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Man and His Becoming by Philip H. Phenix

Philip H. Phenix was educated at Princeton University, Union Theological Seminary, and Columbia University. He was formerly Dean of Carleton College, and was professor of Education at Teachers College, Columbia University. This book presents the Brown and Haley lectures at the University of Puget Sound, Tacoma, Washington given by Philip Phenix in 1964. Published by Rutgers University Press, New Brunswick, New Jersey, 1964. This material was prepared for Religion Online by Ted & Winnie Brock.

No single field of study can provide a full picture of human nature and growth. An integral philosophy of man must be founded upon knowledge gained from all areas of inquiry, including the natural sciences, the social sciences, and the humanities.

Chapter 1: Being and Becoming Human

Relatively little of human significance can be discovered in the disciplines of mathematics and the natural sciences, for they are restricted to the objective description of human beings. If these sciences are broadened to include philosophical considerations out of their critical scrutiny of science and technology they will become primes sources of knowledge of man.

Chapter 2: Being and Becoming Related

This chapter considers what the social sciences may contribute to the comprehensive philosophy of man and his becoming. The differences between the natural sciences and the social sciences are discussed.

Chapter 3: Being and Becoming Oneself

The function of the humanities is to disclose human beings as unique persons. Each discipline reveals man as a dynamic unity of matter, reason, and spirit, the differences among the disciplines reflecting different aspects and components of the total life of individual persons.

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Chapter 1: Being and Becoming Human

The question of what a human being is and how he becomes what he may become is one that every serious and thoughtful person seeks to answer. Every person's plan of life reflects some image of man as he actually is or ideally should come to be. One's relations to others also imply characteristic conceptions of human nature, whether or not they are consciously formulated.

The problem of man and his becoming is particularly urgent for parents, teachers, school officials, and citizens concerned with the conduct of education. To choose soundly what to teach and how to teach it, to judge what educational goals are practicable and what ones are not -- such wisdom requires the best possible understanding of human nature and its transformation.

Where is this knowledge of man and his becoming to be obtained? Unfortunately there is no single brand of specialists -- call them "hominists"-- to whom one can turn for authoritative answers about man, as one might turn to linguists for information about languages or, if he had great faith, to meteorologists for understanding the weather. To be sure, there are anthropologists, who helpfully describe the *logos* of *anthropos,* and there are psychologists, who offer comprehensive theories of human behavior. But neither of these two groups of investigators, nor any other, has succeeded in winning exclusive rights to the human province.

In point of fact, claims to authentic knowledge of man and his becoming appear from many fields of inquiry. Physicists and biologists include man among the objects they investigate. Sociologists, economists, and political scientists devote themselves entirely to forms of human behavior. Artists, historians, theologians, and philosophers likewise offer their own special insights about human beings and becomings.

A moment's reflection makes clear the reason for this ubiquity of concern about human nature. All knowing, regardless of its ostensible object, yields knowledge of man, for knowing is a characteristically human function. It follows that knowledge in any field of study yields insights

into the nature of the knowing person. This conclusion holds whatever one's theory of knowledge may be, whether idealist, realist, pragmatist, positivist, or any other -- although what is concluded about the knowing person may depend on the theory of knowledge accepted.

Not only is this sharing of interest in man inevitable, it is also required for an adequate picture of human nature. Every field of disciplined study is defined by certain characteristic methods and concepts. These defining properties of each field both advance and circumscribe understanding. They advance it by providing categories of intelligibility. They circumscribe it by ignoring other equally illuminating ways of categorizing. Biology, economics, and music all contribute to knowledge about man. But each contributes only certain perspectives, to the neglect of other equally significant insights.

Every way of knowing about man and his becoming succeeds by virtue of certain methodological self-limitations. Just because each way is itself and not some other way, it yields only partial understanding. Conflict and confusion result when this partiality is forgotten and the advocates of particular disciplines presume to tell the whole truth.

The nearest one can hope to come to the whole truth about man and his becoming is to construct a comprehensive picture, making use of the perspectives gained from each of the main disciplines of knowledge. Since each kind of inquiry is concerned with the same humanity, the several conclusions reached should be mutually complementary. Conflicts of doctrine about human nature between investigators in different disciplines must then be ascribed to errors in inquiry, or to an epistemological imperialism that arbitrarily limits the admissible perspectives, or to an incorrect analysis of the relation of the several perspectives to one another. It is chiefly to this last source of doctrinal conflict that the present analysis will be addressed.

In what follows an attempt will be made to indicate as precisely as possible how various disciplines of knowledge contribute to a consistent and comprehensive understanding of man and his becoming. The present chapter will consider the contribution of mathematics and the natural sciences. The second and third chapters will deal with what is known of man from the social sciences and the humanities, respectively.

Before beginning the more detailed exposition, a summary preview of the line of argument may be useful.

Throughout this book the terms "body," "mind," and "spirit" will frequently be used. Very roughly, "body" refers to material things perceptible to the senses, "mind" refers to the processes of perception, reasoning, and learning, and "spirit" refers to human self-awareness and freedom of choice. The analysis will show that these categories are not independent and sharply distinguishable, but that they overlap and intertwine. It follows that "body," "mind," and "spirit" are useful only as abstract terms for certain gross common-sense aspects of a person's nature and activity. They do not represent separate entities, constituents, or even clearly distinguishable

functions of actual human beings.

The traditional image of man has been that of a tripartite being comprising body, mind, and spirit, each part existing in a relationship of mutual interdependence and tension with the other parts. For an understanding of man as body it has been customary to look to the natural sciences. Man as mind has been studied by the social scientists and psychologists, and man as a spiritual being has been understood through various humanistic studies.

The difficulty with this three-fold division lies in the insistent sense of the unity of the human being. A person regards himself as an integral whole and not as a patchwork of parts that can be investigated separately. Also, it is not satisfactory to regard human becoming as the successive accretions of body, mind, and spirit components.

If the person is a unity, and if the natural sciences reveal him as body, then it follows that from a natural science standpoint man is nothing but a body. He is a complex physicochemical mechanism, and mind and spirit are simply forms of bodily behavior. Such is the view of man in reductive materialism.

On the other extreme if a person is a unity, and if the humanistic disciplines reveal him as spirit, then it follows that from a humanistic standpoint man is nothing but a spirit. He is a free creative subject, and body and mind are simply objectifications of spiritual substances. Such is the view of man in reductive idealism.

Between these two reductive positions the social sciences may portray the person as a complex organism equipped with intellectual powers for adaptive adjustment to its environment, both natural and human. All human behavior, ranging from bodily processes through the most advanced forms of cultural creation, as in the arts and religion, is then interpreted by means of categories drawn from the experience of social interaction. In this way body and spirit are in effect subsumed under mind.

The effect of assigning body, mind, and spirit respectively to the natural sciences, the social sciences, and the humanistic disciplines, and at the same time affirming the unity of the person, is to create conflicting reductionisms. Materialists contend against idealists, and both seek to capture the social behaviorists who occupy the intermediate territory. The consequences of this contending of scholars is intellectual confusion, deepening already intense personal and social disorder. Instead of one mankind, there develop the estrangements of C. P. Snow’s *Two Cultures*, or, more precisely, the three cultures of materialists, social behaviorists, and idealists.

It will be argued in what follows that these destructive conflicts are due to a misconception of the provinces of the several branches of disciplined knowledge about man. A correct appraisal of the various ways of knowing not only shows that they do not contradict or interfere with each other, but that they beautifully enhance and complement one another.

The crucial misconception is that the natural sciences have to do only with bodily properties, the social studies only with minded behavior, and the humanistic studies only with spiritual realities. It will be shown that all three branches of knowledge have to do with all three of the traditional aspects of human nature, and that every discipline in fact studies man as a whole, comprising body, mind, and spirit.

How, then, do the three main branches of inquiry differ in their contributions to knowledge of man and his becoming? They differ only in respect to the degree of generality of their disclosures. In brief, the natural sciences are concerned with those properties of human nature that are universal, that is, shared or shareable with all other human beings. The social sciences deal with relational aspects of man, that is, ones that pertain only to some persons. The humanistic studies have to do with singular human qualities, that is, ones that belong to persons in their uniqueness.

Clearly, with such a division of the realms of knowledge no conflicts about the essential nature of man such as arise from the usual body-mind-spirit trichotomy need occur. A person has certain features in common with all persons, others he shares with members of groups to which he belongs, and still others are singularly his own. Furthermore, the universal, the relational, and the unique human characteristics all have bodily, mental, and spiritual aspects.

In brief, then, mathematics and the natural sciences are the clue to being and becoming human, the social sciences are concerned with being and becoming related, and the humanities have to do with being and becoming oneself. Since every person at one and the same time is a member of the whole human family, enters into limited human associations, and is a singular self, the three classes of knowledge about man and his becoming are fully compatible and complementary. Together they afford the basis for a comprehensive philosophy of man. Such a philosophy in turn imposes on the several contributory disciplines an obligation for scope and depth of application that may be lacking in the customary pursuit of these specialized studies.

The detailed exposition of this thesis begins with a consideration of what the "queen of the sciences," mathematics, discloses about human nature. From one point of view, mathematics yields no knowledge at all of man, or of anything else. For, despite its many practical applications, mathematics is essentially not about any existent thing. That existing things, including people, can be ordered by means of mathematics (for example, in a census, or in actuarial statistics) is a happy circumstance that does not negate the essential independence of mathematical ideas from every empirical reality. The authentic subject matter of mathematics is systems of symbols and not the existential interpretations those symbols may be used to express.

Seen from another standpoint, however, mathematics tells a great deal about human beings. In modern mathematical thought it is becoming increasingly evident that one cannot really be said to know mathematics unless he is self-conscious about his knowledge. He must not only know

what, he must know why. At every step of his reasoning he must be fully aware of his assumptions, and he must be able to make clear to himself and to others the rational justification for every proposition he affirms. The essence of mathematical knowledge is not the ability to make correct calculations and to manipulate formulas skillfully. Competence in mathematics is measured rather by the rigor and precision with which the thinker can exhibit the basis for his thought.

Mathematics, then, is the study par excellence for the development of disciplined self-awareness in all its purity. Mathematics is the inquiry the essence of which is thought becoming conscious of itself. Such activity is prime evidence for the human quality of spirituality. To be a spiritual being is to have the power of self-transcendence -- the capacity to be simultaneously a self and an observer and appraiser of the self. In mathematics people both reason and scrupulously examine their reasoning. They play the dual role of actor and spectator of their actions.

Self-awareness is the most distinctive universal property of a person. It is what separates human beings from everything else in creation. It is the most fundamental property that each human being shares with all other persons. And this property is the basis of the mathematical enterprise. Hence, mathematics is a prime revealer of man as a self-conscious, or spiritual, being.

Through the rigorous self-awareness of mathematics, an important property of universal human spirituality is disclosed. The thinker critically surveying his thought does not simply find his thought. He finds thought-making. He discovers that mathematical forms are not given in the nature of things, but that they are posited. It is now well established that every mathematical system rests upon a basis of primitive or undefined terms, logical concepts, and postulates or axioms. The basis is essentially arbitrary. It is chosen as the foundation for a particular mathematical system. There is no single "true" basis in mathematics. The bases for ordinary algebra, for vector analysis, and for Riemannian geometry, for example, are different. Each provides the formal rules required for the elaboration of a satisfactory symbolic system. Definitions, axioms, and the resulting theorems are posited, or freely adopted. They are elected by the thinker and not imposed upon him as objective realities.

What the postulational method of mathematics shows is that man as a reflective thinker is free. Freedom is another aspect of spirituality. It is exercised only by virtue of the power of self-transcendence. The thinker surveys a range of possible rules of thought and selects those that promise to yield interesting and illuminating elaborations. Since the discipline of mathematics demonstrates the capacity of spiritual man to create new rational systems without limit, it is an important sphere of human inventiveness and decision.

But if the freedom implied by the postulational method has the first word in mathematics, necessity has the last word. There is ample reason for the common-sense view of mathematics as a realm of absolute, certain, and demonstrable truth. The proposition that the sum of the angles of any triangle in the Euclidean plane is equal to two right angles is incontrovertibly true. Its

truth is not a matter of choice or preference, but of logical necessity. No one is at liberty to reject it as false. It is an assertion to which everyone is rationally obliged to give assent. This necessity is logical rather than psychological. There may be people who do not in fact believe the proposition, for any of a variety of causes. In such cases it can be confidently affirmed that the nonbelievers are surely mistaken and that the causes for their error should be removed.

The freedom of definition and postulation, and the logical necessity of mathematical propositions, are in no way incompatible. Necessity rules only within the system of propositions resulting from a particular freely posited axiomatic base. The aforementioned proposition about the sum of the angles of any triangle is necessarily true only within the system of plane Euclidean geometry. For a triangle drawn on a spherical surface, with segments of great circles as sides, the sum of the angles is always more than two right angles. Both of the foregoing propositions are necessarily true, but only with regard to the meanings assigned to the terms in which; they are respectively expressed. When the terms used apply to different freely chosen formal systems, the resulting propositions do not really contradict each other, because each presupposes a different basis. Logical necessity governs only after the rules of the mathematical system have been posited and accepted.

The interesting question in the present context is what the logical necessity of mathematical propositions reveals about the nature of man. What follows from the fact that the freedom of system construction is complemented by absolute logical coerciveness in the outworking of the theorems deduced from the basis of each postulated system?

Necessity in mathematical reasoning is a consequence of adopting a principle of consistency. Conclusions follow from premises by necessary inference only by virtue of the demand for consistency. A reasoner is held to be in error if he can be shown to affirm both a proposition and its contradiction, within the same axiomatic framework. What are the sources of the demand for consistency? Why should one feel obliged to avoid contradictions? Clearly, the principle of noncontradiction is required for all orderly thought. It is a presupposition without which the difference between correct and incorrect reasoning cannot be tested. Without it, dependable conceptual systems cannot be constructed, for then the rules of construction would somewhere contain mutually irreconcilable directives.

The demand for consistency is also rooted in the search for universal principles of thought. Mathematics represents ways of reasoning that are universally warrantable. By limiting admissible systems to those that produce consistent theorems, potentially universal agreement is assured. What is affirmed in mathematics holds without respect to persons, and applies for everyone without exception.

The demand for consistency thus points to the human need for some universal basis for the assessment of thought -- a demand that comes with the force of a moral obligation. People who are not consistent in their reasoning ought to be consistent. It is wrong for them to indulge in self-

contradiction. In effect, then, the mathematical enterprise shows man as having a sense of universal obligation. The logical necessity of mathematics rests upon the basic "laws of thought," which define not how people actually do think, but how they ought to think, if the goal of universal understanding and agreement is to be achieved.

