristotle to the present day. Of course the object is not created by the percipient; of course the subject is no more “a mere reflex arc” than it is an evangelical soul; nor are subject and object “products” of a vital force. For a century, roughly speaking, objective idealism has given us—its innermost truth—existence as unitary experience which upon analysis resolves itself into the two great generic differings which have been called subject and object. Now physiologists and psychologists in their treatment of response are approaching this view.

The present psychological treatment of response, by emphasizing “the total situation,” happy phrase showing the importance of the outer object or situation as constituent of the behavior process, is extraordinarily interesting to students of social research. Add to the total situation what might be called the evolving situation, as hinted in Holt’s formula and clarified by him in other places, and you have an important contribution to the social sciences. This formula defines behavior as a function of environment and identifies thought (purpose, will) with that function. The use of the mathematical term function has many suggestive implications. For instance, this definition of behavior, taken with the rest of this writer’s teaching, implies the possible reciprocal influence of subject and object, or to keep to the language of the mathematical analogy,

implies that the variables of this formula *may* be interdependent, either being a function of the other.³ He does, it is true, in one place speak of environment as if it were always an independent variable,⁴ and that would make his formula inapplicable for what we see in most social situations; industrial conditions are influencing the behavior of trade unions while the behavior of trade unions is influencing industrial conditions. But while Holt uses the words “object” or “object of environment” continually, he often uses also “situation,” “event,” “process,” and with these words it becomes more obvious that the “object” is being influenced by the “subject” while the “subject” is being influenced by the “object.” Moreover, in the illustration he gives of the girl discriminating between different plays, he says that her choice influences “the sound moral development of the institution itself.”⁵ Here the theatre is not an independent but one of two interdependent variables. When we are employing this formula, therefore, we have to decide in the case

3 Perhaps an illustration, although it may be only roughly accurate, would make this clearer. Take the European situation and a gold mine in America. The European situation and the amount of gold taken out of the mine are two interdependent variables either one of which may be taken as a function of the other. The European situation will vary according to the amount of gold taken out, that is, it “depends” on it, and it is equally true the other way around, for the total amount of gold taken out will depend somewhat on the European situation. Increase the birth-rate in Europe and more gold will be taken out at Nome. If, however, we should be speaking not of the actual amount of gold taken from the mine, but of the percentage per ton of gold in quartz in a mine, the matter is quite different. The European situation is affected by the variation in this percentage, but the percentage varies quite independently of the European situation; increase the birth-rate in Europe and you do not increase the percentage per ton. We have no longer two interdependent variables; the percentage of gold per ton is an independent variable of which the European situation is a function.

4 *The Freudian Wish*, p. 95.

5 *Op cit.*, p. 124.

in hand whether environment is an independent or one of two interdependent variables—it is in each case a question of observed fact.

The interweaving of the different factors of the evolving situation sometimes takes place so rapidly before our eyes as to make the process very plain. On a Wage Board, one year, we were up against an interesting objective situation: a drop in prices, indications of unemployment, and at the same time a demand for higher wages in that particular industry. In anticipation of the proposed heightened wage scale which our Board was to effect, some employers were turning off their less efficient workers. We had to ask each week the changes in that respect in the objective situation; those changes had been brought about by the trend of our deliberations, but also our deliberations were very much affected by these changes. We saw that it would be a disadvantage to the employees as well as to employers to have the minimum wage too high, since we had evidence in the actual situation, not mere threats, that that would mean a certain amount of unemployment.

This reciprocal influence, this evolving situation, fundamental for politics, economics and jurisprudence, is made clearer if for the words thought, purpose, will in a description of the behavior process, we substitute thinking, purposing, willing. It is not thought which Watson is writing about, but thinking, for surely Watson if anyone gives us thinking as a process. As long as we use the word thought there is a tendency to think that bodily mechanisms are the expression, the organs, of thought, whereas they are thought, or rather, they are thinking. Again, there is a tendency to con-

ceive of thought as the thing we have left over when we have finished thinking, the thing which thinking produces. All static expressions should be avoided. Integrated organism (one psychologist speaks of "the completely integrated organism") is unfortunate, for the organism is the continuing activity of self-organizing, self-maintaining. We must be careful of the "eds" because they lead to "wholes," the wrong kind of wholes, the "influence of the whole on the parts," etc.⁶ Such expressions as "coordinated wholes" are seen in the writings of some of the behaviorists, but, unless explained, seem against the very truth which behaviorism is trying to stand for. An "-ed" becomes a stopping place to thought, and when man cannot think any further it is dangerous. God has been to many races and to many individuals the place where thinking stops, as mind is often "the sanctuary of ignorance."

