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The Foundations of Normal and Abnormal Psychology **Boris Sidis**

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Published by Good Press, 2022

goodpress@okpublishing.info

EAN 4064066438234

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Preface

In this volume I made an attempt to formulate the fundamental assumptions and main principles that underlie normal and abnormal psychology. Every science, mathematical, physical or biological, has its postulates as the foundation of its structure. Psychology as a science has also its own assumptions which have to be clearly formulated. The object of the first part of this volume is the unravelling of the principal concepts and hypotheses which form the basis of the study of mental phenomena.

All through the domain of the sciences there is a vast movement for the search of fundamental concepts and for the close investigation of such concepts. Even such an exact science as mathematics has felt this spirit of examination of its fundamental assumptions, axioms, and postulates. Men like Lobatchevsky, Bolyai, Rieman and others have given the start and a number of mathematicians have recently followed in their footsteps, with the result of getting a wider horizon and of opening unknown regions. The same we find in the case of physical sciences, such as physics, mechanics and chemistry. Mach, Poincaré, Ostwald, Pearson and others have contributed to this spirit of investigation in the domain of physical sciences. This spirit of inquiry has become of late specially intensified by the revolutionary discoveries of radio-active bodies.

We are acquainted with the great movement which has swept all over biological, sociological, and economical sciences due to the influence of the theory of evolution. The spirit of free inquiry into fundamental concepts has seized on all sciences Throughout the whole domain of human thought there is felt this rejuvenating and invigorating breath of the new revolutionary spirit. Philosophy, ethics, aesthetics, history, law, economics all have been, awakened out of their long sleep of centuries. Every science has been shaken by this mighty movement to its very foundation. Even such a dry study as logic has felt the vital breeze of the inquiring spirit of modern times.

I make an attempt in this volume to examine in an elementary way the foundations of normal and abnormal psychology. This is all the more necessary as physiologists, biologists, biological chemists, and recently students of comparative psychology, a science which lies on the borderland of psychology and biology, have a tendency to make incursions into psychology proper, and favor mechanical or purely physiological concepts to the detriment and even total exclusion of mental processes.

This tendency towards elimination of psychic life by mechanical processes or by "The Unconscious" is also observed in the writings of some workers in the domain of psychopathology. They think it is in the interest of strict science to express wherever possible mental states in terms of physical changes. Finally a stage is reached in which all consciousness is completely dispensed with in favor of physiological processes or "The Unconscious". Psychology is thus made a branch of physiology and biology.

Again, philosophers and metaphysicians are apt to make intrusions into the domain of psychology, because the latter is regarded by them from time immemorial as legitimate prey, inasmuch as their own domain lies on the outskirts of mental life. In the interest of metaphysical systems philosophers attempt to subject psychology to their own speculative purposes.

popular mind has a tendency of regarding The psychology as something mystical and of identifying psychology with all kinds of faith cures, mind cures, spiritism, telepathy, telaesthesia, and table rapping. It is unfortunate that even medical men of note, on account of lack of acquaintance with psychological subjects and inquiries, are apt to look askance at psychology and identify it with religious beliefs, mental cures as well as with the more shady side of spiritistic manifestations. Still more complicated is the plight in which the psychologist finds himself in regard to the recent claims put forth by some psychologists in having achieved results of importance to law, industry, and to the reformation of social ills. The demand for practical results in psychology is due to the industrial spirit of our times, a spirit which requires immediate results that can be cashed or expressed in dollars and cents. The earnest psychologist should repudiate such industrial business psychology, for the simple reason that such a psychology is imaginary; in other words, such a psychology does not exist. An experienced salesman, an intelligent business man knows infinitely more about business and how to obtain the best results out of certain combinations than all the psychologists with their laboratory experiments, their artificial statistics, and puerile trivial experimental arrangements, giving results no less trivial and meaningless.