It is possible that the coercive force of mathematical necessity has an even stronger basis than the demand for universal agreement, important as that may be. The human desire for agreement is, after all, balanced by even stronger forces of divergence. Conceivably, the denial of validity to reasoning that leads to self-contradiction is a consequence of man's bodily existence. Being in space and time is defined in common-sense experience by a law of self-identity and of mutual exclusion. A body is what it is and not something else. It is located in a series of particular here-nows. It cannot be fully here and there at the same time, nor can the spatiotemporal location of two different beings be in all respects identical.

This is not to argue for the metaphysical adequacy of the common-sense view. Alfred North Whitehead has shown persuasively the pitfalls in the idea of simple location that underlies it. This is merely to suggest a reason for the coerciveness of the principle of noncontradiction. May this principle not be a rational rendering of the universal experience that different bodies cannot occupy the same space at the same time. There is not only a kind of logical scandal in asserting both p and not-p, where p is any proposition, but also a conviction that such a contradiction is an impossibility in the domain of existent things.

If this argument is valid, it shows that mathematics is rooted in bodily life and that the necessity in mathematical reasoning is rooted in man's spatiotemporal existence. It may also afford a clue to the puzzle as to why mathematics, which is a project of pure thought, turns out to be so widely applicable to the description of the real world. There is reason to think that the structure of the natural world arises from the coordinations of elemental entities exhibiting a rule of self identity and mutual exclusion. If the fundamental requirement of noncontradiction also defines mathematical systems, then one would expect to find mathematical constructions serving as models of the empirical world, as they do in every quantified science.

Mathematics interestingly exhibits the interplay of body and spirit in human personality. The freedom of the spirit is manifest in the postulational method, and the necessity of bodily existence is shown in the rigor of deductive inference. The thinker is free to choose any axioms he wishes, except self-contradictory ones. The choice is limited in this way for the very sake of freedom, because self-contradictory axioms make the fruitful development of a system impossible. Security of necessary inference is essential to the fulfillment of postulational freedom. Unlimited arbitrariness leads to unfreedom rather than to productive liberty. On the other hand, rigorous consistent adherence to the rules of the posited system is required if its potentialities are to be realized.

From this confluence of freedom and necessity springs the order that is the prime evidence of

mind in mathematics. Mind appears in the discernment of pattern or structure. The axioms of each mathematical system define its particular kind of order, its special manifestation of mind. The mind made manifest in these orders is not the fullness of human mentality, but mind in its universal aspect. Mathematical form is pure abstraction. It is form-in-itself, without reference to concrete exemplification. Its aim is complete generality, free of particular embodiment.

The quality of mind exhibited in mathematics is well epitomized in the concept of sets, which figure so prominently in most of the recent revisions of the school mathematics curriculum. A set is a collection of elements having some property in common. This common property, which is the defining feature of the set, is an abstraction, that is, an aspect singled out for exclusive attention. It is the only consideration used in dealing with the members of the set. This power of selective abstraction of form is the very essence of human rationality.

The forms of rationality in mathematics are expressed by the use of symbols. Symbol-making is a characteristic mark of human spirituality, about which more will be said in the next chapter in connection with language. Suffice it now only to note that the special property of mathematical symbols is the universality of their signification. They do not depend upon the accidents of person, place, or epoch, but derive their meaning solely from the formal structures they are devised to express. They constitute a universal language for the symbolization of universally demonstrable, purely formal relations.

It is clear that the insights into human nature afforded by mathematics do not result from applying mathematical methods to human beings. As a purely abstract and formal discipline no such direct inquiry would be appropriate. Instead, the significance of mathematics for a philosophy of man derives from reflection on the mathematical enterprise as a type of human activity. Such reflection shows man as a spiritual being with self-consciousness, rational freedom, and the ability to make and use symbols. It shows him further as having a mind, with the power to create conceptual abstractions and to order ideas into systematic formal patterns. It further suggests that man is bound by existential necessities stemming from his spatiotemporal embodiment, and that fulfillment of his freedom and rationality depends upon conforming the processes of thought to the elemental demands of necessity through loyalty to the rule of noncontradiction.

These observations also point to the role of mathematics in the making of persons. Mathematical studies in the curriculums of schools and colleges sharpen self-awareness in thinking, stimulate conceptual inventiveness, and develop the capacity for symbol construction and transformation. They also provide for growth in powers of abstraction, generalization, and perception of formal relationships and inculcate a sense of the inexorable objectivity of valid thought -- and even, perhaps, of corporeal being.

Turning to the physical sciences, one finds an equally comprehensive view of man as that which derives from reflection on mathematics. Again, a first thought would lead one to expect little

insight into human nature from the physical sciences. Knowledge of stars, rocks, and atoms, yes, but knowledge of man?-- it would seem one must look elsewhere for that.

It is clear that the normal business of the physicist, the chemist, the astronomer, and the geologist is not to investigate man as such. They are concerned with the description and explanation of matter and energy in a more general way, without particular reference to human life. It is not especially illuminating to know that a human being falling in a uniform gravitational field moves according to the law $s = 1/2\ gt^2$ -- though such information might be of vital importance to divers, high-wire walkers, parachutists, and others engaged in activities of the utmost gravity. Nor is it particularly important to know the chemical composition of a man, except for the purposes of amusing or shocking audiences in popular lectures by telling them that they are so much hydrogen, oxygen, carbon, nitrogen, potassium, sulfur, and so on, worth one dollar and ninety-eight cents on the current market in chemicals. (Such recitals are an inevitable prelude to perorations about the infinite qualitative worth of each human being.)

Certain practical values are gained from the physical measurement of human beings. For example, physical anthropometry is used to determine the optimum distribution of clothing sizes by large manufacturers and distributors of apparel. Architects need to know about human weights and heights in planning structures for human use. Similarly, designers of all sorts of equipment need to know the physical characteristics of the intended human users.

But all such items of information about man from the physical sciences are relatively trivial and uninteresting within the context of a total understanding of human nature. They refer only to the gross physical characteristics of the human body. A comprehensive physical science perspective on man must yield more than such information.

Really significant direct insights into human nature come from the engineering analysis and simulation of the processes of human thought. It is largely through investigations in this direction that the persistent conviction that physical science has to do only with bodies and not with the mind and spirit has been called into question. The evidence is found in the astonishing growth in recent decades in the construction of control mechanisms using the cybernetic principle of feedback regulation.

The point of central importance in these developments for a philosophy of man is that man-made physical mechanisms are no longer limited to rigid patterns of mechanical action, but are now admitted to the domain of sensitive response, memory, and even of decision-making -- activities that traditionally have been thought the exclusive province of minded organisms. Technologically, the new automatic machines are of overwhelming importance, because they can perform far more precisely, swiftly, and economically than can many operations that were formerly believed possible only for persons. Thus, human beings, earlier liberated from physical drudgery by the simpler machines, are now being emancipated also from mental labor by cybernetic machines.

Perhaps even more significant than this replacement of human labor is the extension, classification, and perfection of the human powers of thought made possible by automatic machines. The developments of computer design and programming have exposed the anatomy of logical thinking with a clarity and precision never before achieved. Because of these mechanisms, vastly more than ever before is now known about the formal patterns of thought. The operations to be performed by these computers have to be specified exactly. Complex instructions must be carefully analyzed into a series of elemental steps to be carried out in the digital type computers by simple on-off switching devices. Analog-type computers, on the other hand, exemplify the configurational aspects of thought rather than logical processes reducible to elementary counting operations.

That computer physics and engineering have direct relevance to human nature and development is demonstrated by the rise of programmed instruction. The basic premise of educational programming is that the same careful articulation of small sequential steps that enables the computer to achieve its reliable results is requisite to effective human learning. Just as the success of the computer depends upon the meticulous preparation of instructions by the programmer, omitting no step in the whole process, so it is assumed that the success of the human learner, who is believed to be (among other things) a very complex cybernetic mechanism, depends upon the scrupulous logical organization of teaching materials.

Programmed instruction is frequently criticized for being suited only to rote learning, in which one correct answer is given in advance, and not for developing creativeness and individuality. Such objections are only partially justified. Programs can be devised to encourage inventiveness and flexibility, but only within limits foreseen by the programmers and built into the programs. Computer technology is not a clue to all thinking, but only to those processes of thought that are generalizable. There are other aspects of thought that pertain to the unique person, and these evidently cannot be programmed.

Cybernetic mechanisms are particularly illuminating in connection with the processes of decision-making, which belong to the sphere of human spirituality. They involve reflective consideration of alternatives, imaginative projection of possibilities, and conclusive resolution. By enormously extending the range of factors weighed and the possibilities explored, and by dramatically accelerating the execution of component judgments in a complex decision, the efficiency and reliability of choice-making can be greatly improved. In this way physical science makes a valuable contribution to the understanding of human spirituality.

This is not to say that human beings are automatic machines, nor that cybernetics affords a complete model of man, but only that the development of computers provides a basis for the unprecedented exploration of the structure of the human mind and spirit in their universal aspects. The simulative mechanisms are products of human thought and decision, and like all tools they bear the impress of their makers. The extraordinary fact about these tools is that,

unlike ordinary instruments, they do not simply extend the reach of the bodily senses and by their form yield information about the body and its functions. Instead, they disclose the patterns of human cognition and conscious deliberation with new clarity and precision. In this way the computers constitute important means of revealing to man certain universal features of his being and becoming.

Further insight into the human condition arises from reflection on the progress of scientific technology generally. Through knowledge of the regularities of natural processes men are able to predict with varying degrees of accuracy the future course of natural events. They can then govern their own conduct so as to take advantage of this foreknowledge. Likewise, understanding of the behavior of material systems makes possible the invention of technical devices for making the energies of nature serve human purposes.

The demonstrated success of prediction and control through the natural sciences and technology shows that in some sense human intelligence is not alien to the nonhuman world. If it were, the effort to discover rational order in the world would have proven impossible. The intelligibility of the world is evidence that to some degree man is at home in nature, or akin to nature, and this recognition is an important source of hope and courage for mankind. The confidence begotten from the fact that there are discernible regularities in natural occurrences is an important source of morale in an existence that is beset with anxiety-producing contingencies.

On the other hand, the manner in which the technical control of nature is actually achieved makes it clear that man is not in a position to impose his will on nature unconditionally and arbitrarily. Human beings are by no means the uninhibited darlings of Dame Nature. She exacts rigorous conditions for the bestowal of her benefits. Her bounty is granted only to those who understand her ways and accept her demands. The price of technical mastery is knowledge of natural laws and action in disciplined subordination to the intelligible orders of nature.

What technical control does is to challenge both fate and magic as factors in the human situation. It challenges fate by substituting a reliable rational order for arbitrary and inscrutable powers. It challenges magic by showing that the powers of nature must be studied, respected, and obeyed before they can be employed for the fulfillment of human wants.

Thus, technology has significant bearings on the relation of freedom and necessity in human life. The necessities of natural existence are not simply restrictions and negations of freedom. Though they do deny the unlimited autonomy of the human will, they also constitute conditions for the realization of human purposes. The natural laws disclosed in the physical sciences are not just bounds within which freedom is constrained. They comprise the knowledge through which positive freedom alone may be defined and fulfilled.

One of the great contributions of scientific and technical study to human growth consists in this disclosure of the intimate interdependence of body, mind, and spirit. The free spirit of man is

realized, at least in part, by using his mind for the study of the necessities that condition him as a bodied being. Thus, by acquaintance with the scientific outlook the growing person learns that he is neither arbitrarily autonomous nor yet wholly dependent on forces outside himself, but capable of exercising rational freedom within and by virtue of the necessities of the natural order.

The natural sciences provide further clues to human nature through an examination of the character of the scientific enterprise itself. Two features of scientific activity are of greatest human importance. The first feature grows out of the very meaning of science. The subject matter of science may be taken as those matters of fact on which it is possible, in principle, to secure universal agreement. The methods of science are designed to make possible such agreement. Everything that is private, irreducibly subjective, esoteric, or idiosyncratic is excluded. The only knowledge scientifically admissible is that which is objective and publicly verifiable. For example, because color as such is a matter of essentially subjective qualitative perception, it does not qualify as a scientific property. On the other hand, the wave lengths of light corresponding to various colors are admissible scientific data because they are confirmable by observations that anyone can make.

The method of achieving potential universality of agreement is to adopt measurement techniques based on the elemental principle of self-identity that defines spatiotemporal existence. Physical measurement provides a means of ordering observations according to the necessary conditions of succession and juxtaposition that characterize bodily experience in time and space. Since, as we have already observed, these conditions are also the basis for mathematical necessity, the test for scientific admissibility is the possibility of mathematical formulation. It is the precondition for universalizability and therefore for scientific authenticity.

The fact that metrical operations can be constructed so as to make universal agreement possible is a remarkable property of the human mind in relation to the natural world in which it functions. Here again it can be seen how closely mental activity is linked to the bodily and spiritual life. Bodily existence is the basis for defining the procedures that give coerciveness and hence universality to scientific thought. The spiritual life is the source of the imagination and inventiveness whereby the metrical abstractions, experimental procedures, and theoretical models that render the observations intelligible are created. Thus, at the basis of scientific thought there appears the same curious interplay of freedom and necessity that was earlier shown to mark the human situation in its universal aspects.

The other most humanly significant feature of the scientific enterprise is its inherent moral imperative. Jacob Bronowski has made the point eloquently in his lectures contained in *Science and Human Values*. From the commitment of the scientific community to impartiality it is quite improper to conclude that science is a value-free enterprise. On the contrary, science is through and through a moral endeavor, and the very commitment to impartiality is one evidence of its values. The scientific community is dedicated to the construction of a system of understandings

that are reliably and universally confirmable. Its mission is the fullest possible realization of those aspects of human cognition that belong to all mankind.

The point of special emphasis here is that this aim is not simply an objective for those who have scientific interests. It is a goal and a mission laid upon everyone as an ethical imperative. Truth is not merely to be sought and affirmed if one happens to like that sort of thing. Loyalty to it and to the human communities that foster it is a universal moral obligation.

Perhaps the claim of universal truth that underlies science is the primal source of all universal moral imperatives. The equality of all persons in respect to the truth, without favor or distinction, is the presupposition of every demand for justice. It is no accident that the Stoics, with their strong sense of universal reason in nature, were also one of the main sources of the idea of universal justice and of the equality of all men before the law. Thus, reflection on the enterprise of natural science yields important insights about man as a moral being, and education in scientific attitudes may be seen as one of the most significant ways of developing moral sensitivity and responsibility.

