

THE REVOLT AGAINST MATERIALISM IN
ENGLISH PSYCHOLOGY, 1875-1910

by

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ABSTRACT

The accepted view of Late Victorian psychology suggests that it avoided a commitment to a scientific framework because of the influence of Idealist philosophy. This study represents an attempt to show that both moral considerations and the recognition of the positive rôle which the human mind plays in organizing sense data favoured the abandonment of certain assumptions inherent in Positivism and Naturalism. In essence, the problem faced by Late Victorian psychologists was how to explain consciousness as a natural phenomenon.

The most important sources of information used in this study were the text books of James Ward, James Sully and G.F. Stout. In addition, their articles on psychological topics, published in academic journals, were of considerable value; and in particular, the British journal, Mind proved useful.

In an address to the British Association for the Advancement of Science, Thomas Henry Huxley presented the "doctrine of conscious automatism," which described human behavior as a result solely of external sensations without the intervention of consciousness.

The psychologist, James Ward, attacked the materialist influence upon psychology and Naturalism in general. Ward took the position that the laws of science were only mathematical generalizations and thus were not always applicable

to single instances. Evolution, he believed, gave evidence of the workings of a Supernatural Power. In man, the influence of the Power was shown by a need to fulfill a moral ideal.

Another Late Victorian psychologist, James Sully, tried to adhere more firmly to the Positivist tradition. Following a suggestion of Herbert Spencer's, Sully tried to explain morals as the end product of mankind's evolutionary development.

The final psychologist treated in this study, George Frederick Stout also recognized the importance of subjective factors in a man's perceptions and judgments. Stout adopted Avenarius' theory that all thought served as a form of biological adjustment to the environment. In this way, Stout showed how consciousness could be studied as a natural phenomenon.

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I. T. H. HUXLEY AND THE DOCTRINE OF CONSCIOUS AUTOMATISM

Of the many academic debates which gave rise to much deep reflection on the part of Late Victorian and Edwardian intellectuals, few had more serious implications than that in psychology. The question at issue was the recognition by practitioners, sometimes years before other thinkers, that science had failed in its efforts to offer a credible, all-embracing explanation of the world, at least an account which could include as a natural phenomenon the human mind.

Despite its impressive record of achievements, Victorian science, as Thomas Henry Huxley observed in 1868, was a cause for anxious concern to Victorians. By 1839 the cell theory of Schleiden had made possible a physico-chemical interpretation of elemental life processes. Later the discoveries of Dalton, Faraday and Amperé led the physicist, Helmholtz, to formulate the law of the conservation of energy and thereby to describe the interrelation of heat and motion. Now one could visualize the universe as a closed mechanical system, for Helmholtz's theory had reduced all physical transformations to mere changes in the motion of the particles of matter. And finally, in 1859 when Darwin made so bold as to argue that naturalistic causes, the more or less successful adaptation of organisms to their environment, were the real source of the variations between the species, it seemed to thoughtful Victorians that the day was nigh when science would, at last, be in a position to give a wholly materialistic explanation to account for every event that had ever taken place, or would be likely to take place, anywhere in the cosmos. In

the graphic language of T.H. Huxley,

The consciousness of this great truth weighs like a nightmare, I believe, upon many of the best minds of these days. They watch what they conceive to be the progress of materialism, in such fear and powerless anger as a savage feels, when, during an eclipse, the great shadow creeps over the face of the sun. The advancing tide of matter threatens to drown their souls; the tightening grasp of law impedes their freedom; they are alarmed lest man's moral nature be debased by the increase of his wisdom.¹

Huxley was correct in his observation that the implications of materialism (the word is virtually synonymous with science until the last decade of the nineteenth century) would lead a man to draw certain conclusions that were entirely at variance with the accepted thinking about human nature. The bone of contention arose not from the admission of the likelihood that the physiology of man followed the same chemical laws that applied to the remainder of the natural world, nor from the acceptance of Darwin's theory about the origin of man, but out of a different problem: how to fit the fact of human consciousness into what seemed the immutable law of the conservation of energy. A knowledge of the law of the conservation of energy would appear to indicate that a conscious idea or mental change, not being itself a source of material energy, could not therefore affect, in any way whatsoever, the physical processes occurring within the brain. The implications to this line of reasoning were, as the biologist, G.J. Romanes observed, nothing less than dumbfounding.

Nowhere can we suppose the physical process to be interrupted or diverted by the psychical process; and therefore we must conclude that thought and volition really play no part whatever in determining

action. (my emphasis) Thoughts and feelings are but indices which show in the mirror of the mind certain changes that are proceeding in the matter of the brain, and are as inefficient in influencing those changes as the shadow of a cloud is powerless to direct the movements of that of which it is the shadow.²

There were only two possible deductions: either the phenomenon of consciousness evidenced a reality that stood apart from the so-called laws of nature and man therefore existed outside the premises of materialism, or conversely, that an individual's thoughts and feelings play no rôle whatsoever in determining his conduct--the materialist's view. Not surprisingly, some Victorians concluded that if the fixed purpose of science was to be able to put forward one day a completely naturalistic interpretation of man as well as his world, it had apparently foundered on the rocky shoal of human consciousness. Must science, then, retreat from this attempt at a comprehensive generalization and finally concede the truth of claims that the soul of man gave proof of some greater power governing the universe, than the mere transmutations of matter. Not all scientists were prepared to grant the validity of the argument demanding that they postulate the existence of a supernatural influence in order that they could shed light upon the mystery of human consciousness. Furthermore, some scientists were aware of the potential threat of a re-emergent obscurantism which might stifle forever the growth of scientific enlightenment should they admit the possibility of a non-material source for human behavior.

With this thought in mind, Thomas Henry Huxley in 1874 lectured to the British Association for the Advancement of Science, "On the Hypothesis that Animals are Automata and Its History." Huxley in his address attracted the widespread attention of the British public, for he boldly extended the assumptions of scientific materialism even to human consciousness and thereby demonstrated that the hitherto inexplicable fact of consciousness only involved another facet of the manifold properties of matter. Huxley wished to abolish once and for all from the realm of scientific discourse that unknown entity, consciousness, so beloved by metaphysicians and theologians, in order to establish a wholly materialist science of the mind upon what he presumed were the foundations laid by Descartes. In this Huxley's programme came some forty years too early; it remained for Watson and the Behaviorists to claim the dubious credit for banishing consciousness from psychology.

The five principles taken from Descartes which Huxley believed were entirely compatible with the then current notions of physiology and which could provide the core for a nonmetaphysical psychology were:

(1) The brain is the organ of sensation, thought, and emotion; that is to say, some change in the condition of the matter of this organ is the invariable antecedent of the state of consciousness to which each of these terms is applied.

(2) The movements of animals are due to the change of form of muscles, which shorten and become thicker; and this change of form in a muscle arises from a motion of the substance contained within the nerves which go to the muscles.

(3) The sensations of animals are due to a motion of the substance of the nerves which connects the sensory organs with the brain.

(4) The motion of the matter of a sensory nerve may be transmitted through the brain.

(5) The motion of any given portion of the matter of the brain excited by the motion of a sensory nerve, leaves behind a readiness to be moved in the same way, in that part. Anything which resuscitates the motion gives rise to the appropriate feeling. This is the physical mechanism of memory.³

By the term automatism, Huxley did not imply that animals were, as Descartes had supposed, simply biological machines without anything equivalent to man's consciousness, rather, Huxley meant to suggest that animal behavior was determined entirely by neural reactions to external stimuli. An animal may have some form of consciousness, but its reactions are not the consequence of conscious perception upon its part. Huxley thought the stimuli from the environment react upon the sense organs and create a form of molecular movement which is transmitted along the nerve pathways until it reaches the brain where it produces a change in brain matter and a concurrent alteration in consciousness. Despite this change in consciousness the animal's muscular exertion results entirely from these modifications of brain substance; consciousness itself has no effect at all upon an animal's reactions. No independent transmutation of consciousness--if this is at all possible--can cause brain matter to change in any way.

Huxley believed he had proved his hypothesis by an experiment in which he removed the cerebral hemispheres of a frog. To all intents and purposes, he argued, the behavior

of the frog has remained the same, reacting as before to the same sensations, although now without any possibility of it having a consciousness of its actions. Thus, Huxley concluded, animal consciousness is always an effect and never a cause. In a phrase destined to excite a good deal of conscious activity among his critics, he described animal consciousness by using the analogy of a steam whistle.

The consciousness of brutes would appear to be related to the mechanism of their body simply as a collateral product of its working, and to be as completely without any power of modifying that working, as the steam whistle which accompanies the work of a locomotive engine is without influence upon its machinery. Their volition, if they have any, is an emotion indicative of physical changes, not a cause of such changes.⁴

Yet, it was not Huxley's negation of the consciousness of brutes which provoked the heated response to his paper. Huxley had dared to apply his hypothesis to man. His manifest desire was to make a further contribution to science, but Huxley's discussion on animal automatism also fulfilled another purpose, for his paper delivered one more blow in the cause of intellectual anticlericalism. Near the end of his lecture, Huxley ceased finally to pose any longer as the dispassionate biologist, motivated solely by his interest in animal reflexes, and took up his characteristic bulldog stance in defence of free thought. While admitting that his discussion of brute mentation would offend neither Papist or Presbyter, Huxley provocatively declared that having "luxerated" in the rare freedom permitted scientist, "to go as far as reason leads, and stop where evidence comes to an end--without speedily

being deafened by the tattoo of the 'drum ecclesiastic,'"
he must now unwillingly prepare, he continued, to risk
theological censure by applying his explanation to man's
consciousness, for should he fail to do so, others would.⁵

Apologizing tongue-in-cheek, Huxley regretted that the
sheer incontrovertibility of the evidence had forced upon him
these unwanted conclusions: human consciousness is like that
of brutes, and consciousness is nothing else but molecular
changes in brain substance. As a logical corollary to this
thesis, Huxley maintained that the state of feeling generally
termed volition is never a determinant of action, but only
"the symbol of that state of brain which is the immediate
cause of that act."⁶ One is free to do only what one's
brain has already decided upon before hand, without any
conscious awareness of the decision. Therefore all human
action follows as the predetermined consequences of natural
causes; it is as simple as that. Such was the substance of
Huxley's reasoning. Strangely enough, considering the tenor
of his argument, he ended his address by rejecting any attempt
to label him a "materialist, fatalist or atheist." Nonetheless
the implications of his statements seemed clear to his
listeners and were to them unquestionably materialistic,
fatalistic, and atheistic.

By means of his paper on conscious automatism, Huxley
had issued a challenge to the Victorian public to admit the
right of science to express as freely its views on the nature
of man as it had the right to do about the natural world.

That is to say, he had seized the opportunity to reiterate the very message of John Tyndall's presidential address before that same meeting at Belfast of the British Association. Both men affirmed in their own way the "inherent" enmity of science towards both metaphysics and theology. Tyndall had discussed the history of science at great length. He referred to its early antecedents, particularly the materialist philosophies of Democritus and Epicurus, the ever present conflict of science with philosophic idealism, and the eventual suppression of scientific materialism by the medieval church. The chief glory of ancient science, Tyndall held, was its unflinching acceptance of the principle of the constancy of matter in the universe: "from nothing comes nothing," the indestructability of matter, and the belief that all change results from a necessary cause: ultimately the combination and separation of atoms. Tyndall submitted that the great discoveries of Victorian science had not substantially altered Democritus' propositions.

In concluding his address, Tyndall forthrightly proposed to demarcate the spheres of religion and science, to release science from any restraints against further progress. Religion, he declared, ought to concern itself solely with the expression of sentiment: the feelings of "Awe, Reverence and Wonder," thereby adding, "in the region of poetry and emotion, inward completeness and dignity to man."⁷ Religion, so destructive of free inquiry in the past, cannot add anything to the region of objective knowledge and thus should not be permitted to

interfere with the proper task of science: the search for impersonal truth. By separating the respective domains of science and religion, Tyndall with all the provocative confidence of a man feeling assured of the certain victory of his ideals over his adversaries' unreasoned faith, claimed the right to exclude religion from the privilege of uttering any statement whatsoever about the physical universe. Tyndall, comparing systems of thought to competing organisms within the Darwinian scheme, demanded freedom from all theological restrictions to allow truth (by truth Tyndall meant his notion of science) to evolve further into being:

When this truth has been thoroughly taken in, rigidity will be relaxed, exclusiveness diminished, things now deemed essential will be dropped, and elements now rejected will be assimilated. The lifting of the life is the essential point, and as long as dogmatism, fanaticism, and intolerance are kept out, various modes of leverage may be employed to raise life to a higher level.⁸

Tyndall's lecture was a defiant refusal to accept either a self-effacing or secondary rôle for science, or to acknowledge religion as the representation of some higher form of truth. Similarly, Huxley had seized the opportunity of the Belfast meeting to issue his personal challenge to the forces of unreason. Huxley had expected that his extreme mechanistic analysis which he so vigorously put forth would stir up stiff resistance. He was correct in this, but was mistaken about the sources of his criticism. Not the clergy, but fellow physiologists and psychologists took up Huxley's gage and disputed his contention that consciousness was nothing else than the passive, impotent record of physical changes within

the brain. Yet, it is possible that Huxley did not seriously offer his ideas as anything more than a prod to awaken scientists to what he felt was their responsibility: the application of the methodology of the natural sciences to the mind of man, hitherto the sole domain of philosophers and theologians. Perhaps Huxley only hoped he might give courage to some new and timid Darwin who would do for the study of the mind something comparable to the other's achievements in biology. Whatever Huxley's reason, he needed a generous measure of audacity to make the indirect suggestion that the members of his Victorian audience were automatons, albeit conscious ones, without any truly independent will--this in a society where the dominant values urged a man to strive concertedly and "earnestly" for his full share of merit.