The claims made by psychologists as to industrial efficiency which psychology can give is ludicrous in the extreme. We may well expect the astronomer to claim that astronomy can give points how to conduct successfully a political campaign. As a matter of fact the psychologist has nothing to say on the subject of advertisements, industry, and business, but commonplace trivialities expressed with all the pomposity of scholastic authority. Industrial efficiency does not belong to the domain of psychology. We may as well expect the comparative psychologist to offer practical points on the efficiency of cows to give milk or on the efficiency of hens to lay eggs. The success of advertisement is a matter of experienced business men and not of academic psychologists who have to offer nothing but the merest platitudes.

We must once for all enter a protest against those psychologists who claim that they have some great psychological truths to reveal to businessmen. manufacturers and workingmen. I trust that both the businessman and the workingman will have enough common sense to take such psychological truths for what they are actually worth. The ordinary psychologist understands little of business life, knows almost nothing of the life of the laborer, and is woefully ignorant of the economical questions of the times. Psychological business claims are illusory. The sooner the practical business man learns this fact the better for him, and also for the earnest psychological investigator.

Psychology is just emerging from its metaphysical and theological stages as Auguste Comte would put it. Psychology is just entering the circle of her sister sciences. At present it is in a state similar to the physics of the sixteenth century. The psychologist should declare frankly and openly that he can no more assist the businessman and the manufacturer than the mathematician with his non-Euclidean geometry or the logician with his algebra of logic can help the solution of the great problems of capital and labor.

We can obtain some help from abnormal psychology in its application to the medical treatment of nervous and mental maladies. This is quite natural as abnormal psychology is essentially based on clinical and experimental studies of mental diseases. The claim, however, that psychology can give directions for vocations of life or for business and industry is entirely unfounded.

The same holds true of the practical pseudo-psychology that has invaded the school, the court, the prison and the immigration bureau. The intelligence tests are silly, pedantic, absurd, and grossly misleading.

I have not discussed in this volume the practical aspect of recent quasi-business psychology for the reason that such claims are nothing but a snare and delusion. Of course I do not expect that this warning of mine as to the misleading character of applied psychology will be taken graciously. There is at present an epidemic of practical or applied however will wake up from their psychology. People will realize psychological dreams and that applied psychology is nothing but a nightmare. I am fully aware of the fact that my present protest will draw on me the ire and severe attacks of many a psychologist, but I sincerely hope

that some of the more earnest psychologists will sustain me in my present contention.

So much for the practical limitations of psychology. In discussing the theoretical aspects of psychology and attempting to point out its limitations I have had to touch on problems ultra-psychological, but this was unavoidable. It had to be done in order to clear the path and see the lay of the land. I have no doubt that there will be found a great number of shortcomings in the foundations as well as vagueness in the delineation of the main postulates and psychological principles. I shall be fully satisfied, if this volume will stimulate others to better work in the same direction.

The second part of this work deals with my theory of "moment-consciousness." This theory was advanced by me some sixteen years ago in my "Psychology of Suggestion." It was further touched upon in my "Multiple Personality," but I had not stated the theory as distinctly as I did in this volume. I may add that when James read the theory in "The Psychology of Suggestion" he told me he found it valuable, and urged me to develop it more in detail.

The theory of moment-consciousness presents a general view of the nature and development of consciousness, from reflex consciousness to compound reflex and instinctive consciousness reaching the highest form of consciousness, that of self-consciousness. Consciousness and the adaptation of the psychic individuality or of the organism to the external environment is looked at not only from a psychological, but also from a biological standpoint. Consciousness in the course of its development is presented in a series of stages and types, each lower stage leading to the next higher and more complicated stage and type. This does not mean that the higher type is included in the lower We must assume spontaneous mental variations, or psychic mutations, so that while the stages and types are arranged in a progressive series of their development and complication, they at the same time differ *qualitatively* in type of mental life.

I may add that most of the ideas developed in this volume have been formulated by me some fourteen years ago, and then retouched from time to time. A few of the chapters with some modifications have been published by me in various psychological and medical journals.