Most of what is known of human nature from mathematics and the physical sciences is based on reflection on those disciplines and hence is not normally thought to be part of their proper subject matter, but to belong more to the philosophy of science and mathematics. The same does not hold for the biological sciences, since the study of man falls directly within their domain of investigation. There is something a little odd about looking to mathematics and the physical sciences for knowledge of man, and the insights eventually obtained are of a different order from those ordinarily expected. In biology, on the other hand, knowledge of human nature is an important explicit aim of inquiry.

The great contribution of biology to the understanding of human nature is the light it throws on the significance of time. Everything that is exists in time. Everything is immersed in ceaseless process. Everything has a past from which it has emerged and a future toward which it inescapably moves. While all things, inanimate and animate alike, share in temporal passage, living things make it more evident. The eternal hills appear to stand unchanged, while the growing things that cover them bloom and wither with the seasons. Material artifacts often endure from generation to generation, while the men who make and use them are born, mature, and die in unceasing succession.

It was mainly from the study of living things that the great idea of evolution sprang -- an idea that appears to be applicable to everything, living and nonliving, natural and man-made, material and nonmaterial. According to this idea, everything is what it is by virtue of a process of growth and development involving a long chain of related antecedents.

This evolutionary perspective forbids any facile identification of the essential "natures" of things, including human beings. Because the principle of universal change is so widely assumed,

inquiries into the nature of man (or of anything else) are regarded by many scholars as futile, since all that can be known is the series of stages through which a developing being or class of beings moves. Accordingly, anything affirmed about the nature of man requires the tacit qualification: "at this point along the evolutionary line." With this tentativeness also belongs an attitude of expectancy concerning new human possibilities that may emerge as evolution proceeds.

Biology thus fosters a view of man as engaged in a continuing adventure, drawn on to new levels of fulfillment by the lure of future possibilities. The human future is open rather than closed, as it is with a static view of a fixed human nature. Moreover, the evolutionary picture shows that man's beings and his becomings are intimately connected. Man is what he has become; and his present being is what it is by virtue of the long struggle for more successful adaptation to the environment. Therefore, the individual becoming of man and the evolutionary becoming of mankind are mutually illuminating -- an insight embodied in the old dictum that "ontogeny recapitulates phylogeny."

The decisive feature of living things is not the fact of change, since everything changes, at varying rates. What is distinctive about living things are the manner and direction of change. Organisms are characterized by their ability to preserve constancy in the midst of change. Living matter has the astonishing power of reduplicating itself, incorporating materials from the environment according to the constant pattern of its own being. This power is the secret of organic adaptation. The environment supplies energy and raw materials that the organism utilizes for its self-perpetuation.

The phenomenon of homeostasis exemplifies this tendency of living matter to preserve its identity amidst change. Injured parts are repaired, or other parts modify their functions to compensate for the loss, restoring the integrity of the whole organism. In the higher organisms, including man, a complex set of neural and humoral regulatory mechanisms preserve the stability of the metabolic processes within very narrow limits, despite substantial changes in the external environment.

This property of constancy amid change depends on the fact that living things are open systems. According to the Second Law of Thermodynamics, every energy transformation in a self-contained physical system takes place in such a way that the entropy -- a measure of the randomness of the energy distribution -- is increased. That is to say, all isolated energy changes proceed in the direction of greater disorder. Living things, on the contrary, have the ability to maintain themselves against disordering tendencies. They can do so only because they are open rather than closed systems. They exchange matter and energy with the environment, perpetuating their own organization at the expense of other low entropy energy sources, such as the sun, from which the energy for photosynthesis is derived.

A fundamental property of all living things, including human beings, is their ability to

perpetuate themselves. They function according to a principle of the conservation of organic order. Self-preservation is the very law of life. Affirmation of existence, the will to live, is written into the constitution of all living things.

But the manner of change in living things is not exhausted by the facts of dynamic equilibrium in homeostatic open systems. The living world also presses on toward increasing complexity of organization. Through sexual combinations and genetic mutations new forms of life are created, and of these the ones that are best fitted to use the resources of the environment in the effort of self-perpetuation gain selective advantage over less well-adapted forms. Thus, living things not only conserve order; they also evolve toward more comprehensive patterns of hierarchical articulation.

The profound revelation that biology affords is that these processes of form-conservation and form-creation are found at every level of the evolutionary scale. Even in the inanimate realm things persist through time by virtue of stable energy configurations. Atoms and molecules, for example, are energy systems exhibiting more or less dynamic equilibrium. Building on these elemental physicochemical orders, successively more complex patterns have evolved, culminating in the most advanced organic forms comprising the human species.

From a biological standpoint, then, human beings are at the top of the evolutionary hierarchy, having developed the most effective means for conserving and creating order. This effectiveness has been achieved chiefly through the growth of intelligence, and is most clearly manifest in the decisive change that has taken place in the method of evolution, which in man proceeds through reflective deliberation rather than through the unconscious processes of natural selection that prevailed in the pre-human era.

This view provides powerful support for the argument that body, mind, and spirit are intimately interconnected. The forms of the body are explicable only by reference to the life of the mind that finally blossoms into the self-conscious deliberations of spiritual creatures. Organized matter, life, and thought are successive achievements in what Teilhard de Chardin calls "cosmogenesis." Each phase in cosmic evolution is continuous with the preceding one. As Edmund Sinnott points out in *Cell and Psyche*, what appears as organizing forces in the elementary forms of life and as organic drives in the higher forms manifests itself as conscious purpose in man. Body, mind, and spirit are thus seen to reflect three aspects of a single cosmic process.

In this fashion biology reveals universal man, not in the sense of the Renaissance ideal of that name, but as the clue to the development of the whole cosmos. One cannot understand the universe without comprehending the universals of human nature, and conversely, what is known of the world order, and of world-making contributes to an understanding of man and his becoming.

What mathematics and the physical sciences point to indirectly concerning the belonging of man in the natural order is thus confirmed directly in the life sciences. But more than that, the study of life reveals two important universal truths about man. The first is that human beings, along with all other living things, are amazingly self-consistent. Throughout all the changes and circumstances of existence they seek to maintain their distinctive identity. This is a fact that educators tend to forget in their efforts to make and mold the young. Life in all its forms is defined by structures that afford constancies amid change. People grow and learn, to be sure, but not in direct obedience to the patterns of outer influence. Since the first law of all life is self-perpetuation, whatever gets incorporated from the environment must accord with the patterns of existence that characterize the person as an integral enduring self.

The second great truth is that man participates in a universal process of construction in which ever higher levels of differentiated coordination emerge. Biological evolution has a direction that can be clearly charted through all of the stages in material, organic, and cultural creation. This direction is toward increasing individuation in cooperative interdependence, as opposed to the increasing disorder of isolated physical processes. In this upward movement mankind may find warrant for confidence and hope for the future of the human enterprise.

In conclusion, the central theme of this chapter may be rounded out and underscored by a brief consideration of experimental psychology as the remaining major branch of the natural sciences concerned with man and his becoming. In reaction against vitalistic and animistic conceptions of pre-scientific thought, scientific psychologists seek to develop reliable procedures for the study of human behavior, so as to yield valid objective knowledge. Their chief method is the analysis of patterns of observable behavioral responses to experimental stimuli. They scrupulously avoid introspective data and they treat what have traditionally been regarded as directly intuited psychic phenomena, such as perception, memory, will, and emotion, solely as theoretical inferences from observed behavior.

By these methods much interesting and useful knowledge about the predictable patterns of human behavior has been gained. By inference these patterns can be used to construct a detailed picture of activities that have traditionally been called mental and spiritual, including feeling, thinking, remembering, purposing, and choosing. As a natural science, psychology aims to chart these human functions insofar as they exhibit universal regularities.

Despite the knowledge gained by these methods, it seems doubtful that the demand for complete objectivity in psychology can be justified. It is difficult to see how anything significant can be known about human subjects by eliminating everything subjective and treating them as if they were only objects. Even in the most rigorously objective study of human behavior subjective understanding is covertly introduced in identifying the meaning of the theoretical inferences. For example, the inferential construct "memory" is regarded as yielding knowledge of what is commonly known as memory only because the investigators already know immediately and inwardly what memory is.

In their anxiety to be rigorously scientific, some behaviorally oriented psychologists adopt a body-bias that effectively inhibits understanding of human beings. Just as physics reveals little of significance about man until one reflects on the enterprises of science and technology, so scientific psychology, aiming to out-do physics in objective rigor, can yield little insight about man until the distinctive human quality of self-awareness is acknowledged as an essential factor in psychological inquiry.

In respect to self-awareness as an essential ingredient in the knowledge of man, the example is most clearly set by the discipline of mathematics, understanding of which requires strict reflective scrutiny of the processes of thought. In this way the self-knowledge of man, the knower, is accepted as an essential part of the process of inquiry. From these considerations it becomes clear that mathematics, which superficially appears to have no relevance to the knowledge of human nature, actually affords important insights about human beings, not only as rational agents, but as persons with freedom yet also bound by necessities in the spatiotemporal order.

The physical sciences and the life sciences also yield their full harvest of knowledge about man only when the understanding gained through direct self-consciousness is used in the interpretation of the methods and results of objective scientific investigation and of technical invention. In affirming this intimate experiential source for the knowledge of man the data of objective research are not rejected, nor are the gates opened to uncontrolled subjective vagaries. Rather, a basis is provided for the meaningful interpretation of what is objectively observed.

It appears likely that scientific psychology will eventually fulfill its promise as the culminating natural science of man and that this will occur when the essential data of critical self-awareness are integrated with the methods of objective behavioral observation and inference.

Thus, mathematics and the natural sciences, including experimental psychology, are sources for the knowledge of man and his becoming, in respect to those features that all men have in common and that link mankind to the universal natural order. These features include not only the bodily functions that one expects to be treated by the natural sciences, but also the qualities of thought and decision that man possesses as a rational and spiritual creature.

Though the natural sciences therefore give a rounded account of man and his becoming, they do not tell the whole human story. Man is more than the universal human being whose nature and development have thus far been discussed. It is not enough to describe man’s being and becoming human. For his other significant beings and becomings other sources of knowledge must be considered. These will be the concern of the succeeding chapters.

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Man and His Becoming by Philip H. Phenix

Philip H. Phenix was educated at Princeton University, Union Theological Seminary, and Columbia University. He was formerly Dean of Carleton College, and was professor of Education at Teachers College, Columbia University. This book presents the Brown and Haley lectures at the University of Puget Sound, Tacoma, Washington given by Philip Phenix in 1964. Published by Rutgers University Press, New Brunswick, New Jersey, 1964. This material was prepared for Religion Online by Ted & Winnie Brock.

Chapter 2: Being and Becoming Related

The first chapter considered some of the important lessons to be learned about man and his becoming from mathematics and the natural sciences. It was suggested that relatively little of human significance can be discovered in these disciplines as long as they are restricted to the objective description of human beings. If these sciences are to afford valuable insights into human nature, they must be broadened to include philosophical considerations growing out of the critical scrutiny of science and technology as human undertakings. When this philosophic dimension is admitted, the natural sciences become prime sources of knowledge of man, not only in respect to those material properties shared with the nonhuman world, but also in respect to the uniquely human qualities of mind and spirit.

This chapter will consider what the social sciences, including linguistics, anthropology, sociology, economics, political science, and interpersonal psychology, may contribute to a comprehensive philosophy of man and his becoming. The relevance of these disciplines is obviously quite different from that of the natural sciences insofar as the latter do not have man as their direct object of study. Since the social sciences are explicitly and exclusively concerned with human life, one may look for direct knowledge about man in these disciplines rather than finding their human meaning mainly in philosophic reflection on the enterprise of inquiry, as in physics and mathematics.

Insofar as social studies are conducted on a scientific basis, yielding universally warrantable propositions, their indirect meaning, as human activities, is the same as in the case of the natural sciences. In the subject matter with which they are directly concerned, however, they differ from the natural sciences. The object of inquiry in the social sciences is man-in-relation. The focus of investigation is neither the human species in general, nor individual persons, but persons in association. Relationships are those limited aspects of human existence that are shared by two or more persons. A knowledge of these relationships adds specificity and richness to the universals of human nature revealed by and through the natural sciences and

mathematics.

Since human forms of relation are evidence of mind, it might appear that the social sciences are concerned only with man's mental nature. It can be shown, on the contrary, that just as the natural sciences yield a comprehensive view of man, so the picture of human nature provided by the social sciences is that of a three-fold integration of body, mind, and spirit.

In *I and Thou* Martin Buber affirms that all existence has its ground in relation. He holds that relationships are not derivative patterns subsisting between essentially self-sufficient entities, but that they are the primary basis for all being and becoming whatsoever. There are two "primary words," which he calls "I-Thou" and "I-It." The primary word I-Thou is the fundamental personal relation from which authentic being springs. The primary word I-It appears when the personal relation is replaced by a depersonalized subject-object relation.

It is significant that Buber calls the relations in which all human existence is grounded "words," for in doing so he hints at the centrality of language in the life of man. From the study of languages and reflection on the meaning of language come some of our most essential insights into human nature and growth.

The power of speech is a characteristic human function. No other creature possesses this ability, except perhaps in the most rudimentary way. To be sure, other animals communicate. But the manner of their communication is essentially different from that of human speech. They use signals, which function as direct cues to action. Language, on the other hand, is not a system of signals, but of symbols. The human power of speech is the ability to create and to use symbols.

Symbols differ from signals in being bearers of meaning. While signals immediately direct action, symbols convey meanings, and these meanings mediate between utterance and action. Ernst Cassirer in his *Essay on Man* designates man as "animal symbolicum," and shows that all of the typically human functions stem from this fundamental ability to formulate and communicate meanings.

The phenomenon of language nicely illustrates the synthesis of physical, mental, and spiritual aspects in human nature. Symbols are physical entities, such as sounds or visual images. They are objective material creations, requiring bodies for their production and use. The human organism that employs them must also have a suitable array of sense receptors and neurological structures. The pathologies of speech, hearing, and sight demonstrate the profound dependence of all of the higher human functions upon bodily structures. The moving account of Helen Keller's transformation from the essentially animal to the truly human level illustrates both the importance of a physiological basis for meaningful human existence and the dramatic contrast between life with and without symbols.

Symbols are also instruments of mind. They have forms or structures that bear meanings. The

meanings conveyed by various symbols are contained in their distinctive forms. Knowledge of a language consists in the ability to recognize and use the patterns adopted to express meanings. These patterns are abstractions that the mind uses to order experience and thus render it manageable and intelligible. Without such symbolic abstractions the rational organization of behavior would be impossible; by virtue of them a cognitive relation to the world is established.