As a consequence, Huxley's claim did not go undebated. Were men only conscious automata, who mechanically adapted to their environment; or were men rational beings with the capacity to fulfill some higher moral nature through their own wilful efforts? To argue as Huxley appeared to be doing that consciousness could not alter behavior in any way, that people's actions, good or bad, were nothing more than reflexes stamped upon their character and beyond their wilful control, no doubt posed a threat to the self-esteem and to the sense of moral efficacy of more than just a few.⁹ Thus many of Huxley's opponents were driven to vindicate as a biological necessity those same moral precepts which formed such an

integral element within their own character. More directly, the dissent against the hypothesis of conscious automatism generally centred on the question of whether an individual's intellectual and physical responses were predetermined or the result of his own volition.

The physiologist, William B. Carpenter, found that the problem of conscious automatism had resurrected that chestnut of metaphysics: free will versus determinism. Carpenter demanded that Huxley recognize that man has a conscience which guides his conduct. The supporters of automatism, Carpenter thought, drew their conclusion not from any observation of human nature, but from a commitment to a philosophic dogma. In reality, the individual need not behave as an automaton; he always has, argued Carpenter, the option to choose what course of action he will follow. Unless, of course, he has a definite pathological character and is therefore a "moral idiot," a man must recognize the distinction between right and wrong and must have a sense of duty: the desire to act rightly or at least in conformity to his own moral distinctions. Carpenter deduced from his explanation of the threefold interrelationship of Will, the attention process, and behavior the inference that the individual must at all times accept the ultimate responsibility for his actions. He cannot blame his failings upon automatic reflexes outside his control. The concluding passage of Carpenter's article in The Contemporary Review communicates the feelings of those

concerned Victorian thinkers to whom Huxley's doctrine of conscious automatism seemed the irresponsible ravings of godless man. Carpenter writes,

It is then that we sow what will come up either as a harvest of wholesome nourishment to the spiritual part of our nature, or as a growth of noxious weeds which inflame the 'fleshly lusts that war against the soul.' And it is then that we lay up in our inner chamber those accumulations of good or evil tendencies which shape our future course in life; helping us as with the hand of an Angel whom we have entertained unawares, when we are earnestly striving to 'turn to the right and keep straight on'; or dragging us downward, as with the grasp of a Nemesis, towards the lowest depths of selfishness and sensuality, when we have knowingly allowed ourselves to take the first steps in the facilis descensus Averni.¹⁰

Although not everyone agreed wholeheartedly with Carpenter's judgment that the doctrine of conscious automatism indicated the Age's hurried descent into depravity, clearly the doctrine had a serious moral implication. Huxley did not deny the existence of consciousness, but he did argue that consciousness was only another expression of matter, that consciousness could in no way effect a physical response. Furthermore, if Huxley's view was correct, then, all of man's beliefs, his reasoned knowledge, his ideals, were equally of no importance; man was but an involuntary creature wholly at the whim of blind reflexes. Huxley's theory of conscious automatism, by removing from a person all potential for independent action, also removed from him any capacity to make a moral decision. If a man could not act other than as determined by sensation, how could he be called to account for his actions? Besides the doctrine had a number of obvious

intellectual difficulties.¹¹ For example, it hardly fitted with the apparent fact that men sometimes carefully deliberate about their actions before they attempt to carry them into execution.

George Henry Lewes, one of Huxley's critics, put forward the suggestion that the evidence seemed to prove that the mind actually interfered with the sensations which it was about to experience. Lewes, who devoted nearly two hundred pages of his Physical Basis of Mind to a discussion of automatism, held that consciousness, itself, was an agent and was not solely the result of the preceding physiological state.¹² In his view a man does not react wholly submissively to his surroundings. The environment produces a sensation as well as a conscious experience of it--what one means by the term feeling--which allows him to anticipate the probable sensations, desirable or otherwise, about to follow. Fortunately, a person may act in such a manner as to prevent this likelihood from taking place; but without the fact of consciousness the initial series would necessarily continue without any modification. As Lewes put it, the feeling which accompanies a muscular contraction is the stimulus of the contraction. Lewes used to illustrate his point the example of a man with his eyes closed who slides his hand along a table he discovers a wet patch and then either suspends the movement of his hand or alters its direction. From this Lewes drew the conclusion that consciousness is not just an effect caused by the environment, but an active agent as well; a person does not only

react to his surroundings, he interacts with them by continually making new tactical decisions as further knowledge of his environment warrants them. In fact, Lewes was developing here something akin to the cyberneticists' notion of "feedback," an approach to be more fully developed in the nineteenth century by Richard Avenarius.

Nevertheless, whatever the success of Huxley's attempt to provide a "scientific" account of human conduct, he did draw attention to the fact that science had failed to realize the expectations of the eighteenth century philosophes and the nineteenth century positivists, who trusted that one day science would reveal a universe of natural laws to which men might adapt themselves and thereby live according to the dictates of reason. At all events, Huxley had apparently derived his theory from a law of nature, in this case the law of the conservation of energy, with the result that it was impossible for him to conceive of consciousness having any influence upon physical activity. Thus Huxley's scientific psychology not only stated that reason seemingly had no effect upon behavior; but, in addition, implied that man's understanding of the mechanical processes of nature was incapable of providing him with a store of useful information from which he could deduce what constituted a rational way of acting. Huxley had cut the ground from under the trust of George Henry Lewes that,

When Science has fairly mastered the principles of moral relations, all Knowledge will be incorporated in a homogeneous doctrine rivaling that of the old

theologies in its comprehensiveness, and surpassing it in the authority of its credentials. 'Christian Ethics' will then no longer mean Ethics founded on the principles of Christian Theology, but on the principles expressing the social relations and duties of man in Christianized society.¹³

Lewes' positivist hope that the observations and logic of the natural sciences would eventually provide mankind with a rational morality bore no fruit. More importantly, after the publication of Huxley's paper a Late Victorian might arrive at one of two conclusions. He might venture the opinion that mental processes did not wholly relate to the natural world because they reflected the presence of supernatural force. Or alternatively, he might conclude that science had so far not succeeded in disclosing that hidden law of nature, which shed light upon the affinity between the physical world and human consciousness, let alone build a rational morality upon it.

Still, there were a few who preferred to retain the conviction that science must always assume that every event has ultimately a natural source. Following this assumption, the question that they preferred to ask of Huxley's doctrine of conscious automatism was whether or not it necessarily expressed the only credible, naturalistic account of human mentation and conduct. In other words, need a truly scientific psychology be committed inevitably to the premises and assumptions of materialism? Huxley's logic had led him to conclude that consciousness could not influence human behavior. He had followed a strictly materialist line of reasoning: that is to say, if energy is nothing more than moving matter--Helmholtz's

view--then the source of human activity must be from a form of molecular movement, transmitted from the sensory receptors over the pathways of the nerves through the brain, and again along the nerves, until it is finally translated into muscular responses. Furthermore, the direct cause of the neural motion in the first place was sensation, actually an individual's reception through his sense organs of stimuli from the environment; thus, to all appearances, human behavior followed the pattern of a reflex arc. In this view, it was difficult to see how thought, unless it was another form of matter, could affect the course of a cerebral reflex. Besides, even if consciousness and matter were but two different forms of a single substance, as the philosopher W.K. Clifford argued,¹⁴ it would still be impossible to explain how a man could feel himself, at times, possessing the ability to choose between various courses of action, if his thoughts were always a reflection of a predetermined material condition. How could there be any kind of volition when every neural response must follow from some movement of matter taking place within the brain, a movement which must have already been instituted by a preceding material change?

Clearly, the doctrine of conscious automatism presented certain theoretical difficulties of such a nature that even those who were not inclined to reject it on emotional grounds treated it skeptically. Nevertheless, Huxley's paper had served to raise important questions about the relationship

of psychology to metaphysics. What, after all, was consciousness? Was it, as some claimed, the mixture of physical experience and divinely inspired intuitions, or alternatively, was it merely the co-ordination of immediate, remembered and anticipated sensations of pleasure and pain? After Huxley had read his paper Late Victorian psychology could no longer brush aside the moot point of whether or not man's thought processes were the product of natural or supernatural causes. Should the latter view prove true, then the limitations of science were clearly evident, but should the former prevail, one would still have to admit that the materialist's account of man's relation to the physical world suffered from obvious defects.

Hence, either opinion being correct, one would have to conclude that materialism's claims to describe the natural world accurately and exhaustively were fraudulent. Moreover, one would also have to question whether psychology could truly call itself a science, unless it willingly committed itself to the physiological orientation implicit in materialism. Perhaps, psychology would have to admit that the fact of consciousness stood outside the limited comprehension of the naturalist. Thus, notwithstanding Huxley's scientific reputation, a number of thoughtful Victorians remained unconvinced that man was an automaton and submitted that his repudiation of man's spiritual being was both hasty and ill-considered.

For one critic, the psychical researcher, F.W.H. Myers, the data accumulating from research into hypnotic trance

states offered strong arguments in favour of the view that variations in consciousness did, after all, cause later physical responses. In any case, it was becoming obvious to those who, like Myers, were acquainted with hypnotic phenomena, that a far reaching revision of current notions about consciousness, subconsciousness, automatism and volition would have to take place before they would be in accord with the known facts about hypnotism, for hypnotism seemed to indicate that a "secondary consciousness" exercised unknown powers over the individual.¹⁵ Certainly, on this basis it looked as if psychologists ought to infer that the mind was something more than a reflection of "matter in motion." Besides, they reasoned, if Huxley and his materialist colleagues were in error, would it be so wrong for a man to suppose that the moral aspirations of humanity had, after all, some purpose behind them.

Frederick William Henry Myers was one man among others who ventured to raise this question, and thereby found a way to reconcile science with religion. He believed that certain unusual phenomena, among them clairvoyance and telepathy, suggested that there were immaterial forces--not entirely dissimilar to some of the notions held by mystics--which operate upon the nonconscious levels of the mind. Myers entertained the idea that if he observed the canons of the scientific method and confirmed certain psychical experiences with rigid tests, then he would have an obvious challenge to the materialist's conception of the world. But beyond even

these far reaching aspirations, Myers wished to affirm conclusively the truth of mankind's most alluring dream: the promise of eternal life.

On the other hand, another Late Victorian psychologist disputed the contention that consciousness necessarily subverted the naturalist's point of view. Although he readily acknowledged that consciousness played an immense rôle in behavior, George Frederick Stout believed that it was still possible to construct a truly scientific psychology. Psychology would, however, first have to recognize that a physiological analysis of mental states was, at present, far beyond its capabilities. Although unable to find fault with the materialist's correlation of behavior and sensation, and unable to deny the importance of consciousness, Stout concluded that he must suspend all metaphysical judgments, until a time came when further knowledge would show the exact relationship of mind to matter. If psychology must make the choice between the alternatives of naturalism and mysticism, he believed it must declare itself on the side of science.

FOOTNOTES TO CHAPTER I

¹T.H. Huxley, "On the Physical Basis of Life," (first published in 1868), Method and Results, New York, D. Appleton, 1898, p. 160.

²G.J. Romanes, "The Fallacy of Materialism," The Nineteenth Century, vol. 12 (July-Dec. 1882), p. 879.

³T.H. Huxley, "On the Hypothesis that Animals are Automata and Its History," The Fortnightly Review, vol. 16 (July-Dec. 1874), pp. 557-562.

⁴Ibid., p. 575.

⁵Ibid., p. 576.

⁶Ibid., p. 577.

⁷J. Tyndall, "The Belfast Address," Fragments of Science, London, Longmans Green, 1907, vol. 2, p. 196.

⁸Ibid., p. 197.

⁹Cf. G.H. Lewes' remark to the effect that the "general public" was scandalized by Huxley's address. G.H. Lewes, The Physical Basis of Mind, London, Trubner, 1877, p. 389.

¹⁰W.B. Carpenter, "On the Doctrine of Human Automatism," The Contemporary Review, vol. 25 (Dec. 1874-May 1875), p. 961.

¹¹v. Appendix A.

¹²G.H. Lewes, The Physical Basis of Mind, London, Trubner, 1877.

