

## The human person in modern psychological science\*

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It is ironic that natural science, a product of human minds, should now generate a sense of concern if not fear among the very human beings who have fathered it. We can appreciate this concern when we think in terms of atomic bombs and intercontinental missiles, for these are direct threats to life, but how is it that so many of us are alarmed by what 'scientific psychology' is doing to the *human* being we know ourselves to be? We often frame this issue in terms of the control of behaviour—whether or not it is right for the science of psychology to brainwash or otherwise to control the lives of people—but at heart it is something more fundamental to which we react. It is not the control of lives but the loss of identity, not the threat to freedom but the threat to the spirit, which we are *really* concerned about. We sense that with each advance in the 'control and prediction' of behaviour man suffers a new defeat and a loss of dignity. He is pulled down and frozen into the elements of nature which he named and catalogued, and which now dehumanize him by making him a mere mediator of inanimate motions, a point of focus within the silent substrata of the universe.

I would like to outline for you how it seems to me that this situation came about in the history of science. In doing so I will be contending that the continuing dehumanization of man as a person in certain camps of modern psychology is both historically appropriate and yet contemporaneously unnecessary. It is about time that we who take an interest in the

*social* science of man begin to elucidate very clearly how we differ from those who take the *natural* science approach to man's conceptualization.

My argument will hinge upon two major issues in the history of science, both of which aimed at the admirable goals of being clear in thought, explicit in description, and accurate in the claims one made on reality. Both also stem from the formal writings of Aristotle, though they pre-date him in an informal sense. My first point will deal with what Aristotle called the distinction between dialectical and demonstrative reasoning. The second has to do with his theory of causation. Following these two central themes, I will attempt to show that it is through a limitation of theoretical description in modern natural science that a 'human' brand of science is now impossible. We are currently attempting to account for man in *only* demonstrative terms, relying upon efficient and material cause description, when in fact man needs *both* demonstrative and dialectical conceptualizations as well as the full panoply of causes including the formal and the final to capture him as we have known him to be since the dawn of time.

### DIALECTICAL VERSUS DEMONSTRATIVE REASONING

Aristotle was the first philosopher to make a careful analysis of the way in which we reason. He thought of reasoning as the 'flow' of thought, and he adroitly recognized that the direction which this flow takes depends upon the assumptions that we make at its inception. Although direct evidence is lacking, it seems likely that Aristotle introduced what has come to be known as the format of syllogistic reasoning. We all know the 'All men are

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mortal. This is a man. Hence this man is mortal' sequence of reasoning called the syllogism. The initial assumption (All men are mortal) is termed the major premise, the secondary denotation (This is a man) is called the minor premise, and the deduction made is called the conclusion.

The implication of this analysis is that major premises *play the major* role in the process of truth extraction. One could of course err in the process of reasoning from sound major to minor premises, but an even more dangerous outcome results when one's major premises are unsound, based on opinion, fraught with error, and so forth. We might then reason correctly—'logically' as the saying goes—yet arrive at erroneous conclusions due to our erroneous major premises. And this is the charge which Aristotle levelled at his forerunners, the earlier philosophers who had relied upon what was known as the *dialectic* in their search for truth. Socrates, for example, would pose a question to a student and then, by reasoning from the opposite of what the student said, encourage a flow of thought which eventually led to what he took to be new truths. If the student chose A, Socrates defended not-A; if the student chose not-A, Socrates defended A. It was all the same, for Socrates did not believe that he had any knowledge to 'communicate' to the student. He did not feel that he was skilfully and deviously manipulating the flow of a student's thought in asking his questions. This is how we interpret him today, based on the fact that Plato has recorded these spontaneous encounters as the renowned 'dialogues'. Socrates never recorded a system of philosophy precisely because he did not believe that knowledge was programmed in this fashion. Two men, each of whom had 'potential knowledge' within their mental grasp, had to bring reason to bear in discussion in order to create knowledge dialectically.

