SHADWORTH HODGSON AND THE PSYCHOLOGY OF WILLIAM JAMES: EXPERIENCE, TELEOLOGY AND REALISM

RICHARD PAUL HIGH

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EXPERIENCE, TELEOLOGY AND REALISM

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ABSTRACT

SHADWORTH HODGSON AND THE PSYCHOLOGY OF WILLIAM JAMES:
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In the last fifteen years there has been a renaissance of scholarly activity on the psychological thought of William James from both the Continental and Anglo-American philosophical traditions. These works are illuminating in a number of respects, as James did anticipate a number of the central themes of contemporary phenomenology and logical positivism. A problem which pervades this literature, however, is that it is methodologically presentistic. That is, it tends to view the past, in this case James's *Principles of Psychology*, out of its historical context, focusing instead on its distinctively modern aspects. The result is that James is portrayed as a thinker who was moving toward either a phenomenology or logical positivism, depending on the predisposition of a particular writer. This study seeks to redress this problem by examining the origin and development of the fundamental themes and/or theories in James's *Principles*. Three general areas of James's psychological thought are considered:
philosophical psychology, (2) cognition and (3) perception. Once this clearly historical orientation is adopted, the importance of Shadworth Hodgson, a nineteenth century English philosopher who has been ignored in contemporary James scholarship, comes to the foreground. This study is composed of five chapters.

The first chapter is a general introduction to James's early life and thought and seeks to integrate relevant biographical material with his published writings between 1861 and 1884. After examining his early conflict over the question of freedom vs. mechanism, it is argued that his voluntaristic solution formed the conceptual basis of his general account of philosophical and scientific activity. This solution is articulated on the basis of a series of philosophical essays he published between 1877 and 1884. The chapter concludes with a preliminary sketch of some of the problems which his voluntarism created for his later program of scientific psychology.

The second chapter is devoted to an examination of James's debt to Hodgson with respect to the philosophical assumptions which underlie the Principles. Three philosophical problem areas are considered. First, James's methodological orientation is explicated within the context of his notion of the psychologists' fallacy. It is argued that his call for an assumptionless description of experience is an outgrowth of what Hodgson called the method of reflection, which arose in conjunction with a critical interpretation of the two dominant philosophical traditions of the nineteenth century. Second, it is argued that James's epistemological distinction between knowledge by acquaintance and knowledge about is a development of Hodgson's distinction between first and second intention descriptions. Lastly, James's somewhat contradictory statements regarding
dualism in the *Principles* is examined within the context of Hodgson's more consistent formulation of a philosophical monism and methodological dualism for scientific psychology.

James's formulation of the higher mental processes in the *Principles* is examined in the third chapter. This chapter begins with a consideration of his debt to Hodgson in offering a dynamic formulation of the laws of association. In examining James's formulation of reasoning (cognition) and valuing (belief), however, it is argued that he went beyond the letter and spirit of Hodgson's philosophy. With respect to human cognition, James's biological interpretation of the a priori is set forth as an attempt to synthesize Kant's rationalism and Mill's empiricism. His formulation of the sub-universes of reality (belief) is then interpreted as an attempt to deal with the dynamic, transitive portions of the stream of thought.

In the fourth chapter James's theory of perception is examined in relation to the perceptual realism he found in Hodgson's analysis of space and time. James's critique of the empiricist account of space perception is examined within the context of three problems in perceptual psychology: (1) simultaneous color contrast, (2) the eccentric projection of sensations and (3) form perception. Hodgson's influence with respect to James's notion of the spatial quale is then examined, followed by James's attempt to retain a perceptual realism while acknowledging the role of intellect in perception.

The concluding chapter summarizes the impact of Hodgson on James's psychology and briefly sketches the impact of James on psychology between 1900 and 1920. Two somewhat distinct lines of influence are delineated: (1) the dynamic, cognitive psychologies of Calkins, MacDougall and Baldwin and (2) the neo-realist thought of Holt, Perry and Dewey.
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I would like to thank all of my committee members for their suggestions, encouragement, understanding and, most importantly, for their faith in my ability to have this be my own work. Special thanks must be extended to my chairman, William Woodward, for his dedication and thoughtful perseverance with me as a sometimes unlistening student.

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INTRODUCTION

William James is perhaps best known as the founder of pragmatism, an early twentieth century American philosophy which Old World philosophers immediately branded anti-intellectual. In the eyes of these traditionalists, James's system—if it could even be called a system—was little more than an oblique expression of the rather crass, practical spirit of a nation which possessed an over-abundance of natural resources and an undying will to exploit them. In a sense, James set the stage for this characterization with his scathing attacks on the great systems of European philosophy and his embarrassingly persistent insistence that we look to the "cash-value" of concepts to find their meaning and truth. At another level, however, the response of the European philosophical community can be viewed as jaundiced and rather superficial. As Ralph Ross has written, James's "philosophical beliefs were more caricatured than comprehended" by his contemporaries.\(^1\) This judgement gains support from contemporary philosophers, who have returned to James as far more than a symptom of the pioneer spirit of an expanding America.

In fact, in the last fifteen years there has been a renaissance of scholarly activity on James by members of widely divergent philosophical traditions. From our perspective, this literature is particularly interesting because his psychology has been rediscovered along with his philosophy. A. J. Ayer, for example, has recently examined James's

psychological and philosophical thought and concluded that he must be viewed as a forerunner of the tough-minded philosophy of logical positivism. He argues that James implicitly distinguished between three types of statements—those of empirical science, logic/mathematics and metaphysics/aesthetics—and that the pragmatic criterion of emotional satisfaction was offered only for our metaphysical and aesthetic beliefs. In the realms of science and logic/mathematics, Ayer attempts to show that James, the psychologist-philosopher, was in fundamental agreement with the Vienna Circle—verifiability principle included! The fact is that James did offer a version of the verifiability principle in The Meaning of Truth; and one of Ayer's lasting services is his refutation of the view that James ever maintained that a person can believe in anything which he finds emotionally satisfying. At the same time, however, calling James a forerunner of logical positivism does not fit well with the active, voluntaristic conception of human nature which pervades his psychology and philosophy.

While Ayer's interpretation paints an illuminating picture of the tough-minded side of James, a number of phenomenologists have recently centered their attention on the tender-minded side of America's first psychologist. Taking Edmund Husserl's laudatory evaluation of James's


3 James, Meaning of Truth, p. xxx.

psychology as a starting point, no less than five phenomenologists have offered detailed analyses of the philosophical implications of a number of the seminal ideas in James's *Principles of Psychology*. It is simply impossible to do justice to such a large body of research in a short review, but these commentators have: (1) articulated the similarities between James and the phenomenologies of Husserl, Maurice Merleau-Ponty and others, (2) offered phenomenological solutions to some of the contradictions and problems in the *Principles* and (3) integrated aspects of James's psychology with contemporary thought in phenomenological, existential and gestalt psychology. These writers have been especially concerned with the descriptive aspects of James's psychology, his description of experience as a fringed, flowing stream, the notion of self as a distinctive member of the stream, his description of the experience of freedom and lastly, the perspectivalism or contextualism which permeates his psychology. Although this literature does more justice to the details of James's psychology, it suffers from two disciplinary prejudices. First, as phenomenologists of the German tradition, these people have steadfastly ignored the positive influence of British empiricism on James. This omission becomes especially conspicuous because, as we shall argue, a number of James's so-called phenomenological insights can be traced to Shadworth Hodgson, an Englishman working within the empiricist tradition. Second, as non-scientists, the phenomenologists have been unsympathetic to the fundamental goal of the *Principles*—to create a scientific psychology.


The one methodological feature which underlies both the phenomenological and positivistic interpretations of James is that both seek to recast his thought into terms which are compatible with the fundamental postulates of a contemporary philosophy. This is, in some respects, a thoroughly reasonable and understandable aim; contemporary systems should be able to withstand the challenges of, and find support in, previous systems. But a problem which hovers over any attempt to integrate aspects of the present with the past is the tendency to view the past out of its historical context, to subordinate the past to the present. Herbert Butterfield has called this the whig interpretation of history:

The total result of this method is to impose a certain form upon the whole historical story, and produce a scheme . . . which is bound to converge beautifully upon the present—all demonstrating throughout . . . the workings of an obvious principle of progress.6

A whiggish strain can be discerned in the contemporary literature on James. It appears most clearly in the conclusions of this otherwise valuable literature. That is, James is portrayed as a thinker who was moving toward either a phenomenology or logical positivism, depending on the predisposition of the writer. In either case, however, a contemporary scheme is imposed on James's writings and he emerges as a prophet for some modern school of thought. The problem is that an important aspect of William James is lost as he is cast in the role of a harbinger of either phenomenology or logical positivism. The positivist interpretation, for example, fails to integrate his conception of human nature with his formulation of the nature of scientific inquiry, a theme which pervades his early works. On the other hand, the phenomenological interpretation simply does not

take his program of scientific psychology seriously, despite the fact that the *Principles* was written for exactly that purpose. And while there surely are phenomenological as well as positivistic strains in James's psychology, neither aspect alone does full justice to the contents of the *Principles*.

In this study—"Shadworth Hodgson and the Psychology of William James: Experience, Teleology and Realism"—we shall examine the origin and development of the fundamental themes and theories of the *Principles*. Our method is historical and our goal is to clarify some aspects of James's psychological thought. The assumption which ties our method and goal together is the belief that James's psychology can be best understood through an analysis of its development from its beginnings in the 1870's to its culmination in 1890. In adopting this method, we are trying to approach the *Principles* as James himself approached it—as an attempt to integrate the best of philosophy with evolutionary biology and thereby create a scientific psychology. Thus this is a study in the history of psychology. Accordingly, the bulk of our study—chapters two, three and four—is devoted to an analysis of three general areas of the *Principles*: (1) philosophical psychology, (2) cognition and (3) perception. Moreover, the scope of this work is clearly limited to James's pre-1892 writings, for after publishing his *Psychology* in that year he turned to philosophy until his death in 1910. In limiting our scope in this way, we shall not take up either of his mature philosophical doctrines—pragmatism or radical empiricism. Hopefully, what has been consciously sacrificed in breadth will be recompensed by the depth and detail of our analysis of James's psychological thought.
Describing this work as a study in the history of psychology would be misleading unless two qualifications are made explicit at the outset. First, the historical reality is that James's psychology developed hand-in-hand with a complex of related philosophical and ethical positions during the 1870's and 1880's. The commonly held opinion that he progressed gradually from physiology to psychology to philosophy is simply inaccurate and serves only to obscure the threads which tie these areas of his thought together. Instead, however, of avoiding the complexity of the historical record or treating it as an unsettling complication, we have tried to use it to our advantage. Thus, in the first chapter, James's early philosophical and ethical thought will be presented as the assumptive frame of reference from which his psychology emerged. From this perspective, his early philosophical and ethical thought can be viewed as a vital source of enrichment to his scientific psychology—it raised questions (e.g., human freedom, the status of consciousness and a priori knowledge) which he later sought to answer in the Principles.

The second sense in which this study departs from the history of psychology proper is Shadworth Hodgson. To call Hodgson anything but a metaphysician would be positively misleading. He did, of course, keep up with the latest developments of the psychology of his time but even in this respect his fundamental goal was philosophical. As we shall see, his philosophical system was founded upon distinguishing scientific psychology from philosophy on methodological grounds. At this juncture, we would simply like to make Hodgson's role in this study explicit; to state, in general terms, why his name graces the title of this work. Put simply, on reading James, Hodgson and Ralph Barton Perry, it became clear that Hodgson's thought served as the philosophical point of departure for James's
scientific psychology. Hodgsonian insights, and applications of principles which can be traced to Hodgson, served as the foundation upon which James constructed his psychology. It should be stated clearly that we shall not do full justice to Hodgson's philosophical system. Given the goal of this study, we shall use him selectively, as James did in the Principles. At the same time, however, this study is organized around the belief that Hodgson had an important, and perhaps the most important, impact on the structure and contents of the Principles.

In closing, one aspect of the style of this study deserves comment. Since deciding to work on James, my goal has been to provide an in-depth historical analysis of his psychological thought. What I failed to realize until I began writing was that an in-depth analysis—at least at this stage of my understanding of James—entails a considerable amount of attention to the details of his writings. James is simply not a person who can be easily classified into the dichotomies of the history of philosophy and psychology, e.g., rationalism-empiricism, idealism-realism, subjectivism-objectivism. In an attempt to preserve the richness, and most importantly the integrity of his thought, I have taken the liberty of using excerpts of his writings rather liberally. My fundamental goal is to provide a clear picture of what James was saying and, quite frankly, there are times when his precision and descriptive genius cannot be equaled.

CHAPTER 1

WILLIAM JAMES: THE YOUNG PHILOSOPHER-PSYCHOLOGIST

The fundamental task of history, if it wishes to be in all seriousness a science, must be to show how this philosophy, or that political system, could only have been discovered, developed, and, in short, lived by a particular type of man at a particular date.¹

Ortega y Gasset's statement can stand as an eloquent and succinct formulation of the goal of this chapter, for here we shall seek to root the dominant themes of William James's early philosophical thought in his life in nineteenth century America. The task ought to be a joyous one for a psychologist, for there is a great wealth of seductively psychological conflicts in James's early life. One finds, for example, young William James thinking of suicide, being harassed by innumerable psychosomatic disorders and then being saved by a conversion experience, if one takes that term in its broader sense. Furthermore, these psychological conflicts clearly find their way into James's early philosophical writings before 1884.

Before moving incautiously into a psycho-historical exposition, however, one would do well to read William Earle's admonishment that a study of James "must be diverted from his life, however interesting, to his published philosophy."² The conflict exemplified in Ortega y Gasset


and Earle—between living and thinking—was one which James spent a good deal of his life (or should we say 'thought'?!) trying to integrate.

Now, almost a century later, we continue to stare blankly into the face of this bifurcation, wondering whether the debate is a matter of semantics or fundamental ontology. In spite of this discomforting dichotomy however, the substance of Earle's warning must be acknowledged. William James did, after all, offer the philosophical community of his time a system and he defended his system with philosophical arguments. Both his system and arguments were, in fact, more or less continuous with previous philosophical thought; even his unique contributions can only be recognized as such from within the context of nineteenth century philosophy. Earle's contention is simply that James's thought ought to be considered in its philosophical context, regardless of the seductiveness of the biographical details of his life.

As a whole then, this study must be able to stand up to Earle's remarks. James's psychology, like his philosophy, must stand on its own since it is—in some sense at least—independent of his life. At the same time however, this is an historical study and we therefore have the responsibility of situating James's ideas within the context of his life and times. In this chapter we hope to do just that. This chapter will cover the years between 1861 and 1884, with the focus on the last decade of that period. In biographical terms, this period spans the nineteenth through forty-second years of William James's life. These were James's formative years, our subject is a classic example of the late-bloomer. In terms of his professional development, we shall open the chapter as James enters Harvard College and close it as he begins teaching there, at the mid-point of a twelve-year project which culminated in the Principles
of Psychology. In terms of personal development, we shall follow the young philosopher-psychologist through a state of confusion, hopelessness and psychic paralysis to a state of willful activity and optimism. Most importantly however, we shall attempt to articulate a number of inchoate themes of a philosophy which sought to integrate the fundamental conflicts which racked the nineteenth century in general and William James in particular.

This chapter will focus on a series of 'philosophical' essays which James wrote between 1877 and 1884. The strategy of approaching James's psychology through his early philosophical thought holds a number of unique advantages. It directly challenges, for example, the commonly-held opinion that there was a neat chronological progression in James's intellectual development—from physiology to psychology to philosophy. In fact, James was in print as a philosopher before he published as a psychologist and he continued to write philosophical essays during the twelve-year period (1878-1890) when he was writing the Principles. This approach will also bring the unified nature of James's psychological and philosophical thought to the foreground.