¹³G.H. Lewes, "The Dread and Dislike of Science," The Fortnightly Review, vol. 23 (Jan.-June 1878), p. 815.

¹⁴W.K. Clifford, "Body and Mind," The Fortnightly Review, vol. 16 (July-Dec. 1874), pp. 714-736.

¹⁵J. Milne Bramwell, "What is Hypnotism?" Proceedings of the Society for Psychical Research, vol. 12, 1896-7, pp. 204-258.

II. VICTORIAN PSYCHOLOGY--A DARWINIAN MYSTICISM
OR A PRAGMATIC SCIENCE?

G.M. Young, the author of Portrait of An Age, has pointed out that the last years of the nineteenth century gave evidence of a widespread search for a new faith, one that could be reconcilable with the authoritative judgments of science.

. . . from In Memoriam to The Woods of Westermain, from the Choruses of The Dynasts, we can follow the secular intellect seeking its way to such an apprehension of Being as Process as might hereafter reconcile the spiritual demands of humanity with the rapt and cosmic indifference of Evolution.¹

Similarly, the historian, A.O.J. Cockshut has described the plight of the Victorian agnostics who renounced many of the dogmas of their upbringing, yet tried to incorporate something of their lost faith into fresh ethical rationales.² But while these skeptics rejected the fundamentalist theology of Puritanism, they still retained much of its substance; at the core of their "alternative religions" lay the heartfelt belief in the personal responsibility of the individual to exert himself to his utmost in order to ensure the supremacy of virtue and nobility over the forces of depravity and egoism. Most agnostics trusted that evil was not an inexplicable chance event in a contingent universe; it was not some innate biological need to destroy; it was not even an existent fact. Evil was instead the negative expression of moral vacillation, the consequence of a failing to make a total commitment to the task of eradicating all tendencies towards self-indulgence, vanity, greed and the other foibles of humanity.³ Nevertheless, the Late Victorian intellectual, who maintained a strong faith

in the moral imperatives of right action, conduct and thought, had a concurrent difficulty in explaining the basis of this faith, especially since evolution appeared to have eliminated both the ideal of a supernatural Legislator and the obligation to obey his divine ordinances. But while the theological rationale for this "earnestness," inherited from the Puritans, seemed to have evaporated, the post Darwinian generation still faced the awkward task of vindicating their beliefs. Consequently, they were driven to search out a variety of scientific hypotheses and philosophic theories, hoping always to buttress an insecure faith, hoping always that their moral impulses were truly the manifestation of some obscure but righteous power latent within the universe. Yet, they trusted, should they fail in this endeavour, at least their efforts would prove that man had, after all, the capacity to understand himself and his universe through the exercise of reason.

Although historians have long recognized that in the years roughly between 1830 and 1870 a profusion of Britain's leading intellectuals underwent the emotional turmoil of a religious crisis, few historians have so far ventured to connect this debacle with the semi-mystical nature of the intellectual views prevalent in the last years of the nineteenth century and the first decade of the twentieth. But such a relationship did exist, for in many instances men formed certain intellectual conceptions largely because these judgments conveniently served to replace a now questionable faith.

One must remember that for many a loss of faith was not a sudden cataclysmic event, a conversion in reverse, but a slow agonizing series, first of positive assertions of belief and then, counter denials of the same dogmatic points. No sooner did these unhappy Victorians sense that they had gained a feeling of certainty in one judgment about the spiritual nature of man or the divine attributes of Jesus, than, they found this surety had evaporated in the face of new doubts.

Nevertheless, their slow progress from a state of absolute despair to a new mood of confidence and reassurance came about more from a substitution of a new certainty, rather than from any positive repudiation of their former convictions. Agnosticism was to them an admission of their ignorance; not a statement displaying an apathy towards theological matters. The realization that they were the first generation to feel the moral vacuity of an existence in a world without God gave no cause for exultation or triumph; their newly discovered freedom brought with it deep-seated misgivings. Was man really nothing more than a wretched accident of blind matter? These irresolute Victorians shrank from the awful indifference of a contingent universe. If only they could find some purpose behind nature, if only they could prove that man was something more than a calculating brute, then, so they reasoned, they could justifiably show fresh grounds for reassurance, even though the faith of their childhood remained forever discredited. Eventually, a number of intellectuals

replaced their Christian beliefs with a new philosophic or scientific doctrine. These new-fashioned creeds had the advantage of not only appearing as an objective, rational statement about the world; but at the same time, these convictions promised to furnish a modicum of hope and consolation.

To grasp fully the predicament faced by many Late Victorian intellectuals, one must realize that the loss of religious faith could mean the loss of all faith: faith in themselves, in mankind and indeed in the value of life itself. Witness this letter from the psychologist James Ward, then twenty-nine:

All my doubts philosophical and historical notwithstanding, I am sure of this as a practical truth--reason, conscience, experience back me up as I say it, I say it with my whole soul--I have no doubt of God's infinite fatherly patience and love: when I despair of myself I find new hope in what He is . . . Self is one's bane--self it is which deflects the will, the needle of our spiritual compass. How are we to know? Were the heavens forever dark we would not perhaps at once, but there are stars and light above even the dreariest sea of doubt. Spiritual shipwreck to an honest man or to any man unconsciously is doubly impossible. In all this, in the practical, what I want is not light but grace, to be taken up into a higher life and delivered from the treacherous self. I tell you Wolstenhome, I have no dread of God, no fear of the Devil, no fear of man, but my head swims as I write it--I fear myself. Oh God deliver me or I perish! There it ends. To this I come back: "Beloved, if our heart condemn us, God is greater than our heart and knowth all things."⁴

James Ward eventually overcame his difficulties, but only after he was convinced that he had discovered evidence indicating that some spiritual force was promoting the

evolutionary development of the material world. Like a number of Victorian thinkers, Ward spent his life in a quest for scientific proof which he could use to confirm the objective validity of his own moral impulses. This close relationship between Ward's emotional needs and what he took to be truly scientific judgments about the natural world was not uncommon in the thinking of a significant section of England's academic and scientific community. Ward's life illustrates that overpowering need, which affected a number of Victorian and Edwardian agnostics, to justify personal moral impulses as the inward expression of nature's intrinsic ethical disposition. Like the eighteenth century philosophes these agnostics felt certain that their sense of right and wrong must somehow or other derive from their intuitive grasp of natural law. Science, they trusted, would expose the error of Huxley's views; it would reveal that man was not a dumb creature wholly at the beck and nod of blind reflexes, but a being who could by means of his transcendent reason dimly make out the grand design of a farseeing Providence.

Although one might well have doubts whether or not the intelligent public took Huxley's views seriously enough to have worries about being mere automatons, it is certain that there was indeed a widespread apprehension about the moral implications of materialism. Admittedly, Huxley's efforts to found a materialist psychology failed because he was forced to deny, in spite of everyone's experiences to the contrary, that a man's feelings and judgments had any effect on his

behavior. Thoughtful Englishmen dreaded, nonetheless, the eventual success of the materialist doctrine. Perhaps, the day would come, they feared, when someone with a more sophisticated understanding of physiology would show how a person's thoughts and actions were truly the product of natural forces, and thereby achieve in psychology something comparable to what Darwin had accomplished in biology. They shrank before the prospect of a world where neither absolute good, nor absolute evil existed. They feared a life devoid of the welcome solace of knowing that their lives were both right and good inasmuch as they complied with the dictates of a higher authority, a power whose will was revealed by the evolutionary aspirations of emergent nature. Faced with the alternative that all of man's hopes, dreams and desires might be no more than some absurd permutation of matter, not a few concerned Late Victorians wondered whether science must necessarily be committed to the materialist outlook.

Behind the critique of scientific materialism put forward by James Ward, it is possible easily to detect Ward's fundamentally spiritual concern. Ward contended that natural science had erred in denying the subjective, moral and human elements in evolution. He hoped that ultimately evolution would mean the eradication of moral evil from the world. Since there is nothing in nature equivalent to original sin, evil, he explained, must be only a kind of disorder, the confusion of not knowing where one's real self-interest lies. Thus evil is identical with irrationality. While an

individual may observe that the natural world exhibits a definite physical progression, arising from the conflict between the species, he may also discover that of greater importance than Natural Selection is man's advancement from "rational selection." By rational selection, Ward meant the compelling desire within a man to see the greater dominion of the ethical, so that, in his words, "justice may be supreme." Ward believed that this desire gave evidence of spiritual depths in man, unrecognized by the biological egoism of natural selection, which, he regretted, had lately and unfortunately spawned the Nietzschean ideal of the Heldenmoral.

Ward argued that the experimental psychology of the nineteenth century ignored a fundamental epistemological problem: how a person legitimately distinguishes between his own subjective consciousness and what appears to him as the objective source of sensation, in other words, the Cartesian dualism of mind and body. Generally most philosophers and psychologists had attempted to resolve this Cartesian separation from one of two distinct positions. Either all reality was mind, the conclusion of the idealist, or all was matter, the materialist's solution. In one respect the two views are similar, for both are monisms; they reduce all existent phenomena to the actions of single entity. Some, therefore, equated psychology with the analysis of introspection, while others thought psychology to be synonymous with the measurement of physiological reactions.

Ward disagreed with Huxley and the materialists, and emphatically rejected their assumption that matter must always be the sole causal partner in the duality of mind and body. Ward's contribution to psychology was to assert unequivocally that physiological changes were not the whole source of consciousness for, in his view, the mental attitude of the organism, itself, could effect physical reactions.

As early as 1876, Ward had criticized the founder of psychophysics, Gustav Fechner, on the same grounds.⁶ Fechner had proposed that the subjective experience of a sensation related proportionally to the intensity of the stimulus. Ward, however, argued that in the experiment from which Fechner had derived his conclusion, the subject occasionally misjudged the threshold-intensity of the stimulus. The experiment indicated to Ward that subjective perception had played an active rôle in the experience of the sensation, therefore he concluded that physiological reactions were not entirely independent of consciousness. Fechner had compensated for this subjective error by statistically eliminating it. Thus the mathematical relationship of a stimulus to a sensation might express only the law of averages, and was not necessarily a description of actual instances.

Later in Ward's Gifford lectures of 1896-98, this failure to discriminate between an actual event and the hypothetical generalization of many similar events and in this case compressed into a scientific law, drove him to attack many of the fundamental premises of nineteenth century science, and in

particular the theories of Herbert Spencer.⁷ Ward treated with much suspicion materialism's efforts to reduce all phenomena to the cause-effect reciprocity between matter and motion. As Ward explained, for the most part, the idea of an effect resulting from a cause actually tells us little, since we can never be certain which is the cause and which is the effect. Thus while the physicists speak of causal relationships existing between masses, there can, in fact, only be a cause when the action is determined by an external agent and when the series of resulting actions follow one another in a definite time-order sequence. Besides, the physicists had tended to confuse a statistical conception with reality.

Matter is not mass, Ward stated:

. . . a 'mass' means merely a concrete number, i.e. the term stands for a specific quantity not for a concrete thing; mass is a mathematical conception devised solely to facilitate calculation and was never meant to aid rational insight or understanding.⁸

Ward thought that the opinions expressed by Spencer and the great majority of naturalists were misleading. Ward believed their vaunted laws of science to be little more than subjective fictions. The scientists, he explained, seemed to want to avoid discussing the realities of matter, and emphasized instead only certain quantifiable, spatial and temporal relationships. They had mistaken the part for the whole, qualities for substances; these laws of science reflected not the necessary properties of existent matter, but only an order imposed upon nature by the human mind.

Here Ward was repeating, in essence, the English Hegelians' critique of materialism which had sprung from their notion of the "concrete universal." The Hegelians distinguished between a single, observable fact and the general class of similar facts or things under which it could be grouped. An example would be the scientific universal of water freezing at 0°C and the concrete reality of an actual pond freezing.⁹ The scientific statement had eliminated numerous unknown and nonquantifiable variables in order to put into words the abstract truth found by emphasizing the properties common to all bodies of water. This difference between concrete realities and scientific abstractions, recognized by Ward and the English Hegelians, played an important part in each of their separate attacks upon scientific materialism, for, they concluded, the mind's obvious ability to construct these abstractions indicated the falseness of the materialists's assumption that consciousness was always the passive result of sensation. Furthermore, these critics also questioned whether or not the single instances of a phenomenon, collectively treated by scientists in an all-inclusive generalization, might not in some cases be exempt from the comprehensive statement. Naturalists--so went the argument--ought to replace the too rigid laws of science with less stringent hypotheses, since that determinism in nature which scientists claim to have discovered may, in fact, not exist.

Our conception of space is not, Ward noted, based

solely on the sensory awareness created by our movements, an observation made long ago by Kant. Kant had believed that geometers were able to talk of pure or abstract space which consisted of a system of abstract relationships, known independent of all sensory experience. If this were true, then a person could conclude that he has already the capacity to abstract the particular type of knowledge, thus, "Active experience becomes the basis of geometry, not geometry of experience."¹⁰

Ward agreed with Kant; one must not mistakenly identify perception wholly with sensory experience. As a consequence, every spatial or temporal relationship actually depends upon both objective and subjective factors which are products of the individual's ego and its powers of organization and coordination. Therefore science--Herbert Spencer's assertion to the contrary--is not a true description of reality; science is only an explanation which may always at some time in the future be superceded by a better explanation. Science is not certainty!