To return to our consideration of the behavior process, Holt has made his formula clear by a description of the working of two laws: one from physiology, one from physics. First he has shown us the importance of the physiological law that when a muscle contracts,⁷ the sense-organ in that muscle is stimulated so that there is an almost simultaneous afferent nerve impulse from the muscle back to the centre, and thus a circular reflex is established. Hence the contraction of the muscle is only in a certain sense "caused" by the stimulus; that

6 I have tried to show in Chap. V when and how I think it is legitimate to use this expression.

7 A sense organ has been stimulated, the energy of stimulation has been transformed into nervous energy, this nervous energy has passed along an afferent nerve to the central nervous system and has passed through this and out by an efferent or motor nerve to a muscle where the energy is again transformed and the muscle contracts.

very muscular activity is itself in part producing the stimulus which “causes” the muscular activity. Holt’s estimate of the value of the circular reflex appeared in his Harvard lectures in 1917, perhaps earlier also, but as they have not been published I quote from Bok, although Bok’s article came out at a later date. I quote at some length because I wish in a later chapter, in speaking of the political process, to recall the circular reflex as a law which observation shows us as operating on infra-personal, personal and social levels.

“The reflex arc is the path of the stimulations received in consequence of a function of the individual itself...” “This view does not start from the function of the receptor, but just from the action of the effector, which sounds strange at first, since we are accustomed to look upon the action of the effector as a result only of irritation in the receptor...” “On a visual stimulation the animal must react with a movement which alters the visual stimulations...in other words, so that the attitude very specifically changes with regard to the stimulation given. Thus the reflex-reaction must alter the perception of the reflex-stimulus: in other words, it must very specifically alter the relation of the animal towards that specific stimulus, it must ‘respond’ to that stimulus.”⁸

This will throw much light on the interdependent variables of the formula given above when we come to use that formula for social psychology, whether one thinks of it only as an analogy or as the operation of

8 S.T. Bok, *The Reflex-Circle*, in *Psychiatrische en Neurologische Bladen*, Amsterdam, Juli-Augustus, 1917. See also James, *Principles of Psychology*, II, 582, and Baldwin’s *Mental Development in the Child and the Race*, 2nd ed., pp. 133, 263 ff., 374 ff.

the same law on different levels. We shall see that the activity of the individual is only in a certain sense caused by the stimulus of the situation because that activity is itself helping to produce the situation which causes the activity of the individual. In other words behavior is a relating not of "subject" and "object" as such, but of two activities. In talking of the behavior process we have to give up the expression act "on" (subject acts on object, object acts on subject);⁹ in that process the central fact is the meeting and interpenetrating of activities. What physiology and psychology now teach us is that part of the *nature* of response is the change it makes in the activity which caused so-to-speak the response, that is, we shall never catch the stimulus stimulating or the response responding. The importance of this cannot be overestimated. Stimulus is not cause and response the effect. Some writers, while speaking otherwise accurately of the behavior process, yet use the word result—the result of the process—whereas there is no result *of* process but only a moment *in* process. Response is not merely the activity resulting from a certain stimulus and that response in turn influencing the activity; it is *because* it is response that it influences that activity, that is part of what response means. Cause and effect, subject and object, stimulus and response: these are now given new meanings. All the possibilities of connections in the neural pathways which we are now beginning to suspect, or rather to have evidence of through the work

9 This has important consequences for psychology, for as long as we thought of matter as something "acted on" we inevitably thought of sensory experimentation," etc., in a certain way. A truly dynamic psychology, by giving us both environment and ourselves as activity, has implications which have not begun to be unfolded yet.

of Pawlov, Bechterew, etc., have new light thrown on them by this approach to response. On the social level, cause and effect are ways of describing certain moments in the situation when we look at those moments apart from the total process.