Boris Sidis

Sidis Psychotherapeutic Institute Portsmouth, New Hampshire, January, 1914

I Psychology as a Science

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We assume that the reader regards psychology as a science. It is however one thing to label a subject as a science and another thing to understand clearly in what sense the term science is used in the case of psychology. A clear understanding of the nature of science is here of special importance on account of the peculiar position psychology occupies in the hierarchy of human knowledge. It is therefore desirable to define the meaning of science before we proceed to discuss the subject matter of psychology.

Science is the description of phenomena and the formulation of their relations. Science describes facts and formulates their relations in laws. The task of science is first to formulate facts belonging to the same type, and then to generalize them, that is to express their general relationship by one comprehensive formula, in spite of the many individual variations in the phenomena. Thus in geometry, possibly the most ancient of all sciences, many isolated and important facts were already known to the semi-civilized nations of antiquity, but it required the rationalizing spirit of the Greek mind to classify and generalize the facts into theorems, the laws of space. Many important properties of the right-angled triangle, for instance, were already known to the ancient Chaldeans and Egyptians. They knew that if in a right-angled triangle the two sides are respectively three and four, the hypotenuse must be five and so on; that is, they knew only concrete facts, but what they lacked was just the scientific side. It required a Pythagoras to discover that in all right-angled triangles the sum of the squares of the two sides is equal to the square of the third. No matter what the size of the triangle be, no matter how different in length its sides are, once the triangle be of the same type, namely right-angular, the same general relationship must obtain.

To take an illustration from physics. Falling bodies form one type of movement. Now the bodies themselves may be different in kind, in nature, may be of various material, may differ widely in structure, weight, and shape, and still, since they all belong to the same type of motion, they are, in spite of their manifold diversity, expressed in one general formula, in one law, namely, that the spaces traversed are proportional to the square of times.

In other less exact sciences the facts are exhaustively described and a general statement is formulated as to their relationship. In physiology, for instance, we find mainly descriptions of facts classified into types, the relationships of which are expressed in general formulae, or laws. Thus in the cerebro-spinal nervous system, each part and its functions are described as fully as possible, and then all the facts are brought under one comprehensive formula such as the reflex arc. In embryology the different changes of the embryo are minutely described, classified into types, into a certain number of definite stages, and then all the changes, in the infinite wealth of their variety, are expressed in the general proposition that the embryo in the short period of its development traverses in an abbreviated form all the stages that the species has passed through in the many ages of its existence; all the changes are generalized in the formula that the ontogenetic series is an epitome of phylogenetic evolution. We may, therefore, say that science is a description of types of facts, the relationships of which are expressed in general comprehensive formulae, or laws. It is in this sense that we understand psychology to be a science; it classifies phenomena into types and searches for the general expression of their relations, or for what is termed psychological laws.

We must come to something more precise and definite. We said that psychology deals with classification and generalizations of phenomena; but what are these phenomena? In the different branches of science, we find that each one has a determinate order of phenomena to deal with, a definite subject matter. Thus geometry deals with spatial facts, mechanics with motion, physics with changes of molecular aggregations, chemistry with atomic mutations, combinations and their physiology with processes going to make the equilibrium of organic life, sociology with phenomena of social life, and so it is in the case of all other sciences. Now what is the subject matter of psychology? What are the facts, the phenomena with which psychology deals? *Psychology deals* with facts of consciousness.

On the very threshold of our discussion, we may be stopped by the pertinent question: "You say that psychology deals with facts of consciousness, but what is consciousness?" Consciousness is subjective facts, such as the elements of sensation, feelings, pains, thoughts, acts of willing and the like. Positive science must have given facts, data to work upon; these data it analyzes, describes, classifies into types and seeks to find the formulae of their relationships. Psychology can accomplish no more than any other science. The data of psychology are facts of consciousness, these facts are analyzed into their simplest elements, and the laws of their relations are searched for. But psychology does not, and legitimately cannot possibly go beyond consciousness. Consciousness is the ultimate datum which psychology must assume as given and which psychological standpoint unanalyzable. from is а Consciousness must be postulated, if we wish to enter the temple of psychology.