James Ward was familiar with the work of the Austrian physicist and philosopher of science, Ernst Mach, and Ward's arguments closely parallel a number of those found in Mach's book of 1883: The Science of Mechanics; A Critical and Historical Exposition. Mach questioned the two premises of scientific materialism: that all phenomena could be reduced to the laws of mechanics, and that science would eventually offer a complete explanation for every occurrence within the

universe. Science, declared Mach, could give no real explanation for natural events, it merely described phenomena. And the so-called laws of science were not facts but sensory observations, abbreviated and generalized. In the scientific understanding of the world, mental activity, itself, played an eminent rôle in simplifying and categorizing the observations from which science formulates its hypotheses. Mach believed it fruitless to talk of an objective, external, material world; in truth, there existed only one's subjective perception. Consequently, scientific explanation consisted of nothing more than perceptual experience.¹¹ These criticisms, of course, are still basic to modern phenomenologists and logical positivists. They would agree with Mach that true reality must always remain unknowable; a man sees only reality's manufactured appearance through the subjectivity of his perception. Ward therefore saw the function of psychology to be not the hopeless task of measuring non-existent sensations, but rather to discover our own feelings and awareness, our existential reality. To Ward, the most significant element in any act of cognition undoubtedly is the very individual who is currently having that experience. Actually what Ward meant here is that an individual not only has ordinary consciousness, the perception of the world around him, he also had a distinct self-consciousness,¹² the awareness or consciousness of himself as the subject of those experiences which he is currently undergoing.¹³

To clarify this point Ward divided the self into the "Empirical Ego" and the "Pure Self." The Empirical Ego consisted of a man's awareness of his own feelings, such statements as "I am sad." These statements describe the Me (object) of which the I (subject) is conscious. For the most part the Empirical Ego was a product of the awareness of organic sensations, thus it likely was the source of abnormal behavior. Ward thought that the moods created by physical sensations somehow become imbalanced and as a result one particular mood or group of related moods occupy and dominate the Ego's consciousness of itself and the world surrounding it. This form of domination exercised over the whole field of consciousness, Ward found particularly noticeable in cases of multiple personality.

On the other hand, the Pure Self derives from imagination, one's ideals and reasoning ability. The "Pure Self" is the:

. . . concept which every intelligent being more or less distinctly forms of himself as a person, M. or N., having such and such as character, tastes and convictions, such and such a history, and such and such an aim in life. The main instrument in the formation of this concept, as of others, is language, and especially the social intercourse that language promotes.¹⁴

The "Pure Self" relates to its environment through a process known as "introjection," a term Ward derived from Richard Avenarius, the co-founder, along with Mach, of Empirio-criticism. By the term introjection, Avenarius meant the process whereby an individual alters the data of sensory

experience to conform to his existing preconceptions. Avenarius believed that the brain has the tendency to want to preserve a state of equilibration with the environment in order to minimize tension or excitement. Should, however, the environment appear too threatening, the brain then modifies its conceptions in such a way as to neutralize the dangerous stimulus in the simplest possible manner with the least possible change in its accustomed attitude.¹⁵ This, Avenarius believed, was the source of the animism of primitive man and ultimately of the belief in God. Men, even scientists, are naturally anthropomorphic and attribute their own qualities to nature. And like Freud, Avenarius saw mind as a tension-reducing energy system with complete equilibration (Fechner's "principle of constancy"¹⁶) as its final goal.

This dualistic nature of man; the conscious self and the "presented" or experiential self was previously recognized by Kant. Compare Ward's discussion with that of a modern student of Kant:

In a situation where we attend to, or judge on the basis of, some item in our sensible experience, we naturally distinguish between the attention or the judgment and the sensible presentation of the item. Kant insists that if we talk of knowing that we are attending to, or judging, something, then we should also distinguish between the judgment about our attention and its sensible presentation.¹⁷

Although Ward accepted Kant's distinction, he thought that the dualism implicit in experience was resolved or "transcended" by the individual. Firstly, a person learns to discriminate between himself and his environment; next to

separate the present ideas from past memories; then to control his desires through reason, until finally there is a focusing on an,

. . . image of the self into the conceptual identity of a self conscious of itself as a person, and capable of saying "I am" . . . activity, at first impelled by appetite, then solicited by desire, manifests itself at length as free self-determination.¹⁸

Because he believed psychology had tried to ignore this vital fact of life, conscious self-determination, Ward was convinced that much of the responsibility for the unhappy ignorance about man's spiritual being, evidenced by an age which took Nietzsche as its prophet, lay with psychology's faulty tenets. In his opinion, naturalistic, physiological psychology had tried to ignore subjective factors in order to build upon the more easily calculable (hence "scientific"), it had consequently neglected the real nature of man. In short, man, like all other living creatures, interacts with his environment according to how he can exploit it in order to realize his ends, therefore his attitudes must of necessity reflect whether or not he, himself, feels certain aspects of his surroundings to be either a help or a hindrance to his pursuit of survival and self-betterment. This led Ward to conclude that those apparently objective laws and causal relationships in nature were nothing of the kind; they were, in his view, only the anthropomorphic constructions and conceptual schemes of men. As he explained it, "Mind is not the impotent shadow of Nature as thus shaped forth but this shaping is itself the work of mind."¹⁹

Ward fully acknowledged his debt to Avenarius for resolving the apparent dualism between the subjective and objective components of experience. Avenarius's notion of "introjection" meant that while an individual easily believes that his own ideas are somehow an objective creation of his sensory perception of the environment, he also assumes erroneously that the ideas of everyone else arise wholly from subjective considerations.²⁰ Actually, since others are reacting to the same situation and are meeting with something which approximates the same awareness that we are having ourselves, psychology can therefore study these "transsubjective" aspects of experience, thereby eradicating the false dualism, the confusion between subject and object, which besets psychology.

Furthermore, Ward argued, these universal or "transsubjective" features which are found to be characteristic of experience, are a direct refutation of naturalism, for the premises of naturalism implies a system of matter and law beyond man's control. Ward understood the issue in this way: if certain natural laws entirely regulated the course of the universe, then man's ego ought itself to reflect this order of things. As a result, the ego would be nothing more than the passive instrument of sensation, and mankind would be without the capacity, the independent judgment, or imagination to take an active rôle in shaping and manipulating its surroundings.²¹

Thus Ward took from Avenarius' line of reasoning the judgment that every experience indicated an inherently subjective phenomenon. From this all-important conclusion Ward gained support for his conviction that man cannot be understood as if he were merely a product of blind, environmental stimuli. Through his very subjectivity man gains the awareness of his true moral being was the substance of Ward's argument. He believed that this knowledge had shown him the way to resolve the apparent contradictions between the separate truths of religion and science. He was certain that it was this subjective, visionary element in man that disclosed Nature's everpresent yearning towards the attainment of a moral ideal.

From what he saw as the contingency evident in the universe, Ward reached the conclusion that Nature was, at present, still evolving--teleologically. In his explanation, the seeming determinism of Nature only reflected the statistical constancy of large numbers; Nature was unpredictable in single instances. Hence, the possibility of new forms and relationships of an even greater complexity and consequent improvement always remained. This applies equally to individuals; since they can never wholly foresee the accidental consequences of their actions, they may also learn new, more favourable ways of reacting with their environment; and this is progressive evolution.

Ward judged that his view were in agreement with the Pluralists, who argued that God has limited Himself in order

to lend man a portion of his causation. God assigns the talents; His creatures they may use or they may misuse them--the discretion is theirs.

Now Ward found a curious proof for the existence of God. In essence, his argument was that the best of men always recognize a self-imposed moral ideal through which they can identify their own interest with the highest good for all men. Although Ward accepted that some might argue that this ideal could not always be justified on logical grounds, this was only an appearance for,

Either the world is not rational or man does not stand alone and this life is not all. But it cannot be rational to conclude that the world is not rational, least of all when an alternative is open to us that leaves room for its rationality--the alternative of postulating God and the future life.²²

And as our moral ideals lead us to a faith in God, they also provide us with the assurance of a future life. Our ideals demand the existence of a soul. If man as a rational free agent has chosen some belief for a moral ideal, it must, of necessity, exist; or as Ward in a burst of inspiration instructs,

Humanity already has yearnings and aspirations that the flesh-pots of Egypt--material and temporal well-being--can never content; is it, impelled by these longings for higher things destined to wander aimlessly in the wilderness forever unsatisfied?²³

It is important not to confuse Ward's rational theology with some form of Idealism. He believed the universe possessed manifold forms and did not have the unity of one being or substance. Ward described his outlook as a combination of

both Pluralism and Theism, declaring that the universe actually existed in two aspects: "it is One and it is Many." The universe contains a multiplicity of self-determining entities, organic and inorganic, of varying degrees of consciousness all seeking to realize their ends: their perfection of form, their idea of the good. These entities or monads (Ward owed his solution to the problem of the contradictory monisms of the idealists and materialists to the philosophy of Leibniz) exhibit a definite progression or evolution which on earth will reach its final harmony in the "perfect commonwealth" of men where all will co-operate and none conflict; all becoming one in the pursuit of the true and the good.

But for Pluralism to be fully rational, for the universe's "living orbs" to resolve in the higher synthesis, explained Ward, there must also be a hierarchy of intelligences, a hierarchy which culminates in a Supreme Being. God because of His love for the world has renounced His omnipotence, and has allowed the "Many" the freedom to determine their ends. It is this love that gives the true unity to Pluralism. Theism and Pluralism are one: the synthesis of reason and faith, therefore,

We cannot live or move without faith, that is clear. Is it not rational to believe in the best, we ask; and can there be a better?²⁴

In this way, Ward came to the reassuring deduction that faith is rationality, and reason is piety. He was confident that by recognizing the fact of subjectivity, especially the still small voice within, a man could see not only a refutation

of materialism, but could glimpse the workings of a higher power. This sort of reasoning was not uncommon among Late Victorian intellectuals; witness Frederick Myers' theory that the subconscious ("subliminal") mind was evolving in response to telepathic stimuli broadcast by the World Spirit. Again, like many other intellectuals in the period, Ward felt a strong need to assert his particular moral principles as the only rational alternatives. Psychology became for him a means to put the stamp of approval on what were essentially the religious convictions of his childhood. Using an amalgam of Empirio-criticism, Hegelian dialectics and Sunday School dogma, Ward explained how conventional morality and rationality are one and the same.

Ward thought that the key to self-actualization, which is supposedly a man's awareness of his true moral being, lies in the "transsubjective" nature of experience. Through participation in society a person transcends his isolated self; his transsubjective knowledge allows him to establish what is objectively true for all. Thus he is able to distinguish his own private and subjective perceptions from the general fund of objective knowledge. In this way he attains self-consciousness.

In Ward's view, most social theorists, not excluding Locke, Hobbes and Rousseau, had led themselves astray by assuming that a man was a rational being, antecedent to society. On the other hand, Hegel was essentially correct

to argue that society was an organism through which social-man became rational and self-conscious; "the more intimate the unity of the whole the more complete the differentiation of its members."²⁵ If followed, then, there could be no conflict between society and an individual's self-interest. While many still pursue egoistic goals, there is a growing realization that real self-interest lies in the social good--what T.H. Green had called the "claims of the common humanity."²⁶ Ward agreed with Green that self-realization meant not the apparent self-interest of egoism and greed, but the morality of socially constructive behavior. In this way the "concrete" individual through his sharing in the moral obligations of society attains the "universal"--rationality.²⁷ What will be the rational ideal gained thereby, Ward asked?

The answer may be very brief. "Thy Kingdom come, Thy will be done on earth as it is in heaven." To imagine this petition answered is to imagine humanity animated by a single wise and righteous will: every citizen would work harmoniously with every other, each one doing the highest and the best of which he is capable. The will of the many and the will of the One would accord completely. . . .

The Kingdom would take the place of the ideal King: there would be a perfect commonwealth, but strictly no monarch other than 'the objective mind' sovereign in every breast.²⁸

Ward was one of those post Darwinian intellectuals, described by Cockshut, who tried to shed what they believed to be Christianity's untenable dogmas, while simultaneously evolving a new set of ethical principles, principles through which they hoped to retain certain elements of their former

convictions, particularly a faith in the progressive fulfillment of an inherent moral order. In this way, a Victorian intellectual could legitimately renounce the uncomfortable doctrines of his childhood religion without betraying its ethical ideals. He would not longer need to ground his faith on a set of dubious tenets and questionable stories, for that faith would now be corroborated by the incontestable facts of evolutionary progress. It seemed that the universe was not, as Mr. Carlyle feared, a blind, mechanistic clockwork and man a mere cog in its great workings.²⁹ Thus if scientific "fact" shattered the foundations of the Puritan world view, it also seemed capable of rescuing moral freedom from the dim prospects of Calvinist predestination. The more optimistic--and Ward was one--were certain that science would one day prove that those ethical imperatives felt so strongly by many Late Victorians, were a natural and intrinsic aspect of human evolution.