In the behavior process then we see the interlocking of stimulus and response, a self-sufficing process. Here is no taint of the psychological fallacy which held the results of mere abstraction as primary *Dinge an sich*. We get completely away from the fallacy which dissected experience and took the dead products, subject and object, and made them the generating elements. The most valuable part of this teaching is that the reflex arc is the path of stimuli *received in consequence of* an activity of the individual. Thus experience is given us as self-creating coherence.

What we may now call circular response or circular behavior we see every day as we observe and analyze human relations, social situations.¹⁰ We see it clearly in the European conferences because there it is evident that there is no static European situation; moreover, it is evident that we can never understand the European situation by watching stimulus and response as mere stimulus and response. We have another example in labor conflict which would be much simplified if employer's purpose and workmen's purpose would remain stationary while the situation developed, but they never do. We see the same thing in our own lives:

10 I believe physiologists have not decided yet how far the sensory side of circular response is necessary to its continued functioning even although necessary to its formation, and if I were trying to establish any exact parallel between the physiological circular reflex and circular response as seen by the students of social research, such questions would be important for us, but I hope it is understood that no such exact parallel is intended.

as we perform a certain action our thought towards it changes and that changes our activity. Or we do something which requires courage and we become more courageous and do a braver thing. The relation between leaders and group is an excellent example of the reflex circle. All amicable discussion is another. The state and individual another.¹¹ Or "the man and the hour." But we need not go further afield for the working of this law than the meeting of two individuals. You say, "When I talk with Mr. X he always stimulates me." Now it may not be true that Mr. X stimulates everyone; it may be that something in you has called forth something in him. That is why I said above that we must give up the expression "act on," object acts on subject, etc. Do we not see here, to quote Bok, "the path of the stimulations which are caused, actualized, or altered by the future reflex-action?"

Through circular response we are creating each other all the time. This seems too obvious to mention, and yet where is it taken account of sufficiently? Le Bon, one of the most penetrating of sociologists, tells us much of crowds, much of individuals, but does not reveal the process of a creative meeting of individuals.

To sum up this point: the most fundamental thought about all this is that reaction is always reaction to a relating. Bok finds it in the neuro-muscular system. Integrative psychology shows us organism reacting to environment plus organism. In human relations, as I have said, this is obvious: I never react to you but to you-plus-me; or to be more accurate, it is I-plus-you reacting to you-plus-me. "I" can never influence "you" because you have already influenced me; that is,

11 See Chap. XI.

in the very process of meeting, by the very process of meeting, we both become something different. It begins even before we meet, in the anticipation of meeting. We see this clearly in conferences. Does anyone wish to find the point where the change begins? He never will. Every movement we make is made up of a thousand reflex arcs and the organization of those arcs began before our birth. On physiological, psychological and social levels the law holds good: response is always to a relating. Accurately speaking the matter cannot be expressed even by the phrase used above, I-plus-you meeting you-plus-me. It is I plus the-interweaving-between-you and me meeting you plus the-interweaving-between-you-and-me, etc., etc. If we were doing it mathematically we should work it out to the n th power.¹²

This pregnant truth—that response is always to a relation, the relation between the response and that to which the response is being made—needs further consideration, for it is the basic truth for all the social sciences. Let us consider the implications of this statement, even although this will necessitate some repetition. First, my changing activity is a response to an activity which is also changing; and the changes in my activity are in part caused by the changes in the activity of that to which I am in relation and vice versa. My response is not to a crystallized product of the past, static for the moment of meeting; *while* I am behaving, the environment is changing because of my behaving, and my behavior is a response to the new situation

12 I mean by this that if we could formulate the process mathematically, we should obtain a differential equation or a set of differential equations to be solved by integration.

which I, in part, have created. Thus we see involved the third point, namely, that the responding is not merely to another activity but to the relating between the self-activity and the other activity. The psychologists who are using the language of calculus have opened up whole reaches of thought for us, for the principles of relation as given by differential calculus help us to a clear understanding of this fundamental principle of life. Let us take an illustration—we can take one from our simplest, everyday experience and see what help mathematical thought gives us. Think of the boy going to school. He is not responding to school merely, but also to his own response to school. That is, the going to school may so stimulate him that he works much better than at home with his mother; his activity is a function of the activity that is set up between him and school. And the school too is affected by the activity- between; through either his or his parents' demand upon it, it may improve its methods. And so the interweaving goes on: the more the school alters the boy, the more chance is there of the boy altering the school. This is a situation which suggests the calculus, for if the child's going to school so stimulates him that he works harder, his performance is continuously changed by that very performance. Hence the functional relation between the two cannot be expressed in terms merely of the boy and the school, there must always be included the activity-between.