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5The Writings of William James, ed. John J. McDermott (New York: Random House, 1967), p. 817. This collection contains an invaluable annotated bibliography of James's entire works, including a large number of anonymous book reviews and notices he wrote before 1880. Anonymous or unsigned materials by James cited in this study are identified by McDermott.
This chapter is divided into four sections. In the first section we shall examine the conflict James experienced as a philosophically-minded scientist and the solution he offered in the late 1860's. In the second section we shall find James refining this solution and offering it as a general account of the nature of philosophical and scientific activity. The third section will consider James's defense of human freedom and in the last section we shall briefly look into the problems this position created for his program of a scientific psychology.

Early Misgivings about Mechanical Science and Moral Philosophy

However wanting by contemporary standards, James's education was the best that a young and well-to-do American could enjoy in the middle of the nineteenth century. After studying at Harvard's newly founded Lawrence Scientific School (1861-1864), James matriculated at Harvard Medical School between 1864 and 1869. He was more interested in physiology and anatomy than medicine per se during these years and he never seriously considered practicing medicine. Like many young scholars of his day (e.g., Wilhelm Wundt, Hermann Helmholtz, Hermann Lotze and Sigmund Freud), a medical education was, for James, a way of receiving training in the natural sciences. It held the additional advantage of providing the graduate with a ready-made and possibly lucrative profession if times became hard or academic positions were unavailable. James's academic work during these years was supplemented by an expedition to the Amazon in 1865 with Louis Agassiz, a year of somewhat erratic

study in Europe during 1867 and a good deal of independent reading in
physiology, psychology and philosophy.7

In terms of James's later work, his Harvard years proved to be
most important. In this first decade after the publication of Darwin's
Origin of Species the Cambridge campus became the focal point of the
American response to the question of 'transmutation.' In fact, even
before James's arrival in Cambridge the scientific and religious impli-
cations of Darwin's theory had been debated by members of Harvard's
faculty.8 The names of Asa Gray, Louis Agassiz, Francis Bowen and
Jeffries Wyman stand out in this respect.

Gray and Agassiz were the acknowledged titans of American bio-
logical thought in the middle of the nineteenth century; both held senior
editorial positions on the prestigious American Journal of Science and
each had made contributions to their respective fields of speciality.
Agassiz, a European-trained naturalist of Cuvier's school, had presented
his formulation of the fixity of species in his Essay on Classification
in 1855.9 Having viewed nature through the eyes of a 'special creationist'
for over thirty years, Agassiz found little to praise in Darwin's work
and he feared the religious and moral implications of the concept of chance
and the principle of natural selection. In his review of the Origins in
the American Journal of Science, Agassiz dismissed the work as "a sci-
entific mistake, untrue in its facts, unscientific in its method and

7 Ibid., pp. 202-235.
8 E. J. Pfeifer, "United States," in The Comparative Reception of
Darwinism, ed. Thomas R. Glick (Austin: University of Texas Press, 1972),
9 Louis Agassiz, On the Principles of Classification in the Animal
Kingdom (Charleston, S. C.: Walker and James, 1850).
mischievous in its tendency.\textsuperscript{10} From Agassiz's perspective, a perspective which mixed biology and theology inextricably, the classification of species represented an attempt to reconstruct the plan of Divine Will. Spurred by a theistic idealism which was rooted in the Naturphilosophie of his mentor Schelling, America's most respected naturalist became Darwin's most obstinate and vocal American critic.\textsuperscript{11} Gray's review of the \textit{Origins}, which appeared in the same journal in 1860, pitted editor against editor. In marked contrast to the condescending tone of Agassiz's review, Gray was supportive and even conciliatory in that he emphasized that natural selection was no more intrinsically atheistic than Newton's universal gravitation.\textsuperscript{12} Both laws, wrote Harvard's eminent botanist, were formulated in terms of 'efficient' causes and neither excluded God as a 'final' cause. Gray had been in correspondence with Darwin since the mid-1850's and his work on the geographic distribution of flora in Japan was used by Darwin to support his argument for evolution. Gray followed his review with a series of popular essays through the 1860's and 1870's which sought to reconcile natural selection and Design. The Harvard anatomist, Jeffries Wyman, and Francis Bowen, the moral philosopher, also assumed active, though less luminous, roles in the debate over evolution at the meetings of the Academy for the Advancement of Science during the 1860's.\textsuperscript{13}


Agassiz and Wyman were James's teachers and men such as Gray and Bowen could not have gone unnoticed by a student of science with philosophical inclinations. In such an atmosphere James became aware of the arguments advanced by both parties, and though awed by the aura of Agassiz's character, he lined up behind the cause of evolution and science. James's early alliance with evolution—and science in general—is evidenced in his correspondence during his 1867-1868 European tour. Guided by the spirit of evolution, we find James demanding a mechanistic explanation for any topic under consideration, but the young scientist was concerned about how such an attitude might effect his future in the academic world. Writing to Oliver Wendell Holmes, the future Chief Justice of the United States, James intimated that he would continue studying psychology and try teaching moral philosophy "in some western academy, but I have no idea how such things are attainable, nor if they are attainable at all to men of a non-spiritualistic mould."14

James's misgivings about the reality of the spiritual world are most clearly evidenced in an exchange of letters with his father during this stay in Europe. Henry James Sr. had sent his son-the-scientist an essay he had published in 1867 entitled "Swedenborg's Ontology."15 In this essay the elder James described the gradual unification of the individual's consciousness with the Creator when selfish, earthly strivings were overcome. Yet these selfish motives, which Swedenborg and Henry Sr. were only too willing to overcome, stood at the very center


of what Darwin had called the 'struggle for existence'. But Henry Sr. was not merely arguing for the reality of a spiritual realm alongside of the material universe. Instead, he sought to demonstrate that all reality is, by its very nature, spiritual! After reading the article William respectfully remarked that he could not help interpreting his father's description in terms of the "natural constitution of things . . . in its mechanical sense." To this reply William's father retorted that . . . it is very evident to me that your trouble in understanding . . . arises mainly from the purely scientific cast of your mind just at the present time.

His father went on to say that for him, as a spiritualist and free-thinker: "Nature . . . is void of absoluteness, or has no being in se but only in the exigencies of our carnal understanding." For nearly a decade however, William had been nurtured on a mechanistic interpretation of the universe and taught to trust 'empirical evidence' as the ultimate arbiter for truth. If the younger James was to approach the phenomena which his father wrote about, he would need concrete evidence rather than the personal testimony and metaphysical assumptions of his father, Agassiz or Swedenborg.

What can be abstracted from this early correspondence is that while William was a scientist by training, he was unabashedly philosophical by temperament. Describing him in this manner means simply that while he respected the power and rigor of science, he was impatient with the partial answers which science was structured to provide. Thus even

16 Perry, William James, 2:713.
17 Ibid., p. 714.
18 Ibid., p. 713.
during the 1860's we find James going beyond the 'factual data' in search of philosophical implications. The system of thought called science, for example, which William employed to interpret his father's spiritualistic writings, meant more than a mass of laboratory results. At its core, science for James was a set of assumptions—a mechanistic philosophy—and such a philosophy had unambiguous personal implications. Thus we find the philosopher by temperament, scientist by training, writing to Thomas Ward that he was "poisoned with Utilitarian venom . . . ," but that his "only ideal is a scientific life."19 In the same letter to this college friend James brings us to the crux of the problem:

Ah! Tom, Tom, you well-constructed whelps who travel on their free-will and moral responsibility are more to be envied than anyone in the world . . . . They [the believers in human freedom] are a superb form of animal, and beat the cows of whom you speak . . . beat 'em hollow, on their very own track of finite absoluteness.20

And writing to Ward again, a year later, the brooding young scientist openly complained that he was

... swamped with an empirical philosophy. I feel that we are Nature through and through, that we are wholly conditioned, that not a wiggle of our will happens save as a result of physical laws.21

This is the same message which James expressed to his father two years earlier but the tone of these letters has changed significantly. The rebellious certainty which pervaded his reply to his father's article has melted away into dissatisfaction and diffidence. These letters are enlightening in that they bring us to the fundamental personal and later

19 Ibid., p. 287.
20 Ibid.
philosophical conflict which plagued James throughout his early life, i.e., the tension between the mechanistic goal of scientific knowledge and the moral tone which seemed to pervade experience. The contradictory nature of James’s letters during the late 1860’s is best understood as a reflection of the profound ambivalence which he felt between a mechanistic philosophy of science and his own moralistic cast of mind. To speak in terms which he would later make popular, the ‘tough-minded’ James was devoted to an empirical philosophy, as he respected the precision and concrete utility of scientific knowledge. For these reasons a spiritualistic idealism like his father’s seemed vapid, however much he sympathized with its aims and ideals. At the same time, however, the ‘tender-minded’ James disdained the moral, or more precisely, the amoral implications of a mechanistic philosophy.

This conflict reached its emotional crescendo in the late 1860’s when James was continually harassed by psychosomatic disorders and bouts of severe depression. Relief from these ailments came slowly through the 1870’s but the first signs of improvement coincided with his solution to the problem of human freedom. In the spring of 1870 James made the following entry in his diary:

I think yesterday was a crisis in my life. I finished reading the first part of Renouvier’s second ‘Essais’ and see no reason why his definition of Free Will—‘the sustaining of a thought because I choose to when I might have other thoughts’—need be the definition of an illusion. . . . My first act of free will shall be to believe in free will . . . . Hitherto, when I have felt like taking a free initiative, . . . suicide seemed the most manly form to put my daring into; now I will go a step further with my will not only act with it, but believe as well; believe in my individual reality and creative power.”

This passage is often quoted but is rarely given the kind of analysis

22James, Letters of William James, 1:147-148.
it deserves. Most commentators offer it as an example of James's concern over the problem of free will and then move on to his defense of human freedom in 1884. Murphy, for example, described James as a person sick with the disease of indecision: "There he lay, a sick man, wretched soul, unable to move. Renouvier . . . told him to march. And he marched." Murphy is surely correct, as far as he goes. What must not be overlooked in this seductive biographical event however, is that Renouvier told James more than that he could march, he also told him what marching involved. That is, a psychological model underlies James's affirmation of human freedom, a model which made belief a central element in human experience. This basic model extended beyond James's defense of human freedom and pervaded his psychological as well as philosophical thought.

Thus it is important to recognize exactly what James's declaration of freedom entailed and note how it influenced his early philosophical and psychological thought. Philosophically, James is stating more in this passage than 'man is free' in the theological or metaphysical sense in which the American moral philosophers or his father chose to deal with the question. For James, human freedom was reformulated as a continuous process rather than a potential given in or with the faculty of will. From the latter part of the passage especially, it is clear that James recognized that the process of becoming free involves a subjective volitional act, an act of faith or belief in himself in a moment of decision.

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This brings us to the impact of this passage on James's psychology, specifically on the role of belief in the higher mental processes. For James, in this declaration of freedom in 1870, makes believing an essential aspect of volition and action. As he said, "I will go a step further with my will, not only act with it, but believe as well; believe in my individual reality and creative power." As we shall see in chapter three, belief, an emotional response of the whole person, plays a central role in James's treatment of the higher mental processes in the Principles.

Let us return now to the philosophical level and note that James in this passage is bringing the metaphysical question of freedom—his freedom—into the realm of concrete, lived experience. This is a methodologically unique philosophical perspective which culminated in James's pragmatic philosophy. Within such a perspective, the question of freedom is torn from the strictly logical level of abstract discussion and tied irrevocably to experience and action. James's justification for this move is that the problematical nature of what philosophers had called the problem of freedom is only experienced in action, when freedom is a living alternative. To treat this question as an abstraction means, ipso facto, to take it out of the situation which creates the problem.

Thus in spite of its circularity and irrationality, James suggested that a person becomes free by willfully choosing to believe in the reality of his freedom and then acting on that belief. In justifying such a position James, as early as 1877, pointed to the practical effects of such a stance, "the result substantiates my belief, verifies it."25 This represents

James's early attempt to reconcile science and the moral universe, a position which was later expanded and called 'pragmatism' in 1898. Our concern however, is not with pragmatism per se but the impact of James's early philosophical thought on his psychology. We must then leave James's early formulation of pragmatism and turn to another, related theme in his early philosophical thought—the concept of 'subjective interests'.

James's Early Critique of Science and the Concept of Subjective Interests

James's solution to the problem of freedom by means of a subjective act of belief—or, in psychological terms, an act of willful attention—set the stage for his early philosophical and psychological thought. In this section we shall follow the philosophical development of this theme from a number of early book reviews in the mid-1870's to its culmination in a trilogy of essays he wrote in the late 1870's. Specifically, it will be argued that the subjectivism of Renouvier's formulation of freedom, divorced from the problem of freedom per se, formed the conceptual basis for James's critique of nineteenth century positivistic science. That is, having recognized the importance of subjective factors—beliefs—in his affirmation of freedom, James argued that the adoption of any philosophical system—including science—entailed a subjective act of faith. It should also be noted that while Renouvier, in France, was


building a philosophy around a 'subjective act', Hodgson, in England, was constructing a psychology around the concept of 'attention'. In a very real sense, James's pre-1900 thought can be viewed as an attempt to integrate these systems.

In a relatively short period of time the mechanistic program of science had gained many successes on issues which philosophers had been verbally dissecting for centuries, i.e., the electrical nature of the nerve impulse, the origin of life from lower forms and even the interconvertibility of forces such as heat, motion and sound. These were brilliant and powerful discoveries. Emboldened by these successes however, a number of scientists turned to more clearly speculative and complex issues, most conspicuously, the nature of life and mind. Of course, mechanistic formulations of these topics can be found throughout history but Helmholtz's law of the conservation of energy and Darwin's theory of evolution gave the new mechanistic formulations a credibility they had never before possessed. In terms of its impact on the study of human experience, John Tyndall's Belfast Address of 1874 can serve as a valuable illustration of this trend.  

The Belfast Address was prototypical of the science vs. philosophy controversy in a number of respects. First, it was delivered by a respected physicist as the presidential address to the prestigious British Association for the Advancement of Science. Secondly, after delivering his speech Tyndall staunchly defended his position against the arguments of dissenters. Lastly, on hearing Tyndall's speech a Presbyterian

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minister offered to deliver a paper to the Biological section of the Association which attempted to reconcile science and religion. The Association's refusal on the grounds that such a topic was unscientific embittered many since Tyndall had admittedly gone beyond the boundaries of scientific evidence. The controversy which ensued was followed in the pages of the popular magazines and did much to polarize all parties involved. Those members of both the religious and scientific communities who had remained diplomatically neutral to the question of materialism found it increasingly difficult to maintain such a position.

Tyndall, it seemed, had explicitly challenged the authority of anything that did not contain the stamp of science. The response in the American press, for Tyndall had recently completed a lecture-tour of the United States, came fast and was generally negative. It was written in Nation magazine that Tyndall's performance was the "sort of propaganda not much superior in method to that of theological missionaries."  

The substantive issue involved Tyndall's formulation of a mechanistic materialism, with the physicist 'confessing' that he 'discerned in matter the promise and potency of every form of life'. The implication was clear to a generation sensitized by fifteen years of controversy over evolution. The study of man, whose consciousness to many signified a uniquely spiritual nature, could now be approached within the mechanistic framework of science. Within this framework consciousness was reduced to epiphenomenal status and man's image to that of what

30 Ibid.
31 Tyndall, Fragments of Science, 1:181.
Thomas Huxley called a 'conscious automaton'. In his essay "Are We Automata?," James offered an alternative to Tyndall's materialism.

He entered the 1874 controversy in the form of a letter to the editor of Nation, where he responded to Tyndall's suggestion that scientists, as scientists, are fully justified in metaphysical speculations. This was a loaded remark. Behind it stood the thesis of what Maurice Mandelbaum has called 'systematic positivism', "that the adequacy of our knowledge increases as it approximates the forms of explanation which have been achieved by most of the natural sciences." To Tyndall's claim James wrote that:

As men, of course, they have! . . . only when this exhilarated . . . mood is upon them let it be distinctly recognized for what it is—the Mood of Faith, not Science.

The question that arises is whether the 'Mood of Faith' of the speculative scientist is essentially the same as the subjective act by which James affirmed his own freedom in 1870?