Others could not share Ward's comforting convictions. They found it difficult to accept that the subjective aspects of perception and understanding were entirely reconcilable with what they conceived of as rational thinking. Though they agreed with Ward that consciousness did influence behavior, they were less than certain that one could legitimately assume that mental processes always conformed to the laws of logic.

FOOTNOTES TO CHAPTER II

¹G.M. Young, Portrait of An Age, London, Oxford University Press, 1960, p. 110.

²A.O.J. Cockshut, The Unbelievers, London, Collins, 1964.

³v. the discussion of "earnestness" in W.E. Houghton, The Victorian Frame of Mind, New Haven, Yale University Press, 1951, pp. 218-262.

⁴A letter quoted by Ward's daughter in her biographical introduction to a collection of Ward's essays. O.W. Campbell, "Memoir," Essays in Philosophy James Ward, Cambridge University Press, 1927, p. 46.

⁵W.R. Sorley, an intimate friend and author of the notice on Ward in the Dictionary of National Biography, described Ward's family as Congregationalists, but Calvinists in their theology. According to Sorley's account, Ward completed a B.A. in theology at Spring Hill College in Birmingham and then travelled to Germany to study philosophy under Rudolf Lotze. In 1871 Ward, although not officially ordained as a minister, accepted a call to preach at the Emmanuel Congregation chapel at Cambridge. But Ward, during his short ministry underwent a crisis of belief, which caused him to reject institutional religion. Thereupon he entered Cambridge to pursue his interests in philosophy and psychology. Nevertheless, Sorley had the opinion that Ward always retained much of his early belief in spiritual values and never tended really towards secularism or agnosticism. W.R. Sorley, "James Ward," Dictionary of National Biography 1922-1930, ed. J.R.H. Weaver, London, Oxford, reprinted 1965, p. 885.

⁶James Ward, "An Attempt To Interpret Fechner's Law," Mind, vol. 1, 1876, p. 459.

⁷In the eighteen-eighties Lord Gifford founded and endowed a lectureship in the Scottish Universities. The lectures were to have as their subject matter, "Natural Theology" and demanded "an inquiry into the ultimate ground of being, pursued in a spirit of scientific philosophy, and expressly renouncing supernatural sources of knowledge: enquiry into existing nature, and attributes of the Divine, the relations in which man and the universe stand to the Deity, the meaning of existence etc." R.M. Metz, A Hundred Years of Philosophy, London, George Allen, 1938, p. 779.

⁸James Ward, Naturalism and Agnosticism, London, Adam and Charles Black, 1906, vol. 2, p. 86.

⁹A.J.M. Milne, The Social Philosophy of English Idealism, London, George Allen and Unwin, 1962, p. 21.

¹⁰Ward, Naturalism and Agnosticism, vol. 2, p. 142.

¹¹This explanation of Mach's philosophy, often termed neo-positivism or empirio-criticism, has been taken from Phillip Frank, Modern Science and Its Philosophy, Cambridge Harvard University Press, 1949.

¹²In Ward's somewhat obscure words: ". . . the first and most fundamental fact yielded by the analysis of this experience we have found to be its reference to a subject or self that has it. The knowledge of this fact we call self-consciousness, meaning thereby not the consciousness that we attribute to every self but the consciousness of this consciousness; a consciousness to which only some experients attain, to which we only gradually attain." James Ward, Psychological Principles, Cambridge University Press, 1918, p. 361.

¹³Although Ward's major work in psychology was not published until 1918, many of its important chapters consisted of papers published between 1880 and 1893, including information from Ward's "famous" article on psychology for the ninth edition of the Encyclopaedia Britannica.

¹⁴J. Ward, Psychological Principles, p. 368.

¹⁵N. Smith, "Avenarius' Philosophy of Pure Experience," Mind, vol. 15, 1906, p. 27.

¹⁶S. Freud, Beyond the Pleasure Principle, New York, Bantam, 1959, pp. 23-25.

¹⁷G. Bird, Kant's Theory of Knowledge, London, Routledge and Kegan Paul, 1962, p. 170.

¹⁸Ward, Psychological Principles, p. 376.

¹⁹Ward, Naturalism and Agnosticism, vol. 2, p. 247.

²⁰Ibid., p. 172.

²¹Ibid., p. 169.

²²James Ward, The Realm of Ends or Pluralism and Theism, Cambridge University Press, 1920, p. 421. The Realm of Ends was Ward's sequel to Naturalism and Agnosticism. These

Gifford lectures were delivered at the University of St. Andrews between 1907-1910.

²³Ward, The Realm of Ends, p. 425.

²⁴Ibid., p. 453.

²⁵Ibid., p. 124.

²⁶Quoted by Ward, The Realm of Ends, p. 134.

²⁷A.J.M. Milne, The Social Philosophy of English Idealism, London, George Allen and Unwin, 1962, p. 51.

²⁸Ward, The Realm of Ends, p. 136.

²⁹W.E.Houghton, The Victorian Frame of Mind, New Haven, Yale University Press, 1957, p. 50.

III. JAMES SULLY AND THE STUDY OF ILLUSIONS

In the thirty years or so after T.H. Huxley's address to the Belfast meeting, British psychology found itself trying to cope with a peculiarly difficult task. Though Huxley had denied the efficacy of consciousness, psychologists were still willing to argue that consciousness could be treated in a scientific framework, even if Idealists begged to differ. And not all psychologists saw the issue as a mere choice between Ward's palpable mysticism and Huxley's atavistic Behaviorism.

For instance, one Late Victorian psychologist, James Sully believed that science could offer a fully rational explanation for subjective, moral values, without resorting to a supernatural Deity. Sully accepted Herbert Spencer's Lamarckian understanding of evolution, and contended that the rational judgments of one generation become the moral values of the next. In Sully's words,

It is by this agency that each generation transmits (on the average) a slight increment of brain-power to its successor, and that the continuous exercise of intelligence, of moral feeling, and so forth, through the succession of generations leads to a perceptible improvement of these powers.¹

Hence, Sully could discern no dichotomy between morals and rationality. Still, the problem of subjectivity had a wider dimension than one of simply justifying morals as another form of reason. Sully's lifelong concern with studying illusions and dreams led him to conclude that apparent irrationality derived from the distorting effect of man's

expectations on his perception of the external world.² To illustrate, a man spending the night in a house which according to rumour is inhabited by ghosts, might easily experience an illusion of what he is anticipating. Hallucinations exhibit the same process, excepting that the "representation" plays an even greater rôle, dominating consciousness completely. Similarly, in dream states and cases of insanity a man's perceptual ability is also overcome by memories (representations) which the individual in these situations cannot alter to conform to the real nature of sensory-objects.

Following in the tradition of the Enlightenment, Sully accepted that truth could be found in the universal qualities of all men's experience. Thus, Sully believed there existed a way by which a man could overcome the blind and hazardous judgments which his illusions entail. He must check his subjective tendency to false and inaccurate statements by trying to ascertain which are the features in any act of cognition that he shares with the majority. Secondly, he must then attempt to formulate these common perceptions in "accurate definitions" and "universal propositions" in order to obtain both the fruit of the individual imagination and a realistic standard which would act to curb any possible threat from a too bizarre subjectivity.

Cultural evolution was in a sense inevitable, Sully surmised, for error and illusion have only negative utility; they must of necessity bring the individual into some form

of conflict with his environment. Because of this fact every new scientific truth which has the advantage of presenting itself as a better picture of reality (a more accurate perception), will manage to survive the public's initial antagonism and will eventually become a part of the common understanding. Whether they have originated from scientific discovery or in the imaginative intuitions of genius, private beliefs must at some time confront the intellectual conventions of society. This clashing of view will either demonstrate the illusionary foundations of the individual judgments or will show their pragmatic value from their "fitness to external conditions and practical efficacy," and sooner or later will come to be the new standard against which educated men can test their own convictions.³

By providing a biological support (Spencer's theory that a man's rational understanding through continual exercise and repetition becomes a habitual assumption transferable to his descendants) for moral development and social co-operation, Sully forged Darwinism to Utilitarianism in a series of dialectical conflicts in which organisms struggle with their environment, reasoned self-interest opposes passionate egotism, and objective truth overcomes subjective error. At times, this conflict even occurs between civilized man and his up-to-date society. Though his position seems similar to that of the Social Darwinists, it really reflects his Utilitarian heritage of radicalism. For like the radical, he places the

more highly evolved individual in opposition to the obsolete "belief-systems" of his society. The genius with "prenatural sensitiveness of nerve" and a finer perception of reality must be prepared to reject the conventional truths of his society and rely on his personal experience, rather than accept either the unreasoned assumptions of the "multitude" or the knowledge passed on by the "traditional agencies of instruction."⁴

Still, he did believe it possible that the interaction between the individual and society was to the mutual advantage of all. To apprehend reality, it is necessary to compare sense-experiences. Through the medium of a common language and by the formulation of experience in logical propositions and definitions, the "truer" interpretation of the world can become common knowledge. One can eliminate, by subjugating the forces of passion and impatience and by directing attention and volition to the pursuit of truth, the possible contamination of the intellect by society's unreasoned creeds.

Here there is still a desire and a will to believe, only that it is a will to believe what is true, that is to say, a volitional process initiated and sustained by a logical feeling or a regard for truth as such.⁵

Thus a person realizes his moral development when he learns to hesitate before responding to his impulses towards immediate gratification, and instead begins to pursue the enduring ends of health, reputation and knowledge. Moreover, beyond even this form of self-interest there is the common

good; eventually the individual will find his "motive-idea" in the exercise of self-control for the welfare of the community. This is partially attained as one acquires motives answering to the common interest--the furtherance of knowledge and the creation of art. The principles of "duty" and "benevolence," the altruistic concern for humanity, represent the highest state of conscious self-control and moral development.

Thus a man restraining appetite, or speaking the truth in the face of serious risks, may be said to be applying to himself the rule or maxim 'Be temperate,' 'Be truthful.' In this way, as moral development advances, we pass from mere obedience to an external authority to the inward voice of reason and conscience.⁶

Accordingly, James Sully, while following a very different line of thought than Ward's, reached similar conclusions. For both, the moral element in consciousness expressed the quintessence of rationality. For both, moral values represented the vanguard of evolutionary development. And both were not ashamed to say that their values were the very ones shared by the majority of decent men. Morality, social harmony, rationality, all were merely different facets of the same essential verity; intelligence worked hand in hand with feeling to bring to mankind a knowledge of this happy truth. Thus, by accepting Herbert Spencer's understanding of evolution, James Sully escaped the disconcerting realization: that the dictates of conscience could not be explained as the rational responses to objective conditions.

FOOTNOTES TO CHAPTER III

¹J. Sully, The Human Mind, London, Longmans Green, 1892, vol. 1, p. 139.

²J. Sully, Illusions, London, Kegan Paul, 1881, passim.

³Ibid., p. 339.

⁴J. Sully, "Genius and Insanity," The Nineteenth Century, vol. 17 (Jan.-June 1885), p. 968. Sully researched the backgrounds of a number of "geniuses" and found that most of them gave little credit to the influence of formal education upon them. v. J. Sully, "The Education of Genius," The Living Age, vol. 188 (Jan.-March), pp. 558-565.

⁵J. Sully, The Human Mind, vol. 2, p. 277.

⁶Ibid., p. 268.

IV. G.F. STOUT AND THE PROBLEM OF BELIEF

If virtually all psychologists were fully prepared to defend the efficacy of consciousness from the materialist's attack and to declare their discipline's independence from physiology, not all felt that it was necessary to equate conventional morality with rational thinking. In fact, one psychologist, George Frederick Stout came to very much the opposite conclusion: that subjective desires, moral or otherwise, had the tendency to inhibit rational thinking.

Like his former professor at Cambridge, James Ward, Stout was attracted by the writings of Richard Avenarius. Despite the continued opposition of idealists and materialists to the independent existence of psychology, he discovered that Richard Avenarius had redefined the task of psychology in such a way that it had been given a new lease on life.¹ Stout subscribed to Avenarius' axiom of the interdependency of psychical and physiological processes and concurred with Avenarius' contention that the ultimate truth of this proposition was, in fact, irrelevant. A psychologist, Stout agreed, must accept the validity of this premise, even if only for its usefulness in procuring objectively verifiable results.²

Avenarius, himself, believed the task of what he termed a "scientific philosophy" was merely to give the best description of a psychological event, and not attempt either to prove or to refute any metaphysical assumptions. To this end, Avenarius listed his two "axioms" of Empirio-criticism which

he used to justify his psychological theories: first, every individual necessarily interacts with a complex, physical environment; and second, all philosophic or scientific thought can be reduced to more simple and general intellectual functions.