Thus the relating involves an increment that can be measured only by compound interest. In compound interest part of the activity of the growing is the adding of the growing. This is the same with all organic growth. Simple response, if there were such a

thing, would be like simple interest—if there were such a thing. There is no such thing as simple interest in the organic world; the law of organic growth is the law of compound interest. Organic growth is by geometrical progression. This is the law of social relations. France and Germany have surely not been “influencing” each other by simple, but by compound interest. We have always the increment of the increment.

Before considering social phenomena from this point of view, let us note two points that we shall have to keep in mind: first, the objective situation as constituent part of the behavior process; secondly, that internal conditioning is of equal importance with external conditioning. Both these points are very important for social research. Often, for instance, we see the head of an industrial plant trying to solve a situation by studying his men rather than by considering men and situation, and the reciprocal effect of one on the other. In regard to the second point, as the psychologist notes the neuro-muscular interplay, using every possible instrumentation to make it apparent, as he takes into consideration the factors contained in the mechanisms which are maintaining the functions he is studying, which are modifying these functions, so the sociologist must note as carefully, must see as integral part of the causal process, internal as well as external conditioning. Of course we shall remember that what is internal in the mechanism has also come from integration. When the organism experiences certain lacks, there arises a disturbed nervous system which causes the animal to make movements to supply these lacks from its environment. These

responses to external environment caused by general motor restlessness integrate with the internal stimuli and the general motor restlessness becomes specific conduct. Thus "behavior" emerges, always from the activity-plus. In one of his lectures Holt put it this way, "If driven by metabolism, we have a disturbed nervous system, that system will so act toward environment as to put environment in that state which will make it send to the nervous system what it needs."¹⁸ In this sentence the efficacy of the interrelating becomes still more apparent. Much of our older psychology failed to note sufficiently the interlacing of external stimulus and the conditions of neural, muscular and glandular response. Only recently I was surprised to see the question asked by a psychologist: "Is behavior internally or externally conditioned?" The factors of intra and extra-organic stimulation are not only equally important but are bound up together. They must be considered simultaneously. We have now a wholly dynamic psychology. The neuro-muscular mechanisms of the behaviorists tend in the hands of some writers (only in some) to become as static as the old "mental states." Behavior "pattern" is a figure of speech and not altogether a good one. We shall have, if we are not careful, as much trouble with the "patterns" of the behaviorists as the behaviorists have felt they had with the "minds" of the older psychologists.

13 See also Kempf. "Whenever the autonomic . . . apparatus is disturbed it compels the projicient sensori-motor apparatus to so adjust the receptors in the environment as to acquire stimuli having the capacity to produce adequate postural readjustments in the autonomic apparatus." Edward J. Kempf, *The Autonomic Functions and the Personality*, p. 1.

The matter of internal and external conditioning has an exact parallel in the social sciences. No one can understand the labor movement, the farmer movement, international situations, unless he is watching the integrating of internal stimuli, the lacks felt, with the responses to environment caused by these lacks. Moreover, the so-called stored-stimuli are exactly as important for sociologist as for psychologist; the sociologist has to consider in each case how far the person or persons are acting from present stimuli and how far from action patterns already existing. Let us take an illustration which involves all the points so far given:

The workman responds to	1. Employer: wages, share in profits or management, conditions of factory, etc. 2. General conditions: cost of living, etc. 3. His own desires, aspirations, standards of living, etc. 4. The relation between his responding and the above.
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The important things to notice here are: first, that the workman is responding to something in himself as well as to something outside; for instance, we have now to add to the factors which made the internal conditioning of the workmen of 1914, the restlessness caused in many by the varied life and experiences (including even foreign travel) afforded by the war, the change in his desires caused by the lavish expenditure of war profits which he sees about him, etc., etc. Secondly, he is responding to the relating between his responding and the environment. Finally, all the factors involved are varying factors and must be studied in their varying relations. By the use of the language of calculus in the definition of behavior which we are considering, we are brought at once to the heart of

every situation: the relating of things that are varying, which makes the relating vary. The Checker Taxi Company announced this week a cut in rates because of an increased volume of business; it thus makes volume of business the independent variable. Mr. Ford, on the other hand, when he reduced the price of his cars *in order to* increase volume of business, made the rate the independent variable. But both did the same thing: they measured a varying thing in relation to a varying thing, taking into account that these were affecting each other simultaneously.