James wrote a notice for Nation magazine in 1873 which provides support for this interpretation. In this short acknowledgement James applauded the newly founded journal of Renouvier and Pillon, La Critique Philosophique, and took the opportunity to contrast their philosophy with

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33 William James, "Are We Automata?," Mind 4 (1879):1-22.


scientific positivism. Not surprisingly, James noted that the primary difference between these schools of thought is that Renouvier's system leaves room for the possibility of "absolute beginnings," i.e., human freedom. James concluded this short notice by noting that within Renouvier's system one has "an act enthroned in the heart of philosophic thought." The act which James refers to here is clearly subjective but our interpretation would be more clearly supported by a more general statement, one in which James explicitly postulates that all speculation necessarily contains a subjective act of faith. Such a statement was fully articulated in James's essay "The Sentiment of Rationality," but his message to the speculative scientists is sufficiently clear in an 1875 review of The Unseen Universe: or Physical Speculations on a Future State. Here he wrote that

. . . the author's belief in the 'betterness of the other [mechanistic] world' which he constructs for us demands from him at the end of his mechanical gyrations . . . the same simple act of teleological trust, the same faith that the end will crown the work . . . as does the most narrow-minded old woman [who] so quickly envelops her briefly-recited cosmogony."

What James seems to have extracted from Renouvier's demand that the individual take an active role in determining his fate was that all speculation necessarily involves an emotionally based act of faith. For if the whole person of William James contributes to his affirmation of a philosophy which embraces human freedom, then the emotional interests of a

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37 La Critique Philosophique (1872-1889) continued the first series of Annee Philosophique (1867-1869) and was superceded by Annee Philosophique (1890-1913).

38 James, "Notice for La Critique Philosophique," p. 94.

Spencer, Tyndall, Hodgson or Huxley must also be involved in their adoption of a philosophy which denies the reality of freedom. It is imperative to note that whether such a choice is itself determined is not the central issue here. James's major point is that a scientist's affirmation of his philosophy—his working assumptions—is not a scientific decision. Like religion and art, science necessarily involves a subjective commitment which is rooted in the emotional interests of the scientist. This position lent itself to cries of 'anti-intellectualism' and 'subjectivism' by members of the philosophical and scientific communities. That James was aware of this difficulty is evidenced by his remark in an 1886 essay:

I know very well that in talking of dislikes to those who never mention them, I am doing a very coarse thing, and making a sort of intellectual Orson of myself. But, for the life of me, I cannot help it, because I feel sure that likes and dislikes must be among the ultimate factors of their philosophy as well as mine. Would they but admit it! How sweetly we then could hold converse together! 40

James was addressing the then emerging Hegelian philosophies of T. H. Green and F. H. Bradley in this essay but his thesis—that personal likes and dislikes are essential aspects of philosophical belief—had been placed in a more general framework seven years earlier. It received its most detailed consideration in James's 1879 essay, "The Sentiment of Rationality." 41

In that essay James explicitly posited that an emotionally based act is an essential, though often unnoticed, aspect of the affirmation of any philosophical system. Not only Hegelian rationalism but the empiricism of J. S. Mill and Alexander Bain and positivistic science find

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41 James, Will to Believe, pp. 63-110.
their way into James's discussion. James's working assumption in this essay is that there is a fundamental ambiguity in experience, i.e., that when all the evidence is collected there still remains a degree of opaqueness and thus room for alternative interpretations. James was fond of making reference to the one-fluid and two-fluid theories of electricity as an example of this ambiguity since both theories were scientific and could account for the data equally well. Given this ambiguity, James argued that the particular interpretation which one adopts is an expression or fulfillment of the 'subjective interests' which one holds to be most valuable. His thesis is more general and ambitious here, he is concerned with the 'psychology' underlying philosophical affiliation as a human activity.

The title of the essay—"The Sentiment of Rationality"—tells much of the story. This essay is aimed at the many faceted and pompously fragile balloons of rationality which existed in the late nineteenth century. For however much science, British empiricism and Hegelian rationalism differed as systems, they shared one fundamental similarity. The end of each, as a system of thought, was a unified and abstract account of the universe. In different ways, each sought to show that the world really was, in fact, a 'uni' rather than a 'multi'-verse. In moving toward this end, each of these systems conceived of the particulars of individual experience as a kind of messy afterthought to be subsumed under abstract laws. Given this analysis, we find James in the role of the gadfly, suggesting that 'rationality' itself is an individual 'feeling' whose distinctive marks are necessarily 'subjective'. What James was groping for here was the recognition of those fleeting feelings by which the thinker himself recognizes that his search for a rational
answer is complete. James's answer was that this experience consisted of:

A strong feeling of ease, peace, rest . . . . The transition from a state of puzzle and perplexity to rational comprehension is full of lively relief and pleasure . . . . Shall we then say that the feeling of rationality is constituted merely by the absence of any feeling of irrationality? I think there are very good grounds for upholding such a view.42

Later in the essay James put his thesis more succinctly, "to think with perfect fluency, the thing we think of seems to us pro tanto rational."43

Within this formulation of rationality the thinker himself, his entire personality, becomes an essential part of his system of thought, for only the person doing the thinking can feel the 'perfect fluency' which to him signifies a rational answer. James thought that this simple observation—which brings the whole person back into the process of philosophical belief and inquiry—provided the psychological basis for the diversity of philosophical opinion. The problem comes into clear focus when it is recognized, as James did, that different people may hold fundamentally different subjective criteria which their systems must fulfill. James delineated what he called two "sister passions"—the passion for parsimony and the passion for particulars—which he saw as the conflicting ideals which philosophical systems seek to satisfy.44

In calling them passions, James sought to make clear the emotional basis of these subjective interests. He saw the passion for parsimony as the common psychological motive which the systems Hegelian rationalism, British empiricism and science in general were responding to. Their ideal is to explicate the fundamental unity of the universe, to demonstrate, through different methods, the uniformity and homogeneity which underlies the multiplicity and heterogeneity of experience. Their primary

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42 Ibid., pp. 63-64. 43 Ibid., p. 64. 44 Ibid., pp. 65-66.
methodological tool is causal analysis, "which is often given," James wrote, "as the definition of rational knowledge." The power and esteem of these systems lie in their power to explain, to subsume the particulars of experience under a minimum of general laws. This is the passion for abstract simplicity most clearly evidenced in the theory-builder. James wrote that abstraction, classification and conceptual knowledge are the ideals of this enterprise. This tradition—this way of looking at reality—can be traced back to Plato; it is the tradition of Reason and the Intellect which science took over from rationalistic philosophy.

James's most important contribution to this analysis however, was the recognition that each of these parsimonious ideals was a double-edged sword, that other motives also operate in determining philosophical opinion. For in abstracting and explaining and articulating the higher-order uniformities, one necessarily loses contact with the richness and felt reality of the phenomena under study. Hence, alongside the passion for parsimony lies its rival, the passion for a clear understanding of the particulars of experience. Of this passion, this subjective interest, James wrote that:

It loves to recognize particulars in their full completeness, and the more it can carry the happier it is. It prefers any amount of incoherence, abruptness and fragmentariness (so long as the literal details of the separate facts are saved) to an abstract way of conceiving things that . . . dissolves away at the same time their concrete fullness. Clearness and simplicity thus set up rival claims and make a real dilemma for the thinker.  

The dilemma to which James is referring here can be seen in the speculations of the nineteenth century systematic positivists, e.g., J. S. Mill, Herbert Spencer and Auguste Comte. Having forsaken the richness and

45 Ibid., p. 65. 46 Ibid., p. 66. (Italics mine.)
complexity of individual experience for theoretical simplicity and unity, they created systems of thought that failed to do justice to the creative power of the individual. Individuals came to be conceived as pawns in a cosmic interchange of mechanical forces. This conception of the individual seemed the epitome of 'empty barrenness' to James. What James argued for was a bit of humility on the part of the speculative positivists, the recognition that the "interest of theoretical rationality . . . is but one of a thousand human purposes." Thus while he defended the scientific ideal as a valuable way of conceiving of the universe, he refused—unlike the systematic positivists—to acknowledge that scientific abstraction was the only justifiable perspective.

What we have in this early essay, which Perry noted was written in 1877, is the rudiments of James's pluralism, a theme which plays a central role in both his psychology and mature philosophical thought. The fundamental thesis of pluralism is that reality can be viewed from a number of different perspectives—that there are multiple rather than one fundamental Reality. Another form which James's early pluralism took was his attempt to reconcile religious belief and science in the late 1870's. James took up this topic in an essay he published in 1879, "Rationality, Activity and Faith," and again in an 1881 essay, "Reflex Action and Theism." Though our primary concern is James's early critique of positivistic science, it might be noted that James's defense of

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47 Ibid., p. 70.
48 Perry, William James, 1:495.
religious belief took the same form as his defense of human freedom—in both cases the belief is justified by its practical consequences. In the late nineteenth century, science argued against both of these issues but James recognized different problems demanded different perspectives and that their answers were perspective dependent. As we shall see in the third chapter, James's pluralism appears in his psychology in his formulation of the various sub-universes of reality in which thinking takes place.

Returning to James's early thought, it must be acknowledged that the demand for objectivity, uniformity and verifiability were associated with the ascendancy of the natural sciences. James feared however, and with some justification, that the proponents of Tyndall and Huxley were exploiting the authority of science when they ventured into the speculative realm. Their exploitation took the form of speaking as though their scientific formulations of metaphysical questions were the only reasonable alternatives, that they had an unequivocal basis of support. In short, positivistic speculation was presented as dogma. At the same time, they strongly implied that other interpretations were merely 'subjective', or worse yet, 'theological'. Their mistake, as James saw it, was that their zealous proselytizing of science allowed them to forget that they themselves were engaging in a thoroughly subjective and speculative enterprise. Thus James was upset that Huxley could suggest that faith in an unproven religious doctrine was the 'lowest depth of immorality' while righteously maintaining that man is a 'conscious automaton'. The scientific evidence supporting Huxley's conception of consciousness was, in

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50 James, Will to Believe, pp. 91-92.
James's eyes, open to alternative interpretation. In his essay "Are We Automata," James drew upon the most successful scientific achievement of his age—evolutionary theory—to support his contention that consciousness is more than epiphenomenal. In brief, he argued that since consciousness has 'survived' phylogenetically it must have adaptive value and therefore must effect action, i.e., it must function to guide man's adaptation under some circumstances. This proposition, coupled with evidence from phenomenal experience and a practical justification for the efficacy of belief, allowed James to present an at least plausible argument for psycho-physical interactionism.

In summary, by postulating that all speculation contains a subjective element, James sought to make clear that the presumed objectivity of the scientific conception of human nature was illusory, that the content of their speculative systems was dictated by the values which they held dearest. For this reason James's invitation to the speculative realm contained a noteworthy qualification:

By all means let every man who has a stomach for the fray be admitted to the speculative realm. But let it be on equal footing with all comers, all to wear the speculative colors, no odds given, no favors shown. And may the critics help fair play by pointing out to the . . . public that this wild-eyed champion who is now seen throwing in his hat . . . was no other than the laborious and accurate physicist, chemist, or physiologist Blank, who, having . . . tired . . . of the laboratory's confinement, now appears in his new and brilliant role of Blank, the Audacious and Ingenious Speculative Philosopher.

Let us take one example—the scientist's rejection of the reality of human freedom—and see how it could be understood within James's account of philosophical belief. The scientist enters the philosophical realm

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51 James, "Are We Automata?," pp. 14-19. 52 Ibid.

53 James, "Letter to the Editor," p. 437. (Italics mine.)
seeking universal lawfulness and simplicity and, because of these subjective ideals—which have been valuable guides in his scientific work—he opts for a strict determinism. The possibility of 'absolute beginnings' is, to the scientist, an unthinkable anomaly, a blatant contradiction of everything that he has learned to cherish. In contrast, in defending human freedom the free-willist is responding to his passion for an accurate description of the particulars of phenomenal experience. The scientist's abstract determinism leaves him cold, it simply does not address itself to the richness and moral intensity which he is seeking to understand. How can moral righteousness be reduced to the interplay of neural connections asks the person who believes in human freedom. James's fundamental postulate is evidenced in the belief of both the scientist and free-willist; the individual contributes something—replaces factual ambiguity with emotional conviction—based on his previously established subjects interests.

James's Philosophical Defense of Human Freedom

We have encountered James's belief in human freedom from two perspectives; first as a personal dilemma which he overcame and second in terms of his formulation of the nature of philosophical belief. This is unavoidable since this theme literally pervades James's early writings. Instead of continuing to approach this theme obliquely however, we shall examine it explicitly in this section. With this accomplished, we shall attempt to show the continuity between James's interactionistic conception of man in his philosophical and psychological thought.

Although James's formal statement on human freedom did not appear until his 1884 essay "The Dilemma of Determinism," the essentials of his
formulation can again be seen emerging in his book reviews and writings of the 1870's. While we shall deal primarily with his more elaborate statement, a number of his early works will be cited to anchor his thought chronologically. The relationship between his defense of human freedom, psycho-physical interactionism and his critique of nineteenth century science should also be made explicit. If his philosophical and psychological work before 1884 is considered as an integrated whole, it can be seen to contain both critical and constructive aspects. At the philosophical level, he was critical of the ostensibly objective scientific formulation of man. On the positive side, his early philosophical work culminated with pragmatically based argument for human freedom. At the psychological level James criticized the scientific formulation of mind, mounted a scientific argument in support of psycho-physical interactionism and presented a formulation of volition which could accommodate human freedom.

It should not be surprising to learn that James's argument for human freedom centered around the subjective affirmation of the "moral order in the universe." Formulated in terms of the behavioral effects of a person believing in his freedom or determination, his argument is the practical embodiment of Victorian moralism.

James fully realized, in considering the topic of human freedom, that he was dealing with a metaphysical postulate which could not be verified in a scientific fashion. His argument therefore consisted of an explication of the real life implications, the 'practical effects'

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54 See especially William James, "German Pessimism," Nation 21 (1875):233-234.
55 Ibid., p. 234.
of believing in a thoroughly determined universe. According to James, the dilemma of determinism is that its affirmation ipso facto repudiates the reality of the moral world and creates a universe in which 'what ought to be' is impossible or morally meaningless. That is, James argued that since determinism postulates that all behavior is decreed (caused) by a set of antecedent events, 'what ought to be' is impossible unless, per chance, 'what ought to be' is decreed to be. The problem, for the moralist, is that with either alternative 'what ought to be' is beyond human control and therefore devoid of moral responsibility.

James analyzes the case of murder in the following fashion. According to the determinist, the act of murder was the only possible outcome of the given set of antecedent conditions. Would the determinist, James asked, regret the murder? Possibly, but if so, he should surely regret all the other evils in the world. The result of these feelings of regret in a world which is beyond our control, James argued, would be the development of an attitude of 'deterministic pessimism'. James saw such pessimism evidenced in the German philosophies of von Hartmann and Schopenhauer. It also follows that 'what ought to be' is impossible since the possibility of non-murder under the given conditions is nonsensical to the determinist. The only escape for the determinist, thought James, was the adoption of a Rousseau-like attitude of 'deterministic optimism', i.e., a philosophy of life which maintains that 'whatever happens is for the best in the long run'. The problem here is that the determinist must forever renounce his feelings of regret and the moral universe as either unreal or pathological. James concluded his discussion

56 James, Will to Believe, p. 163. 57 Ibid., pp. 162-167.
of a deterministic philosophy of life by suggesting that it fosters the fatalistic mood of mind. It makes those who are already too inert more passive still; it renders wholly reckless those whose energy is already in excess.\textsuperscript{58}

The moralistic and interactionistic conception of James's argument against determinism is clear in this passage, as well as an earlier essay published in Renouvier's journal.\textsuperscript{59} The problem of evil was a very real problem within James's moral universe. It could neither be denied nor explained away in the name of science. From James's point of view, the only viable strategy was to acknowledge its existence and actively strive to overpower it through willful effort. His formulation of human freedom was fully compatible with such a melioristic conception of the world.

James's interactionism is evidenced by his suggestion that if a person believes his efforts are ineffectual—that whatever will be will be—then he would be less likely to expend the effort necessary to do what ought to be done. In contrast, believing in his own freedom and creativity would act to reinforce the expenditure of additional volitional effort. This argument in terms of the 'practical effects' of a belief in freedom provided the concrete justification which his father's or Agassiz's idealism lacked. The psychological tone of this philosophical argument should also be made explicit. James is saying, in effect, that a belief in one's helplessness contributes to a person being and acting helpless while a belief in freedom can contribute to a strenuous and effort-filled life.