Although these are the root principles of Avenarius' psychology--and Stout's--its nucleus was the conception that the nervous system was a mechanism which regulated the creature's vital energy, something akin to the modern notion of a homeostatic device. Avenarius held that the environment occasions the expenditure of energy by the organism. However, at the same time, the environment also furnishes the organism with a substance to replenish its reserves of energy with the result that the nervous system again reaches a balance between its energy income and expenditure.³ But, in truth, a state of real equilibrium is never attained because the environment is altering continuously and therefore imbalancing the equation--Avenarius' "vital difference." The organism consequently becomes active trying to restore its equilibrium; this behavior he termed the "vital series." In this way, Avenarius believed that he had finally done away with the usefulness of consciousness as a postulate for the psychologist.⁴ Besides, he reasoned, since no substantial proof either confirmed or denied the existence of consciousness one ought to learn to describe psychologic events without resorting to something so ambiguous. Stout was not willing to go as far as Avenarius in this respect.

On the whole highly sympathetic to Avenarius' arguments, Stout agreed that a time had come for psychology to dispense with metaphysical preconceptions. In his estimation Avenarius had been correct to infer that judgments and beliefs have ultimately a biological, hence subjective, origin. An individual, it seemed, seeks to attain some goal which will eventually result in an increase of pleasure and diminution of pain; the desire to gain this end necessarily results in his belief in the reality of that end. This course of events arose from desire's capacity to reinforce a man's conviction about a previously uncertain opinion, thus making it now a firmly held belief. Desire had the effect of directing attention away from all contrary evidence. In extreme cases this resulted in an impulsive, undiscerning passion, or in Stout's phrase: "overwhelming conatation." Furthermore, in addition to monopolizing one's attention, desire helped an opinion resist conditions which might negate it. Specifically, a man, Stout thought, will find it difficult to rid himself of a questionable prejudice, since to acquire a fresh belief would mean the destruction of those hopes associated with his initial belief, and this would frustrate his desire and produce an imbalance of pain over pleasure. A man's convictions were also to some extent dependent upon the vigour and activity--the potential "conative strength"--of his mind. This led Stout to conclude that the true believers and likely converts were to be found among the rising generation: "Youth is sanguine; age is sceptical and hesitates to adopt new views."⁵

In essence, however, belief is a simple matter of neural economics--the utility of pleasure and pain. A man believes what will allow him to increase his pleasure and minimize his pain. He believes what he rationally, or for that matter irrationally, presumes to be his self-interest--one might almost say his "~~felicific calculus~~" In this respect, "counter experiences" tend to oppose the inertia of obsolete beliefs, since "counter experiences" can force a man to revise his existing beliefs in order that he might include them in his understanding and thereby find a more efficient way of fulfilling his rational self-interest. The other chief factor, in Stout's view, limiting the variety and content of belief, is the precise nature of the environment, for the environment imposed the inevitable limitations upon a person's activity and thus, in effect, determines the instrumental value of any belief.

What had Stout accomplished through his adoption of Avenarius' "bio-psychology"? In the first place, Stout used it to cut through the gordian knot caused by the apparent dualism between mind and body. Though, it was impossible for Stout to demonstrate exactly how consciousness was related to physiological states, he agreed with Avenarius that psychology must assume in any event that just such a relationship between thought and action took place.⁶ Unless this assumption was made, against all objections from philosophy and physiology, the further development of a naturalistic psychology would,

Stout believed, be almost completely thwarted. Of immediate importance to Stout for its usefulness in vindicating the right of psychology to be independent from metaphysics and physiology, the viewpoint of Avenarius also suggested an important revision of the Darwinian hypothesis. No longer was it necessary to link animal behavior to a primitive sensationalism, whereby every action, like a reflex, proceeded automatically without the intervention of thought. Avenarius explained away the absurdities of Huxley's doctrine, and at the same time showed how an animal's adjustment to its environment was both a psychological and biological event. An animal or man experiences a form of tension (pain) which is the subjective expression of a physiological fact (the expenditure of energy) the animal then makes the appropriate adjustment, generally the repetition of a successful past response.

It would, however, be a mistake to assume that this revision of Darwinism met with a wholly favourable reaction. There were it appears some less than pleasant implications to the new outlook of the Empirio-criticists. In Avenarius' explanation all thought served the purpose of helping the organism to conserve energy. Hence it would seem a man had no concern with rational thinking as an end in itself, but only with developing an idea leading to a course of action, which would remove a state of tension. From this, Stout drew the conclusion that the origin of a man's beliefs lay with

his desires. Almost as with a sleight of hand, Stout blurred and then obliterated the timeworn distinction between "rational," "objective" judgments and imperative, "subjective" beliefs.

On the other hand, James Ward ignored the logic of Avenarius' bio-mechanical principle, and oddly enough, found in it a confirmation of his own moral intuition. Ward thought it futile to hope that science could ever apply its methods satisfactorily to human consciousness. He believed that it was impossible to discuss consciousness without recognizing the all-important part moral judgments played in a man's subjective concerns, and here Ward was prepared to see the influence of a Supreme Being, though It was not exactly the same God of the orthodox theologians. Accordingly, he felt that he was only being consistent to suggest that Science publicly acknowledge its defeat and thereafter bow before the truth of this great mystery which wedded the subjective mind to the universe's immutable moral laws.

Yet, if both Stout and Ward appealed to the axioms of Empirio-criticism to vindicate the independent existence of psychology, the inferences they drew were completely at odds. Subjectivity was not for Stout the comforting path to intimation of truth, but a persistent threat to rational thought. In other words, if a person's beliefs are, as Stout claimed, determined invariably by his subjective desires, is it then possible to ascertain anything which could legitimately be described as objective reality? Stout's apparent

willingness to accept the implications of Avenarius' restatement of the Darwinian outlook and to acquiesce in the divorce of what he conceived of as rational thought from any notion of an absolute moral standard warrants further treatment at this point. It is important to remember that while Stout's psychological opinions led him to conclude that subjectivity and rationality were almost always in opposition, most other psychologists still found it disconcerting to think that their firm convictions of a lifetime might be no more than a pleasure-giving illusion.

How is it possible to ascertain what is the real world? Stout believed that it was possible to make a legitimate distinction between reality and mere appearance, at least in the case of external objects, though this is difficult.

. . . when we are in error what is unreal appears to be present to consciousness in the same manner as what is real is presented when we truly know. While the erroneous belief is actually held, the illusory object seems in no way to differ for the conscious subject from a real object.⁷

Consequently, before an individual can distinguish mere appearance from reality he must first learn to suspend his will to believe, and thus allow the qualities of the relevant object to manifest themselves freely. One must try to know an object as a "thing-in-itself"; such is the case in experimental science where the chemist achieves his results independently of his volition. The chemist first becomes active so that he will be passive. In more precise language,

the chemist applies a test to a substance--here one can describe him as being active. He is thus permitting the independent nature of the substance in question to decide the results of his test; therefore in a real sense the chemist has now become passive.⁸ Essentially, the chemist's activity consists of shaping a question in such a way as to force an answer from the object being studied. In this context, Stout felt justified in distinguishing between what he described as a false "appearance" and a true "error." An appearance was simply a misinterpretation of an actual presentation--for example, an optical illusion. On the other hand, an error occurred when a person tried to make the characteristics of an object conform to some pre-determined system of belief. Hence if a statement is to be meaningful, an individual must decide its truth or falsity independently of his desire to either affirm or deny it.

Stout rejected the two usual solutions of either indefinitely suspending belief until more information was available, or as an alternative, relying on the probable truth of the proposition relating to the object. The first solution had the effect, Stout believed, of making any activity impossible; therefore a man must presume on the limited knowledge available, otherwise he must continue vacillating interminably. Furthermore, probability itself is dependent upon the truth or falseness of certain other beliefs, for instance whether or not a person has been correct

in his judgment about the merits of the competing interpretations, thus the possibility of error again emerges.

Our result, then, is: (1) That absolute suspense of judgment excluding even the judgment of probability is equivalent to suspense of action. (2) That the relative suspense of judgment which consists in affirming even chances does not suffice to determine action unless it is supplemented by other beliefs in which one alternative is preferred to others. Hence it appears that practical decision involves theoretical decision, and that we must constantly risk error by presuming on partial knowledge, if we are to live at all.⁹

Still, this apparent impasse can be avoided, Stout explained, returning to his central theme, by asking the kinds of questions which allow the object to reveal itself gratuitously. In particular, Stout was attacking the argument of the Idealist, F.H. Bradley, who suggested that every proposition must be conditioned; there cannot be anything absolutely certain unless there is also a total knowledge of the universe, the conditions limiting the proposition. Consequently, Bradley argued, this inescapable ignorance makes the truth of any proposition highly questionable. Stout begged to differ:

The truth of judgments concerning what is real is not logically dependent upon the truth of judgments concerning 'Reality' with a capital R.¹⁰

What impresses one about Stout's outlook is its strong pragmatic temper. Absent is the search for some authoritative truth which claimed to express the moral laws of the universe, for in Stout's understanding truth cannot be seen as anything like a moral commandment. Truth is relative, a partly

subjective assumption, an intellectual tool used by a man to realize his ends. And man is a problem-solver whose ultimate concern is gaining pleasure while avoiding pain. Stout held that his views were essentially those expressed by the English Pragmatist, F.C.S. Schiller, at least the,

. . . view that all adequate verifications involves the successful use of propositions as postulates for the guidance of our activity. Truth must therefore be, in some sense, relative to our emotions, desires, purposes, etc.¹¹

This concern with the practical ways of verifying statements, what the logical positivist, Karl Popper has called "deductive testing," is an aspect of Stout's thinking that gives it a peculiarly modern flavour.¹² In the modern empirical outlook, subjectivity, rather than being a well-spring of mystic truth, is the constant source of error in accurate observation.

James Sully also recognized this fact, that a man's subjective needs could obstruct his conscious efforts to understand his world. Sully, however, had shared the commonly held view that evolution must proceed in such a way as to demonstrate automatically, unavoidably, certain infallible truths. To Sully, it was inconceivable that the ethical conventions of his society did not necessarily reflect an absolute standard set by a provident Nature. Furthermore, the anthropologist, Edward B. Tylor, whose work Sully was familiar with, offered convincing proof that it was precisely those moral conventions, obeyed by the Late Victorian gentleman, which were conspicuously lacking in those evolutionary, immature tribal societies.¹³

Stout, on the other hand, would hardly have suggested that the dictates of conscience and the polite rules of society were necessarily the end products of evolution and deserved a man's explicit observance lest he become an unhappy prey to dangerous illusions. In his view every mental process served as a flexible response to the ever-changing relationship between a man and his surroundings. As the physical needs of an organism change so must its conceptions, excepting only that the mental energy required to repeat a previous operation is less than that needed to initiate a new action. Stout's psychology was almost the only morally neutral treatment in Late Victorian England of the Darwinian outlook in psychology. As a result, Stout's work sought to present no case for any set of moral judgments, transcendental or otherwise. Unlike other Late Victorians who hoped that science would conscientiously determine absolute truth (natural law) which would set the standard of rational conduct for men, Stout recognized the futility of this endeavour. While he was vitally concerned, like so many other intellectuals in this period, with trying to grasp the intellectual implications of a morally relativistic universe, Stout accepted without any trace of fear life in a world where man need acknowledge no true master except his own self-interest. Despite the efforts of psychologists like James Ward and James Sully, Stout argued that a certain degree of relativism must inevitably pervade the whole domain of

thought and believed that ethics could never hope to express anything that could be considered an absolute standard. Stout's conception that all thought served as a bridge between objective stimuli and subjective feeling and united a man's physiological needs to the sensory qualities of objects around him had disturbing implications. For while the Victorian agnostic may have willingly or unwillingly renounced many of his previous convictions, he had not bargained on contending with a life devoid of all authority. Yet this was precisely where Stout's argument seemed to be leading. By including subjectivity as a natural though obtrusive element in all thinking, Stout had, perhaps unwittingly, helped to herald the death of positivism and a new age of uncertainty.

H. Stuart Hughes has described the dilemma facing continental intellectuals at the turn of the century as a struggle to retain something of the Enlightenment's belief in rational man, while coming to terms with the evidence of the irrationality of human conduct. They were, Hughes believes, almost obsessed by this problem of the nonlogical, irrational elements in human behavior, yet fearful of abandoning themselves to the errors of emotionalism and mysticism.¹⁴ Simultaneously, while attempting to reaffirm their faith in the analytical powers of man to understand himself and his society, the generation of the nineties were in conscious revolt against the crude naturalism and shallow psychology of scientific materialism and positivism.