It is a mistake to suppose that language is simply a way of expressing thought that is already in the mind. Language is rather the very source of thought. A thought that cannot be expressed is no thought at all. The idea of an unsymbolized idea is meaningless, for the being of an idea consists in its form, as expressed in symbols. Thus, human mentality and symbolization are inextricably united.

Furthermore, language is a spiritual function, for the self-conscious person by reflection is able to make a four-fold discrimination between: (1) particular things symbolized, (2) the sensible symbols used to symbolize them, (3) the meanings conveyed by the symbols, and (4) the self by whom the meanings are understood. Such reflective discrimination is possible only by virtue of the power of self-transcendence that betokens the spiritual life of man.

Spirituality is evident, too, in the fact that the symbolic patterns of language are freely chosen. They are not wholly dictated by natural necessity, but are constructed by the human community. The evidence for this freedom is, of course, the multiplicity of existing languages.

On the other hand, the freedom of symbolization in language is not as marked as in mathematics. In the case of language two sources of constraint operate. The first is the demand that linguistic symbols adequately express the meanings of experience in the objective world. Since language is not, like mathematics, a purely imaginative intellectual construct, but is a means for understanding the real world, its patterns must in some sense represent the way things really are. The other limitation on freedom in language follows from the fact that communication is a social and not an individual function. Languages are not for the most part deliberately invented. They grow and change in the human community. Whoever wants to be understood is constrained to speak in accordance with the practices of the language community to which he belongs.

The power of symbolization is a universal property of human beings, without which humanness cannot emerge. Yet the forms of language are not everywhere the same. They differ from one language community to another, providing an essential bond of interpersonal association. Every particular language serves as the basis for communication among a limited number of persons. Each contains certain characteristic categories of thought that determine the way in which its users organize their experience. These common symbolic patterns not only make possible intelligible relations to the world of things, but more significantly, they enable people to be in effective relationship to one another. They enable persons to realize their essentially social nature.

Language, then, is a human creation. The converse also holds, that human beings are created by language. Persons grow through relation, and the quality of their relationships influences the characters of persons. Since language is a fundamental mode of interpersonal relating, it follows that what people become is dependent upon their language experiences.

Accordingly, the study of language rightly occupies a central place in the education of the young. From the moment of a child's birth the process of symbolic interaction begins. Before long the patterned stimuli of spoken sounds assume reliable and more or less consistent significance, and the creative power of language begins to manifest itself. A world of shared meanings opens up, with boundless possibilities for action and enjoyment.

Formal education continues the expansion and deepening of symbolic understanding. Most school learning occurs through the use of language. When a child has reading difficulties, his whole educational development suffers. Such a child is also likely to experience serious problems of social and emotional adjustment, for he senses that in his language deficiency the very foundations for his participation in the life of relation -- and hence for having any life worth living -- are threatened. It is therefore of the utmost importance that a child's language difficulties be taken seriously and that remedial measures be applied without delay, since his whole future as a person so largely depends on competence in the use of symbols.

While the importance of language instruction can scarcely be overemphasized it should also be recognized that such teaching may degenerate into arid formalism, in which verbalisms are taught in rote fashion without concern for real understanding. In that event language is robbed of its symbolic character. Instead of communicating meaning, the words serve only as signs, stimulating certain approved forms of behavior, usually also verbal, such as "repeating the correct answer."

Language is an essential part of human becoming only when its symbolic character, that is, its power of conveying meanings, is respected. In every community and in every age verbal formulas need to be critically examined and reinterpreted, through dialogue and fresh experience, in order that their power as bearers of meaning, and hence as creators of authentic human existence, may be assured.

Linguistics is one branch of the most comprehensive of the social sciences, namely, anthropology, the aim of which is to offer a more detailed account of man than do the several descriptions provided by the universalizing natural sciences. The distinctive impetus for anthropological study has been and continues to be the conviction that human differences are significant and worthy of investigation. Anthropologists have effectively contested the simplistic conceptions of man that would put every human being into one uniform category, recognizing that some of the most interesting aspects of human nature relate to dissimilarities rather than likenesses.

But the anthropologist is not concerned with individual differences. He studies the differences among groups of people all of whom share some common factors. That is, he investigates the different ways in which groups of people are alike. Hence, anthropological knowledge exhibits the significant types or classes of human beings. By describing human nature in categories that apply to some, but not necessarily to all persons, a far richer picture of man emerges than by regarding only universal properties.

The critical idea here is that of significant types. There are all sorts of possible ways of classifying people. The problem is to find categories that are genuinely illuminating, in the sense that they provide a rational basis for understanding what people are and why they behave as they do.One of the ways of classifying people is by inheritable physical characteristics, such as size and shape of head, physiognomy, hair distribution and type, skeletal structure, body proportions, blood type, and skin and eye pigmentation. Investigators of such matters are physical anthropologists. From their knowledge it is possible to arrange people into groups defined by certain shared characteristics. Historically one of the most important typologies based on physical characteristics is that of race. The principal value of the scientific study of race is to render the concept more exact than it is in common use and to demonstrate its severe limitations as a classification device.

Race proves to be a term that is not properly applicable to individual persons at all, but only to groups of persons. It does not refer to properties identical in all members of a group, but only to the statistical distribution of inheritable physical characteristics in the members of the group. For example, Caucasoid and Negroid groups differ on the average in skin color, hair form, shape of nose and jaw, blood type, and other features. The reason why only statistical averages apply is that inheritable qualities are for the most part independently determined. There is no biological basis for perfect individual correlation among different characteristics, such as pigmentation and shape of head. All existing human populations contain mixtures of traits. There are no "pure" genetic types that make it possible to assign individuals completely to one human group rather than to another. Thus, the idea of race as a basis for reliable and definite classification of individuals clearly has to be abandoned in favor of a problematic and inexact system of statistical abstraction.

Even more important than the foregoing qualifications of the race concept is the recognition that the properties commonly employed in racial classification are humanly insignificant. For example, since skin color has no demonstrable relation to intellectual ability, esthetic sensitivity, or character, it follows that no significant conclusions about a person’s characteristically human behavior can be drawn from the nature of his pigmentation.

One of the main lessons of physical anthropology is that one must look elsewhere than to inherited physical traits for personally significant modes of human classification. That is to say, abstractions that are limited to bodily characteristics yield an extremely meager account of

human beings.

The most fruitful basis for human classification devised by anthropologists is found in the idea of culture. The culture concept is one of the great illuminating ideas of modern science, comparable in importance to the concept of evolution in biology, the concept of electromagnetic and gravitational fields in physics, and the concept of the atom in chemistry. The term culture refers to the entire complex of customs, laws, institutions, beliefs, values, traditions, and artifacts that constitute the common man-made environment of a group of people.

Human beings are not only or mainly denizens of the world of nature. They also live and grow in an artificial world of human design. Moreover, there are many such artificial worlds. Man-made environments vary according to the particular life-histories of the human groups that live by them. Cultural patterns thus represent aspects of human nature that are not universal, but shared with a limited number of other persons.

Man does not live by bread alone, that is, by means of his natural environment. His life is also rooted in culture. The network of cultural connections is as essential to personal existence as food, air, and water are to bodily survival. When a person is displaced into a radically different culture, he suffers acute distress, and when cultural patterns deteriorate through internal contradictions in a society or by external forces, the persons concerned undergo disorientation and disintegration.

The facts of culture make it evident that the notion of the person as an independent self-contained unit cannot be maintained. A kind of "field" theory of human nature is evidently needed. The being of persons extends beyond bodily boundaries to include the field of interconnections embodied in the culture. A living culture is a matrix of person-sustaining relationships that are inseparable from the human beings who participate in them.

Culture not only sustains persons; it is also in large part the means for creating them. Human learning is not so much an activity in culture as an inevitable and omnipresent effect of culture. It is a form of "enculturation." Who a person becomes is affected greatly by the formative influence of the whole culture in which he lives. Teachers, preachers, and others who devote themselves to the work of instruction can be saved needless frustration and disappointment if they bear in mind the weight of educational influences exerted by the culture as a whole, and if they take account of the prevailing cultural patterns as they plan their teaching.

The facts of culture beautifully exemplify the compresence of body, mind, and spirit in human nature. As to body, culture is deeply rooted in biological needs. Man is an organism struggling for survival, in the face of threats from natural forces and other living things. To protect himself he builds houses, makes clothing, and invents weapons. To supply his material wants more abundantly he fashions tools, harnesses the powers of nature in water, wind, and fire, and domesticates animals to his service. Since survival and material progress also require human

cooperation, men devise social structures to provide for division of labor, specialization of function, and distribution of material goods. Furthermore, the elaborate patterns of culture connected with birth, initiation, courtship, marriage, illness, and death all express responses to the insistent demands of natural existence in particular circumstances of space and time.

Rooted though culture is in biological necessities, it reveals methods of human adjustment that transcend those of animal instinct and trial and error learning. Culture is a product of mind. Instruments, artifacts, and institutions are crystallizations of ideas. They are meaningful structures intelligibly related to purposes consciously entertained. The creations of culture are, in fact, the visible embodiments of the thought of a people. They are tangible evidence of the special forms of rationality that characterize a certain human group, as contrasted with the products and processes of reason that apply universally.

Culture is also evidence of spirituality. The products of human imagination extend far beyond the satisfaction of practical interests. In this man differs radically from the lower animals. He cannot rest content when his biological needs are supplied. He projects new possibilities of experiencing and then creates conditions of life that convert those possibilities into higher-order necessities. Civilization is far more than organization for the efficient exploitation of nature. It is a spiritual creation that transcends nature, constituting a new world of interests, enjoyments, and perplexities.

Among the cultural forms studied by the anthropologist are ones that explicitly embody spiritual meanings, including the beliefs, practices, and institutions of religion, some forms of which appear in every known culture. Important as these explicit evidences of spirit are, they should not be regarded as the only such manifestations. All cultural creation in some measure bears the mark of spirit, for it proceeds from the projecting, initiating power of free self-transcendence. Thus, language, law, science, art, manners, customs, history, and tradition are elaborations of the human spirit no less than is religion.

The enterprise of anthropology is itself an outstanding illustration of man’s spiritual self-transcendence. The aim of the anthropologist is to understand cultures by sensitive and sympathetic participation in them on their own terms. He seeks to achieve a new kind of objectivity by identifying himself in patience and sincerity with cultures other than his own. Commonly he studies primitive cultures because they have greater inner homogeneity and simplicity than more advanced cultures and because they provide sharper contrasts with his own cultural habits and expectations. In this manner anthropology provides a bridge between the universal and the relative aspects of human nature. The ability to transcend one’s own relative position through imaginative participation in the relativities of other peoples is the basis for a new, richer universalism, in which the significant partialities of particular groups are encompassed within a sympathetic accepting awareness.

The concept of cultural relativism is particularly helpful in connection with the understanding

of values as one of the expressions of human spirituality. Convictions about good and bad, right and wrong, important and insignificant, and the like, differ from culture to culture. While this relativity can be interpreted to mean that values are wholly defined by the circumstances of culture and are merely expressions of cultural exigencies, the insistent pressures of the human conscience, oftentimes in contradiction to accepted cultural norms, render this interpretation doubtful. What the relativity of values does show is that no one system of preferences can win assent for all people and under all circumstances. The easy assumption that one's own provincial commitments are the standard by which everyone's values should be judged is called into question. Ethical obligations are in one sense necessarily universal: they refer to what anyone ought to do or to approve. But the qualifier "in such and such circumstances" must be added, for rights and duties are not independent of the context of action. Cultural relativity is a reminder of these contextual factors in the specification of values. Thus, the universal moral obligations that inhere in the scientific commitment to truth are supplemented by the particular loyalties that are proper within the limited relationships of actual cultural traditions.

As already pointed out, culture is a powerful agency in the formation of human personality. The same social realities, however, also underlie the massive conservatism of culture. The principle of self-perpetuation is fundamental to all living things, and homeostasis, or conservation of form, is characteristic of the open systems comprising all enduring organisms. Similar conservation principles also apply to man's life-in-relation. Cultures are patterns of interrelation that give particular groups their identity. These groups maintain their integrity, and provide a sense of security and continuity to their members, by holding fast to the customs, beliefs, and values that comprise the cultural heritage.

From this persistent fact of cultural conservatism arise the most serious problems of social conflict, including the bitter strife of races, classes, sects, and nations. In such conflict, as well as in the quieter processes of peaceful transformation, cultures may change; conservation of culture is not an absolute law. Patterns of life can also be so severely disturbed that meaningful human existence is put in jeopardy. The present century is such a time of violent cultural dislocation, in which the system of common assumptions and shared convictions that make stable and integral human existence possible have been shattered, as a result both of burgeoning knowledge and inventiveness and of the destructive intergroup conflicts made possible through the powers at modern man's disposal.

The solution of this problem of cultural conflict and disintegration is perhaps the major challenge to modern civilization. There are four possible lines of resolution. The first is to retreat into pure individualism, denying the necessity for culture and affirming the essential autonomy and independence of the solitary person. This atomistic solution is a romantic illusion, for persons are made in and for relation, and anyone who imagines himself to be self-sufficient is simply oblivious to the network of relations in which his being consists.

The second approach is to work for the creation of a monolithic universal culture in which all

particular patterns of life will be eliminated. This solution has the obvious merit of removing the basis for intergroup conflict. It is the preferred goal of utopian world planners. But again, it is doubtful that such a plan is consistent with human nature. Though man has universal properties that link him with all other members of his species, he also has qualities that he shares with only some of his fellows, and still others that are his own singular properties. To organize mankind on a uniform global pattern would eliminate one of the most enriching bases for human existence.

The third possibility is to create a system of cooperating cultures, united by certain common commitments required to adjudicate conflicts, but still preserving the group identities that give the separate cultures their distinctiveness. Mankind would then be organized into a federation of relatively autonomous, self-contained ethnic groups subject to principles of intergroup amity and mutual understanding. Such cultural pluralism is consistent with the requirements of human nature for a determinate social matrix, and it provides for continued enrichment of the life of mankind through a variety of contrasting traditions.

It appears unlikely, however, that the form of man's life-in-relation will in the long run be that of a plurality of cultures. With the accelerating pace of travel and communication, the conditions of relative isolation and constancy required for ethnic continuity and identity are ceasing to exist. This leads to the fourth and most promising possible solution to the problem of intergroup conflict, that is, the emergence of a single pluralistic world society, in which there will be ample provision for individual and group differences, but not on the basis of relatively independent culture groups.