Plato continued in this tradition of discovery through an act of intellect, turning the procedure of 'reasoning by opposites' inwards, so that one man could work his way upward

to the 'universal truth' of pure thought. It seems that Aristotle grew tired of the mental circumlocutions going on in this game of dialectics, where everything seemed to be true, if only the reasoner was adept enough in the use of language. Today we would say that Aristotle rankled at the 'armchair' theoreticians who accepted major premises proffered to them by others 'for the sake of argument', which were—at best—of doubtful validity, and probably entirely erroneous. Hence, to distinguish between solidly based reasoning and something less than this, Aristotle proposed the following:

Now reasoning is an argument in which, certain things being laid down, something other than these necessarily comes about through them. (a) It is a 'demonstration', when the premises from which the reasoning starts are true and primary, or are such that our knowledge of them has originally come through premises which are primary and true: (b) reasoning on the other hand, is 'dialectical', if it reasons from opinions that are generally accepted (*Topics*; Hutchins, 1952a, p. 143).

By 'primary' and 'true' major premises in demonstrative reasoning Aristotle meant either (a) the tautologically clear premises which help clarify our terms in what Kant later called an *analytical* proposition ('All bachelors are unmarried'), or (b) a proven, empirically demonstrable tie of subject to object in what Kant later called a *synthetical* proposition ('All bodies are heavy') (*The Critique of Pure Reason*; Hutchins, 1952d, p. 16). In the latter case, in order to come to his major premise the reasoner would have to operationalize, to look about in experience and find the clear tie of 'this' concept to 'that' concept as a primary and true, meaningful relationship.

Dialecticians, said Aristotle, were too ready to base their major premises on synthetic propositions of the sort which were either not found or not properly tested in experience. The dialectician settled for plausibilities when he asked an opponent, or asked himself, some question such as 'What does it mean to speak

of folly?' The subsequent opposition of two positions, eliminating contradictions and furthering one side or the other of a line of reasoning was capable of producing reasoned conclusions. But the trouble is, Aristotle claimed, this flow of meaningful thought is inevitably based upon *opinion*—which means that it may be true but then it may be empirically false from the outset. Dialectic, therefore, has at its very roots a serious potential for error. It must be resorted to in argument when under attack and no recourse to empirical data is possible. As such, Aristotle claimed, the dialectic shades into rhetoric and even into conscious sophistry.

The distinction between dialectical and demonstrative reasoning is therefore one of how a reasoner comes to his *major* premise preliminary to the process of syllogistic reasoning. All men are said to reason both ways, and all men always follow some form of syllogistic procedure in drawing out the implications of their thought. Aristotle became the father of biology and in a real sense the first empirical scientist precisely because he wanted to begin from 'primary and true' major premises, premises which could not be contradicted with mere words, for they spoke from the hard facts of reality. Dialectical thought was to be used sparingly, and only when under attack. To round out his approach to scientific knowledge, Aristotle also put together what I consider to be the most all-encompassing and beautiful theory in the history of thought.

#### THE FOUR CAUSES: ARISTOTLE'S THEORY OF KNOWLEDGE

If we were to ask the average person 'What do you mean by the cause of anything?' he would probably respond with something like: 'Well, it's whatever made it or created it or brought it about.' The idea of cause is so firmly identified with its contrasting opposite, 'effect', that the modern mind simply presumes that causes are always agents which literally bring about effects, they are the something (A) coming before something else (B)

which bring about the something else (A to B, or cause to effect). But actually, Aristotle never used the term 'cause' in such a restricted sense when he first coined the usage. To get his system of explanation in mind, suppose that we wanted to explain the complete nature of a stereophonic hi-fi system which we had built. Following Aristotle's prescription, we could say that the metals and plastics going into the components of the set define a *material* cause of the finished product. The *formal* cause is the blueprint we used in organizing the components into a finished product which matched the standard form or pattern of such electrical equipment. The ways in which we manipulated our eyes and hands in reading the blueprint and in building the set act as the *efficient* causes of the finished product. And finally, the reason we went through all of this work in the first place ('that for the sake of which' it was built)—our love of music or interest in mechanical gadgets—constituted the *final* cause of the completed stereophonic system.

Now Aristotle felt that anything which could be described might in some way encompass the meanings of *all four of his causes*. These are not mutually exclusive categories of description, as our example demonstrates. Furthermore, it was his belief that the more causes we could bring to bear in describing the nature of anything, the *more complex* was our explanation, the more thorough and complete were the meaningful statements we could make regarding the object of our description. Thus it is that in his *Physics*, Aristotle theorized that leaves exist for the purpose of providing shade for the fruit on trees, and he concluded thereby 'that nature is a cause, a cause that operates for a purpose' (Hutchins, 1952a, pp. 276-7). I think you can see that such a formulation introduces a note of teleology into one's conception of nature. Natural events have an aim, a goal, a something 'for the sake of which' they are taking place. It was this feature of Aristotle's theory of knowledge which was to cause great difficulty in the history of scientific thought, and I would now like to turn to

that intellectual descent, combining the theory of causes with our dialectical *v.* demonstrative reasoning bifurcation.