A man of his generation, Stout participated in this general trend (which according to Hughes distinguished the Continental outlook at this time), but then, so did James Ward. It was not, therefore, the rejection of materialism that made Stout's work a turning point in English thought. It was, instead, his implicit repudiation of the notion that science ought to confirm the rational validity either of conventional morality or the morality expressed in a more refined metaphysical creed.¹⁵

There was, however, one aspect of Stout's comprehension that reflects that happy if unwarranted confidence with which most modern intellectuals are unblest, that is to say, the reassuring conviction of man's innate goodness. The economist, John Maynard Keynes, looked back nostalgically to the optimism shared, perhaps naively, by his and Stout's generation. We were, Keynes writes,

. . . amongst the first to escape from Benthamism. But of another eighteenth-century heresy we were the unrepentant heirs and last upholders. We were among the last of the Utopians, or meliorists as they are sometimes called, who believe in continuing moral progress by virtue of which the human race already consists of reliable, rational, decent people, influenced by truth and objective standards, who can be safely released from outward restraints of convention and traditional standards and inflexible rules of conduct, and left, from now onwards, to their own sensible devices, pure motives and reliable intuitions of the good.¹⁶

FOOTNOTES TO CHAPTER IV

¹v. Appendix B.

²W. Drabovitich, "La bio-psychologie de R. Avenarius et le problem de 'l'homme total'," Revue Philosophique, vol. 115, 1933, p. 409.

³Ibid., p. 414. v. Appendix C.

⁴Ibid., p. 416.

⁵G.F. Stout, Analytic Psychology, London, Swann Sonnenschein, 1909, vol. 2, p. 255.

⁶By viewing consciousness as a form of self-determination, Stout thought that he could give a tentative account of the relationship between mind and body. Conscious states are directly affiliated with brain processes; consciousness has the ability to influence the brain's physiological functioning in order to sustain the flow of consciousness needed to direct activity toward the achievement of the desired goal. The fact that the available physiological data indicates that the brain is capable of regulating its own blood supply appeared to Stout a confirmation of his theory. It seemed that the whole of mental life actually consists of a perpetual cycle involving first a mental change, next the transmission of nerve impulses, then a muscle response, and finally another mental change, the last in this series of events but the first in a beginning series. Stout suggested that the "revival" of ideas through association gives strong support to his belief that consciousness strives for its own realization. The re-excitation of previously linked memory traces, themselves the result of the modification of brain substance by an earlier psycho-physical process, brings many more prior but related impressions to bear upon the subject of consciousness. Indeed, because of the nature of the attention process a train of ideas may be said to propagate itself as a flame spreads among combustible material. Here consciousness is self-determining, since it has initiated the changes which occasions the revival of memories; furthermore, it is consciousness which caused the modification of the brain substance in the first place. It is important to note that for all his discussion of the theory of psycho-physical parallelism and his forewarning against attributing a material origin to consciousness, Stout claimed to accept the dualism inherent in the theory only on the grounds of its utility; psycho-physical parallelism is a necessity imposed by the limitations of man's knowledge. In truth, however, Stout dissented from the monistic outlook of

both Idealism and Materialism. There are, it seemed, two separate but interdependent entities, matter and mind, for, ". . . the stream of individual consciousness is no such self-contained unit. It is the merest fragment of a universal reality, as its correlated brain-process is the merest fragment of the material world. All change within it is determined by factors extraneous to it. At the same time, it is equally true that no change within is entirely determined from without." Stout, Analytic Psychology, vol. 1, p. 156.

⁷G.F. Stout, "Error," Studies in Philosophy and Psychology, London, MacMillan, 1930, p. 262 (first published in 1902).

⁸Ibid., p. 269.

⁹Ibid., p. 286.

¹⁰Ibid., p. 301.

¹¹G.F. Stout, "Critical Notices: F.C.S. Schiller," Studies in Humanism, Mind, N.S. vol. 16, 1907, p. 588.

¹²K. Popper, The Logic of Scientific Discovery, New York, Harper and Row, 1965, p. 33.

¹³E.B. Tylor, Primitive Culture, London, John Murray, 1903, 2 vols. (first published in 1871).

¹⁴H. Stuart Hughes, Consciousness and Society, New York, Vintage, 1958, p. 35.

¹⁵It is difficult to estimate the reasons for Stout's unusual lack of interest in moral issues. Probably, his want of a conventional religious upbringing and hence his escape from the emotional doldrums of a religious crisis made it easier for him to trust his natural inclinations without recourse to a philosophic doctrine to justify them.

¹⁶J.M. Keynes, Two Memoirs, London, Hart-Davis, 1949, p. 98.

V. CONCLUSION

For some forty years, from Huxley's address to the gathering of scientists at Belfast up to the years before the Great War, British psychology had forthrightly committed itself to defending the active part consciousness played in organizing and interpreting man's physical sensations. As a result, one can say that Huxley's paper had, in effect, marked the demise of classical Associationism. It was clearly evident that psychology could now no longer consider the mind to be nothing more than a place where simple sensations mechanically combined to form complex thoughts and feelings. The long tradition from Locke to the Utilitarians had finally expired beneath the energetic onslaught of the determined opponents of automatism. Thus, if the historian of English psychology, L.S. Hearnshaw, is correct in his appreciation that English psychology reacted unsympathetically to the later programme of the Behaviorists, he is nevertheless mistaken when he blames the mystical element in Ward's thought.¹ After all, the consistent theme in English psychology for forty years had been the effort to refute any suggestion that man's consciousness was without influence upon his behavior. And the level-headed George Frederick Stout shared, every bit as much as the "transcendentalists," this antipathy to the notion that psychology had no business considering consciousness to be a legitimate field of scientific study. Any view, whether it was held by Associationists, Automatists or Behaviorists, that the mind did no more than record external

sensation, without any suggestion that consciousness had a positive, vital share in determining the qualitative nature of experience, was distinctly out of favour with almost all psychologists. Results from experiments involving hypnosis strengthened this view even further when they indicated that the subjective elements within the mind exercised a power of far greater magnitude over a person's conduct than even the most rigorous defender of the independence of consciousness from sensation would have once ever supposed.²

Furthermore, psychology, by recognizing the importance of the subjective component in apprehension, found itself undertaking a re-definition of the Darwinian account of man's relationship with his surroundings. No longer did it appear adequate to talk of adjustment solely in physical terms, for now thought itself began to be seen as a kind of active response to the changing character of the environment. There was one difficulty with this line of reasoning. Ostensibly, a legitimate deduction for a man to infer from this proposition would be that most of the demands of his conscience were inherently irrational, as it was clearly impossible to justify them on the usual grounds that they were the necessary reactions to environmental conditions. Unless, they served obvious biological needs, morals and ethical values had, it seemed, no claim to be considered products of rational induction.

L.S. Hearnshaw has briefly described the course taken

by British psychology under the influence of Continental Idealism:

. . . British psychology had been for too long closely identified with a particular philosophic tradition, anti-religious in general tone, and this tradition was about to suffer an eclipse. No science is so self-sufficient as to be wholly immune to changes in philosophic climate. Nineteenth-century psychology, barely emerged from infancy, was equally susceptible to them. When in the third quarter of the nineteenth century British philosophers, renouncing their native philosophic tradition, flocked to the idealistic banner, the development of psychology was necessarily affected. In German and American universities a rapid growth of psychological departments took place in the last two decades of the century. British universities antagonistically held aloof, and for at least two generations the academic development of psychology was retarded, until another change of philosophic climate and a second world war provided more favourable circumstances.³

While Hearnshaw's argument has a convincing ring to it, it is a generalization that cannot stand without the addition of several important qualifications. It is true, of course, that many Late Victorian intellectuals, James Ward, for example, found to their delight that Continental philosophy could offer a moral "frame of reference," that seemed to withstand critical examination better than the equivalent, British, ethical systems. There is a relationship between the religious crisis in Ward's early manhood, Huxley's denial of the efficacy of consciousness and the sometimes less than subtle moral overtones which characterized Ward's defence of subjectivism. Yet, it is clearly impossible to fit G.F. Stout into this narrow mold. To equate his brand of Pragmatism with Idealism, is stretching the use of these terms

beyond acceptable limits. And, moreover, it is precisely those moral concerns of Ward that are conspicuously lacking in Stout's outlook.

On the other hand, whatever their individual viewpoint, every psychologist, Pragmatist, Idealist, Spiritualist, Spencerian or Pluralist, shared a common interest in exploring the ramifications of human subjectivity. In this context, the philosophic defence of moral values was but one aspect of this larger issue of coming to terms with the importance of the subjective (irrational?) aspect of human thought. This problem, that is to say, the active rôle the mind performed in perceiving and interpreting sensation was the outstanding deficiency of orthodox Associationism. Therefore, despite their divergent philosophies, psychologists in Late Victorian and Edwardian England faced the recognition of the inherent difficulty of distinguishing truth from error, reality from illusion, and rational judgments from irrational beliefs. The questions they were asking of their science was to explain how one man could form certain convictions entirely at variance with another's. Was it, they asked, purely a situation of two different environmental backgrounds, or was it a difference in the mental processes of the two men; were they perceiving their surroundings in different ways? It was becoming increasingly difficult to say exactly what being considered "rational" actually meant.

Furthermore, it would also be a mistake to overemphasize

the impact that the semi-mystical trends in German philosophy had upon British intellectual attitudes. One commentator has, in fact, described the philosophic outlook in Cambridge at the turn of the century as one of seeking to replace,

. . . the 'speculative' and 'metaphysical' temper of British Hegelianism by an atmosphere of literal minded 'analysis' and cautious 'empiricism'.⁴

To be sure, it is not difficult to recognize that Stout's approach to the relationship of science and metaphysics had much in common with the emerging generation of logical positivists; at least both recognized the importance of subjective thinking, excluded moral issues from metaphysical and scientific speculation, and evidenced an interest in linguistical analysis.⁵ This is not to say that Stout was a founder of logical positivism in England, only that his psychological concerns were but one aspect of a profound re-orientation then taking place in English intellectual life. The positivist dream that one day men would be able to learn from those incontestable laws of Nature and thereby become wholly rational beings had finally expired amid an age of subjectivity and uncertainty. Even natural science, cognizant of the inapplicability of classical physics to new developments in the theory of electromagnetism and aware of certain strange new phenomena began to have increasing doubts that anything could be described as a hard, scientific fact. Science had to confess that,

What the universe is really like we do not know, and it is meaningless to inquire. We can but form pictures of nature to ourselves, which change radically from time to time and are forever incomplete.⁶

With this change of outlook in the natural sciences, a transformation, anticipated and elucidated by the Empirio-criticists, Mach and Avenarius, came a radical revision of the thinking on human nature. L'Homme Machine, the creature whose thoughts and actions flowed from impinging sensations found himself replaced by a cunning, scheming instrumentalist. Now psychology, released from the impossible burden of trying to fit eighteenth century Associationism into the context of nineteenth century Darwinism, discovered to its surprise that man did, after all, contain within himself the motive forces effecting his thoughts and actions.

There were, however, important differences between the psychological speculation and scientific theorizing of James Ward and G.F. Stout. Behind James Ward's professional antipathy to what he saw as the deceiving generalizations and non-existing causality of science, lay a heartfelt concern with demonstrating moral freedom latent in humanity. In contrast, Stout felt no need to limit his psychological constructions by the questionable preconceptions suggested by any moral or ethical system. Like Avenarius, Stout accepted that man was an anthropomorphic being who unwittingly sees in the reflected images of his own mind the manifest order, inherent in the physical world. Stout's intellectual legacy, therefore, was something much more than the recognition he shared with Ward that human thought was not a response to objective stimuli but developed from subjective needs. Instead, Stout must be

credited with being one of the rare few, who, before the turn of the century, willingly and fearlessly ventured into a brave, new world where a truly secular spirit was replacing the moral preoccupations of former generations.

FOOTNOTES TO CHAPTER V

¹L.S. Hearnshaw, A Short History of British Psychology 1840-1940, New York, Barnes and Noble, 1964, p. 136.

²F.W.H. Myers, Human Personality and Its Survival of Bodily Death, London, Longmans Green, 1903, 2 vols., passim.

³Hearnshaw, op. cit., p. 120.

⁴G. Bergmann, The Metaphysics of Logical Positivism, Longmans Green, 1954, p. 3.

⁵v. Appendix D.

⁶A.R. Hall and M.B. Hall, A Brief History of Science, Toronto, New American Library of Canada, 1964, p. 311.

VI. APPENDICES

APPENDIX A

William James and the Doctrine of Conscious Automatism¹

As William James understood the issue, the doctrine of conscious automatism included several erroneous assumptions. If this were true, James argued, that feeling was merely a collateral of the nerve processes and was unable itself to react upon them, feeling would then be,

inert, uninfluential, a simple passenger in the voyage of life, it is allowed to remain on board, but not allowed to touch the helm or handle the rigging.²

James himself believed the theory of conscious automatism actually stemmed from a wish among scientists to abolish the hoary theory of a dualism between mind and matter and to propose a single, all inclusive formula which would explain human nature in the same terms as it explained man's physical environment. Scientists, he suggested are uncomfortable when faced with the "yawning chasm between physiological states and mental events;" they deny consciousness and thus purify their scientific descriptions from such intangibles as feelings, to thereby establish a single harmonious and esthetically pleasing conception of the universe, a universe which also conformed to the laws of cause and effect.