Perhaps the present age marks the passing of ethnic man and the appearance of social man, the transition from an anthropological to a sociological epoch. The classic anthropological picture, largely drawn from the study of primitive societies, of tightly-woven patterns of culture, each element of which has to be understood in relation to all the other interconnected elements, is decreasingly relevant to the understanding of man-in-relation. Instead, people in a pluralistic society belong to many different groups and have many different roles to fill, depending upon their place in the various structures of the society in which they live. In such a society it is not possible to divide people into cultural groups each of which has a complete and distinctive way of life. Each person's way of life is compounded of the many different roles he plays in connection with the various associations into which he enters.

In a pluralistic society, while there must be certain standards by which everyone is regulated, there is no inclusive pattern of life for the society as a whole. There are, in fact, mutually exclusive, even contradictory, modes of existence. Moreover, each person's pattern of life is made up of diverse combinations of roles from the various groups in which he participates.

The resulting demands made on the individual person for choosing the relationships into which he enters and for integrating them into a reasonably viable mode of coherence is unprecedented

in the history of mankind. Ethnic man had a ready-made way of life that could be interiorized through the normal processes of enculturation. In this given pattern lay much of his security, as well as his limitation. Man in the pluralistic society is released from this secure confinement into the exhilarating but frightening responsibility of freedom. It should occasion no surprise that so many moderns try to escape this dreadful freedom by re-creating comprehensive orthodoxies, whether ecclesiastical or secular, that will restore the unity and simplicity of life through closed systems of ethnic identification.

The central problem in the creation of a pluralistic world society is, then, a spiritual one, requiring the acceptance of the gift and responsibilities of mature freedom. The study of the possible forms of relation in which that freedom may be exercised is the province of the social sciences. The unique organization of those choices in the making of singular persons is the province of the humanistic studies, which will be considered in the following chapter. Thus, the crisis in modern man's being and becoming related, as revealed in anthropology and sociology, also requires for its solution the human understandings gained in the humanities.

Anthropology and sociology both aim at a comprehensive description of man-in-relation. Other social sciences, concentrating on certain limited kinds of human activities, together afford a more detailed picture of man's culture and social organization. One of the most important of these specialized types of activity, namely, language, has already been discussed. The remainder of this chapter will be concerned with three other kinds of human relations -- economic, political, and familial -- and with what the sciences centrally concerned with them tell about human nature and its transformations.

Economic phenomena point most obviously to the bodily life of man. Without food, drink, and shelter people cannot live. The sustenance and security of the physical organism are prerequisite to all of the higher and more characteristically human functions. Most of what people do seems to be concerned directly or indirectly with supplying bodily wants. Agriculture furnishes food, drink, and fiber. From forests and mines come building materials and fuels to keep men safe and comfortable. The transportation industry carries people bodily from place to place. One cannot view the whole gigantic production apparatus of modem advanced societies and the perennial preoccupation of mankind with making a living without being impressed by the dominance of physical demands in the life of man. Such economic facts render untenable any picture of man as a purely mental or spiritual being.

Yet even in economic affairs man proves to be more than body. His organic demands are only the first stage in the elaboration of a system of wants that far transcend biological impulses. Man has psychogenic needs that are just as insistent as those of the body. To satisfy them natural objects are transformed into a complex environment of created artifacts bearing the impress of human mentality. Human beings do not rest content with physical satiety. They hunger also for the goods of intelligence. Accordingly, a large part of economic activity is devoted to the satisfaction of man's psychic wants.

Human rationality is also evident in the very fact of economic organization. The incredibly intricate system of accounting that makes possible the business and financial structure of society bears eloquent witness to the powers of the human mind to achieve rational ordering and control of human affairs. One can gain some measure of this attainment by imagining the chaos and destructive conflict that would ensue if all records of economic transactions should disappear. Far more than is usually acknowledged, the security and well-being of the human community are dependent upon that great triumph of the symbolizing mind, bookkeeping.

Supervening on bodily wants, psychogenic elaborations, and rational systems of control are the spiritual factors in man's economic existence. Economic problems are occasioned by the perennial disparity between the available supply of goods and services and the demand for them. If persons were only intelligent organisms with finite wants, the problem of adjusting demand and supply could in principle be easily settled by rational calculation. In fact, human beings prove to have limitless desires. They do not, like lower animals, become content when their bodily hungers are satisfied. Humans are endowed with a boundless craving, such that when one want is fulfilled, some other and more urgent demand takes its place. People are never fully satisfied at any stage of attainment. From each level of fulfillment they always look up longingly to still higher levels. That is why economic problems do not diminish as the standard of living rises. If anything, they are intensified. Things that are regarded as luxuries in one economic bracket are considered necessities in the more affluent circles. While the kinds of things people want do change as goods become more abundant, the fundamental economic fact of scarcity continues to operate. For, relative to the potential total human demand, no possible supply of goods and services is ever sufficient.

This persistence of economic problems is due to the infinitude of the human spirit. The interesting point is that this quality of transcendence is shown in connection with the supply of material wants. Because body, mind, and spirit are an indissoluble triad in the human personality, man deals with his physical needs in characteristically mental and spiritual ways, ordering his economic life according to rational canons and multiplying his demands beyond all limits in obedience to the infinite yearnings of the self-transcending spirit.

While economics as a descriptive study is not concerned with moral issues, the facts of economic life inescapably point to the moral element in human nature. Economic activity has to do with the production and distribution of goods, and "good" generally has ethical connotations. In scientific economics one can remove the normative element by defining an economic good as whatever anyone wants, leaving open the question as to whether it ought to be wanted. Such economics is limited to the ethically neutral desired, leaving out of account the normative desirable. However, this elimination of the moral factor is alien to human nature; because man has a conscience, he cannot escape moral self-appraisals. When a person desires anything, he tends to ask whether or not he ought to desire it. Because human beings are thus morally concerned, "goods" can never be wholly "de-moralized." That is, the question of desirability

cannot be persistently avoided.

The moral issue arises because economic affairs have to do with man-in-relation. Each person's wants have to be considered in relation to the wants of others, and the limited available supply of goods and services must be distributed among the various claimants. Economic systems are designed to give an answer to the question of how this distribution shall be effected. In contemporary civilization three main conceptions of economics compete for acceptance, and to each corresponds a characteristic picture of economic man.

The first view is that of classical free enterprise. Under this system goods and services are distributed by means of an open market in commodities, land, labor, and money, the values or prices of which are determined by competitive bidding. Presumably the aim of economic activity is to maximize material gain, and the enterpriser has an unalienable right of ownership in what he produces and acquires through market exchanges. The error of such free market economics is that it substitutes an automatic social mechanism for moral responsibility and thereby permits grave social injustices to occur. The freedom and privacy of the few strongest and cleverest are bought at the price of the enslavement of the many less able. Given the cumulative power of private property, justice does not result from the competitive interplay of acquisitive individuals.

The second economic system, that of communism, is also unrealistic about human nature, but in a different way. Under this system it is assumed that a just distribution of goods and services will automatically follow the elimination of private property rights in the means of production. Communists hold that by the expropriation of capitalists and the dictatorship of the proletariat the ideal of distribution "from each according to his ability, to each according to his need" will inevitably be realized. In actuality, grave injustices occur under this system also. The strong still exploit the weak, the important human values of freedom and privacy are effectively denied, and incentives for productive activity are undermined.

Both the free market and the communist economic philosophies should be rejected, because both substitute a social mechanism for moral responsibility. Economic affairs inescapably raise questions of justice, which no institutional structure, individualistic or collectivistic, can automatically insure.

There remains a third answer to the distribution question, based on a deliberate acceptance of the demands of the moral conscience of man. Economics is not a natural science, describing how events in the world of production and distribution must occur, whether by the laws of the free market or by the dialectic of economic determinism. Economics is a policy science, providing a basis for making intelligent decisions in the light of the common good. Economic activity is not a self-contained, autonomous domain of life, but a means to fulfill the moral ends of mankind.

The importance of the changes that have taken place in economics largely since the Keynesian revolution does not lie principally in the many new practical devices and theoretical discoveries that have been made, but in the picture of human nature implicit in the newer views. In this picture man is no longer seen as subject to ineluctable economic forces, but as himself responsible for deliberately organizing his life-in-relation according to the requirements of social justice. Economic institutions are human creations, made to supply physical, intellectual, and spiritual needs. The particular mechanisms employed depend on circumstances of history, geography, and culture, and decisions about them can be made responsibly only by taking account of man's acquisitive propensities, his need for rational order, his longing for freedom, and his sense of justice -- in short, by relying on an integral rather than a truncated conception of human nature.

The forms of economic organization are powerful means of forming persons. A nonmoral economic system tends to create a society either of acquisitive or of collective automatons, depending on the principles relied upon to regulate economic behavior. On the other hand, a society in which conscious control of economic processes is undertaken for the common good encourages the growth of moral personalities. Becoming a mature person requires the discipline of wants. The economic system educates because it supplies the institutional structures through which desires are regulated. The rewards and sanctions administered by economic institutions become internalized ingredients of personality in those who live by and in the system. Therefore, it is of great importance for the nurture of human beings that the economic organization of society be based upon a comprehensive and not a partial concept of human nature.

The most powerful influence of economic life in the formation of persons is the occupational structure. Since a person essentially is what he does and can do, his habitual occupation to a large degree determines his character. There was sound insight in the custom of an earlier day of identifying persons and families by their callings. The very being of Mr. Smith consisted in his smithing and of Mr. Carpenter in his carpentering, and it was presumed that both the designation and the occupation would continue from generation to generation. Thanks to the passing of occupational castes, Mr. Smith can now be a banker and Mr. Carpenter can even be a mason, union rules permitting. Still, the new Smith's being is formed by his banking and the new Carpenter's by his masoning.

The primary social question in regard to occupation is whether work is determined by the requirements of a sovereign economic mechanism or by deliberate social planning guided by an integral concept of human nature. When maximum production and continually increasing economic growth, measured by income and expenditure figures, are taken as the measures of social well-being, then occupations and the educational preparation for them are dehumanized and made narrowly vocational; and persons are degraded into interchangeable parts in a giant social machine designed for generating and gratifying acquisitive hungers.

Since occupations are made for man and not man for occupations, the nature and distribution of work should foster the growth of complete persons. From this standpoint, the prevailing division of occupations along the lines of physical, mental, and spiritual functions -- or as manual, white collar, and managerial and professional -- is undesirable. It is not necessary to give up the specialization of functions that makes advanced civilization possible. What is required by the criterion of human integrity is that occupations be so defined that manual work is also a rational pursuit and an opportunity for constructive imagination, that symbolic skills may be exercised in clear relation to material necessities and in the light of moral responsibilities, and that creative professional activities will be conducted with a vivid sense of the realities of nature and the canons of reason. In short, every occupation can and should be designed to take account of the essential unity of body, mind, and spirit in human nature. Such an occupational structure would not only nurture integral persons; it would also create a healthy society. Is a fatal mistake to suppose that a good community can be constructed by combining partial human beings according to some ideal blueprint. The good society can only be constituted of whole human beings. In the making of such persons, integral occupations play a central role. In schools and colleges, the best preparation and continuing support for occupations of this kind is liberal education, in which the full range of human potentialities is developed, rather than a narrowly conceived program of vocational training. Such liberal education is entirely consistent with a high degree of specialized technical instruction, provided the latter is carried out imaginatively and with continuous concern for the wider bearings and the deeper meanings of the specialty.

Inseparable from the economic structure of society, as well as from all of the other institutions regulating the common life, are the instruments of government, with which political science is concerned. Man is a political animal, whose being and behaving are determined in the context of association with others. In their essential interdependence, human beings exert power and influence on other persons. The science of politics deals with these power relationships.

The anatomy of social power vividly illustrates the interfusion of physical, mental, and spiritual elements in human affairs. In physics power means capacity to do work, and it is calculated by multiplying the amount of an acting force by the speed with which it acts. All changes of motion in material things, including people, are due to the exercise of power in this sense. Sometimes human affairs are conducted on the basis of such direct physical compulsion. When the police carry a resistant culprit to jail or when one army drives back an opposing army in battle, social power takes the same form as the powers of nature.

Usually, however, human behavior is not caused by the direct application of physical force, but is controlled by habit patterns acquired in earlier social experience. That is to say, most human action consists of learned responses, which depend on mental capabilities. Possessing minds, persons can become socialized, in the sense that they can develop response patterns more or less closely corresponding to the demands of the social order in which they live. Physical compulsion is thus largely replaced in social relationships by mental control.

The most distinctive form of power in human affairs extends beyond the acquired responses of mind, to the self-transcending action of the human spirit. A person is aware of himself as occupying a certain social position, and it is by his evaluation of that status and of himself in relation to it that his behavior is governed. Each social position carries with it certain rights, privileges, and responsibilities, and the pattern of social positions determines the power structure of the society. A large factor in the maintenance and operation of this structure is the symbolic system, including the rituals, symbolic objects, and verbal forms that embody the values to which the members of society are committed.

A fundamental fact about government is that it possesses the means of compelling compliance by physical force if necessary. It has the ultimate sanction of police power. Equally fundamental is the fact that such physical sanctions are effective only when most members of the community habitually and voluntarily accept the existing order, that is, when their internal springs of action are consistent with the power structure of the society. These two facts underline the fusion of body, mind, and spirit in power as a human reality. Though physical force in human affairs is largely replaced by rational and purposive controls, the connection of these higher forms of power with direct compulsion remains. Though a life in relation cannot be truly human until force is subordinated to persuasion, it is doubtful that purely mental and spiritual power can exist, severed from any connection with physical force as a possible ultimate sanction.

In this connection the practice of non-violent resistance is instructive. Mahatma Gandhi, Martin Luther King, and other like-minded apostles of social change, and their followers, have been effective in challenging the prevailing power structure because they did not merely appeal to reason and high purposes. They used their bodies literally to force consideration of their better vision. The general principle is that the ultimate test of every commitment to ideals takes place at the bodily level, whether in the application of force by the governing powers or in the suffering of those who actively or passively resist the prevailing political order.

These considerations have significant bearing on the education of the young. Physical compulsion has an essential place in character development. Pure reason and exhortation are not meaningful by themselves. They gain their significance by ultimate reference to forceful sanctions. Parents and teachers who believe that physical restraint and corporal punishment are uncivilized and injurious to personality and hold that permissiveness and affirmation are the sovereign rules of child training deprive the children in their care of an essential element in personal growth. A child governed by sheer force would become not a person but a brute. On the other hand, a child is not a discarnate mind, nor a pure soul. He has a body, and it is in and through this body that his character must be developed, his physical existence supporting and standing as a pledge for the reality of his rational and spiritual commitments.