\textsuperscript{58} Ibid., p. 171.

\textsuperscript{59} See James, \textit{Collected Essays and Reviews}, pp. 69-82.
It should also be noted how closely James's argument for freedom is tied to his own crisis over the problem of freedom in the late 1860's. Remember the importance of belief in Renouvier's formulation of free will, and James's proclamation in 1870 that:

Hitherto, when I have felt like taking a free initiative ... suicide seemed the most manly form to put my daring into; now, I will go a step further with my will, not only act with it, but believe as well; believe in my individual reality and creative power. My belief ... can't be optimistic—but I will posit life (the good, the real) in the self-governing resistance of the ego to the world.60

Thus an interactionistic conception of self—an actively choosing fighter for ends—stood at the very center of James's personal and philosophical conception of human freedom. Without exaggeration, believing provided James with an alternative to thoughts of suicide, and after 1870 he never again seriously questioned the reality of his freedom. It should not be surprising then, that James's early philosophical works represent the foundation of a system which sought to accommodate human freedom, a system in which the individual was an actively choosing and creative part of reality.

**Human Freedom and a Scientific Psychology**

During the years between 1875 and 1884 however, James was beginning to formulate the central principles of his scientific psychology and his personal and philosophical affirmation of freedom created enormous difficulties for this task. For if volitional effort does effect action, if mind does effect body, an alternative to the then popular psycho-physical parallelism would have to be supplied. In fact, if James's psychology was to be consistent with his moral philosophy, it

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could be nothing less than a psycho-physical interactionism—a psychology in which an efficacious and mentalistic self traversed the unfathomable Cartesian chasm. Surely his moral philosophy demanded only a limited interactionism but, as we have seen, nineteenth century scientific determinism required that psychology adopt a strict psycho-physical parallelism. The *Principles* reveals that James felt this conflict intensely. The *Principles* was, after all, a scientific text and, in hopes of avoiding metaphysical polemics, James explicitly postulated a complete parallelism, "the blank unmediated correspondence, term for term, of the states of consciousness with the total brain process."\(^{61}\) For the most part he was able to stay within the boundaries of this formulation. But despite the author's intent to maintain the collaterality of mind and body, James's parallelism leaks—from the mental to the physical—in precisely those areas which his moral philosophy demands that it leak, viz., in his formulation of will and related topics.\(^{62}\)

James's conception of consciousness as an efficacious cognitive-emotive process can be seen emerging in his 1878 critique of Spencer's definition of mind.\(^{63}\) Spencer, in his own *Principles of Psychology*, had postulated that the entire process of mental evolution could be conceived as "the continuous adjustment of internal mental relations to external

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\(^{61}\) James, *Principles*, 1:182.


\(^{63}\) William James, "Remarks on Spencer's Definition of Mind as Correspondence," *Journal of Speculative Philosophy*, 12 (1878):1-18.
environmental relations." According to this correspondence theory of mind, mind passively registers those actually experienced relations and events which make survival more probable. This formulation is the evolutionary embodiment of an empirical philosophy. The motivational principle is pleasure and pain and ultimately the survival of the organism. James thought this characterization was a gross oversimplification—another instance of the positivistic pseudo-scientist losing sight of the obvious in the glare of cosmic speculation. The poverty of such a formulation is that it concealed the complexity and teleology inherent in experience, the teleology which James had argued is central to both scientific and philosophical inquiry. Beyond passively registering the events and relations of the external world, James suggested that consciousness

... seems to supply the means and the standard by which the [objects] are measured. It not only serves a final purpose, but it brings a final purpose—posits, declares it, this purpose is not a mere hypothesis ... but an imperative decree; Survival shall occur, and, therefore, brain must so perform.65

In this passage we find James describing two qualitatively different forms of conscious activity. The first is strictly psychological and relates to the use of the concept of subjective interests as a psychological construct, i.e., the subjective interests embedded in consciousness seem "to supply the means and the standard" by which objects are measured. Thus experience seems to be pervaded by what we shall call in the third chapter a transient teleology through which some objects and relations are judged valuable and true while others are declared trivial and misleading or simply ignored. In this same passage however, we find James making reference


65James, "Remarks on Spencer," p. 15. (Italics mine.)
to a qualitatively different form of conscious activity. Thus he wrote that some subjective interests take on the status of "imperative decrees;" and survival, or some other subjective ideal, "shall occur, and, therefore, brain must so perform." Such imperative decrees are the fundamental beliefs of the knower—which we shall call the fundamental teleology in James's psychological thought. Not surprisingly this form of conscious activity represents a clear and explicit 'leak' from the mental to the physical and this is a source of inconsistency and confusion in James's psychology. In this section we shall begin to trace the development and implications of both forms of conscious activity in James's psychological thought. But it must be repeated that this is just the beginning; this task will not be completed until we examine his formulation of belief in the third chapter and directly confront the relation between his early philosophical thought and his psychology of the higher mental processes.

James's debt to Renouvier might also be noted, for while the French philosopher put an act by the individual in the heart of his philosophical thought, James placed an act by the individual in the heart of his psychological thought.

At the strictly psychological level, the means which James makes reference to in the above passage are the mental representations of the various possibilities of action. These mental representations are the cognitive portions of consciousness, as stored in memory. By defining mind almost exclusively in terms of the passive registration of relations experienced in the environment, Spencer's formulation emphasized this cognitive aspect of mind. But James recognized that an equally important aspect of mind is that it supplies its own standard through which reality is judged. With this idiosyncratic standard, consciousness becomes an
active participant in a person's construction of reality—much like the subjective ideals of the person play an essential part in James's analysis of philosophical belief. For example, given the same mass of sensory input—a northern New Hampshire landscape—the painter, the real estate developer and the geologist see different worlds based on their divergent interests. Within James's psychology, subjective interests draw an individual's attention to different aspects of the same mass of sensory experience. They influence action by determining exactly what a person perceives. In this respect they represent a deterministic and potentially scientific construct. Of equal importance to James however, is that subjective interests represent the dynamic-motivational aspect of all conscious activity, "the real a priori element in cognition which precedes the outer relations noticed." He described this dynamic aspect as "an immense number of emotional judgements, judgements of the ideal, judgements that things should be thus and so." This transient, dynamic and frightfully complex network of ideal, mental relations develops gradually in time and becomes the cognitive-emotive rules which a person brings into the game of experiencing reality. They can be understood as mental constructions which result from the interaction of a person's network of ideal relations with what is actually experienced in the world. Most importantly, they need not correspond to anything that actually has been experienced in the real world. With the concept of subjective interests the content of consciousness is forever embedded, in James's psychology, in a dynamic act.

Given this formulation, the terms pleasure and pain beg the motivational question since only by knowing a person's ideals—his unique

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66 Ibid., p. 6.  
67 Ibid., p. 3.
structure of interests—can one define what is pleasureful or painful. Thus with the concept of subjective interests James obtained a construct—however evasive—through which a person could transcend objectively defined pleasures and pains as well as the actually experienced relations given in the world. And that at least some people can make such a transcendence, James wrote, is evidenced by phenomenal experience.

Though it received little attention from psychologists at the time, the concept of subjective interests is central to James's mature psychological as well as philosophical thought. Perhaps its explicitly teleological and idiographic character made nineteenth century experimental psychologists wary of its utility as a scientific construct. Whatever the reasons, however, it is certainly the most pervasive theme in James's pre-1890 essays and it appears in the Principles in the most distinctively Jamesian chapters, i.e., "Automaton Theory," "The Consciousness of Self," "The Stream of Thought," "Reasoning," "Association" and "The Perception of Reality." We can turn to the Principles to solidify this point. In his treatment of self, James makes the dynamic-motivational character of subjective interests explicit.

Our interest in things means the attention and emotion which the thought of them will excite, and the actions which their presence will evoke . . . my social self-love, my interest in the images other men have framed of me, is . . . an interest in a set of objects external to my thought.

And in his treatment of attention we find a passage that goes to the heart

68. We shall examine James's formulation of the distinctive, a priori capacities of human beings which make such a transcendence possible; see pp. 124-138 below.


70. James, Principles, 1:320-321. (Italics mine.)
of James's critique of classical associationism. Here he writes that

Millions of items of the outward order are present to my senses
which never properly enter into my experience. Why? Because
they are of no interest to me . . . . Only those items which
I notice shape my mind—without selective interest, experience
is utter chaos. Interest alone gives accent and emphasis, light
and shade, background and foreground—intelligent perspective,
in a word.71

For our last example we shall turn to James's most distinctive psycholog-
ical concept, the stream of thought. Again, the notion of interest is a
central aspect of this formulation.

Relation . . . to . . . interest is constantly felt in the fringe,
and particularly the relation of harmony and discord. . . . any
thought the quality of whose fringe lets us feel ourselves 'all
right' is an acceptable member of our thinking . . . . Provided we
only feel it to have a place in a scheme of relations in which
the interesting topic also lies, that is quite sufficient to make
it a relevant and appropriate portion of the train of ideas.72

Thus subjective interests transform consciousness, for James, from a
passive register to an essentially active, selective process which is
antithetical to Spencer's definition of mind. Furthermore, the subject-
tivistic and idiographic tone of the concept of subjective interests set
the foundation upon which the formulation of the stream of thought was
constructed. Its intimate relationship to James's early philosophical
thought should also be noted. Implicit in his affirmation of freedom,
his early book reviews and his essays on the motives of philosophical
belief is a recognition that the person selects one aspect of experience
to be his reality, whether that reality be a scientific theory or some
concrete perceptual object.

Let us now return to the second form of conscious activity contained
in James's critique of Spencer's definition of mind, the imperative decree

71 Ibid., p. 402. (Italics mine.)
72 Ibid., pp. 259-260. (Italics mine.)
which we have called the fundamental teleology in James's psychology. Here we find James describing what must be called an essentially interactionistic and indeterministic form of conscious activity. "Survival shall occur," he wrote, and, therefore, brain must so perform."\(^{73}\) This willful command represents an unequivocal 'leak' from the mental to the physical and, once acknowledged, any hope of a complete psycho-physical parallelism is shattered. The philosophical postulate which stands in the not too distant background of this sentence is, of course, human freedom. This imperative decree which James tells us is characteristic of volitional activity is essentially the same as Renouvier's formulation of freedom which James alluded to in 1870, i.e., "the sustaining of a thought because I choose to when I might have other thoughts."\(^{74}\) The sustaining of a particular thought involves attending to that thought and voluntary attention, according to James, is the essence of will.\(^{75}\) In both cases a subjective volitional act brings one of any number of possible actions into reality.

In his first full-length treatment of volition, James stated that the question of human freedom reduced to whether or not the amount of volitional effort expended was fully determined by antecedent events.\(^{76}\) The scientist explicitly postulates that the amount of effort is fully determined and states, in effect, that the line of least resistance is

\(^{73}\)James, "Remarks on Spencer," p. 15.

\(^{74}\)James, Letters of William James, 1:148.

\(^{75}\)James, Principles, 2:568.

always followed. Anything short of such a postulate would be the tacit affirmation of mental efficacy. James noted, however, that such a position is not supported by phenomenal experience in those cases in which a more altruistic idea is chosen. He symbolized such an instance as,

1. \( M \text{ per se} < S \)
2. \( M + E > S \)

where \( S \) is the more forceful or instinctual idea, \( M \) is the less forcefully felt or altruistic idea and \( E \) is the amount of volitional effort expended in attending to the idea.\(^77\) According to James, in the second equation volitional effort seems to be added \textit{de novo} to the rather weak, altruistic idea and the path of \textit{greater} resistance becomes a reality. Of course, the determinist would posit that this experience is an illusion but James took pains to point out that such a statement is an assumption rather than an empirical fact. Of course, James's position is also assumptive rather than factual but his assumption does not do violence to phenomenal experience. Rather than being a fixed resultant of a set of antecedent events, volitional effort, for James, "is a psychic or moral fact pure and simple," which

... appears adventitious and indeterminate in advance. We can make more or less of it as we please, and if we make enough we can convert the greatest resistance into the least.\(^78\)

It is obvious but important to recognize that within this formulation of volition, James is going beyond his own deterministic construct of subjective interests and entering the realm of the metaphysics of human freedom. He is therefore constructing a formulation of volition within which a person can transcend not only pleasure and pain, but also his subjective interests, through willful effort. This type of conscious

\(^{77}\)Ibid., p. 28. \(^{78}\)Ibid., p. 26.
control, which James called the 'fiat' of the will, represents a clear departure from the strictly psychological form of selectivity contained in the concept of subjective interests.

James used a number of phrases to communicate the full meaning of the fiat. In his earliest publication on volition he called it the "mental click of resolve." In a later article he described it as a "genuine and sincere mental consent." And in the Principles the fiat is simply a "volitional mandate" or an "act of mental consent." In all usages, however, he describes the fiat as a mental process by which "we keep affirming and adopting a state of mind of which disagreeableness is an integral factor." And whenever James employs the term it is clearly mentalistic, implicates a psycho-physical interactionism and is potentially indeterministic. I say potentially indeterministic because James knew full-well that he was injecting metaphysics into his psychology of volition. In fact, it might be more accurate to say that James's formulation of volition was offered with human freedom in mind rather than to imply that his formulation stands or falls with the resolution to the question of free will.

In any case, James is obviously troubled and torn over the implications of human freedom for scientific psychology and vice versa. And it should not be surprising that he openly discards his proposed parallelism in his chapters on Attention, Will and Automaton Theory. That

79 Ibid., p. 22.
81 James, Principles, 2:559-578.
82 James, "The Feeling of Effort," p. 23.
he had free will in mind when he broke his parallelism in these chapters is evidenced by his 1879 letter to Shadworth Hodgson. Here he wrote that:

... so obscure are still the relations of the individual consciousness to the universal thought ... that I can't help hoping ... that some way will be found by which causality may still be ascribed to individual volitions and reactions of attention. My article in Mind was written against the swaggering dogmatism of certain medical materialists. ... I wanted to show them how many empirical facts have been overlooked.83

The very language which James uses in this excerpt—"the relations of the individual consciousness to the universal thought"—is reminiscent of his father's discussion of Swedenborg's ontology. But while father and son may have shared the same ideals, William truly was a scientist and needed empirical facts to support his contention. The article in Mind which he alludes to in this letter is his essay, "Are We Automata?," which first appeared in 1879 and was later incorporated into the Principles. It also becomes clear from this letter that James's critique of nineteenth century positivistic science and his formulation of volition were both motivated by a desire to defend—or at least leave open—the possibility of human freedom.

The Jamesian circle is now complete and above the abstract theoretical inconsistencies there appears a fundamental personal consistency in James's early philosophical and psychological thought. A phenomenon which James—the man—discovered in personal experience was later affirmed by James—the moral philosopher—in the metaphysical realm and still later presented by James—the empirical psychologist—as an integral part of his scientific psychology. If James—the psychologist—is considered

83 Perry, William James, 1:616. (Italics mine.)
in isolation, the traces of interactionism and indeterminism in the *Principles* become aberrations and the inconsistencies of that work become incomprehensible or, worse yet, naive. But if James is recognized as a man who was vitally concerned with moral issues which centered around the problem of human freedom, these inconsistencies can be seen as necessary, and, in fact, essential parts of his attempt to create a science of psychology. Of course, such a recognition does not make the theoretical and metaphysical inconsistencies disappear but one wonders whether the inconsistencies are rooted in the emotional sentiments of William James or the equally emotional sentiments of those who wish to legislate *ex cathedra* the contents and methods of a scientific psychology.

For James, the scientist by training, philosopher by temperament, a scientific psychology

... means ... not a sort of psychology that stands on solid ground. It means a psychology particularly fragile, and into which the waters of metaphysical criticism leak at every joint.84

A hundred years after the birth of William James, Gordon Allport examined what he called the 'productive paradoxes' of James's psychology.

We shall close our chapter with Allport's description of his mentor's message to contemporary psychology.