#### THE RISE OF MODERN NATURAL SCIENCE

Considering our two styles of reasoning first, the fact is that down through history there has been what amounts to a continuing debate between two groups of thinkers who seemed to be on one side or the other of this dialectical *v.* demonstrative issue. In medieval philosophy we might contrast St Augustine and St Thomas Aquinas in this regard. St Augustine was an indomitable dialectician, and, in fact, some of his interpreters have seen in his explication of the Holy Trinity a manifestation of the usual tripartite breakdown of dialectical reasoning into a given (thesis), its opposite (antithesis), and a resolution of the contradiction (synthesis) (Jaspers, 1962, pp. 196–7). St Thomas Aquinas, on the other hand, though he acknowledged the Aristotelian role for dialectic as a legitimate defence of one's major premises when under attack, rejected the Platonic reliance which Augustine had placed on dialectical reasoning. In post-medieval times we might contrast Kant (St Thomas's role) and Hegel (St Augustine's role) in like fashion.

Turning now to our causes, it should be noted that the churchmen were making use of all four meanings in explicating their theology. The final cause was greatly incorporated into what might be termed a 'deity teleology', as questions were posed of the sort: 'What did God intend when He etc. . . .' The other causes were also central in these theories of divine origins of natural events. For example, St Anselm's and St Thomas's arguments for the Prime Mover or 'First Cause' were arguments based entirely on the efficient cause. But the reliance on formal and final causality when linked to a deity teleology in arriving at God's supposed intentions led to a certain restraint being applied to the empiricist who might dare contradict divinely inspired accounts of the universe—as the unhappy incident with Gali-

leo gives grim testimony to. Incidentally, Voltaire has probably given us the best satirical account of how final-cause theorizing can lead to absurdities when he had the 'metaphysico-theologo-cosmolo-nigologist' Pangloss teach his young charge, Candide, that 'everything is made for an end. . . noses were made to wear spectacles; and so we have spectacles' (Voltaire, 1759, p. 14).

It was British philosophy—usually termed 'British Empiricism'—which was most influential in delimiting the use of our causes, as well as squelching the dialectical approach for modern science. Sir Francis Bacon carried on a vigorous attack against the formal and final causes as being adequate to the description of *nature*. There were no intentions in nature, there was no rationality 'for the sake of which' bones held up muscle or leaves shaded fruit, for example (Hutchins, 1952*b*, p. 44). This kind of theory has ever since been termed a scandalous anthropomorphization of purely 'natural' phenomena. Bacon *did* accept formal and final causes as adequate terms for ethical and aesthetical theories, but he helped fix material and efficient causes as the only appropriate constructs for what we now know as 'natural science'.

Along with the paring of our causes, the British philosophers—particularly Hobbes and Locke—simply ignored the fact that man could reason dialectically. Up until this time even those philosophers who had rejected the dialectic as fraught with potential error and sophistry had not denied that, after all, man *can* reason by opposites. As a realist, John Locke viewed 'ideas' as little 'primary and true' copies of an immutable reality, to which man's *tabula rasa* mind responded passively. Each meaning is embodied, said Locke, in a 'simple idea' which is a single unit of information unto itself, and which *cannot be further subdivided* (Hutchins, 1952*c*, p. 128). The mind never creates knowledge through an exploration of the 'opposite' of what is fed into it, because each simple idea obeys the Aristotelian 'law of contradiction' (A is not non-A). The idea is a true and primary 'bit' of information

efficiently caused and mathematically combined with other bits of information, totalling up to the higher-order levels of knowledge. Man's mind is thus at the 'effect' side of the 'cause-effect' efficient cause conceptualization in the Lockean model.