The study of family relations and of the growth of persons within the family is the special concern of interpersonal psychology, particularly as represented in the various psychoanalytic

schools. Sigmund Freud was a pioneer in calling attention to the fundamental importance of the family constellation in the development of persons, and those who succeeded him in the depth analysis of the human psyche demonstrated the fruitfulness of this approach to man and his becoming.

The major contribution of interpersonal psychology to a comprehensive philosophy of human nature is that what a person becomes is decisively influenced by his relationships with other persons -- chiefly those in his family in the first few years of life. Many of the clues to adult behavior are to be found in childhood experiences. More than any other discipline devoted to the study of man, psychoanalysis underscores the connection between being and the process of becoming, particularly emphasizing the fact that the later development of persons is largely a working out of patterns early established in the family.

Psychoanalysis gives special emphasis to the reciprocal relations between bodily, rational, and spiritual functions in the human personality. The infant is completely dependent on his parents, especially his mother, for nourishment and protection. The manner in which the dependent child's organic needs are satisfied has a profound effect on his subsequent emotional development. If his wants are promptly supplied, he learns to regard the world as a friendly place and the people around him as trustworthy. If his wants are denied or served in an inconsistent or haphazard manner, the child comes to regard the world as hostile, unreliable, and enigmatic. Such attitudes of secure optimism or anxious pessimism may persist, coloring the thoughts and purposes of the person throughout his life.

Similarly, a homely bodily matter like toilet training may have a profound effect on the growth of personality. A child inducted too early into the control of his natural functions may develop lasting patterns of scrupulousness and anxiety. He may learn to fear his natural impulses, impoverishing his personal vitality by excessive rigidity and negation of feeling.

The loss of spontaneity and natural warmth is frequently associated with the denial of sexual impulses. Much of the modern study of psychopathology centers on the problems caused by sexual repression. For example, the classical Freudian theory makes the Oedipal conflict, in which the child must come to terms with his sexual attraction to the parent of the opposite sex, a central factor in the development of personality.

Interpersonal psychology further demonstrates that emotional factors deriving from the regulation of organic impulses for social purposes have a profound effect on the life of reason. Much of human thought proves to be rationalization, that is, a means of justifying to oneself or to others conduct that does not measure up to accepted standards. Human conduct is often largely guided by unconscious and irrational factors. However, the assumption of the psychotherapist is that irrational behavior can be brought under rational control by re-educating the person in healthy interpersonal relationships. Relationships are healthy if they are based on truth and love, that is, on a reality principle, and on concern for and acceptance of the person

himself.

Physical well-being in turn is dependent on health of mind and spirit. It is now common knowledge that many bodily ailments are caused by emotional maladjustments. Ulcers, heart attacks, arthritis, indeed, almost any medical pathology one can name, including cancer, may be affected, if not caused, by psychological factors. Consequently, the healing of the body may depend on the healing of the mind and spirit. Hatred, fear, boredom, and hopelessness are often the sources of disease, and love, courage, high purpose, and hope are then needed to effect a cure.

Interpersonal psychology thus vividly demonstrates the essential interweaving of body, mind, and spirit in human nature. It also shows that personal health consists in wholeness, that is, in the integration of the human being through the proper articulation of his various component functions. A person becomes integral, or healthy, largely through relationships with other persons in which his early instinctual needs are adequately gratified but are also progressively disciplined as required by the realities of the natural and cultural environment.

The present chapter has shown what some of the sciences of man contribute to our understanding of human nature and development. The aspects of man that he shares with all natural things or with all other human beings -- as disclosed by natural science -- do not yield a complete picture of man. Humans are essentially social. The quality of their being and the modes of their becoming depend on their particular patterns of social interaction. Every set of continuing relationships contributes to the formation of particular qualities in the persons thus related.

The social sciences reveal the different ways human beings are alike. Alike they must be, for a person cannot exist in isolation. Relation is essential to being. Yet there are different patterns of relation, resulting from the creative freedom of human beings. The myriad forms of human culture and institutions comprise these different kinds of likeness.

Each social science provides an image of man based on certain aspects of life-in-relation. Linguistics shows man as a creator of symbolic systems that provide common worlds in thought and imagination. Cultural anthropology shows human nature as it grows out of the matrix of integral human communities. Sociology is more concerned with the various societal structures and mechanisms by which man’s social existence is maintained and modified. Economics describes the variety of social mechanisms by which the production and distribution of scarce goods and services may be regulated. Political science analyzes human beings in terms of their striving for power and the need for its proper ordering. Interpersonal psychology discloses the sources of personality in the life of the family and through other intimate relationships.

The organization of man’s life-in-relation is manifestly a work of mind. It is a product of the rational power of perceiving and fashioning forms, of understanding identity and difference, of

classification and abstraction. At the same time, the shared life has a bodily basis, is adapted to the necessities of corporeal being, and is expressed by physical means. Finally, the embodied reason of man's shared cultural forms bears the mark of the free creative determinations of the self-conscious human spirit. Thus, the social sciences, like the natural sciences, show that man's nature and nurture in their relational as in their universal aspects, must be conceived with due regard for the inextricable interdependence of physical, mental, and spiritual factors.

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Man and His Becoming by Philip H. Phenix

Philip H. Phenix was educated at Princeton University, Union Theological Seminary, and Columbia University. He was formerly Dean of Carleton College, and was professor of Education at Teachers College, Columbia University. This book presents the Brown and Haley lectures at the University of Puget Sound, Tacoma, Washington given by Philip Phenix in 1964. Published by Rutgers University Press, New Brunswick, New Jersey, 1964. This material was prepared for Religion Online by Ted & Winnie Brock.

Chapter 3: Being and Becoming Oneself

The first chapter showed how mathematics and the natural sciences reveal human nature in its universal aspects, and the second chapter indicated the contribution of the social sciences to the knowledge of human qualities shared in social groups. This final chapter will consider the function of the humanities in disclosing human beings as unique persons.

The humanities that will be discussed include several of the fine arts, history, certain aspects of individual psychology, and religion. As in the case of the disciplines treated earlier, the analysis will be concerned both with what the humanistic studies directly disclose about man and his becoming and with what can be inferred about human nature indirectly by reflection on the activities comprising those studies.

As before, it will be demonstrated that each discipline reveals man as a dynamic unity of matter, reason, and spirit, the differences among the disciplines reflecting different aspects and components of the total life of individual persons.

The first part of the analysis concerns what esthetic experience and artistic creation in general reveal about man. The essence of the esthetic attitude is the contemplative enjoyment of an interesting object. The thing enjoyed may be either natural or man-made -- a rock, a person, a statue, or a sonnet. In the esthetic encounter one does not consider the properties of the object as a kind of thing or as something the inherent meaning of which is derived from sharing it with others. The esthetic object is appreciated in and for itself and the act of appreciation is ultimately and ideally a personal response of the perceiver, without reference to the reactions of other persons to the object.

Esthetic experience is thus decisively different in kind from the acts of descriptive observation and of communication that characterize the scientific and relational life of man. Esthetic life is not concerned with general functional conceptions but with singular nonfunctional perceptions,

that is, perceptions in which the esthetic object is regarded as interesting in itself and not as a means to serve other interests.

The esthetic attitude is evidence that man understands and values individuality. In the act of appreciation he shows his respect for the object in its own right. He sees it as a concrete particular embodying an excellence that belongs to that thing alone. He does not seek to incorporate the object into his own being, but discovers himself drawn out of himself in self-forgetful acknowledgment of an objective, finite perfection.

Of all the creatures only human beings appear to engage to any appreciable extent in the activity of esthetic contemplation. This is because only man has a highly developed spiritual capacity for self-transcendence, enabling him to lose himself in the nonfunctional perception of an interesting other being. The lower animals for the most part appear to perceive functionally. They regard things with an eye to the animal's own organic interests; they are not fascinated with things as valuable in themselves. Only the self-transcending human percipient has the power of vicariously living the life of the interesting other being.

This understanding and valuing of other individual beings is possible because a person himself is an interesting and interested unique self. The perceiver knows from his own being what individuation means. Because he perceives his own inner life as a continuous series of singular concretions, he is able to recognize and to respect as a value-in-itself each object that captures his esthetic attention.

In esthetic experiences there are the roots of what may well be mankind's most fundamental moral persuasion, namely, the inherent worth of the individual. The esthetic attitude is essentially one of respect for the thing-in-itself and for the freedom of the perceiving subject. In such an attitude there is no place for coercion, for manipulation, for classifying, or for ranking. Things of worth are prized for what they are and not for the extrinsic benefits they may bring. Despite the importance of the subjective element in esthetic perception, the esthetic attitude is fundamentally objective, in that it concerns the ascription of worth to an object of value.

This basic morality of respect for the individual may be the grounds for equality and justice in the social order and for the ethics of publicity and veracity in the scientific community. In the light of the esthetic ideal communal relations can be established so as to yield the maximum individuality, variety, and liberty to create. In the same light, even the potential universals of scientific inquiry can be derived from the fellowship of free persons each responding to the personal persuasion of the evidence available to him.

Esthetic objects are interesting not only because of their unique existence, which is spiritually perceived, but also because of their rational and material aspects, resonating with the corresponding aspects of human nature. Esthetic objects are embodiments of reason. They are materializations of intelligence. Here reason and intelligence are to be interpreted in their

individuated forms. Mind is not manifest only in the forms of discursive reason. Besides the mind disclosed in scientific universals and in relational orderings, there is the mind of unique esthetic presentations. Mind in this last sense is the creative source of all understandings, including the concepts and conventions of the general forms of reason. Before any patterns of thought can be put to use in the categories of science or the structures of human organization, they must be perceived as significant forms by the esthetic imagination.

Esthetic experience is thus the basis for understanding the elemental patterns of human rationality, of which the forms of ordinary logical cognition are only generalized modes selected for the non-esthetic purposes of communication. The direct intuitive understanding of a tree, of a pattern of clouds, of a human face, of a house, or of a song is an achievement of intelligence no less reasonable and no less significant than the comprehension of a mathematical demonstration or of a legal regulation.

If human beings are to become mature selves it is essential that they be given regular opportunity and encouragement in esthetic exploration, and that such learning be accorded its due status as an authentic rational pursuit. Without this esthetic basis reason becomes narrowly canalized in its generalizing modes and loses the creative vitality of the particular perceptions upon which all intelligence, including that of science and practical organization, depends. In this sense scientific, technical, and social man is rooted and grounded in esthetic man.

Esthetic individuation is achieved by the ordering of material substances. Esthetic perceptions are not mere rational abstractions. They yield knowledge of embodied forms manifest in particular material things. The uniqueness of the esthetic object is not a consequence of a general idea, but of the way sensible stuff is put together. The qualities of the materials used, together with the complex effects achieved by organizing them into a unified whole, give the esthetic object its distinctive character.

Corresponding to the individual interesting material object is the unique bodied human perceiver. Esthetic experience is dependent on the physical senses. No pure, immaterial, disembodied perception of beauty or of any other esthetic value is possible. Feeling depends on sensation -- not raw, unorganized impulse, of course, but bodily sense infused with the rational power of particular discriminations.

Thus, the esthetic life makes clear the inextricable unity of matter, reason, and spirit in the individual life of man. Esthetic experience reveals the sensible forms in which reason finds concrete expression. It also provides the occasion for the recognition of uniqueness that marks man as a self-conscious spiritual being.

That part of the esthetic life of man connected with artistic creation yields a particularly clear picture of human nature as revealed in esthetic experience generally. The spirituality of the artist is evident in the fact that he creates perceptible objects. He exercises the freedom of

deliberate construction, in which the objects fashioned constitute a second creation -- a new world, transcending the processes of nature. In this way man, who is dependent on nature, at the same time shows his spiritual freedom to rise above the determinations of the natural order. Likewise, he demonstrates his participation in the eternal, which transcends the flux of time. For the making of works of art is an effort to create enduring objects which will preserve for repeated enjoyment the consummatory perceptions that vanish so quickly from subjective consciousness.

Paradoxically, the means of securing this relative immortality -- this partial immunity from the decrements of time -- is the embodiment of the once-living perception in nonliving matter. The source of continued resurrectability of the esthetic idea is the permanence of the inanimate stuff in which the artist objectifies the idea. Hellas lives today because its glory was captured in undying stone.

In this respect the arts emphasize the being rather than the becoming of man. They offer a reminder that sheer becoming has no meaning, and that value inheres in consummation. Becoming, growth, change, are justified by the being to which they lead. Pure Heraclitan flux is no more satisfactory than absolute Parmenidean immobility. Time and eternity are indissolubly wed. The arts beautifully maintain the sense of this union, which is so essential to the understanding of authentic human existence. On the one hand, they provide for freshness and novelty through acts of creative origination. On the other hand, they allow for the preservation of consummatory values through the fashioning of enduring material objectifications. Thus, the arts help to maintain the balance between progressivism and conservatism that is essential to the health of civilization. Progress is achieved through the free creation of new esthetic objects. Conservation is assured through the lasting materialization of esthetic perceptions.

The secret of this happy balance is individuation. A work of art can properly be absolutely new and absolutely permanent only because it is absolutely unique. No such possibility exists in the partially or universally shared aspects of human existence. For all matters held in common, whether in science, in law and custom, or in institutional arrangement, continuity must always be qualified by criticism, and conversely, novelty to be significant must be introduced with due regard to tradition.

The theme of singularity in art should not be pressed so hard that no room is left for common enjoyment, esthetic communication, and significant criticism. Because esthetic experience is shared, and meaningful esthetic judgments are made and defended, the arts are not without relevance to the relational and even to the universal aspects of human nature. In fact, it is widely held that the measure of greatness in a work of art is the universality of its appeal. Nevertheless, esthetic conviction is grounded in singularity, both of the work of art and of the person who perceives it as significant; such breadth of appeal as a work has is due to the universality of the drive toward personal uniqueness.

Accordingly, esthetic judgments are not coercive in the same way either as scientific demonstrations or as social agreements. While esthetic appraisals may be influenced by illuminating criticism and may be widely shared, they remain essentially free personal responses that reflect the inner life of the unique human being.

The different contributions of the several forms of art to the understanding of human nature depend principally on the types of material used to embody esthetic ideas.

The most intimate and direct esthetic presentation of human nature is attained in the dance, for in this art form the human body itself provides the expressive means. The dance constitutes a living refutation of the assumption that bodies exist only to support the higher human functions and that they themselves have no distinctive human meaning. The somewhat marginal status of the dance in modern civilization, as compared with some of the other arts, may well be due to the prevalent dualistic conception of man, in which the physical organism is assigned to physical activities and the mind to the "higher things." Primitive cultures and archaic civilizations, in which the dance was the dominant art, may be closer to a true understanding of man than are modern civilized cultures. The discovery of psychosomatic unity in the practice of medicine is a partial and largely pragmatic recovery of the integrity of the human person that has always been the unquestioned premise of the dance. The degree of prominence of the dance as an art form may well be a significant measure of a people’s understanding of human health and wholeness.