We must therefore in the social sciences develop methods for watching varying activities in their relatings to other varying activities. We cannot watch the strikers and *then* the mill-owners. We cannot watch France and *then* Germany. We all know that the action of the mill-owners is changing daily the action of the strikers, that the action of the strikers is affecting daily that of the mill-owners; but beyond this is the more subtle point I am trying to emphasize here, that the activity between mill-owners and strikers is changing the activity of mill-owners, of strikers. We have to study not only a changing France in relation to a changing Germany, but also a changing France whose changes have been partly caused by the relation between its variations and Germany's variations. That is, France is not responding to Germany, but to the relation between France and Germany. To return to the language of our formula: the behavior of France is not a function of the behavior of Germany, but of the interweaving between France and Germany. The interweaving which is changing both factors and creating constantly new situations should be the study of the

student of the social sciences. Trade unionism is not today a response to capitalism; it is a response to the relation between itself and capitalism. It is of the utmost importance to bear this constantly in mind. The concept of responsibility takes on entirely new meaning with the introduction of the notion of circular response into the social sciences. The farmers are not responding to the middlemen or to middlemen plus economic conditions or even to middlemen plus economic conditions plus their own desires, but to the relation between themselves and the whole total environment, or rather the relating becomes another element of total environment.

Much light is now thrown on the subject of Chapter I, the relation of "facts" to the social process. We cannot study the "psychology" of the workman, the "psychology" of the employer, and then the "facts" of the situation, as so often seems to be the process of investigation. We must study the workman and the employer in their relation to the facts—and then the facts themselves become as active as any other part of the "total situation." We can never understand the total situation without taking into account the evolving situation. And when a situation changes we have not a new variation under the old fact, but a new fact.

A professor of philosophy told me that it made him dizzy to talk with me because, he says, he wishes always to compare varying things with something stationary. But this philosopher could not go to Europe most economically in his summer vacations unless someone were watching for him the relation of speed to fuel consumption and from this determining rates of change

that are themselves functions involving variables. Suppose a schoolboy should say to his instructor in calculus: "You are making my head spin; I cannot compare unless you give me something stationary to compare with." The only thing his instructor could reply would be: "You will have then to leave this universe; in this one we so often have variations in relation to other variations that we are obliged to learn to think in the terms of those conditions." That is, if in calculus we measure a changing activity by an activity which is also changing, if there is involved rate of change, and also rate of change of rate of change, this is only the same as in all life. But psychology sometimes abstracts from life. For instance, a behaviorist tells us that if a man disregards the red flag at a railroad crossing and crosses in front of the train, he will be fined or imprisoned, and the red flag will thus acquire that much more "meaning" for him. If he suffers from loss of limb or kills the occupants of his car, the red flag acquires still more "meaning" for him. True as an abstraction, true on the supposition that this is all that happens. What is forgotten in this illustration is that the railroad company is not slumbering meanwhile, and the second time the man may not meet red-flag-plus-meaning, but gates, at the railroad crossing.

Take again the classical illustration of the child and the candle. It is a capital illustration supposing the candle to be stationary, in other words, to be a nucleus for "meaning," but it is not always. The child burns its hand. The mother may say, "We must put electricity into the nursery," or, "We must have no uncovered flames in the nursery." This possibility is not ignored by those psychologists who use this illustra-