Narrow consistency can neither bring salvation to your science nor help mankind. Let your approaches be diverse, but let them in aggregate do full justice to the heroic qualities of man. If you find yourselves tangled in paradoxes, what of that? Who can say that the universe shall not contain paradoxes simply because he himself finds them unpalatable? To accommodate the whole of human experience keep layers of space and air and vision in your scientific formulations.85

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CHAPTER 2

SHADWORTH HODGSON AND JAMES'S PHILOSOPHICAL PSYCHOLOGY

He [Hodgson] rejected what passed in his day for empiricism . . . because . . . it was infected with Hume's sensationalistic atomism . . . . It is as an exponent of the experiential theory of being . . . that Hodgson was James' master. . . . But while James . . . cites Hodgson as an exponent of empiricism in general, and names him with Charles Pierce as one of the two sources of his pragmatism, the influence of Hodgson is most evident in matters of detail. He helped James to bridge the chasms created both by traditional dualism and by Hume's sensationalistic atomism.1

This passage, from Perry's The Thought and Character of William James, is both remarkable and confusing. On the one hand, Perry clearly acknowledges James's indebtedness to what he called Hodgson's experiential theory of being, i.e., Hodgson's description of experience as a stream and his unequivocal rejection of Hume's atomism. What is remarkable about this observation is that while James's formulation of the stream of thought is generally recognized as a seminal theme of the Principles, no one—not even Perry—has provided a systematic examination of the influence of Hodgson on James's psychology. This omission becomes especially conspicuous—and in need of clarification—in the light of the recent phenomenological interpretations of the Principles. These writers have considered the notion of the stream of thought in detail but have, for the most part, ignored Hodgson. Instead they have chosen to look to German sources for the roots of James's phenomenological

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2conception of thought as a stream. While their efforts provide us with a clean and ostensibly reasonable historical interpretation—phenomenology did, after all, emerge as a distinct philosophical movement in Germany—a discernably whiggish strain in this interpretation appears when James's debt to Hodgson, an English empirical philosopher, is examined.

What is confusing in Perry's treatment of the Hodgson-James relationship comes into clear focus when two parts of the above excerpt are juxtaposed. We are told that Hodgson "helped James to bridge the chasms created both by traditional dualism and Hume's sensationalistic atomism" but then, in the same breath, that "the influence of Hodgson is most evident in matters of detail." The problem is that dualism and sensationalistic atomism were not details of nineteenth century philosophy and psychology but rather fundamental and long-entrenched assumptions which served as the conceptual foundation of these disciplines. Another interpretation of Perry might be that he meant to relegate Hodgson's

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influence to matters of detail only with respect of James's philosophy of pragmatism. While this seems more reasonable, we are still left with an incomplete account of the sources of James's philosophical psychology in the Principles—a lacuna which contemporary phenomenologists are quickly filling with remnants of the proto-phenomenological systems of late nineteenth century Germans. There are a number of problems with a phenomenological interpretation of the Principles but perhaps the most devastating is the effect that it has on contemporary psychologists— i.e., James's psychology comes to be viewed as removed from the concerns of contemporary psychology and his system becomes unintelligible.

In this chapter it will be argued that a complex of related philosophical insights from Hodgson's system formed, not the details, but the assumptive core of James's philosophical psychology in the Principles. Specifically, it will be argued that a number of phenomenological themes were clearly present in Hodgson's works as early as 1865 and, given this, that these themes influenced James's formulations of: (1) the psychologists' fallacy, (2) the distinction between knowledge by acquaintance and knowledge about and (3) the nature of the distinction between subject and object. At the same time that Hodgson embraced these phenomenological themes however, we shall show that he also retained the ideal of creating a scientific psychology. Before approaching these issues, however, some introductory remarks must be made concerning the domain of philosophical psychology, the approach taken in this chapter and Hodgson's relationship to James.

The province of philosophical psychology is by no means self-evident. Our first task, then, is to circumscribe the boundaries of that discipline as it applies to the Principles. Following the lead
of Andrew Reck, this chapter will consider the fundamental assumptions, methodological orientation and the metaphysical implications of James's psychology. Philosophical psychology in general seeks to explicate the fundamental concepts which psychologists employ as working assumptions. To the extent that these assumptions implicate fundamental worldviews, philosophical psychology makes contact with the metaphysical realm. Conversely, to the extent that these assumptions guide and direct the day to day activities of working psychologists, it considers the fundamental concepts and methods of psychology. In trying to do justice to both these strains, philosophical psychology seeks to make explicit what may only be implicit in a particular system of psychological thought. As stated, it should be apparent that philosophical psychology is a hybrid discipline which lies in the area which bridges metaphysics and the natural sciences—a kind of never-never-land within which neither philosophers nor scientists are safe from molestation by the other.

Though we shall be dealing with philosophical issues throughout this chapter, the method employed is primarily historical. This is an important consideration because the last fifteen years has witnessed a renaissance of scholarly activity on James's psychology from a phenomenological frame of reference, e.g., Linschoten, Gurwitsch, Wilshire.


Edie has summarized the fundamental goal of this literature by stating that it seeks to uncover "the intrinsic and logically necessary convergencies with James' philosophical discoveries and those of the phenomenologists." Although this body of literature is valuable in a number of respects, it has been hampered by: (1) a tendency to tear James out of his historical context and interpret the Principles as a primarily philosophical rather than scientific treatise and (2) an impoverished conception of the British empiricist tradition—a conception which portrays that school as a monolithic ideas-are-atom-like-mental-things movement. As we shall try to show in this chapter, these shortcomings do justice to neither Hodgson, James nor the empirical tradition.

Shadworth Hodgson

Shadworth Holloway Hodgson (1832—1912) was first and foremost a metaphysical system-builder whose system followed him into the grave. He was remembered by his contemporaries as a gracious and contemplative person who turned to metaphysics after the early deaths of his wife and child. Although he never held an academic position, he remained an integral part of nineteenth century British philosophy from his home in London. He was the joint founder of a British philosophical club—the

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Aristotelian society—and was its first and longest president (1880-1894). He was also a frequent contributor to the journal Mind, and his systematic works—Time and Space (1865), The Theory of Practice (1870), The Philosophy of Reflection (1878) and The Metaphysics of Experience (1898)—are testimony to his productivity, breadth and sheer persistence as a philosopher.

Hodgson's metaphysics is almost impossible to categorize in terms of nineteenth century philosophical systems. On one hand, he felt that the only true metaphysics was being written from within the German tradition and he was continuously critical of the attempt by empiricism to reduce metaphysics to psychology, i.e., the psychologism of that school. A contemporary noted that the Kantian tendency was especially evident in his early works, which James encountered well before he began work on the Principles in 1878. At the same time, however, Hodgson was critical of the a priori conclusions of the Kantian tradition and wrote in 1876 that a

... greater and more comprehensive philosophy can arise in the line of Locke that can ever arise in the line of Leibniz; but only on the condition of replacing our narrow psychological horizon by an horizon of true philosophical range.

Merz created a new category in calling Hodgson's metaphysics a 'critical empiricism' to emphasize the Kantian and Lockean strains of his thought.

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10 Merz, British Philosophy, p. 481.
Hodgson himself called his philosophy an 'experientialism' in hopes of distinguishing it from both the atomistic assumptions of the empirical tradition and the a priori assumptions of the rational tradition. Whatever label one chooses, however, the synthetic and critical nature of Hodgson's thought must be emphasized—along with his insistence that the distinctive feature of philosophy is its method which involves an assumptionless description of what is given in experience.

James's contact with Hodgson and his philosophy is easy to document, as a good deal of Perry's three chapters on the James-Hodgson relationship consists of their correspondence and archival materials. While the reader is encouraged to go directly to Perry, a brief outline of his chapters will suffice for our purposes.  

Perry states that James's copy of Hodgson's *Time and Space* is dated "December, 1875" and James's first published reference to Hodgson appears in a July, 1875 book review. In a footnote in the *Principles*, however, James makes reference to an article he tried writing in 1869 in response to those philosophers who tacitly assumed that consciousness affects brain-processes. While the article was never completed, James lists Hodgson's *Time and Space* first in a list of authors he sought to challenge. That James had read Hodgson's works this early in his career—at least five years before the publication of Brentano's or Wundt's classic psychological treatises and at least nine years

12Ibid., p. 612.
before he was contracted to write a psychology text—is an important point to keep in mind.

The James-Hodgson correspondence begins in 1879, became most heavy during the decade of the 1880's and gradually dwindled until James's death in 1910. The tone of the early correspondence shows clearly that Hodgson was the established philosopher and James was the struggling and diffident student. They first met in 1880 and James visited Hodgson on a number of his European tours during the 1880's. James's own estimate of the importance of Hodgson can be seen in a letter dated March 11, 1879, when he wrote to Hodgson that,

I regard [your books] as the greatest mine of philosophical wealth now extant, though I find it hard to re-think your thought—every sentence, yea, every clause being original. I think some disciples must come and retail you in small change before your influence becomes what it should be.15

This letter makes clear that James, in fact, labored over Hodgson's works and found in them what he considered to be first-rate philosophical insights. In the remainder of this chapter I hope to show that James's personal assessment of Hodgson's philosophy was well-founded and that it served as the foundation of his philosophical psychology in the Principles.

James's Notion of the Psychologists' Fallacy

The first topic we shall consider—the psychologists' fallacy—is methodological. A number of recent commentators on James have described this principle as a phenomenological insight of James's psychology, one which pointed toward the importance of assumptionless description for psychology.16 None of these writers, however, have considered the importance

15 Perry, William James, 1:681.

of Hodgson's thought in their examinations of James's notion of the psychologists' fallacy.

What James called the psychologists' fallacy lies at the heart of his philosophical psychology for two reasons. First, within it is contained the germ of a fundamental methodological insight which guided his critique of previous philosophical formulations of the nature of mental processes. It was this realization that made the elements of empiricism and the transcendental ego of rationalism unnecessary encumbrances for James's psychology. Second, this insight also set the conceptual foundation for James's own formulation of the nature of mental processes in the Principles. After explicating James's distinction between the two versions of the fallacy, it will be shown that: (1) a critical interpretation of the history of philosophy underlies this methodological principle, (2) it implicates a further distinction between perceptual and conceptual knowledge and (3) James was indebted to Hodgson for both of the above insights.

James introduces the notion of the psychologists' fallacy in chapter VII of the Principles, "The Methods and Snares of Psychology." This short chapter, together with chapter VIII—"The Relations of Minds to Other Things"—can be viewed as a methodological introduction to James's descriptive analyses of the stream of thought and the self, which follow in chapters IX and X. This statement can be justified historically by noting that the kernal elements of chapters VII and VIII appeared as introductory remarks to James's 1884 essay, "On Some Omissions of Introspective Psychology."17 It was in this article that James presented his

formulation of the stream of thought and his distinction between the transitive and substantive portions of the stream and thus broke clearly from the elementistic tradition of British empiricism.

In chapter VII James examines the experimental, comparative and, most importantly, introspection as the three methods available to scientific psychologists. His treatment of the first two is cursory and skeptical at this juncture of the Principles. This skepticism, however, is not with experimentation per se, whether it be with humans or animals. Instead, James's hesitancy stems from the fundamental assumptions which direct the activities of the evolutionary biologists and the 'new prism, pendulum and chronograph philosophers'. Thus James wrote that the problem with the new psychology is not its 'brass instruments' but the fact that the people who wield these instruments seem so "bent on studying the elements of mental life, dissecting them out from the gross results in which they are embedded, and . . . reducing them to a quantitative scale."  

James first considers the extreme formulations of introspection—that introspection is not humanly possible or, if it is, that it is not possible to make a mistake introspecting. Comte held the former position and questioned the very possibility of introspection with the classic argument that in reflecting on a passing thought or feeling we necessarily distort and even destroy the experience. Imagine reflecting on the

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18 James, Principles, 1:192. (James's italics.)

19 Ibid., p. 185. (James's italics.)
feeling of anger! James cited Ueberweg and Brentano as representing the opposite extreme, those who deny that a feeling of 'inner perception' could be anything except what it appears to be.

A more moderate and representative view of introspection had been presented by Sully in his Illusions: A Psychological Study. Sully's formulation is important since it represents the position of traditional British empiricism and because James tells us that his 1884 article was written "to supplement Mr. Sully's chapter on the Illusions of Introspection." In that chapter Sully distinguishes introspection from perception and memory and confines it to the process of reflecting on the 'contents of mind' in the time immediately after the moment something has been experienced. According to Sully, the most persistent problem in this process is the confusion of what is actually present to mind with some inference which is based on past experience. While Sully's statement, taken out of context, might sound like the notion of the psychologists' fallacy, the examples Sully uses and his continual reference to the 'elements' and 'components' of a complex feeling are testimony to his tacit acceptance of the mental synthesis approach which the psychologists' fallacy sought to refute.

Taken narrowly, the psychologists' fallacy is concerned with the pitfalls of the introspective method. In considering the difficulties of this method, James tells us that the psychologists' fallacy has been committed when the introspecting psychologist confuses "his own standpoint with that of the mental fact of which he is making a report."  


22 James, Principles, 1:196. (James's italics.)
As defined, the psychologists' fallacy is little more than a restatement of Sully's admonishment. It is what James does with this methodological principle that makes it a central feature of his philosophical psychology and an important anticipation of the phenomenological method. That is, with the psychologists' fallacy James pointed out that the elements which nineteenth century empiricism found in experience, and upon which they constructed their psychology, were little more than the expression of their tacitly held assumption that experience really is composed of discrete sensational elements. Then came Kant and the rationalists who, instead of questioning the reality of Hume's sensational elements, presented a non-experiential transcendental ego to unite the discrete elements which were, in the first place, created by Hume's unwarranted assumption.

Taken in this broader, philosophical sense, the implications of the psychologists' fallacy are far more pervasive than some of the more mundane errors of introspection. This is so because, as James recognized, in committing the psychologists' fallacy the psychologist (or philosopher) creates and discloses the fundamental constituents of his psychological system. It is for this reason that James was less concerned with the particular experiments of the 'brass instrument' philosophers than he was with the elementistic assumptions which gave rise to these experiments. For if they assumed that experience is composite in nature, the design, results and theories which emerged from their experiments could do little to challenge that belief. It is for this reason that James stated unequivocally that the psychologists' fallacy is "the great snare of the psychologist."23 Once committed, it becomes

23 Ibid., p. 196. (James's italics.)
self-perpetuating, self-justifying and self-fulfilling.

James distinguished between two forms of the psychologists' fallacy, which we shall call the empiricist and rationalist versions. In the empiricist version the psychologist mistakenly assumes that his thought about the thought under study is the same as the thought itself. As he never tired of reminding the introspecting psychologist, the "psychologist . . . stands outside of the mental state he speaks of. Both itself [the thought] and its object are objects for him." The problem arises from the fact that while the particular thought knows its object from its own unique frame of reference, the psychologist, . . . knowing the self-same object in his way, gets easily led to suppose that the thought, which is of it, knows it in the same way in which he knows it, although this is very often far from being the case.

Let us attempt to clarify this methodological principle with an example which Wild employed. Imagine the psychologist trying to describe a child's experience of a patch of woods in which he or she has recently been frightened. Of course, the psychologist knows a great deal about the woods (e.g., the types of trees that are found there, how they grow, that it is a relaxing place to take a walk through, etc.), but this adult conceptual knowledge is more of a hindrance than an advantage in his attempt to describe the child's experience of the woods. If his goal is description from the point of view of the child, then he must be

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24 Wild, in his Radical Empiricism, has also called attention to the two versions of the psychologists' fallacy, which he called the empiricist and idealist versions. See pp. 31-49 of his work.

25 James, Principles, 1:195.

26 Ibid., p. 196.

27 Wild, Radical Empiricism, pp. 36-37.
careful to bracket his adult knowledge about the woods and keep to the
child's understanding of the woods. If our hypothetical psychologist
imposes his own knowledge about the woods onto his description of the
child's experience of the woods, then he is committing the empiricist
version of the psychologists' fallacy.