In the best sense of the phrase the dancer glorifies the body. This does not mean that he glories in the body as body, but that he integrates the body into an expression of complete humanness. He literally effects an embodiment of reason and spirit, or, conversely, a rationalizing and spiritualizing of the body. For him in fact if not in doctrine the body is the temple of the Holy Spirit. It is a fit vehicle for the most exalted treasures of the human mind and imagination.

The dance portrays the inner life of man in relation to the conditions of space, time, and gravity in which human experience occurs. A great range of human attitudes and emotions, from hope to despair, from suspicion to trust, from resolution to aimlessness, from impudence to reverence, are translated into expressive body positions and movements, demonstrating the indissoluble linkage between the subjective experiences of man and their outward objectifications.

Since the human body itself is the means of expression in the dance, this art form is an exception to the principle of immortalization through artistic creation. Although there are ways of preserving dance forms through photography and dance notation, many dance compositions are as evanescent as human experience itself; the work is created and vanishes with the creation. This transcience applies particularly to the modern expressive dance. Such mortality is the price paid for the advantage of using man’s own mortal stuff as the expressive material, thereby assuring the unity of subjective and objective elements in the esthetic object.

Much dance is also concerned with universal and relational aspects of human nature rather than with individual expression. This is especially the case with ritual dances and with conventional forms such as the stylized traditional ballet. Even free expressive dance as a performing art is not meant to be simply idiosyncratic, but is intended to present human meanings of general significance. Nevertheless, the principle of free personal appropriation is fundamental in the dance as in all esthetic experience, and in this respect the concern for uniqueness is preserved. Furthermore, each dance composition, no matter how widely shared, is a singular construction, and as such sustains the ideal of individuation.

Music shows human nature as a resonator to rhythmic energy pulsations in the audio-frequency range. The sensory channel for musical meanings is a tiny stretched membrane in the ear, the vibration patterns of which are analyzable into a linear, temporal sequence of varying amplitudes. It is one of the miracles and mysteries of man that the whole rich content of musical experience can be contained in such a rhythmic pulse. The miracle, of course, is not in the vibrating tympanic membrane, but in the human mind, in which the temporal sequence of energy amplitudes is converted into a perception of tonal patterns by virtue of the power of memory. Memory overcomes the sheer flux of temporal process, making possible a present in which the past still resounds. The very idea of a tone, with a given pitch, is impossible apart from the mind that collects and connects the rapid succession of pulses that are the physical form of sound. Similarly, the effects of rhythm, harmony, melody, and the various structural patterns in musical composition exist only because memory affords a mode of conscious existence in which the percipient both lives in the time stream and outside of it.

The mystery of music in the life of man is bound up with the ways in which the elemental realities of temporal passage and number can be combined to achieve qualitative effect. In sound perception energy frequency and amplitude are the embodiments of number. The qualitative effect is attained by a certain regularity of impulses, yielding temporal sequences of stimuli with a degree of intelligible periodicity.

It is interesting to speculate on the significance of rhythmic patterns in human existence, indeed, in existence of any kind. Periodicity is found everywhere, from the energy configurations of atoms and the circling of the planets to the life cycles of biological organisms and the ebb and flow of social organizations. Such rhythms are the means of uniting change and constancy, novelty and stability. In rhythmic patterns there is dynamic order -- patterned process -- making possible that balance between security and adventure required for creative advance at every stage in the evolution of the cosmic order.

Music is the art in which this primal fact of constancy-in-change is deliberately celebrated and exploited. Musical patterns provide consciously perceptible experiences of statement, variation, repetition, contrast, and return that link the person to the vastly extended and intricate cycles of the whole hierarchy of creation, and particularly of life, in which variety and flux within

continuity of structural and functional patterns are of the essence. In this sense the enjoyment of music is an act of rejoicing in being itself, and especially in being alive.

Music is far more abstract and intellectual than the dance, which utilizes the whole body, either directly in the dancer or empathically in the viewer. Though music also affects the whole body in its rhythmic pulsations, its aim is the more limited one of sharpening the perception of intelligible (because to some degree cyclic) temporal orderings. By virtue of its high abstraction, the range of constructive combinations in music (as in the closely related domain of mathematics) is very great, and (again, like mathematics) its penetration into the secrets of existence (including man's) is very profound.

In the motion of the dance, temporal and spatial orders are united. In music, abstraction occurs along temporal lines, suppressing the spatial factor. In the visual arts, including painting, graphics, sculpture, and architecture, abstraction takes place spatially, minimizing the temporal factor. To be sure, the visual arts need to be viewed rhythmically in time. Also, qualities of color, and light and shade, are perceived by virtue of the same memory factors in the mind that make possible the discrimination of tones -- the difference in the case of visual perception being in the order of energy frequencies involved and in the nature of the required receptors and resonating brain circuits. Nevertheless, visual perception is an abstraction in the extensive mode rather than in the mode of duration that belongs to music.

Although paintings, prints, statues, and even buildings can be and often are constructed so as to give a sense of life and motion, they are made with fixed and enduring materials and therefore represent a timeless objectification of the living experience. While music, too, can be perpetually re-created by performers or by means of recordings, and may also provide enduring objectifications, it does not reflect man's longing for permanence as directly as do the visual arts.

The visual arts result from man's attempt to organize matter beyond the limits of his own natural body. By arranging ink, paint, clay, metal, brick, glass, and other substances the artist seeks to put the stamp of his individual creative mind onto matter. In so doing he fashions purely material things that bear the marks of reason and spirit. By the ideas expressed these things betoken mind, and by bearing witness in their very being to having been deliberately made they show self-transcending spirituality. In the unity of the created singular work the union of these three dimensions of the unique person is made manifest.

The dance, music, and the visual arts are elemental in the sense that they directly utilize energies and materials that are elements of the natural world -- organic functions and structures, sounds, colors, and substances of every kind. These three arts therefore celebrate man's kinship to the natural cosmos. They manifest his linkage to and active reciprocity with the world of space, time, matter, and energy. They are the counterparts in the realm of esthetic individuation of the universal disciplines of mathematics and the natural sciences. The dance corresponds

most nearly to biology, music to mathematics, and the visual arts to the physical sciences.

A new and quite different array of arts is generated when instead of the universal natural elements the relational materials of human culture are organized into esthetic constructions. The chief among these materials and the most distinctive of human nature is language, from which the language arts are formed. By means of language also the entire world of other cultural products, as well as any relevant natural objects, is made available through symbolic reference in the imaginative creations of the writer. The use of language thus indefinitely extends the possibilities of esthetic expression, opening up boundless resources for symbolic presentation. All the rich treasures of shared meanings contained in language are added to the already vast expressive powers of the speechless voices in the three elemental forms of art.

The arts in which language is used are of three main kinds, paralleling the three nonverbal types already considered. Corresponding to the dance, the most comprehensive and fundamental of the language arts is drama. In the theater human action is presented in the form of action. The play is a means of vividly holding up to view selected interesting aspects of actual or conceivable human life. By what the actors do and say the spectators are enabled to participate imaginatively in situations that bring to focus the ingredients and perspectives out of which personal existence is constituted. These situations may be ones of conflict, decision, and suffering such as occur in high tragedy. Or they may be comic views of human existence, from which the spectators gain a healthy perspective on the finitude and contingency of man’s condition.

The power of drama as a revelation of human nature consists in the fact that its expressive ingredients are whole live persons engaged in credible concrete actions. The dramatist cannot, of course, set forth the entire infinitely complex truth about man. Each play deals with only certain selected perceptions about the human situation. This does not mean that the play has a lesson, or a moral, that can be set forth in literal propositions, but only that it presents some reasonably coherent set of illuminations about the meaning of human existence.

Furthermore, these truths or illuminating perspectives are not generalizations about mankind or groups of men, though the insights of drama may serve as data for such generalizations. The man known in drama is always and essentially a unique person. He is not, as in allegory, simply a type masquerading as a person. The character in a play is not a kind of person, but a person with a name, and what makes him dramatically interesting is precisely that he is himself and nobody else.

The appeal of drama consists in the opportunity it affords for self-identification through imaginative participation in the being and becoming of the characters in the play. The emphasis achieved by the playwright through deliberate selection, invention, structuring, and weighting of dramatic elements gives drama a higher order of effectiveness in self-identification, with all degrees of positive and negative reaction, than is usually possible in the ordinary associations of

actual life. The simplified, concentrated, enlarged, vicarious experiences provided by drama are an important source of imaginative models of personality and conduct for use by persons as they continually search for their own authentic being and ways of becoming.

The central elements of drama are situation, decision, character, and destiny, and all of these are derived from the fact that man fashions his life in and by means of a world of space and time. A person's environmental situation both empowers and limits his decisions. By his decisions his character is formed, and from his character in turn his decisions are fashioned. From one's characteristic decisions in situations his destiny is shaped, that is, the meaning of his life as a whole is established. Human actions do not take place in isolation. A person's present actions are profoundly conditioned by the whole series of his prior actions, as well as by the accidents of his situation, and what he now does affects in perpetuity what he can do in the future. The function of drama is to display for efficient and moving contemplation the endlessly various and subtle interweavings of these several aspects of the individual person's pilgrimage.

Poetry, the second of the language arts, stands in about the same relation to drama as music stands to the dance. Just as music is a high abstraction from the total bodily expression of the dance, emphasizing ordered temporal sequences, so poetry is primarily an art with temporal order, specializing in the rhythmic qualities in language, abstracted from the total personal action of the drama in space and time. The distinction between these art forms, of course, is not absolute. The dance arts usually make use of musical accompaniments, and drama is not uncommonly given poetic form. Nevertheless, the formal distinctions are still legitimate, and have value for analyzing the special contributions of the several arts to the understanding of human nature.

One distinctive virtue of poetry is to link the whole intelligible world, as embodied in language, with the elemental cosmic periodicities celebrated in music. Everything that applies to music regarding its revelation of the interfusion of time and eternity, of change and constancy, applies also to poetry, but with the vastly expanded significance that comes in discovering these fundamental rhythmic cycles in the symbol world. Still more important is the insight that poetry provides, through the poet's intimate and imaginative explorations in language, into the less obvious affinities of things.

The two essentials of poetry are rhythm and metaphor. Both have the same basic function of establishing unity-in-difference -- an achievement (as already pointed out) that is close to the ultimate secret of being itself. In rhythm change is given intelligible order. Metaphor discloses likenesses in different things and thus provides a common bond between what would otherwise be disparate entities.

A successful poem penetrates the darkness of temporal succession. It reveals that the apparently haphazard order of unrelated human experience need not be the only or final answer to the question of life's meaning. By means of language deliberately ordered in cycles of contrast and

return, and in juxtapositions disclosing inner connections of meaning through metaphoric vision, poetry provides models of significance in the sequence of human experience. These models are not only interesting in and for themselves; by analogical reference they also help to illuminate events beyond the poems, be they peaceful or agitated, hopeful or depressing. There are many sorts of poetic models, pointing to the abyss as well as to the heavenly city. Whatever their content, they are esthetic presentations that help satisfy the deep hunger of human beings for deliverance from sheer temporal atomicity and miscellaneousness.

On the other hand, chaos is not the only enemy of human meaning. Sheer sameness is another. Too regular a continuity from one moment to the next is just as deadly as abrupt disconnectedness. The conformity and routine of a secure and predictable life-order militate against the creative vigor proper to living things. Poetry is a means of combating such conformity and repetitiveness. The connections established in good poetry are not the obvious and standard ones. The poet's aim is to awaken the reader from his conventional slumbers by presenting metaphoric associations that disturb established relationships and to substitute ones that are fresh and laden with further possibilities of insight.

Descriptive literature, the third type of language art, roughly corresponding to the visual arts, is not concerned, as poetry is, primarily with the temporal ordering of experience, but with enlarging and enriching the inner vision. Since words are surrogates for things, such descriptions can provide an endless variety of scenes for contemplation, surpassing the powers of painters, sculptors, or architects. One who has dwelt in the realms of imagination created in great literature is likely to find even the best sense presentations disappointing by comparison. Such is the spiritual potency of language.

As in the case of poetry -- indeed, as in all the arts -- the human function of imaginative presentations is to provide new visions of life that overcome the deadness of uniformity, and yet to arrange these visions in some intelligible order. The worth of any literary work is measured by the success with which it binds contrasting elements into a convincing and significant unity.

This esthetic achievement of unity-in-variety is the basis for individuation. The uniqueness of a person does not refer to some particular invariable quality that can be predicated of him, nor to the sum total of his variabilities. His uniqueness consists in the organization of the multiplicities of his existence into a coherent self. All of the arts at their best -- but most powerfully the arts of literature -- exemplify the attainment of unity-in-multiplicity and thus serve as models and resources for the development of selfhood. Companionship with great art in all its forms protects one from drifting into the subhuman boredom of routine existence as well as from the nonbeing of a completely disordered life.

The writing of history grows out of some of the same human motives that lead to the creation of works of art. History writing is both a reminder of change and mortality and a seeking after the eternal and immortal. It emphasizes the fugitive character of life by bringing to notice states of

affairs that have passed away. At the same time it resurrects the past, and by the re-creation of former actions makes them happen again in present minds. Only man among all the living creatures possesses a sense of history. Only man is concerned about the passage of time and seeks to arrest it by keeping records, erecting monuments, and otherwise taking steps to insure the endurance of the passing present. The historian's reconstruction of the past, in the present, using the relics of earlier events, is the counterpart of the effort of earlier generations to maintain themselves in being by means of those memorials.

Man shares with all other living things the fate of dying. But man alone of all the creatures knows that he must die, and this knowledge of inevitable death profoundly affects the whole of man's life. He lives out all his days under the shadow of death. Even in youth he does not escape this thought, and the intensity of his participation in the affairs of life -- the eagerness with which he grasps life -- is heightened by the hovering anxiety of eventual extinction.

It is out of this consciousness of mortality that history is created. History is a means of conserving the values of the past. It is a way of giving assurance that because the past is no longer in being it is not therefore worthless. Implicit in the careful recollection of past events is a conviction about the enduring worth of present events. Human beings are anxious about death because they believe that life ought to have value, and they see death as a threat to values, for a value is not valuable apart from a valuer. Historical activity provides valuers to prize the values of past human events and thus to rescue them from the night of nonbeing.