Despite these reservations, James still accepted the general Darwinian framework for psychology: scientists ought to continue their study of how organisms actively respond and adjust to the conditions within their environment. But in his view, an automaton (Huxley's decapitated frog) could exhibit only a limited range of responses and hence must remain largely at the mercy of external circumstances. On the other hand, if an organism's reactions were not entirely a matter of reflex, a predictable response occasioned by factors beyond its own control, the organism was instead a creature able to determine its own response, it would have, as a consequence, an infinitely greater survival potential. The supporters of automatism have misunderstood consciousness, James surmised. Consciousness is not some non-sensational quality or thing created by the mind, but an element of the perceptual process: the mind's selective emphasis of certain sensations and its inhibition of less relevant ones. Consciousness, he declared, can produce nothing if can only alter the proportions of sensation; however, through this process of selection one experiences things subjectively and terms it feeling.

FOOTNOTES TO APPENDIX A

¹Source William James, "Are We Automata?" Mind, vol. 4, 1879.

²Ibid., p. 1.

APPENDIX B

The philosopher, H.A. Prichard, in an article for the 1907 edition of Mind, challenged Stout about the validity of psychology's claim to be scientific, and demanded that Stout explain the epistemological stand of psychology.¹ For, if the aim of psychology is to study consciousness: the manner in which the mind apprehends the world, then, how does the psychologist distinguish between the external world, considered as a presentation, and the individual's action of perceiving this presentation?² How can a psychologist allege that he can differentiate between the star, Sirius, treated as an abstraction (for instance, the way an astronomer would conceive of it), and the star, Sirius, experienced as an immediate presentation? The question in Prichard's mind was the legitimacy of the reasoning used by psychologists to claim that they could demarcate the conscious mind which apprehends the presentation from the presentation itself.

Stout's reply to this run-of-the-mill idealist criticism was, in effect, an admission that a psychologist could actually be a subjective idealist, one who believes that nothing exists independent of the mind's knowledge of it. Nevertheless, Stout felt he could not concede that psychologists were not justified in considering objects in terms other than of their immediate presentation:

What is indispensable to psychology is not any special theory of knowledge, good or bad, but only the recognition that things are known, come to be known, and cease to be known to individual minds, and that in this relation to individual minds propositions hold good of them which are not applicable to them in abstraction from this relation.³

In his work, Analytic Psychology, Stout's explanation was more forthright:

No consideration of the physical antecedents as such needs to be included in any strictly psychological proposition. We take account of them only in so far as they are indispensable helps in determining and defining the nature and order of changes produced in the mind from without.⁴

But if Stout took steps to refute Prichard's case against psychology, to repudiate his contention that the study of consciousness was more properly the concern of the philosopher, who, at least, recognized the epistemological difficulties in its

study, Stout also rejected the counterclaims of the physiologists. In Stout's judgment, any effort to establish a totally physiological explanation of mental behavior faced a predicament in showing the direct relationship between a physiological event and its psychic counterpart. A psychologist could, at best, only infer this relationship and even then he must presuppose that he has an independent knowledge somehow of both physiological and mental phenomena; consequently, there still remained a need for a wholly introspective psychology. Besides, Stout contended, should the physiological account of mental processes prove correct, after all, it would still have to show that it was matter and not mind that was the sole agent. As Stout commented, because Materialism assumed that mental events cannot occur without material causes, it was using the very same anthropomorphic reasoning as the untutored savage who sees all natural events resulting from the intervention of spirits,

If the continuity of the mechanical process debars us from regarding a movement as due to volition, it must in like manner debar us from regarding a volition as due to a movement, even of brain particles. So far as we have come to believe in matter as the only real agent in material processes, we seem to owe this belief to our growing insight into the continuity of these as parts of a single system; but when we come to consider the connection between physiological and mental events, we find a marked breach of continuity. No analysis can discover in the psychological fact any traces of its supposed physical factors.⁵

Thus for Stout, any hope of linking mental phenomena to physiological changes was but another expression of the Materialist's illusionary, mechanistic vision. Every separate science in their view represented but a part of a single, continuous, mechanical system. In the same way that scientists have learned to reduce biology to the more elementary principles of chemistry and physics, similarly, in a matter of time, scientists would also reduce psychical activity into its physiological components. Stout could not accept this line of reasoning. The Materialist's fallacy, he believed, was to assume that mental phenomena could only be understood as a development of nonmental processes; but the real crux of the issue, left unexplained by the Materialist, was the exact causal relationship between matter and thought.

More particularly, Stout was concerned with refuting the views of the president of the Aristotelian Society, Shadworth H. Hodgson. Although Hodgson had agreed with Stout's contention that any effort to establish psychology entirely upon a physiological base must show the affinity between matter and consciousness, "whereby the one becomes the real condition of the occurrence or coming into existence of the other." Hodgson, notwithstanding

this admission, thought that the everyday distinction which saw consciousness as something entirely apart from the nervous system, actually derived from a linguistical confusion. Normally, Hodgson explained, we describe someone as feeling, thinking and acting, yet we think it impossible to say the same for a physical substance, to admit that nerve and brain tissue thinks, feels or acts. Language which represents our "preanalytic" (common sense) thinking tends to describe the individual as a unity. Yet, psychological analysis had accepted the metaphysical differentiation between the agent or nervous system and the consciousness which seems to be dependent upon it. Nevertheless,

. . . the whole agency in conscious action, feeling and thought lies solely in the nerve and brain of the concrete conscious being; or in other words, the whole conscious being's consciousness is as much theirs, when we consider it analytically as it is his when we consider it preanalytically.⁶

Therefore, argued Hodgson, the realization of this simple fact vindicates the treatment of psychology from a completely physiological viewpoint. It is true, he admitted, that even now the physiologist is not able to describe exactly how matter "conditions" consciousness, but then, Hodgson, somewhat illogically, replied, neither can the physicist explain gravity. Moreover, for psychology to be truly scientific it is only necessary to show first which neural responses were "always and alone accompanied by the arising and the continuing of consciousness," and secondly, to indicate what was characteristically unique about the neural responses so that they invariably create the same dependent psychological state.

To the timeworn argument the existence of free will--the psychologist's notion of "volition"--proves the independence of mind from matter, Hodgson replied that our apparent sense of choice merely resulted from our inability to perceive the nerve processes which are actually making the choice. Hence, a person feels free because he is aware only of his conscious state of mind when, in reality, it has been his subconscious neural processes which have given him that particular judgment. The act of choosing not to walk into a wheel barrow--to use Hodgson's example--consisted of a sequence of events in which a neural reflex follows automatically from the initial perception of the wheelbarrow, and stimulates in turn the limbs so that the wheelbarrow is avoided. Consciousness is nothing more than the "nerve motions" achieving such a degree of intensity that they cross the threshold of consciousness. Therefore, Hodgson surmised, if consciousness is really an independent, causal factor in the series of events from the first sight of the wheelbarrow to the final muscle response in stepping around it, as the metaphysically inclined psychologist believes, consciousness must either change

from a "conditionate" to an actual condition itself. The only other possible explanation was that some immaterial agent previously dormant has now become active, but neither theory can gain support from any of the observable facts:

The only conclusion, therefore which experience warrants is that consciousness in all its forms, and whenever it occurs is not only the concomitant or conditionate, of neural processes and that this order of dependence is never inverted.⁷

Stout lacked Hodgson's convictions about the likelihood of psychology ever demonstrating an incontestable proof for a causal relationship between mind (consciousness) and matter (brain processes). Stout believed that in all honesty he could do no other than retain a Cartesian bifurcated psychology, and must therefore recommend the hypothesis of psycho-physical parallelism as the one offering the better understanding. Still, the hypothesis of psycho-physical parallelism was at best only an intellectual expedient. By means of this hypothesis psychology could advantageously incorporate the evidence from physiology into its understanding, without being forced to admit the truth of the Materialist's argument that consciousness was nothing more than matter in motion--an excessive nerve sensation. He believed that psychology ought to accept the limited aim of trying to demonstrate that certain states of consciousness are attended by corresponding variations in the cerebral processes. A correlation such as this, Stout argued, might explain what happens, for instance, when a man burns his finger. The contact with the flame has caused a painful excitation which in turn has been transmitted by the afferent nerves and finally reaches the cerebral cortex. There it has produced a molecular disturbance and co-incidentally with this had occurred a psychical state--the pain of being burned. Stout recognized that this did not of course prove that conscious states were always the product of physical dispositions; for that matter, the converse might well be true. Nevertheless, he thought, the data of physiology could only prove valuable for the psychologist if he first established a correlation and a sequence of events whereby psychical state a was correlated with the physiological state A, which related to another physiological state B, itself having a mental correspondent: the psychical state b. In this way, by relating the two mental states, a and b, one could conceivably find support for the theory of psycho-physical parallelism, although science had not yet substantiated it, and it was thus, at present, no more than a good methodological hypothesis, a convenient formulation of the facts.

Stout could not accept Prichard's objections against psychology's right to discriminate between the object perceived and the mind perceiving it; but then, neither could Stout agree

with the contrary view of Hodgson that consciousness was nothing more than an extension of matter. It follows that Stout's acceptance of the theory of psycho-physical parallelism put him in the awkward position of having to explain what exactly consciousness was. He admitted a correlation between physiological events and mental states, but denied that they were necessarily two aspects of the same substance, or that one invariably brought into being the other. Still, in Stout's appreciation it was not psychology's function to solve the conundrums of metaphysics. Psychology should confine itself to the description of the mental processes of man interacting with his environment and not try to determine what were the ultimate entities.

FOOTNOTES TO APPENDIX B

¹H.A. Prichard, "A Criticism of the Psychologist's Treatment of Knowledge," Mind, N.S. vol. 16, 1907, p. 29.

²"Presentation: any immediate content of experience, sensory or ideational though sometimes restricted to the former." James Drever, A Dictionary of Psychology, Harmondsworth, Penguin, 1952, p. 217.

³G.F. Stout, "Mr. Prichard's Criticism of Psychology," Mind, N.S. vol. 16, 1907, p. 240.

⁴G.F. Stout, Analytic Psychology, London, Swann Sonnenschein, 1909, vol. 1, p. 27.

⁵Ibid., p. 5.

⁶S.H. Hodgson, The Metaphysic of Experience, London, Longmans Green, 1898, vol. 2, p. 285.

⁷Ibid., p. 319.

APPENDIX C

A MATHEMATICAL DESCRIPTION OF THE BIO-MECHANIC PRINCIPLE¹

Exterior stimulation	=	R
Work	=	F(R)
Food	=	S
Nutrition	=	F(S)

1. $F(R) = -F(S),$

the stage of unstable imbalance between the energy income and expenditure.

2. $\Sigma F(R) = -\Sigma F(S)$

the stage of perfect equilibrium; probably non-existent in life.

¹Source: W. Drabovitch, "La bio-psychologie de R. Avenarius et le problème de 'l'homme total'," Revue Philosophique, vol. 115, 1933, p. 414.

APPENDIX D

THE RELATIONSHIP OF THOUGHT AND LANGUAGE¹

A train of thought, in so far as thought depends on language, consists in a series of successively objectified mental systems, each of which apperceives and is apperceived by its predecessor. An illustration may be drawn from any group of words combined so as to yield an intelligible meaning. In the sentence--"John eats apples," the word "John" stands for a concept which combines in systematic unity all that the speaker knows of the person referred to. It does not stand for a particular presentation, but for a system of presentations, of which only the ultimate components are particular. It fixes the attention of the speaker or of the silent thinker on a totality of diverse states, actions and relations, simultaneous and successive, possible and actual. "John" is not a determinate image but a Universal, which, as such, includes within it a multiplicity of determinations incapable of being united in any particular image. The word, "eats," also stands for a Universal--the general concept of an action which may be performed by different agents or by the same agent at different times and which may vary in manifold consideration the word "John" is followed by the word "eats," the corresponding mental systems are excited to activity and they apperceive each other. The product of their interaction is a new system, which forms an integral part of both of them, and which may be expressed by the compound word, "John-eating." This new system is formed (1) by singling out from among all the states, acts, and relations which enter into the concept, expressed by the word, "John," that specific action expressed by the word, "eating," to the exclusion of incompatible alternatives. This is the apperception of the concept, "John," by the concept, "eating." (2) By singling out from among the possible agents who are capable of the action indicated, the special agent John to the exclusion of others. According as John is known to be a vegetarian, a glutton, an invalid, etc., the general concept, "eating," will receive a varying kind of specification. This is the apperception of the concept "eating," by the concept, "John." John is represented as eating and the act of eating is represented as John's act. The concepts expressed by the words "eating" and "apples" unite in a similar way to form a single system in which each receives specific determination from the other. The apples are represented as being eaten and the eating is represented as the eating of apples.

FOOTNOTE TO APPENDIX D

¹Source: G.F. Stout, "Thought and Language," Mind, O.S. vol. 16, 1891, pp. 189-190.

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