We shall now turn to the historical context which surrounded
James's psychology and show that this type of fallacy stands at the foun­
dation of the elementistic program of nineteenth century empiricism.
The problem, according to James, is rooted in a linguistic confusion--
the unguarded transference of our everyday use of words to the province
of psychological description. James examines the empiricist descrip­
tion of the thought of a-pack-of-cards-on-the-table. Within this tradi­
tion this complex idea was thought to be composed of the simpler ideas
of the individual cards in the deck plus the four legs and horizontal
plane of a table etc., etc. That is, each element of the object was
thought to be represented in the idea of the object. This mode of descrip­
tion, and the explanatory model which emerged from it, is patently absurd
for James, a fallacy which has little support in experience. The result
for psychological description is that

    ... the continuous flow of the mental stream is sacrificed,
and in its place an atomism, a brickbat plan of construction, is
preached for the existence of which no good introspective grounds
can be brought forward ... .

James saw that such a description is the product of the failure to main­
tain the distinction between the way an object appears in thought and
what we know about those objects. We know a great deal, for example, about

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28 James, Principles, 1:194-195.
29 Ibid., pp. 278-279.
30 Ibid., p. 196.
objects in the world. One important feature of physical objects is that they are composed of parts. But just because we know that objects in the world are composed of parts or elements we have no right to assume that a thought of any object is composed of a corresponding set of elements. Such an assumed correspondence is the empiricist version of the psychologists' fallacy and it leads to insurmountable problems for a psychology. It tacitly denies, for example, that thought can be symbolic in nature.

This version is distinctively empirical in the sense that the empiricist school looked to the objective world, the worlds of objects, to find the source and descriptive model for ideas. If percepts are passively impressed on a tabula rasa, what else could an idea be except a mirror-like image which corresponded to the object in the world? Even Locke's classic metaphor of a blank tablet discloses a passive, representational view of mental life; a perspective in which ideas are mental copies of some assumed reality.

James described the rationalist version of the psychologists' fallacy as the "assumption that the mental state under study must be conscious of itself as the psychologist is conscious of it."31 Like the empiricist, the rationalist fails to adopt the point of view of the thought itself. In both versions, James said, a 'wanton assumption' about what the thought is composed of (for the empiricist) or conscious of (for the rationalist) is imposed onto the description of the thought. James was less anxious about the seductiveness of the rationalist version than he was of the empiricist; the experimental psychology of his time.

31Ibid., p. 197.
was, after all, dominated by the Anglo-Saxon philosophical tradition. And while allusions to the rationalist version are less frequent in the *Principles*, he makes clear in his treatment of the stream of thought that the distinction between the thinker and the object thought of is not a necessary part of the process of knowing. "Many philosophers," he wrote,

... hold that the reflective consciousness of the self is essential to the cognitive function of thought. They hold that a thought, in order to know a thing at all, must expressly distinguish between the thing and its own self. ... They know the object to be one thing and the thought another; and they forthwith foist their own knowledge into that of the thought of which they pretend to give a true account.32

James pointed to Kant as the originator of the philosophical tradition which was founded on the rationalist version of the psychologists' fallacy. This fallacy is essentially *rationalistic* in the sense that it assumes that the source of knowledge is contained in the a priori categories of the knowing subject rather than the objects in the world.

Both the empiricist and rationalist versions share one important methodological error, as well as an important metaphysical assumption. Methodologically, both versions impose the observer's common-sense knowledge about the world of subjects and objects onto their descriptions of thought. Furthermore, at a deeper, assumptive level, both philosophical traditions tacitly agree that there are two metaphysically distinct substances in the universe—matter and mind (or subject and object). They differ only in their selection of the more fundamental substance. In the rationalist tradition the knower or self is the more basic substance in the process of knowing. In contrast, the empiricist tradition looked to objects in the world for their fundamental model of mental life. Following the precedent of Descartes, however, both traditions

32Ibid., pp. 274-275.
assumed that epistemological questions were to be posed within a dualistic framework and answered in terms of this fundamental dichotomy. As we shall see later, one of the primary aims of Hodgson's philosophy was to challenge this metaphysical dualism.

The Hodgson-James Critique of Rationalism
and the Need for Distinguishing between
Two Types of Knowledge

James unambiguously rejected the rationalist version of the psychologists' fallacy in his chapter on "The Stream of Thought" in the Principles. Then, in a footnote, James listed a number of British rationalists who had adopted Kant's position with regard to the nature of knowledge. James Ferrier's Institutes of Metaphysic is among those which James referred to and he quoted what that philosopher called the First Proposition—"Along with whatever any intelligence knows it must, as the ground or condition of its knowledge, have some knowledge of itself."33 James's selection of Ferrier is significant because the latter was Hodgson's mentor and Hodgson examined the problems with Ferrier's First Proposition at length in his Time and Space and The Philosophy of Reflection. Remember that it was these treatises which James called "the greatest mine of philosophical wealth now extant."34

In his Time and Space Hodgson was critical of Ferrier's proposition because he felt it contained an unwarranted assumption and an implicit and unjustified commitment to metaphysical dualism. It tacitly assumed, wrote Hodgson, that every feeling ever experienced is composed

33 Ibid., p. 274.
34 Perry, William James, 1:681. For his critique of Ferrier's First Proposition see Hodgson's Time and Space, pp. 45-52 and his Philosophy of Reflection, 1:109-114.
of, and therefore can be analyzed into, subjective and objective elements. Such an assumption means that the distinction between subject and object (self and not-self) is a fundamental and universal element or category of experience. According to Hodgson, the difficulty with this formulation is that the distinction between self and not-self is itself a product of experience, i.e., derived from experience. That is, the child at birth does not see a world of objects and a subject distinct from these objects but some such proposition is contained in Ferrier's First Proposition. In his Philosophy of Reflection, Hodgson called the child's pre-reflective experience primary consciousness, and described it as "no more than a series of feelings and thoughts per se, unreferred (by their subject) either to objects or to self." In Hodgson's philosophy, this world of pure or unreferred experience is developmentally prior to our common-sense world of subjects and objects which only arises after the child realizes that one particular object, the self, persists among the flux of other objects in experience. In making this distinction the child enters what Hodgson called the world of direct consciousness. The important point for Hodgson, however, was that the distinction between the subjective and objective orders was itself discovered in rather than given in primary consciousness. And once discovered, this distinction becomes an essential part of the child's everyday world. This world of direct consciousness becomes elaborated into the world of the common-sense adult and it stands at the foundation of science, which attempts to formalize and make rigorous what might appear chaotic and unconnected. Hodgson's reason for distinguishing between primary and direct consciousness was that he saw that subject matter of philosophy

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35 Hodgson, Philosophy of Reflection, 1:109.
being contaminated by the assumptions of direct consciousness. For
Hodgson, the subject matter of philosophy was experience as it is given.
Within this frame of reference, which Hodgson called reflective con-
sciousness, one seeks an assumptionless description of experience and
this goal entails a voluntary exclusion of our everyday and/or scientific
assumptions from our descriptions. 36 From this frame of reference,
Hodgson argued that Ferrier became unphilosophical by imposing his
everyday knowledge that the world is composed of subjects and objects
onto his description of what is given in experience. Ferrier, in effect,
sought to institutionalize the common-sense distinction between self and
not-self.

The precision of Hodgson's criticism of Ferrier can be seen more
clearly by introducing a distinction that played an integral part in his
philosophical system. This distinction is worth considering at length
because it also played an important role in James's psychological thought.
In Hodgson's system the distinction is between what he called first
intention and second intention statements. 37 First intention statements
are assumptionless descriptions of what is given in perception, or,
what would be called phenomenological descriptions of perceptual experi-
ence in contemporary terms. 38 In recognizing the importance of this

36 Ibid., pp. 9-13. Also see Hodgson, Time and Space, pp. 33-45.
Hodgson clearly recognized both the importance and uniqueness of his
distinction between first and second intention statements. Its impor-
tance arises from the fact that it forms the basis for his distinction
between science and philosophy, a distinction which he stated is predi-
cated on methodological grounds, i.e., the subject matter of philosophy
is composed of first intention descriptions while science deals with
second intention descriptions.

37 Hodgson, Time and Space, pp. 33-45.

38 Compare Richard M. Zaner's The Way of Phenomenology (New York:
type of description, Hodgson—as well as James after him—sought to undercut Kant's dictum that 'percepts without concepts are blind'. "Blind percepts" may well be unimportant in the world of ordinary experience but they play an essential role in the process of knowing and they are part of the subject matter of philosophical inquiry. For Hodgson, first intention statements are descriptions of objects as they are given in experience. In his words,

... when we perceive an object as a man would perceive it who saw in it an object for the first time, or when we voluntarily abstract from a perceived object all that is imported into it by our perceptions of other relations and objects, in both of these cases I call it having before us an object in its first intention. 39

What Hodgson is formulating here is a method of description within which our conceptual knowledge is voluntarily abstracted; a return to what he called primary consciousness. This method—which Hodgson called the method of reflection—becomes a necessary prerequisite for philosophical analysis because without it our conceptual understandings confound our descriptions. Stuart Spicker has recently shown that Hodgson's method of reflection influenced Husserl's formulation of the phenomenological method. 40 This is an exciting and valuable line of research—a pre-Husserl phenomenologist working from within the British empirical tradition!—


40 Stuart F. Spicker, "Shadworth Hodgson's Reduction as an Anticipation of Husserl's Phenomenological Psychology," Journal of the British Society for Phenomenology, 2 (1971):57-73. Also see Stuart F. Spicker, "The Fundamental Constituents of Consciousness: Process-contents and the Erlebnisstrom," Man and World, 6 (1973):26-43. In the latter article Spicker presents a convincing argument to the effect that Hodgson had a direct influence on Husserl's thought. This thesis seems to demand that the early history of phenomenology be rewritten. Taken historically, it seems that Hodgson influenced both James and Husserl. This interpretation also provides a basis for understanding why there are a number of fundamental similarities between Husserl and James.
which parallels our study of Hodgson's impact on James's philosophical psychology.

Hodgson contrasted first intention statements with those of the second intention. And while the former take the percept in isolation from others in consciousness, the latter are concerned with the object of perception in relation to other objects in consciousness. Put simply, second intention statements are made from within some assumptive frame of reference. They may be causal, practical, genetic or ethical and they may assume, for example, that the world is composed of subjects distinct from objects. As such, second intention statements are statements in which inferences about the objects of perception are mixed with what is given in perception. To use another set of Hodgson's terminology, first intention statements are addressed to the purely descriptive question—'What is it?'—while second intention statements seek to answer the explanatory or functional query—'How comes it?' In making this distinction Hodgson sought to provide a methodological distinction between science and philosophy.

Hodgson thought that the failure to make and keep this distinction had resulted in a great deal of intellectual wheel-spinning in the history of philosophy. He employed this distinction, which is the fore-runner of James's distinction between knowledge by acquaintance and knowledge about, to point out the contradiction in Ferrier's First Proposition. To Hodgson, Ferrier's proposition represented a classic example of the unconscious insertion of second intention—conceptual—knowledge into

41 Shadworth Hodgson, "The Metaphysical Method in Philosophy," Mind, 9 (1884):63. This article is an excellent overview of Hodgson's formulation of the methodological basis of his philosophy; the phenomenological themes are clearly evident.
what was intended to be a first intention description. In his *Philosophy of Reflection*, he states that Ferrier's First Proposition contains what he called the *fallacy of incidental circumstance*.\(^{42}\) That is, in his supposedly first intention description of the knowing process (i.e., what is given in that process), Ferrier inserts the concept of self, which is itself an inference based on experience. Since our knowledge of self is an essentially second intention statement it has no place in a description of what is given in experience. Rather than staying within the philosophical realm of what is given in experience, Ferrier imposes his knowledge about the cognitive relation onto his description of that relation.

The important point to recognize is that the rationalist version of James's psychologists' fallacy is methodologically and conceptually identical to the criticism of rationalism contained in Hodgson's fallacy of incidental circumstance. In a narrow sense, both are concerned with a fallacy of introspection, a fallacy rooted in the common-sense use of words to describe the flow of experience. In a broader sense, both criticisms point toward the importance of an assumptionless description of experience, which Hodgson presented formally as the method of reflection. This method, however, is tied to and based on a further distinction, a distinction between what is given in experience (first intention statements) and what is imposed onto experience (second intention statements). Furthermore, at the foundation of each is a skepticism of the traditional forms of metaphysical dualism.

The problem of dualism will be considered in a later section.

Let us now solidify the relationship between James's distinction between

knowledge by acquaintance and knowledge about and Hodgson's distinction between first and second intention statements. With this completed we shall return to the empiricist version of the psychologists' fallacy and Hodgson's critique of traditional empiricism.

James introduced the distinction between knowledge by acquaintance and knowledge about in an 1885 essay, "On the Function of Cognition."\(^{43}\) In spite of its title, this essay is a work in critical philosophical analysis and it is best viewed as a companion to his 1884 essay, "On Some Omissions of Introspective Psychology."\(^{44}\) His primary task in each of these essays is a precise and unadulterated description of mental life, a description free of the paralyzing assumptions which had misled the traditional schools of philosophical thought. It is interesting to note that these essays complement one another in one important respect. In the 1884 essay James argued against the empiricists' assumption that percepts and thoughts are distinct entities composed of separate elements. He countered this position by pointing to the inarticulate 'fringes' which surround, suffuse and give meaning to the more stable images of thought. Then, in his 1885 essay, James turned his descriptive skills to two omissions of the rationalists' conception of mind:

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\(^{43}\) William James, "On the Function of Cognition," *Mind*, 10 (1885): 27-44. It should be noted that James quotes John Grote in giving voice to the distinction between knowledge by acquaintance and knowledge about. My reasons for ignoring Grote and giving precedence to Hodgson's formulation of the distinction are twofold. First, Hodgson's general influence on James and his acknowledgement of this influence were considered. Second, and more importantly, is that Hodgson's distinction is an integral part of a complex of related philosophical insights which appear in the *Principles* but are clearly absent in Grote. Perhaps I am doing Grote an injustice, but I think not. In spite of my belief, however, I would welcome a well-documented examination of the Grote-James relationship.

\(^{44}\) James, "On Some Omissions."
(1) the assumption that a self is a sine qua non of knowledge and
(2) the assumption that immediate, relationless feelings are unimportant to the process of knowing. If the themes of these two essays are taken together we are provided a bird's-eye view of James's critique of nineteenth century philosophy. As such, we have a unique and valuable perspective on James's position on a number of philosophical issues which stand at the foundation of the Principles. And while James went beyond Hodgson in a number of ways (e.g., in positing that relations are themselves given in experience), his debt to that English philosopher is significant and unmistakable.

We know that James was aware of the similarity between his concept of knowledge by acquaintance and Hodgson's first intention descriptions because he used the terms interchangeably in his 1885 essay, as well as in the Principles and his Psychology: A Briefer Course. In the Principles he states that knowledge by acquaintance is provided by the senses and is intimately related to bodily feelings. He gives us a number of examples of knowledge of this sort—the color of blue, the taste of a pear, the feeling of an inch or the feeling of a toothache. James was fully aware that language was working against him in describing the essence of this type of knowledge. Cognizant of this difficulty, he analyzes the types of knowledge that are contained in an ordinary sentence. Take the example of the phrase, "the taste of a pear." The grammatical subject of the phrase (i.e., the taste, or better yet, simply that taste) is the blind object of acquaintance while the prepositional

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46 James, Principles, 1:221-222.
phrase (i.e., of the pear) adds knowledge about that dumb little unnamed and unclassified feeling. It is simply that taste, taken as a feeling grounded in bodily experience and incommunicable to a person who has never actually tasted that class of fruit, which James is referring to as knowledge of the acquaintance type. His genius was in recognizing that this level of knowledge stood at the foundation of all our conceptual knowledge. As he said,

All the elementary natures of the world, its highest genera, the simple qualities of matter and mind, together with the kinds of relation that subsist between them, must not be known at all or known in this dumb way of acquaintance without knowledge about.\footnote{Ibid., p. 221.}

That is, any knowledge, however abstract, is grounded in bodily feeling. James transformed Hodgson's concept of first intention descriptions in at least one important respect in bringing it into the psychological realm. That is, Hodgson's first intention descriptions are held to be absolutely distinct from second intention descriptions in the sense that they are intended to be absolutely pure or assumptionless. In contrast, James uses the distinction between knowledge by acquaintance/knowledge about as a way of indicating opposite extremes of a continuum rather than an iron-clad dichotomy. Thus he wrote that

\[\ldots\text{in general, the less we analyze a thing, and the fewer of its relations we perceive, the less we know about it and the more our knowledge is of the acquaintance type. The two kinds of knowledge are, therefore, as the mind practically exerts them, relative terms.}\]

\footnote{Ibid., p. 186.}

By relativizing and softening Hodgson's distinction James could point to the importance of this level of experience without having to defend the position that an absolutely assumptionless description of experience is possible.