In this relation psychology is as positive as the rest of her sister sciences. Geometry, a science to which no one will deny exactness, deals as we know with the laws of spacerelations. Should we ask the geometrician the same question just put to the psychologist: You say that your science, geometry, deals with facts of space and their relations, but what is space? The geometrician will smile at us. He will tell us that by space he means such forms as lines, angles, triangles, guadrilaterals, circles, cubes, cylinders, pyramids, etc. Should we persist and ask further, "Yes, that is true, but all these are so many forms of space, what is the space itself with which you deal?" The geometrician will no doubt answer: "My dear sir, geometry deals with facts of space, space itself is taken as an ultimate datum. The work of geometry is not to ask what space is in itself, but what the relations are of spatial *forms*, space itself being postulated."

Mechanics deals with the laws of energy and motion, physics with molecular changes of matter, but neither physics nor mechanics would have gone far, had they stopped to answer the questions as to what motion, energy, matter are in themselves. These are simply postulated, taken for granted, they are the ultimate data of these sciences. In this respect psychology does not differ from other sciences, it takes its subject matter as given and does not inquire as to what the nature of the material is in itself. The reader must remember that the question as to what things are in themselves is not at all a question of positive sciences, but of metaphysics. I do not mean in any way to detract from the dignity of metaphysics, what I wish is simply to point out the limits of positive science. The problem as to what things are in themselves does not fall within the province of science, but within the domain of metaphysical research.

The question as to the nature of consciousness, what it is in itself, may be a very important one, but it lies outside the ken of psychology, just as the laws of aesthetics do not concern the chemist, although the latter may be a great lover of beauty. In the contemplation and enjoyment of a beautiful picture he will not introduce a chemical formula, and in his chemical experiments he will not introduce aesthetic considerations. The same holds true in the case of psychology. The psychologist may be a metaphysician, but psychological work he must in his keep clear of metaphysics. Consciousness therefore is a presupposition, a postulate of psychology.

There is one important assumption more which psychology must start with in order to be a positive science at all, namely, uniformity. Under similar conditions like results follow. Suppose a geometrician should prove to you that the sum of the three angles of a triangle is equal to two right angles, suppose that some sceptic should come in and say, "Yes, that is all right in relation to the triangles in this particular space, in another portion of space, on some other star, or planet the theorem will not hold good." The only answer the geometrician could give is that we must assume that space is uniform, so that wherever we form our triangles we obtain the same results. The same is true in mechanics. The laws of motion and inertia hold good of the pebble on the roadside, of the dust grains dancing in the sunbeam, and of distant stars in the milky way. Uniformity of relations among phenomena must be postulated, if science is to be at all. If under the same conditions different results follow, science would have been an impossibility. Uniformity of nature is one of the most fundamental postulates of science. Psychology assumes uniformity; it assumes that there exist constant uniform types of mental activity with definite relations that can be formulated into psychological *laws.* Thus psychology at the very outset postulates consciousness and uniformity of mental phenomena.

We can now see in what relation psychology which deals with phenomena of consciousness differs from philosophy whose subject matter is also consciousness. Philosophy has no postulates, psychology, like all other sciences, must have its postulates which it cannot transcend. Philosophy deals with the ultimate in consciousness, it investigates the very postulates of conscious activity. Psychology on the contrary accepts the facts of consciousness as ultimate data.

II Physical and Psychic Facts

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Psychology we said deals with facts of consciousness, but this is too broad a statement. for there are other sciences that also deal with facts of consciousness, such as ethics, aesthetics, logic. In what respect does psychology differ from these sciences? It differs in this that ethics, aesthetics and logic are normative regulative sciences; psychology is a positive natural science. Ethics deals with ideals of moral life, aesthetics with ideals of beauty, and logic with ideal ways of correct reasoning. All these sciences deal with ideals, with norms to which the matter of fact consciousness *ought* to conform, if it is to act rightly. They put a value on the phenomena. Psychology, however, like all other natural sciences has no other ideal than fact, it admits of no "ought." From a strictly psychological standpoint, the ugly and the beautiful, the good and the evil, the true and the false are of equal value. Psychologically they are all facts of consciousness and must be studied as such; just as the serpent and the dove are of equal interest and value to the naturalist. The ravings of a maniac are of the same psychological interest and value as the subtle reasoning of a Newton. Psychology is a positive natural science, it does not subjective deal with the evaluation of facts of consciousness, but with their *objective natural existence*.