Over against this view, of course, we have had the dialecticians down through history who view man as having an *active* intellect, one which could challenge a major premise fed into it from experience, reason to its opposite and come to an alternative premise as a plan of action (formal cause) 'for the sake of which' (final cause) a creatively new line of behaviour could be acted out. This dialectical tradition is more likely to be seen in Continental philosophy, where we have our phenomenological and existentialistic points of view taking root from a Kantian model of man's mind. Unlike Locke, who viewed meanings as issuing 'from below', Immanuel Kant stressed man's 'categories of reason' which imposed meaning *onto* reality 'from above'. Though Kant was distrustful of the dialectic as a method of arriving at truth, he considered free thought to be dialectical in its essence, and his theory of ideas presents us with a human being who 'frames in' reality actively rather than being controlled by it passively. Modern Rogerians who speak of phenomenal fields or Kellians who speak of personal constructs are in this tradition. Furthermore, when we look at the nature of these categories of reason, phenomenal fields or personal constructs, we find that they take on the meaning of a pattern, plan or strategy 'for the sake of which' the *individual person* behaves.

In short, the Kantian model allows for formal and final-cause meanings which are simply impossible to grasp in a Lockean model. As Lockeans we theorize about 'that, over there', which receives certain immutable and unchangeable inputs and mediates these into certain outputs. As Kantians we speak about 'this, over here', which frames in, construes and evaluates experience even as it responds to it. In Kantian free thought a simple idea *can* be subdivided and even con-

torted by way of its *opposite* implications. Lockean models foster what I like to call an 'extraspective'—a third-person—form of theorizing, whereas Kantian models favour an 'introspective'—a first-person—account. Formal and final cause descriptions strike the extraspectionist as unparsimonious, for what he is trying to capture is simply the flow of efficient causation, from its antecedent to its consequent, whether we think of these as stimuli and responses, independent variables and dependent variables, or simply as the physical 'bumping' of before and afters (which, of course, brings the material cause into play because something material—an atom?—gets bumped). The introspectionist, on the other hand, is searching for a more personalized account, a description of the situation from the eyes of the beheld as well as the beholder. He is writing his theory from a different slant, and for the first time in its history, a practitioner of science finds it impossible to remain within the strictures of science and still render an accurate account of the data he is attempting to describe. How to capture the human condition under the limitations of yesterday? What does it mean to be human in the first place?

#### THE HUMAN IMAGE IN THE 20TH CENTURY

I believe the 20th century has yet to arrive at its conception of man. The dialectic *per se* is not often used in drawing out this picture, even among Communist theorists who strangely enough think of the human being in Lockean, demonstrative terms. Considered formally in our time, dialectic is equated with and dismissed as sophistry, or as a quaint but outmoded method of instruction once used by the Greeks, or as some form of Hegelian nonsense about the flow of history. Submerged and even hidden within the theories of Marx and Freud, however, the dialectic does receive a more balanced and genuine hearing. For this is a century of group rebellion and confrontation, ranging all the way from sexual and economic to racial and even age-level polariza-

tions over what constitutes the proper order of things. And it takes a dialectical phrasing to capture this feature of the human condition. In fact, what is most true about Marxian theory, and most often borrowed, is not the economic theory—which would make predictions other than those which are now coming to be—but rather the certainty of clash and contradiction in the movement of mankind. You will never find ‘humanity’ in a society predicated on demonstrative assumptions, such as the one proposed by Skinner in *Walden Two* (1948). Man simply is not that type of creature.

It is not difficult to show that Freud’s most fundamental style of thought was dialectical (Rychlak, 1968, pp. 309–52). Though he did not like the descriptive label being applied to him, from his very first theoretical paper—in which he relied upon the concept of ‘antithetical ideas’ leading to hysterical tics—to his last formulation of a life *v.* death struggle in the human condition, Freud remained an indomitable dialectician. Freudian psychology is a ‘man in the middle’ view: there are three identities within one psyche, each with its own particular intention (final cause) in the living reality facing the individual. The man in the middle, the ego, must somehow keep his loosely knit group together, and in any given behavioural pattern seek to satisfy all concerned. Like the little tramp in the Charlie Chaplin motion pictures, the ego can at times be perfectly proper and considerate: but beware, for at any moment he may pull the chair out from under the fat lady, or worse, because he also has darker needs to satisfy. What gives Freudian theory its most significant quality is the way Freud opposed *value* structures. He spoke about libido as though energies somehow moved the organism called man. But energies have no more to do with values than the stomach and its digestive juices have. It is the direction taken, the intent (‘that for the sake of which’), and the consequent (value) conflict of the ‘man in the middle’ which gives Freud lasting significance as a personality theorist. How ‘ought’ we to behave? That

insight is the goal which his method and theory seek to provide.