\footnote{Ibid., p. 222.}
The relation between James's knowledge about or conceptual knowl-
edge and Hodgson's second intention statements is less important and
distinctive. Almost every nineteenth century philosopher recognized
that the data of sense is in some way transformed by our conceptual under-
standings, and Hodgson and James are no exception. For Hodgson, this is
the second intention knowledge of ordinary thinking and science, where
statements are made from some assumptive frame of reference. Similarly,
knowledge about for James is a

... result of the thoughts' operating on the data of sense ... to transform the order in which experience comes, into an entirely
different order, that of the conceived world. 50

The Hodgson-James Critique of Empiricism:
the Empiricist Version of the
Psychologists' Fallacy

Thus far we have considered the importance of Hodgson for James's
formulation of the rationalist version of the psychologists' fallacy as
well as the related distinction between knowledge by acquaintance/
knowledge about. While acknowledging these similarities, the critical
reader will demand more. Hume, as well as Sully, saw the difficulty
with positing a substantial self, which is the thrust of the rationalist
version of the psychologists' fallacy. The point is well taken, for
Hodgson, as a member of the empirical tradition, was certainly not alone
in recognizing the difficulty with the rationalists' formulation of
knowledge, i.e., that they implicitly assume the self, which they had
originally set out to prove. This argument against a substantial self
or soul was part of the standard polemics of the empiricist school.

My retort to the critical reader is that Hodgson, unlike any empiricist

50 Ibid., p. 482.
before him, also applied his distinction between first and second intention statements to the fundamental tenets of the empiricist tradition. This is why Hodgson's formalization of this distinction into a philosophical method which could be applied to any philosophical system is so important. The result was that he unambiguously rejected the elementistic and atomistic conception of mind which he found in the empiricist tradition. In the process, Hodgson set the foundation for James's empiricist version of the psychologists' fallacy and his formulation of the stream of thought.

Linschoten has written that James's formulation of the stream of thought "is the most fundamental notion in James' psychology."\(^51\)

From a descriptive point of view, this statement is incontestable. Linschoten goes on to write, however, speaking of Brentano's chapter on the "Unity of Consciousness," that

\[
\ldots \text{although James does not say so, that chapter is the foundation on which he [James] established his theory of the stream of experience, his theory of the Self and of the perception of time}.\(^52\)
\]

Although Brentano's Psychology of 1874 may well have been important in James's treatments of these topics, Linschoten's failure to even mention Hodgson with regard to these topics has a distorting effect that is characteristic of recent phenomenological interpretations of James. In fact, there are historical as well as conceptual reasons which suggest that Hodgson rather than Brentano was more important in James's formulation of the stream of thought. We have already noted that James had read Hodgson's *Time and Space* at least five years before Brentano's

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\(^52\) Ibid., p. 144.
masterpiece was published. The core of Hodgson's criticism of Hume's sensationalistic atomism, as well as his description of experience as a stream are contained in *Time and Space*. More convincing, however, is the fact that the methodological distinction between knowledge by acquaintance/knowledge about underlies James's notion of the stream of thought and this distinction is contained in Hodgson's pre-1874 works but absent in Brentano's *Psychology*. In fact, we find James criticizing Brentano's method of introspection in an 1884 essay precisely because it does not contain the distinction between the "immediate feltness" of experience and one's "reflection on" this experience. Thus, while James shared Brentano's aversion to the elementism and discontinuity of the empiricist conception of mind, his book did not, in James's eyes, present a method which supported the notion that the empiricists' elements were supercilious to the science of psychology.

In introducing Hodgson we quoted him stating that a "greater and more comprehensive philosophy can arise in the line of Locke than ... Leibniz." This makes clear that Hodgson was more sympathetic to the empiricist tradition. In stating this, however, it must be made clear that he was critical of a number of the fundamental tenets of the empiricist tradition. In the foreground of these criticisms is Hodgson's early (beginning in 1865) and continual (spanning his entire philosophical career) rejection of the psychologism and elementism of the British tradition. These criticisms were rooted in what he saw as the empiricists' failure to adopt the method of reflection, i.e., an assumptionless

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In his first excursion into philosophy in 1865 Hodgson made clear that for him, metaphysics is a logical or static discipline while psychology is essentially dynamic. The subject matter of both is consciousness but, according to Hodgson, the methods and goals of metaphysics and psychology are fundamentally different. Psychology, as a dynamic and empirical science, studies "consciousness in relation to [the] bodily organs which are its seat."\(^56\) It is concerned with finding the physical correlates of mental processes and the means by which the objects of perception are produced. In contrast, metaphysics studies "consciousness in relation to its objects," i.e., the relation between the knower and the known.\(^57\) In fulfilling its goal metaphysics must approach its subject matter without assumptions while psychology, as an empirical science, must assume that there are physical correlates of consciousness in the brain as well as in the world. And while Hodgson stated that the goal of metaphysics is "to analyze the structure of objects . . . and to resolve them into elements," he added that

\[\ldots\text{it does not pretend to determine whether the elements which it reaches in its analysis existed prior to the whole or empirical objects which are their synthesis.}\ldots\text{Such a problem would be of a dynamic nature. There is no reason in metaphysics for supposing that historically, in the order of nature, the simple existed before the compounds.}\]  

The issue which Hodgson is addressing here is the psychologism, and its concomitant elementism and mental synthesis, which characterized nineteenth century empirical psychology. That is, in analyzing an object of perception it is natural to assume that the object under consideration

\(^{56}\text{Hodgson, Time and Space, p. 31.}\)

\(^{57}\text{Ibid., p. 31.}\)

\(^{58}\text{Ibid. (Italics mine.)}\)
became an object through the same stages which are uncovered in the reflective analysis of the object. In other words, that the elements of analysis are psychologically real. This is the tacit assumption upon which the entire tradition of British empiricism rested, i.e., that reflective analysis of an object or idea produced an exact simulation of the means by which the idea was produced. In the process, philosophy was reduced to psychology. In Hodgson's language, the empiricists found distinguishable parts of the flow of experience and wrongly assumed that what is distinguishable must also be given separately and distinctly. Hodgson rejected this formulation whole-heartedly. The importance of Hodgson's argument was acknowledged by James in the Principles when he said that the space perception theories of Lipps, Spencer and Bain "seem guilty of that confusion which Mr. Shadworth Hodgson has done so much to clear away, viz., the confounding the analysis of an idea with the means of its production." James wrote that such an assumption is an example of the psychologists' fallacy. But this is not the rationalist

59. The basis of Hodgson's rejection of the psychological elementism of British empiricism can be seen in his Time and Space, (pp. 87-115), in sections entitled "The Unity of Phenomena in Space" and "The Unity of Phenomena in Time." Hodgson's rejection of elementism can also be seen in his critical examination of the laws of associationism in that work, (pp. 256-294). Although this topic deserves to be considered at length, one passage will make clear that Hodgson was dealing with a conception of mind which was temporally interconnected and united and thus fundamentally different from the traditional empiricist description. Hodgson wrote that

"... when once the conception arose of consciousness being one connected series, lengthening itself each moment, and growing out of its former self and out of its previous content, as a plant of its seed, so that the moments of consciousness are not separate objects... but organic parts of one living whole... then the inquiry was directed into its proper channel." [pp. 263-264]

This passage is reminiscent of James's conception of self as passing thought.

60. James, Principles, 2:281.
version of that fallacy. Here James is concerned with the empiricist version, when the psychologists' conceptual knowledge of objects in the world confounds their description of what is given in experience. The fallacious nature of this assumption is most clearly seen in James's unequivocal and continual rejection of the elementism and mental synthesis of the empiricist tradition throughout the Principles.61

In an 1876 article in Mind Hodgson made clear that he agreed with Locke's dictum, Nihil ist in intellectu quod non prius in sensu. In Hodgson's eyes, the problem with the empirical tradition is that it had not yet come to grips with the question of what is given in sensu!62 Are the isolated sensational elements of the empirical school given as distinct impressions? According to Wundt's GrUndzuge, which Hodgson quotes at length in his Philosophy of Reflection,

Pure sensation (Empfindung) is an abstraction which never comes forward in our consciousness. Consciousness possesses only perceptions (Vorstellungen): the sensations are in it always arranged according to the general forms of intuition, time and space. Nevertheless we are compelled by an overwhelming number of psychological facts . . . to suppose the existence of pure sensation, and to assume that perceptions everywhere form themselves, by a psychological synthesis, out of sensations.63

In being compelled to posit the existence of pure sensations and to assume that percepts are formed by a psychological synthesis of those sensations, Wundt was following in the venerable tradition of John Stuart Mill's mental chemistry approach to psychology. Hodgson's retort to Wundt's formulation was,

I am not convinced of the necessity [i.e., to posit pure sensations and a psychological synthesis] because I find sensations always

61Ibid., 1:161.


63Hodgson, Philosophy of Reflection, 1:260. (Italics mine.)
combined with rudiments of time or of time and space, which I call the formal element. These rudiments it is from which they are never found pure. A state previous to perception, in which sensations are pure, is a fiction.\textsuperscript{64}

Wundt's method of introspection, which Hodgson analyzes in his Philosophy of Reflection, demanded that the description of experience be reduced to the purely contentual or material properties of sensations, intensity and quality.\textsuperscript{65} Thus for Wundt, any part of experience could be fully described in terms of its particular sensory qualities (e.g., colors, sounds, etc.) of a given intensity or magnitude. The properties of intensity and quality are logically distinguishable but empirically inseparable since any particular sensory quality must have some magnitude to be experienced. The problem with this method, wrote Hodgson, was that it tacitly assumed that all that is given in experience could, in fact, be fully and accurately described in terms of these two contentual properties. This method was literally founded upon the assumption that what is given in experience could be accurately described in terms of the contentual properties which are directly dependent upon objects in the world. That is, Wundt's method of introspection assumed, following the tradition of Locke and Hume, that what is given \textit{in sensu} is a mere reflection of the properties of objects, which happen to be discrete and separate in the world. Thus Wundt, like Ferrier, imposes his conceptual knowledge onto his description. According to Hodgson, the elementism of the empiricist tradition arose from their unwarranted and unrecognized exclusion of the formal element of time from what is given \textit{in sensu}. That is, in failing to recognize the givenness of the temporal element, empiricism divested experience of the unity and

\textsuperscript{64}Ibid., pp. 260-261. \textsuperscript{65}Ibid., pp. 248-272.
continuity which this formal element provides and which is felt in experience.

Once this atemporal and elementistic assumption was introduced two paths seemed open to philosophers. Hume's path involved making discontinuity an essential, though unnoticed, feature of his system. Then Kant, seeing the need for unifying experience, made space and time a priori forms which give unity and continuity to the chaos of sensory elements. The problem is that Kant made these formal elements logically prior to experience. Hodgson rejected both alternatives and argued that time-duration is an inseparable element that is given, along with the contemp-tual qualities of objects, in experience. That is, any object appearing in experience must appear in some moment of time as well as have the properties of quality and intensity. As Spicker tells us, Hodgson's recognition that time-duration is an inseparable element of experience gives his philosophy a "nexus between all former and latter moments, and makes experience a continuous process." And, within the context of the history of philosophy, this continuity was obtained without recourse to Kant's a priori forms of intuition or Wundt's mysterious psychological synthesis. Thus for Hodgson, the lowest empirical unit of experience, what he called the 'minimum of consciousness', contained feelings (contents) which appear in time (process). Therefore, in the place of pure sensations, Hodgson argued for the recognition of the intrinsically temporal (process-content) nature of experience.

Hodgson was also aware that the root of the empiricists' elementism

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66 Ibid., pp. 259-264.
was their failure to approach the description of experience without assumptions. As he wrote,

... the true objection to Hume should have run somewhat as follows: You are really including an orderliness in your terms experience, and you are assuming that it is a contingent orderliness ad extra though you think you are making no assumption at all. You are only entitled to assume experience, undetermined as to whether it is chaotic or orderly. ... You must analyze experience without assuming orderliness or an original chaos, and then you will possibly see in what its orderliness consists.68

In Hodgson's eyes, empiricism, beginning with Hume, had unconsciously imposed our knowledge about objects onto a supposedly assumptionless description of experience.

My task at this juncture is not to analyze the impact of Hodgson's treatment of time on James's psychology but to show how Hodgson's critique of empiricism formed the basis of James's notion of the empiricist notion of the psychologists' fallacy and the stream of thought. What must not be overlooked, however, is that both James's and Hodgson's criticisms of empiricism are rooted in their recognition of the empiricists' failure to consider the temporal element as given along with any object in experience. Thus James's notion of the stream of thought is intimately tied to his treatment of time. If this is true, and James was indebted to Hodgson for his temporalism, it should not be surprising that he provides the reader with lengthy passages from Hodgson in his chapters on "The Stream of Thought" and "The Perception of Time."69

And it should not be surprising that Hodgson's lowest empirical unit of experience, the 'minimum of consciousness', becomes the 'specious present' in James's treatment of time and the 'passing thought' in his treatment

68 Hodgson, Philosophy of Reflection, 1:11.

69 James, Principles, 1:230; 607-608.
of self. Also, it was James's recognition of the importance of the temporal aspect which moved him to argue that an essential characteristic of the stream of thought is that it is "sensibly continuous;" that thought, as it appears immediately, is felt as temporally inter-penetrated.

Into the awareness of the thunder itself the awareness of the previous silence creeps and continues; for what we hear when the thunder crashes is not thunder pure, but thunder-breaking-upon-silence-and-contrasting-with-it.70

The intimate relationship between James's temporalism and critique of empiricism can be seen in his lengthy argument that exactly the same feeling or idea can never be experienced twice. The proposition seems almost trivial at some level but James reminds the reader that it "is more important theoretically than it at first sight seems." This is the case because it

... makes it already impossible for us to follow obediently in the footsteps of either the Lockean or Herbartian school. ... A permanently existing [and thus atemporal] 'idea' or 'Vorstellung' which makes its appearance before the footlights of consciousness at periodical intervals, is as mythological an entity as the Jack of Spades.71

We quoted James earlier as describing the empiricist version of the psychologists' fallacy as "the confusion ... between the thoughts themselves, taken as subjective facts, and the things of which they are aware." It was this confusion, he argues, that led Hume to describe experience as a discontinuous train and Wundt to posit the need for a psychological synthesis. That a temporalism stands at the foundation of this fallacy can be seen in the following interpretation. James admits that objects in the world can be conceived objectively and thus as temporally distinct, i.e., as "discrete and discontinuous; they do pass before

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70Ibid., p. 240. 71Ibid., pp. 235-236.
us in a train or chain, making explosive appearances and rending each other in the twain." But when these objects are considered subjectively, as part of the stream of thought, they appear as a segment of an essentially continuous temporal process. Thus the absolute separation of successive objects is fundamentally different from the melting-together and inter-penetrating character of those objects considered as subjective facts. And that this melting-togetherness is a product of the temporal nature of experience can be seen in James's suggestion that

The thunder itself we believe to abolish and exclude the silence; but the feeling of the thunder is also a feeling of the silence as just gone; and it would be difficult to find in the actual concrete consciousness of a man a feeling so limited to the present as not to have an inkling of anything that went before.