Having shown in what psychology agrees with other positive natural sciences, we must now point out in what it differs from them. Psychology deals with phenomena of consciousness as facts of objective natural existence. Are these facts of the same order with those of the physical world, the subject matter of the natural physical sciences? We must answer in the negative. The objects of the natural sciences of the physical world arc of a material and spatial nature. A physical body has weight, occupies a certain portion of space, so has the molecule, the atom. Can we say the same of psychological facts? By no means. They are different in kind, and this I wish especially to impress on the mind of the reader. To realize this truth, I think it a good preliminary psychological exercise for the reader to try to find how many grams, or grains his idea of beauty weighs, how many millimeters long, wide and high his feelings of love are; let him indulge in the fancy of conceiving an engineer building a bridge with mathematical formulae as links, and his feelings of virtue and patriotism as supports. On the other hand let him think of a logician trying to fill up the defects of his train of reasoning with solid bricks, and using as connecting links bars of pig iron. In short, psychology differs from physical sciences in this, that its facts, the facts of consciousness are not of a material nature.

"Do not physical sciences it may be asked "deal with such phenomena as sound and light?" Certainly they do, but these sciences regard these phenomena from a standpoint radically different from that of psychology. Sound in physics is not the sensation sound, but the external, material vibration of air, which may or may not give rise to a sensation of hearing. The same holds true in the case of light. What physics investigates is not light as sensation, but vibrations of ether which may or may not give rise to a sensation of sight. It is, however, just such facts as sensations, facts not spatial in their nature which constitute the subject matter of psychology.

"May not facts of consciousness be some kind of matter, some form of material substance the constitution of which we do not as yet know?" Such was the question put by a medical man, when he heard me expounding the difference in kind between physical and psychical facts. "That might be" I answered, "but then substance, if it ever be discovered, will not have the properties of matter; it will be a "matter" totally different in kind from that studied by the physicist. For the "matter" of physical sciences is essentially one of extension; a matter however that occupies no space is an existence altogether different in kind from that of extended things, and is certainly no "matter" for the physicist.

The persistent antagonist may raise here a further objection. "Are not the phenomena of consciousness" he may ask "facts of activity? And is not activity, kinetic energy? And if this be the case must not the facts of consciousness be ranged along with physical phenomena, be reduced to the manifestations and transformations of kinetic energy and thus really and ultimately fall within the domain of the mechanical sciences?"

Change certainly is manifested in the mutations of states of consciousness, but this change is not the physical change of translocation. Change in the states of consciousness may no doubt, be regarded as activity, and if you please as energy, but this activity is not the energy of mechanics. Activity in mechanical or physical sciences means molar,

molecular, or atomic movement of matter through space, while psychic activity is not a translation of matter through space, a thought is not a material mass having extension, weight and locomotion. This truth, simple as it may appear, cannot be too often repeated and too strongly emphasized, since one frequently meets with this fallacy of "thoughtmaterialization" in the world of psychiatry. Words are often misleading and the metaphorical expression "mental energy" is taken in its literal meaning of mechanical energy. While I am writing these lines I find in one of the number of the Russian "Archives of Psychiatry and Neurology" edited by Prof. Kowalevsky, an article, in which an attempt is made to express mental activity in terms of mechanical energy. The writer might as well attempt to change inches into pounds. He who undertakes the examination and study of mental phenomena must bear in mind the simple and important, but frequently forgotten truth, that facts of consciousness are not of a physical, mechanical character.