Straining against this Freudian view of man’s image we have the point of view of modern natural science. Modern psychology—at least in the academic circles of my country (USA)—continues to promulgate a view of man based on the Lockean demonstrative model of efficient causation. Rather than Freud’s externally inconsistent ego we have the internally consistent regularities of the cybernetics machine. Have you ever stopped to think about thinking machines? A moment’s reflexion will convince you that they are *only* demonstrative thinkers! ‘True and primary’ principles are fed in or are recorded as a result of literal performance (via a feedback mechanism and memory bank), and then from these ‘different propositions’ a most probable alternative is selected and recommended or (in the case of chess-playing machines) acted out. *Machines do not challenge their programmes*, their major premises which frame in their performance from the outset. Hence, they do not dream up ‘possibilities’, they do not state opinions (unless we take opinion to mean a certain probability level), they do not create (unless we mean extract all of the possible combinations from a mass of data handed to them), and they do not ‘transcend’ their nature by self-exploration in the way Kant said a man could do through exercise of a transcendental dialectic. If machines were programmed in this Kantian fashion they would become truly creative beings, for they would begin following out ‘alternatives’ to the ‘true and primary’ bits of information fed into them. Beginning in this fashion, a humanly thinking machine might construct an independent line of reasoning, and in its own uncybernetic way, come to a conclusion not really asked for, or a mistaken conclusion (the other side of making a creative contribution), or an ‘opinion’ going against the probabilities of the hard facts. Ironically enough, we would surely have little use for such a maverick machine—because it would be just as inferior as the man who made it.

From all this I hope you will appreciate how dialectical strategies have been involved in most of those features which we constantly hear stressed when we speak about the humanity of man. As we already suggested, the analyses of history by Hegel and then of society by Marx are clearly based upon such a dynamic, oppositional clash of evolving points of view. Artistic expression is most often put into words through a 'tension of opposites' phrasing. For example, Shakespeare was a great dialectician, and whether we think of Hamlet's tortured self-exclamation—'To be or not to be'—or Iago's treacherous self-observation—'I am not what I am'—the respective conflict in moral decision and deceitfulness of apparent reality is best captured as a dialectical matter. Religious conflict, ethics, and indeed emotive behaviours of all varieties—including humour—can be seen to have a dialectical side in which opposition generates a tension, and incongruity mounts to a needed release. Yet, in the psychological laboratory we go on conceiving of man *as if* he were merely one of our 'input-output', efficiently caused machines, we go on trying to 'discover' his essence empirically while looking through only some of the lenses conceptually open to us.

I said at the outset that we no longer need to foster a science so limited and one-sided. I hope that you now see why this is the case. We must appreciate that what was once dropped in natural science for a good reason is now being retained in social science for a bad reason. As humanists, we have to confront the shopworn and outmoded allegations of animism and anthropomorphism and ask: 'After all, what is so terribly wrong with anthropomorphizing the anthro?' In calling for a return to the formal and final causes we *do not* seek a return to deity teleology. We *do* seek an advance to a human teleology. Man is not free or self-determined in every daily action, of course. Some things are simply not worth being creatively 'free' about. Others require

personal strength and moral fibre to change, and not all of us are innovators or crusaders. But surely some men, some of the time, rise above their histories, demonstratively review what 'has been' and consider dialectically what 'could have been', and then project a personally created alternative premise 'for the sake of which' they now behave—and inspire others to behave. Whether or not this alternative will prove worthwhile and helpful or erroneous and harmful only time will tell. But to deny in principle that such a self-directed innovation is possible needlessly robs our very data of what they seek from us most urgently: i.e. an accurate, meaningful account of the human person.

Let us take heart from the lessons of history, and now frame our own dialectically arrived at alternative set of premises. If we are fruitful and instructive we will attract others, some of whom will simply be programmed, but many of whom will make the choice after looking over what the other side of the scientific street has to offer. If we are in error and unproductive, then inevitably in the course of time we will have furthered a more accurate psychological science. In any case, let no man say that we did not here set our own course 'for the sake of which' we now aim to behave.

#### SUMMARY

The history of science is reviewed concerning two significant issues, both of which take root in Aristotle: (1) the distinction between dialectical and demonstrative reasoning; and (2) the theory of four causes in theoretical description. It is shown how the theories of modern natural science have come to restrict the description of human behaviour to demonstrative conceptualizations, and to the use of material and efficient causation. Dialectical strategies and the formal-final causes are not considered appropriate theoretical devices in 20th century science. A call is made for the return to the latter constructs in distinguishing modern *social* from *natural* science.

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