tion, for it is the same kind of thing that is indicated when they speak of the mother holding the child's hand away from the flame instead of teaching him something about it. I am not, therefore, quarrelling with the illustration, but only pointing out that the process of education would be easier for all of us if red flags and candles merely rolled themselves into bigger balls of "meaning"; we should in that case learn how to behave toward first one object and then another until our education was completed. And this is, indeed, a large part of education, particularly in infancy and youth, but it becomes a smaller and smaller part as we get older. We usually cannot apply what we learn from one experience to the next because the next will be different. Moreover, it is usually we ourselves who have made the next experience different. It is the child's burning himself, perhaps, which makes him find something different the next time he puts his hand out. And when we remember all that the child has to learn about flame—to discriminate between flame bare and flame enclosed, between flame enclosed with a conducting and a non-conducting substance, to distinguish between the lighting, heating and burning qualities of flame—we see how complex the matter becomes. But however you enlarge the equation with more brackets, etc., the conditioning equation expressing the relation of the variables remains the same. That is why I think the formula I have cited so useful for the social sciences if we understand and accept what is implicit in it, namely, that behavior is not a function of environment but a function of the relating of behavior and environment.

This seems to me the most illuminating thought that

has been given us of recent years for the study of social phenomena. Holt's formula does not give it to us explicitly, but his treatment of circular response does, his emphasis on the significance of the *organization* of reflex arcs and of the functional reference of behavior, the something "new" of his "critical" moments of evolution, his insistence on the fact that behavior is not a function of immediate stimulus, and his use of the functional theory of causation. The last two points will be taken up in the next chapter. We now see behavior not as a function of environment, but as a function of the relation between self and environment. The activity is a function of itself interweaving with the activity of which it is a function. In the illustration given above of the cut in rates by the Checker Taxi Company, the rate was not really a function of volume of business, but, since the rate increased the volume of business, the rate was a function of the relation, the interlacing relation, between rates and volume of business. We must be sure that our formula will fit an evolving situation.

It will perhaps be thought that I am rather forcing the use of mathematical language in this chapter, but I am using this language deliberately for several reasons. First, in order to unfold the implications in the words function and variables used in the definition of behavior which I have been employing; secondly, because I find the language of calculus so stimulating to my own thought on this subject that I hope others will too; in the third place, because the word function is used so widely, and often carelessly, nowadays, that I think we had better look into its origin and make sure that we use it accurately.

We have now, to repeat in summary, three fundamental principles to guide us in our study of social situations: (1) that my response is not to a rigid, static environment, but to a changing environment; (2) to an environment which is changing because of the activity between it and me; (3) that function may be continuously modified by itself, that is, the activity of the boy going to school may change the activity of the boy going to school. Or it might be put thus: that response is always to a relating, that things which are varying must be compared with things that are varying, that the law of geometrical progression is the law of organic growth, that functional relating has always a plus value. The social sciences must learn to deal with that plus, to reckon literally with it. A dynamic psychology gives us instead of equivalents, plusvalents. It is those which we must look for in every situation. These are the "novelties" in the psychologist's "critical" moments of evolution. It is impossible to overemphasize this point; it means a new approach to the social sciences. In the farmer-middleman controversy, find the plusvalent. In the France-Germany situation, find the plusvalent. Let every statesman and diplomat, every legislator and judge find the plusvalent; it is the only approach possible to politics or industry or international relations or our own smallest everyday problems. *Progressive* experience on every level means the creating of plusvalents.

In the physical sciences, we have some interesting, although not wholly exact, parallels of the plus value of the relating. In chemistry we find a chemical substance X decomposing into another Y at a rate proportional to the amount of X undecomposed; at the same

time by a reverse reaction Y is decomposing into X at a rate proportional to the amount of Y present. X is continuously influencing Y at the same time that Y is continuously influencing X.

In engineering we have what is called "regeneration." A radio receiving set takes in only a small amount of energy from the electromagnetic waves that reach it, but this is made to control the output of a source of considerable energy located in the set. In some sets a part of the latter energy is carried back to the former, so that the former is now intensified and effects an increased output; and the process repeats itself, building up the power of the set perhaps a thousandfold. This "regenerative" action occurs in many physical and chemical processes and is used by engineers in devising mechanical apparatus, electrical and other.

A dynamic physics studies activity rather than mass; it defines things in terms of activity, not in terms of mass. Present-day physics tells us that the rate of change of the activity may not be proportional to the mass of what is active but to the activity of the mass. We had not a dynamic physics until this was seen. It used to be said that in organic growth the increment of the organism in a given time is proportional to the magnitude of the organism itself. Now, looking at the "organism" as an activity, we should have to use some word which would include magnitude and intensity of the activity.