Against our view may be urged the fact that in proportion as a science tends to become exact, it takes on more a aspect, its phenomena reduced quantitative are to molecular or atomic changes. If now psychology is a science at all, it will reach its exactness, when it can be expressed in terms of matter and motion, so that the phenomena by consciousness, although present presented at impenetrable to our imperfect instruments and methods of investigation, must ultimately be reduced, in some way or other, to mechanical terms. Psychology has not yet had its Galileo.

This objection may be easily disposed of by the simple answer that the exactness of science is not at all in proportion to its degree of reduction to terms of matter and motion. No one will deny that mathematics is an exact science, but is it exact because it is reduced to mechanical terms? While mechanics must be logical, logic is not mechanical.

Within certain limits this generalization of the relation of scientific exactness to mechanical formulae may be fully granted, if it be restricted to the concrete physical sciences, but it cannot possibly hold good in case of psychology, as the latter does not fall within the circle of the physical sciences.

The weakness of this last objection from scientific exactness becomes clearly disclosed, if we get a little deeper into the matter. The reason why there is such a persistent tendency to reduce science to mechanical terms is based on the tacit understanding that atoms and motion are the only ultimate realities. We see at a glance that this consideration is at bottom purely metaphysical; it is a consideration which science has not to take into account. Nothing is so dogmatically metaphysical as just the common sense that has an abhorrence of metaphysics. That atoms and their motions are the only ultimate realities is certainly metaphysics and bad metaphysics too, as it is unguarded by thought. critical Since this reflective unreflective metaphysics of atomism is widely spread in the medical world, and is considered scientific, one cannot help discussing it, pointing out its deficiencies, showing up the obstacles it puts in the way of positive science. Metaphysics

is a branch of philosophy which deals with the nature of reality. As philosophy it accepts no unanalyzed concepts; unlike science it has no postulates taken blindly on faith. The proposition now before us, namely that atoms and their motion are ultimate realities, is bad metaphysics, because it is a blind unanalyzed postulate. How do we know that atoms and their motions are ultimate realities? Why not ask what is reality? Once we are on metaphysical ground, why not take it in real earnest? Why stop on atoms and motions? Atoms themselves are not ultimate simple units, they have shape, size, weight. Now shape, size, weight, what are they after all? They are so many resultants of masses of factual, visual and muscular sensations, which are as little ultimate as are the sensations of color or of pain. It is out of sensations, percepts and ideas that the concept "atom" is framed. Subtract from the atom its sensational, perceptual and ideational elements, abstract from it its shape, size, weight and the ultimate reality of the atoms will become a bare nothing. The atom therefore is ultimately resolved into terms of consciousness. The same holds true in case of motion. Motion is a mental product of what is known as muscular and retinal sensations. What is most ultimately known is only consciousness and its facts. The atom and its motions are after all nothing else but constructs of consciousness. From the standpoint of epistemology, or what the Germans call "Erkenntnisstheorie," we have only a double series of mental phenomena, one standing for the internal and the other for the external world, and not atoms, but mental life may be regarded as the ultimate reality.

From a strictly scientific standpoint, however, we have no right to resolve matter into mind or still less mind into matter, because the two are presented to consciousness as different in kind, even though they both may belong to a general consciousness. Between the two series of facts, the physical and the psychical, there exists a fundamental difference. The door yonder is covered with white paint, the inkstand before me is made of glass, is round, is heavy, is black, but my idea of the door is not covered with white paint, my idea of the inkstand is neither made of glass, nor round, nor heavy, nor black. In short, the *facts of consciousness are not spatial.*

A fallacy prevalent among the medical profession and now also extant among the populace is the placing of psychic life in the brain. The neurologist, the pathologist ridicule the old Greek belief that the place of the mind is in the heart. Modern science has discovered that the heart is nothing but a hollow muscle, a blood pump at best, the place of mental processes is in the brain. This medical belief now circulating in the popular and semi-scientific literature of today differs but little from the ancient Greek belief, it is just as fallacious and superstitious. It is true that psychic life is a concomitant variable function of nervous processes and brain activity, but neurosis is not the cause of psychosis. The brain does not secrete thought as the liver secretes bile. The mind is not in the brain, nor in fact is the mind anywhere in the universe of space; for psychosis is not at all a physical spatial process.