Concern for history is therefore a measure of the meaningfulness of life. Persons who have no interest in the past in effect deny the value of former occurrences and in so doing betray the insignificance of their present experience, which in the very living of it takes its place in what is to them the inconsequential past. One who ignores or despises history can hardly be designated a person at all, because he rejects the distinctively human element of reflective valuation. Contrariwise, concern for history is a special mark of humanness, and the study of history is one of the most essential means of affirming and augmenting the significance of one's personal existence.

Historical activity is evidence of man's reaching for the eternal within the temporal. Human beings possess a sense that their deeds have a lasting significance and are not altogether finished in the doing. But in making good his commitment to the eternal, historical man is not content simply to affirm the spiritual or rational continuation of the human act. He is not satisfied with the theoretical conviction that value is a timeless attribute of being. Rather, in reconstituting the past so that it may be experienced by concretely existing people in the present, he makes good the right of significant being to lastingness. History does not rest upon the idea of abstract immortality, but of concrete resurrection.

Implicit in the historical attitude is a profound sense of respect for the truth. The past cannot be changed. It can offer no favors, nor can it be influenced to yield present advantage. The past is

an absolute, a finality, to which one can only seek to do justice in the recalling. Although the complete and precise story of any past event is beyond the possibility of finite man to tell, the sense of unconditioned factuality applies to historical knowledge as to no other kind. When the future is at issue, one's hopes and biases may enter into the determination of truth. But in reference to the past, only the objective reality of the completed and unalterable fact determines the truth -- even though the human estimates of that truth are inevitably partial and fallible.

The obligation to discover and to tell the truth is one of the most insistent and perennial aspects of man's moral consciousness. As pointed out in the first chapter, this obligation plays a central role in the scientific enterprise. Yet, it is in the historical attitude that the most secure foundation for the persuasion to truth must be found. The future lies open, and who is to prove the impossibility of even the most rash prediction about it? Who knows what fresh unforeseen possibilities may upset even the most well-established scientific laws and theories? But the past is as it actually was --however meager and subject to revision present knowledge of it may be -- and one cannot escape the pressure of its unconditional truth.

This idea of obligation to truth about the past adds a new dimension to the concept of necessity. One aspect of necessity is physical compulsion, representing the victory of superior force. Another aspect is logical necessity, based on the principle of noncontradiction. The historical aspect is the necessity of the past, signified by the assertion that the clock cannot be turned back, that the past cannot be lived over. Historical necessity means that what happened, and now it cannot have happened otherwise, though before it occurred the event might have been other than it was. The past is what it was because time is irreversible. The future can still be altered. The past cannot be changed. This essential difference between past and future is fundamental to man's consciousness of time. From the past comes the demand for truth, from the future the lure of possibility. The past is the domain of factual necessity, the future is the realm of creative freedom.

In this respect history and art complement one another. Man as artist is not concerned primarily with fact, but with visions of the possible or even of the impossible. Man as historian is concerned with fact, and his imagination of possibilities is only of use as a means of hypothesizing what really did happen.

Nevertheless, history, though presently a necessary past, is not concerned with necessary truth in the logical sense. It is a tale of freedom exercised within the context of physical and social necessity. History is the story of what human beings have freely chosen to do. Still, the historian well knows and attempts to show persuasively that no human choice is wholly unconditioned. Free action always occurs within a context of limitation. Human beings choose among real possibilities and not among merely abstract or imaginary options. Thus, freedom is intertwined with necessity. Spiritual freedom does not consist in acting without reference to rational insights and material conditions, but in effectively organizing material factors in accordance with the leadings of intelligence and self-conscious purpose.

No historical account is a satisfactory interpretation of the past if it presents persons as acting solely on the basis of sovereign will, or of pure reason, or of social and economic forces. Of all the disciplines history most vividly discloses the intimate interconnection of spiritual, rational, and physical factors in the interplay of freedom and necessity in human conduct. Furthermore, historians who write about the past from purely spiritualistic, rationalistic, or materialistic presuppositions give a distorted picture of the events they recount, because they fail to understand the complex unity of self-awareness, intelligence, and bodily factors in human nature.

The truth about the past, to which historians are committed, concerns unique persons making particular decisions in singular situations. The historian aims to understand and interpret individual events, or happenings, each of which was the outcome of some special constellation of factors never before and never since concretized in an identical determination. Truth in history is therefore not like the truth in the probable generalizations of science. Truth in science, by virtue of its abstractness and generality, is at the same time, in a sense, a planned falsehood. It is a deliberate and useful simplification. In contrast, historical fact is concrete. It concerns what happened, with due regard to the many factors that entered into the human determination of the event.

Moreover, historical understanding is personal. The historian interprets events in the past by entering imaginatively into the personal being of those who caused the events to occur. The historian's obligation is therefore not primarily to an abstract and impersonal truth -- although such truth is relevant in historical interpretation -- but to unique persons in their concrete existence. The historian should be able to show with particular clarity that being a person is more than being a member of the species *homo sapiens* or a participant in various social relationships. He should set forth the singularity of the human person, emphasizing the incomparable selfhood of each human being as an intrinsically interesting and inestimably valuable creative center.

By being loyal to the truth of the persons who made the past, one grows in self-understanding and integrity. The lesson of history is not primarily in the analogues it provides for the guidance of contemporary action. The sciences should be more helpful than history in this regard. The proper function of history is to provide opportunities to recognize and respect the uniqueness of persons, oneself included. Self-understanding, self-acceptance, and proper self-reverence grow in reciprocal relation to the acknowledgment and celebration of the personal uniqueness that is the distinctive province of historical consciousness.

Human individuality is a major theme not only in art and history but also in certain movements in psychology. Clinicians recognize the importance of a person's affirming himself as a unique person and not merely as a member of a species or of various social groups. Objective behavioristic psychology does not tell everything or even the most interesting things about a

person. Neither can a person be wholly understood in the light of his past interpersonal associations. Personality psychologists and existentially oriented interpreters of man insist on the centrality of idiosyncratic factors in human individuality, on the distinctive life-orientation by which a person guides his decisions, on purposes and goals that are inwardly recognized as one's own and not as the reflection of any external standards, on creative autonomy instead of stultifying conformity, and on the reality of freedom, responsibility, and guilt, in relation to the primary obligation to be true to one's own nature.

The unique self thus described is not conceived in animistic or mentalistic fashion, but as a psychophysical unity in which the distinctive personality is manifest not only in a general self-awareness but also in the identification of rational and bodily processes as one's own chosen means of self-disclosure.

The uniqueness of each human person is most persistently and deliberately affirmed and celebrated in the religious traditions of mankind. Alfred North Whitehead's assertions that "religion is what the individual does with his own solitariness" and that "religion in its decay sinks back into sociability" are essentially correct. Religions do have social expressions, and they are concerned with matters of universal moment. Nevertheless, the solitary element is primary in religion, for it is only in aloneness that the question of the ultimate meaning of a person's existence can be asked. Religion requires complete inwardness. All of the outward manifestations of religion in doctrines, rites, codes, and institutions are but means to the attainment of that inwardness, and insofar as they hinder its realization they are obstacles to the religious life.

Complete inwardness is the way to authentic selfhood. It does not mean isolation or disconnection. On the contrary, it means total awareness of relations as they enter into the formation of concrete personal being. Solitariness is a centering in which the scattered ingredients of one's existence are gathered into a coherent whole. By inwardness the whole world with which one is engaged is given meaning; it becomes something more than a totality of unassimilated fragments of experience. In the solitude of inwardness the world in which one participates is appropriated, that is, it becomes one's own world, rather than an alien environment.

This appropriation is essentially unique. A person is himself and no one else. By an act of abstraction one can identify common aspects of persons. Persons enter into relations, and the forms of these relationships can be described, as they are in the social sciences. But such descriptions do not touch the personal core of being, which is constituted by the unique way the relations are organized in the particular self.

The religious question has to do with the importance or significance of this personal uniqueness. After all, everything is unique. No blade of grass is just like any other, nor is any atom precisely the same as any other atom. It might seem therefore that the assertion of

personal singularity is only a special case of the uninteresting and trivial general proposition that anything is what it is and not something else.

In an age of science and large-scale organization the dominant presumption is that importance consists in universality or generality and not in singularity. The advance of science is measured by the degree of generalization in knowledge. Particular data of observation are valued only as they contribute to the formulation of general laws. Exceptions to general principles are regarded as indications that existing knowledge is imperfect and that present hypotheses need revision. From this standpoint, the most significant features of human nature are considered to be those that are shared by all people and least important are those that are idiosyncratic. Properties shared in groups are considered significant in proportion to how generally they apply. It is a short step from this belief to the assumption that the worth of a person is derived from his membership in and contribution to the collective enterprise.

When generality rides high, as it does when science is regarded as the only or the best source of authentic knowledge, those who assert the primacy of the individual are dismissed as romantics and anti-intellectuals, who oppose their private preferences to the public truth and turn aside from the only reliable path to valid understanding. The glorification of the unique is considered as an obscurantist assault on reason and an anarchic threat to the common good. In such an atmosphere esthetic experience tends to be given an instrumental role as a means of keeping persons fit for the performance of their social functions and as a necessary concession to the irrational and private subjectivities of the individual. History is regarded either as a kind of therapeutic recreation, like the arts, or as a social science yielding certain rough generalizations for the guidance of conduct.

Contrary to these assumptions, the fundamental religious insight is that uniqueness rather than generality is the source of significance, and that such importance as the universal and the general have is due to their exemplification and envisagement in the singular conscious self. Importance depends on concrete existence. The really significant truth about a person is the particular complex subjectivity that constitutes his peculiar being. Once this concrete personal reality is recognized as the primal truth, the process of analytic abstraction can be undertaken, to disclose the general and universal aspects shared among persons. It is not possible to follow the reverse process, of deriving personal significance from the consideration of abstractions. No accumulation of abstractions can yield the personal concretion in which meaning is realized.

Complete inwardness is participation in the source and ground of all being. The consciousness of such participation imparts a sense of infinite importance to personal existence. "The soul" is the concept used in religious thought to designate the aspect of human nature that affords this sense of infinite significance, and the names given to the source of being to which the soul is related are the various designations of the divine, or of God, in the religious traditions of mankind. The soul is the person as a bearer of infinite meaning by virtue of his potential participation in the source of all being.

If the ultimate importance of the person derives from his realization of being-itself in the process of singular concretion, a religious conception of human nature supports the insights gained from the other realms of inquiry concerning the compresence of body, mind, and spirit in man. Through his spirit the person is conscious of himself and of his freedom to be and to become. Through his mind the person is aware of the patterns of meaning in his existence. Through his body the physical and organic basis of his personal existence is supplied. None of these three is a separate or separable entity. They are abstractions useful for designating certain aspects of a human being, and they are all relevant to man viewed from the standpoint of religion.

A person, then, does not fulfill his religious being by denying the body and its claims and by ascending into a realm of pure mind or spirit. The body is integral to the person, and the mind and spirit require the body for their fulfillment. Importance is a property of the whole being. Persons cannot be at all without bodies.

In the light of the singular and unitary nature of man, two of the most important and from a rationalistic standpoint most difficult of the Christian doctrines may prove of special interest and relevance. These are the doctrines of incarnation and resurrection. The doctrine of incarnation affirms that the clue to the significance of human life is given in a particular person in history, and not in any general truths of reason. The ultimate truth of life is not to be found in a supernatural realm of spirit or in abstract ideas, but in a real person living in the world and subject to all of the circumstances of natural existence, including death.

The doctrine of resurrection is concerned with the destruction of meaning that results from death. According to this belief, God can re-create persons who have lost their being through death. This belief is radically different from the dualistic doctrine of immortality, according to which a part of the person, the soul, does not perish with the body. According to the holistic resurrection faith, a person is an inseparable unity, and he dies just as he lives, as a whole. If he lives again, by the power of God, he lives in a unity of body, mind, and spirit, though not necessarily in a unity of precisely the same order as the original one. For example, Christians hold that the resurrected Christ lives in the life of his Church, the continuation of the incarnation.

The problem of the importance of uniqueness may now be viewed in the light of the fact of death and the hope of resurrection. The important uniquenesses are the resurrectible ones. The ones that stay dead are insignificant. Unique blades of grass are insignificant because they stay dead. But persons are not necessarily unique in this insignificant way. What is eternal, or worthy of resurrection, in man, and what is not? Being or existence grasped as a final end-in-itself will cease permanently. When the individual interprets his participation in importance to be importance-in-itself, he engages in an act of self-deification that in the end is self-nullifying. Being or existence poured out for other being, on the other hand, is resurrected. The

consequence of sacrificial dying is living again.

The name for the resurrectible in personal existence is love. To love another, one has to affirm the uniqueness and infinite importance of the other's being. It is not loving to treat him by the model of one's own uniqueness. To do that is to play God and incur the penalty of permanent death. To love is to live for the other and to find the eternal importance of existence in the act of dying to the presumptuous importance of one's own being.

Thus, it makes all the difference what the individual does with his solitariness. In his inwardness he encounters the source of his being. He may grasp at the being that has been given him, fearing the abyss of death into which he sees all existence hurtling, and in so doing insure his own perdition. Or he may remain open to the wider opportunities to establish other persons in meaningful existence and thus participate in life that is eternally made new.

In summary, it may be helpful to state some general conclusions that emerge from the argument of the present book.

Human nature is profoundly complex and immeasurably rich. Since man participates in being-itself, his nature is as boundless and deep as existence in all its forms.

From each perspective human nature appears as an integral interfusion of material, intellectual, and spiritual elements. Rationality and freedom depend upon physical factors, and conversely, man's impulsive nature is transformed by the presence of mind and spirit.

Such integral perspectives should help to overcome the divisions between the three cultures: the natural sciences, the social sciences, and the humanities. All are humanly significant enterprises and all are concerned with material, mental, and spiritual matters. The natural sciences do not deal only with material things, the social sciences only with the rational organization of life, and the humanities only with things of the spirit. Each of the three domains is equally revelatory of all three aspects of human nature. The three domains do not contradict each other, but are mutually complementary. The natural sciences disclose the universal aspects of human nature, the social sciences describe those aspects that are shared with some but not all other persons, and the humanities show man in his uniqueness. A satisfactory picture of man and his becoming requires all three types of insights.

Finally, this analysis may help to demonstrate the personal relevance of liberal learning at every level from kindergarten through graduate school, and beyond, in what should be everyone's lifelong pursuit of understanding. For it should be clear that the study of mathematics and chemistry, language and economics, music and religion, do not merely yield knowledge of number and molecules, words and prices, melody and God, but of mankind, one's associates, and oneself. Thus, through diversified liberal studies one may grow in the grace of true humanness, sincere neighborliness, and authentic selfhood.

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