To conclude this chapter: the most significant thing in recent thinking is, I think, the correspondence of thought in different fields and on different levels. Philosophy has long taught us the unity of experience. You can tear it to pieces if you will and find subject

and object, stimulus and response, or—you can refuse to; you can claim the right to see it as a rational interplay of forces, as the functioning of a self-creating coherence. Consciousness is the living interplay of a self-generating activity. Or, Consciousness is the living interplay of myriads of self-generating activities which all generate themselves as a moment of the interplay. The most fundamental idea of philosophy is, I think, the recognition that there is no *Denkform* in which as mould all thought is cast, but rather a constant mode of self-generating as thought, a perpetual law of unifying to which the free activity submits itself, law and freedom each the entelechy of the other. Study of social situations reveals the working of this principle. In psychology and physiology, also, we find certain conclusions write lead us to think that experience on every level may be found to be an interrelating in which the activity of the relating alters the terms of the relating and also the relating itself. Politics, industry and law need the impetus of this thought. Our older social philosophy gave us the pernicious theories of the balance of power between nations, of adjustment between capital and labor. It gave us always equivalents; our more recent thinking shows us how to create plusvalents. This will be developed further in the chapter on Experience as Creating.¹⁴

14 It has been pointed out to me that the term plus-value does not express my idea since the very thing I am opposed to is the plus-relation, the one-by-one connection rather than the integration. But I am certainly opposed to the word super, which has been suggested in its place, for the “something new” of integration is not “over” or “more than” or “greater- than” the parts, as often erroneously claimed for “wholes.” I think plus-value *is* what I mean, for I am not referring to a plus-plus relation of the parts, but expressing the fact that integration gives an additional value, one more value, but not necessarily a greater or super value. See pp. 98-102 for further consideration of this point which is perhaps the most important in the whole range of discussion on human relations.

Because the word function is being increasingly used to express relation, there are certain warnings necessary. First, we should not use the word function to excuse us from studying each situation; this I have seen done several times recently. A phrase may be a legitimate short-cut in exposition, but it is inexcusable to let it be a short-cut in investigation. Secondly, we must not confuse function as relation and function as quantity. For us function is not a quantity left over when the activity of relating is completed; function is the activity of relating, it is the operation, not what results. A function is always functioning; our interest in it is on that very account. In the third place, the independent variable is independent only within a certain equation and our equations are constantly changing. We must not confuse a variable which is constant from moment to moment in the same statement, and varies only from statement to statement, with one that varies in the same statement. This is very important to remember in social psychology. The constant of one situation may not be, probably will not be, the constant of the next situation. In studying any one situation we look on this quantity as constant while the mutual effects of varying quantities are studied; two facts or individuals, let us say two activities, adapt themselves to each other in a certain way for any given situation; change the situation and they will probably adapt themselves in a different way.

Take the economic "law of supply and demand." According to that law price is a constant function of demand: as demand increases, price increases; as de-

mand decreases price decreases. But this law is true only on a certain assumption: that supply is fixed, that there is a certain amount of the commodity in existence which stays fixed. This is an assumption which speculators are always trying to make true, but in ordinary, legitimate, economic operations it is seldom a possible assumption *except for one situation*. Probably demand is increasing the volume of business which, in most cases—in the case of manufactured articles the materials for which can be got in practically unlimited quantities—lowers the cost of production. As a matter of fact, therefore, increased demand means, other things being equal, eventually decreased prices. Thus the function assumed for one situation cannot be carried over into another. Price is a developing situation; it depends on an interweaving; it is a function not of an independent variable alone but of the relation between it and the independent variable. Thus to say that demand raises price is wrong except in regard to a given situation. To put this into mathematical language (which seems to respond more readily than any other to our present thinking on this subject), the error would be to take a variable constant for an absolute constant. Given the amount of commodities at any minute and taking demand as an independent variable, the price will be the function of that, but from situation to situation the supply changes. The economist makes no mistake here; I am giving this as an illustration of the *kind* of error in thinking sometimes made by those who use the word function nowadays rather carelessly. In the use of the word function, the thing to be kept constantly in mind is the developing situation.