As fallacious and superstitious is the recent tendency of medical investigation to localize psychic processes, to place different psychic processes in different seats or localities of the brain, thus implying that each psychic process respectively is placed inside some cerebral centre or nerve cells. Psychic life is no doubt the concomitant of nervous brain activity, and certain psychic processes may depend on definite local brain processes, but the *given* psychic process is not situated in a definite brain center, nor for that matter is it situated anywhere in space.

III The Definition of the Psychic Process

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The definition thus far given of psychic life is rather of a negative character. We defined the psychic phenomenon in opposition to the physical phenomenon. Physical phenomena are in space, psychic phenomena are not spatial. Now a negative definition may to many prove rather unsatisfactory. It is, therefore, desirable to define psychic phenomena in more positive terms.

It is now the tendency to define the physical process in social terms and the psychic process in terms of individual cognition. A physical phenomenon is defined as one common to many minds, while a psychic phenomenon is an object of an individual consciousness. I think that such a view of the external physical object, as that which is common to many minds in contrast to the psychic or that belonging to an individual mind only is incorrect from a purely psychological standpoint. Psychologically considered the characteristic trait of a physical object is not that it is *common* but that it is *external*. The tree yonder is to me a physical object, not because it is common to many minds, but because I *perceive* it as external, the sensory elements of the perception carry with them external objectivity.

The social perception of an object may be one of the criteria of external reality, but certainly not the only one, and surely not the chief one. In perceiving an object I do not consider it as a physical object, because I know that it is common to my fellow beings, but because the very psychic

process of perception gives the immediate knowledge of externality. An object is considered as physical, not because of its social aspect, but because of its perceived external aspect. Had my perception of the house yonder been a hallucination. I would have still seen it as external and therefore regarded as a physical object; and should this hallucination furthermore be confirmed by the testimony of all my other senses, should I be able to touch it, press against it and feel resistance, knock myself on it and feel concussion and pain, and have a series of tactual and muscular sensations by walking into it and around it, and should I further have this hallucination of all the senses every time I come to this identical spot, the object would be to me an external physical object, and no amount of social contradiction could and would make it different. Regarded from a psychical standpoint an object is considered as physical, not because it is common to other minds, but because it is projected as *extensive* and *external* to mind. community, but extension, Not *externality* is the psychological criterion of the physical object.

It is true that community of object is one of the criteria of external reality, but it is certainly not true that the community of the object gives rise to the perception of externality. It may, on the contrary, be claimed, and possibly with far better reason, that it is the object's externality that gives rise to its community.

The child in its growth learns to discriminate between things and persons. Persons move, act, make adaptations, while things are moved, acted upon, adapted to; persons initiate movements, things do not; persons are prime

movers and it is to them that one has to look up in the satisfaction of needs and in the acquisition and use of things. As against persons things are contrasted as impersonal. Gradually the child learns to include himself within the class of persons, his hopes, wishes and desires come in contact, as well as in conflict with those of other persons, and he learns more and more of inner life and activity with which he finally identifies all personality. Personality is more and more stripped of the thing aspect until the inner mental life, especially in its will aspect, remains as its sole characteristic. Persons are *willers*, and it is these wills which are of the utmost importance for the child to learn as the fulfillment of his will depends on them. He then learns to class himself within the category of willers; he himself is a willer. Impersonal things, falling outside and being contrasted with the class of willers, are conceived as independent of persons.

Moreover, while from the very nature of the case each willer bears to things a direct relation, his relation to other willers is only to be established through things. Wills come in contact not through the mere fact of willing, but through their relations to things. Coming in direct relation with things, things alone give direct experience, experience in its first intention. In other words, only things give rise to sensation or rather perception; hence sensory life with its time and space experience giving rise to externality is the of the of things, criterion universe conceived as independent of will. Only *thing* is external, *will* is not. Wills, however, can come in relation through things, and only through the same things; the universe of things must be a