That is, at times it is valuable to conceive of thunder objectively, as a timeless conceptual entity that is isolated from the flux of experience. But if the thunder is taken subjectively, we must attempt to describe it as it appears, as a sound embedded in and conditioned by what immediately preceded and follows it. It is this before-and-after that feeds into and helps create the peculiar experience of a particular experience. Thus, it is a temporalistic argument that stands at the foundation of James's denial of the possibility of a part-for-part correspondence between what we know about objects and the way they appear in experience. And it is this distinction we have tried to show, that James obtained from Hodgson's distinction between first and second intention descriptions. Similarly, it is because of the essentially temporal nature of mental life that James argues that objects, as they appear in the world, must be kept at least methodologically distinct from the objects of thought.

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\(^{72}\)Ibid., p. 240.  \(^{73}\)Ibid., p. 241.
Hodgson and the Dualisms of James's Psychological Thought

The qualifier 'at least methodologically distinct' is an important one in terms of James's treatment of dualism before 1892. We have previously argued that his critique of introspection emerged from the unambiguously monistic strain in Hodgson's philosophy. We shall now approach James's treatment of the mind/body problem directly.

The position which James adopted on the mind/body problem in the Principles has itself been an object of debate since 1890. John Dewey and G. Stanley Hall, for example, who insisted that a scientific psychology must renounce Cartesian dualism, were quick to point out that James's proposed psycho-physical dualism crumbles into an interactionism in his treatments of will, automaton theory and attention. And it seems that George T. Ladd had the mind/body problem in mind when he spoke disparagingly of the

\[\ldots\] great difficulty the critical reader will find in ascertaining just what is Professor James' latest, not to say, his final view upon several difficult and disputed questions.\]

Such criticisms by his American contemporaries makes clear that the author of the Principles failed to offer an integrated or consistent program for a scientific psychology. In fact, the Principles reads, at times, like a kaleidoscope of divergent opinions—where one formulation of dualism transforms itself without warning into another, seemingly contradictory, position.


75 George T. Ladd, "Psychology as a so-called 'Natural Science',' Philosophical Review, 1 (1892):580. James answered Ladd's criticisms directly in the following issue of that journal; see William James's "A Plea for Psychology as a 'Natural Science'," Philosophical Review, 1 (1892):146-153.
The literature which has accumulated on James's treatment of dualism in the Principles seems as contradictory and confusing as the Principles itself. Almost fifty years after his initial criticism, for example, Dewey returned to the Principles in his "The Vanishing Subject in the Psychology of James." In that essay he maintained that there are two incompatible strains in the Principles; one which is an "official acceptance of epistemological dualism" and another in which "subject and object do not stand for separate orders or kinds of existence but at most for certain distinctions made for a definite purpose within experience." Dewey argued, at the height of the attempt in American philosophy to overcome dualism, that James's later philosophy was an elaboration of the second, 'objectivistic' or 'behavioral' formulation of knowledge. This thesis was challenged brilliantly by Capek, who showed that a subjective strain continued throughout James's later philosophical work. The debate did not stop however. Wilshire's 1968 monograph, written when phenomenology began making inroads into the American scene, seeks to show that the psycho-physical parallelism of the Principles breaks down and a distinctively anti-dualistic (i.e., phenomenological) strain emerges. From Wilshire's perspective, the problem with James is that he does not carry this phenomenological strain far enough to escape the inconsistencies inherent in dualism. Then, independent of

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77 Ibid., p. 589.


79 Wilshire, James and Phenomenology.
Wilshire, Morris argued that the dualism of the *Principles* is a methodo-
logical postulate rather than a metaphysical position. This interpreta-
tion, which becomes plausible in light of James's later rejection of
dualism, was recently challenged in an important article by Andrew Reck.

Reck's paper sought to "correct any hasty inference that James
was always anti-dualistic and to reveal . . . just how entrenched dual-
ism was, even in the mind of one of its leading adversaries." It is
Reck's thesis that calling James's dualism methodological obscures both
the "complexity and depth of James' dualism at the time he wrote the
*Principles.*" He supported his position by attempting to show that
James was entrenched in both a psycho-physical and epistemological dual-
ism throughout the *Principles.* This distinction is central to our expo-
sition and thus deserves to be made explicit. By psycho-physical dualism
Reck means the classical position that there are two fundamentally dis-
tinct processes in the universe, body and mind. By epistemological
dualism he means that the knowing process consists of relations between
two irreducible terms, the knower and the known.

Before presenting yet another interpretation, a number of circum-
stances which have clouded the debate ought to be noted. First, and most
importantly, James's treatment of dualism in the *Principles* really is
ambiguous. Second, in an article written in 1904 James publically
abandoned dualism in favor of a monism of pure experience. Third,

80 Charles Morris, *The Pragmatic Movement in American Philosophy*

81 Andrew Reck, "Dualisms in William James' *Principles of Psychology,*/

83 Ibid., p. 32.

84 William James, "Does Consciousness Exist?," *Journal of Philos-
ophy, Psychology and Scientific Methods* (1904); reprinted in William James,*
*Essays in Radical Empiricism* (Gloucester, Mass.: Peter Smith), pp. 1-38.
in that article he stated that he had 'mistrusted' the formulation of "consciousness as an entity" for "twenty years." This would bring us back to 1884, the period in which James was writing the Principles. Thus this large body of literature can be viewed as a search for, or denial of, 'anticipations' in James's psychological thought of the monism which he opted for in his later philosophical thought. One way of approaching this issue is to attempt to articulate the logical parallels between James's post-1900 monism and aspects of his pre-1900 work in psychology. The problem with this strategy is that parts of the Principles really are ambiguous and contradictory and thus open to a number of interpretations.

One way of resolving ambiguity is to uncover the context within which an event took place. Commentators on James have sought to do just this by considering his statements on dualism in the context of either the Principles as a whole or his later thought. Neither approach has brought clarity to our ambiguous stimulus, i.e., James's treatment of dualism in the Principles. One context which this literature has ignored, however, is the historical context, the accumulated frame of reference from which he approached the problem of dualism in the Principles. More specifically, none of these writers have looked to Hodgson to shed light on James's treatment of dualism.

In this section it will be argued that the epistemological dualism of the Principles is most accurately viewed as a methodological postulate rather than a commitment to a metaphysical distinction between the subject and the object. This interpretation is directly contrary to Reck's

85 Ibid., p. 3.
suggestion that James was entrenched in an epistemological dualism in the 
Principles. At the same time, however, it must be admitted that James 
does seem to be entrenched in a psycho-physical dualism and this strain 
of his psychology reveals a commitment to a metaphysical dualism. 86
While this combination of positions is contradictory at one level, it 
is fully compatible with the interpretation offered in the last chapter--
that James's moral philosophy demands an interactionism between mind
and body. This interpretation will be supported by first examining
Hodgson's justification for maintaining both an epistemological and
psycho-physical dualism for scientific psychology while positing an
experiential monism for philosophy. With this historical context arti-
culated, James's treatment of dualism will be examined as it evolved with
the help of, and in opposition to, Hodgson's thought between 1884 and
1892.

Hodgson's unequivocal endorsement of psycho-physical dualism for
scientific psychology came as early as 1870, in his Theory of Practice. 87
This position appears frequently in Hodgson's works and is succinctly
formulated in his presidential address to the Aristotelian Society in
1886. In distinguishing the new physiological psychology from the old
faculty approach, he wrote that

The principle upon which the new school of psychology is founded . . .
is, first to examine, analyze and classify, the content of con-
sciousness as a conditionate . . . and the structure, organiza-
tion and functioning, of the nerve-organism as its condition and
then in the second place to apply the one analysis to the other,
and to determine what organs, what processes, what interactions
of parts and processes, in the organism, are devoted to the

86We had examined James's defense of psycho-physical dualism
and its metaphysical implications above, pp. 36-47.

production and maintaining of what modes and processes of consciousness and conscious action . . . .

The principle which Hodgson is offering here became known as epiphenomenalism. According to this doctrine, mental states are wholly dependent upon and conditioned by physical (i.e., brain) states. Epiphenomenalism envisioned an interaction from the physical to the mental and stated explicitly that mental states must not be conceived as causing either other mental states or brain states. In the last quarter of the nineteenth century epiphenomenalism was synonymous with the automaton theorists William K. Clifford, Thomas H. Huxley and John Tyndall. As we have seen in the first chapter, James argued against this formulation in the Principles, thus committing himself to a dualistic interactionism. And while Huxley labeled this position epiphenomenalism in 1874, James recognized that Hodgson had presented the earliest and most rigorous formulation of this doctrine.

Hodgson also recognized that a scientific psychology must also assume an epistemological dualism. Writing of psychology's search for lawful relationships, he stated that

... this search ... is at once guided by facts to the objective aspect of states of consciousness, excluding their subjective aspect. It is 'things' outside the body which appear to cause 'subjective states' within the body. The search for laws of dependency forces us ... to separate states of subjective


89 James, Principees, 1:130.
aspects from their objective aspect, that is, to separate Subjects generally from Objects generally.90

Before considering Hodgson's distinction between the objective and subjective aspects of experience, it should be noted that Hodgson was clear on why psychology, as a science, must assume such a dualism between subject and object. This assumption is necessary, wrote Hodgson,

... for the relations of dependency have in all other sciences been found to exist only where the thing from which the dependence moved, that is, the condition of cause, was of a solid and material nature, a substance. ... Psychology therefore, in seeking the conditions existendi of subjective states, seeks them in the laws or in the nature of substances. 91

Thus for Hodgson, both epistemological and psycho-physical dualisms were, in Morris's phrase, 'methodological postulates'; working assumptions which psychology as a scientific discipline must adopt. That such assumptions do not entail a commitment to any form of metaphysical dualism can be seen from Hodgson's formulation of the distinction between science and philosophy.

Hodgson's distinction between the objective and subjective aspects of phenomena stands at the core of the experiential monism of his philosophical thought. As such, it is intimately related to both his phenomenological method, the method of reflection, and his distinction between philosophy and the natural sciences. In other words, his monism was the product of his method of reflection, which sought an assumptionless description of experience; and in adopting this method, philosophy becomes distinguished from the natural sciences, which must adopt some assumptions to carry out its task.

90Hodgson, Philosophy of Reflection, 1:52. (Hodgson's italics.)

91Hodgson, "Re-organization of Philosophy," p. 20. (Italics mine.)
As we have seen, any state of consciousness in Hodgson's system could be viewed as either an 'object of consciousness alone' (i.e., in its first intention) or as a 'real existence' (i.e., in its second intention). In adopting a method of assumptionless description philosophy deals with phenomena from a purely subjective point of view and seeks to reduce such phenomena to their metaphysical or logical elements. Hodgson contended that two metaphysical elements, the formal (time and space) and the material (feeling), could be distinguished in the first intention description of phenomena, although he took pains to note that these elements are inseparable as they are given in experience.92 An essential and historically unique feature of Hodgson's analysis is that the distinction between subject and object does not appear as metaphysical elements. Instead, Hodgson argued that the subject-object distinction is derived from experience (i.e., has only second intention status) and thus has no place in metaphysics. Thus, in looking to experience without assumptions Hodgson founded an experiential monism; with the method of reflection he saw simply 'a sequence of different feelings' unreferred to either the subjective or objective orders. For Hodgson, the subject-object distinction appears only when the phenomena of experience are viewed from an objective point of view, i.e., as second intention objects. This objective aspect of phenomena is the perspective of common sense and science, what Husserl later called the 'natural standpoint'.93 The system which emerged from this series of distinctions could be called a dual-element (form and matter), dual-aspect

92Hodgson, Time and Space, p. 52.
(subjective and objective) monism, which Hodgson represented with the diagram below: ⁹⁴

Hodgson's methodological distinction between science and philosophy can be formulated within the terms presented in this diagram.

Philosophy deals with phenomena taken from a subjective point of view, as first intention objects, and seeks to analyze phenomena into their metaphysical elements. In contrast, the natural sciences deal with phenomena from an objective point of view and in doing so must make assumptions which the philosopher has no right to make. The terms, methods and goals of the natural sciences literally demand that the scientist make assumptions about his subject matter. The physicist, for example, must assume that physical objects exist in the world and that they are causally inter-connected. Without such assumptions the search for material causes and general laws is impossible. And as a scientist, the physicist need not concern himself with justifying the existence of the real objects of his science or with his use of the notion of cause. These are philosophical rather than scientific questions. Similarly, Hodgson saw that the psychologist must assume the subject matter of his science, consciousness taken from an objective point of view (i.e., as

⁹⁴Hodgson, *Time and Space*, p. 52.
an object of scientific inquiry). From this point of view, Hodgson argued that consciousness is considered as an object of investigation that is related to other assumed objects in a twofold sense. First, consciousness must be assumed to be related to other objects in the world which psychology, as well as physics, must assume. This epistemological dualism is, for Hodgson, a general characteristic of science and is a direct result of the fact that science considers only the objective aspect of phenomena. Secondly, scientific psychology assumes that consciousness is related to physical states (i.e., bodily or brain states) which are the necessary and sufficient conditions of its appearance. This psychophysical dualism is a distinctive characteristic of the science of psychology, since its subject matter is consciousness. Thus Hodgson found no alternative to maintaining an experiential monism in philosophy along with both an epistemological and psycho-physical dualism in scientific psychology.

This distinction is important because Reck argues that the methods of James's psychology (i.e., introspection, as well as the comparative and experimental methods) and his critical analysis of introspection (what we have called the psychologists' fallacy) provide evidence of James's entrenched in a metaphysical dualism.95 Reck's thesis seems to be based on the hasty and, given Hodgson's precedent, faulty assumption that a person's assumptions for a scientific psychology are accurate representations of his metaphysics. The example of Hodgson should make abundantly clear that positing an epistemological and psycho-physical dualism for a scientific discipline does not preclude the adoption of a philosophical monism! Instead, in Hodgson's system we find dualisms

being offered as 'methodological postulates' which are subordinate to the monism of his philosophy.

Let us now return to James's psychological writings between 1884 and 1892 to see whether Hodgson's system influenced James's position on epistemology. These years span his career as a psychologist, ending in the year of the publication of his Psychology: A Briefer Course. It is also important to note that proclaiming either form of dualism for scientific psychology can not, in and of itself, be taken as evidence of his commitment to any form of metaphysical dualism.

What we find in James's writings during these years is a clear movement away from epistemological dualism. The first clear-cut sign of such a movement can be seen in his 1884 essay, "On Some Omissions of Introspective Psychology." Not surprisingly, this is also the first time one finds unequivocal signs of his adoption of Hodgson's methodological distinction between first and second intention statements, as well as his critical interpretation of rationalism and empiricism.

James's goal in this essay is a description of what he called the "immediate feltness of a mental state," i.e., the stream-like quality of experience. Neither the Kantian nor Humean traditions had done full justice to this level of experience. The important issue for our purpose, however, is whether James, in adopting the method of Hodgson, finds the same epistemological monism which the British philosopher found through this method. An interesting and revealing footnote suggests that James had, in fact, abandoned the metaphysical distinction between

96 James, Psychology.
97 James, "On Some Omissions."
98 Ibid., pp. 1-2.
subject and object and the alternative he formulates reveals his indebtedness to Hodgson. In the context of criticizing the epistemological dualism of rationalism, which separates the 'act' from the sensory 'content' of consciousness, James wrote that the

"... contrast is really between two aspects, in which all mental facts without exception may be taken; their structural aspect, as being subjective, and their functional aspect, as being cognitions. In the former aspect, the highest as well as the lowest is a feeling, a peculiarly tinged segment of the stream. This tinging [sic] is its sensitive body, the wie ihm zu Muth exist, the way it feels whilst passing. In the latter aspect, the lowest mental fact as well as the highest grasps some bit of universal truth as its contents. ... From the cognitive point of view, all mental facts are intellections. From the subjective point of view all are feelings."  

The distinction which we find James making here, between the subjective and cognitive or functional aspects, parallels Hodgson's distinction between the subjective and objective aspects of phenomena. It seems that James learned from Hodgson that one can, and, in fact, must, posit a thorough-going epistemological dualism for scientific psychology—but that such a position need not entail a commitment to a metaphysical distinction between subject and object. But a problem which surfaces in the Principles is that James never explicitly makes the distinction between philosophy and science on methodological grounds, as Hodgson did. The result is that James leaves himself open for misinterpretation.  

One such area of confusion can be seen by noting that his 1884 distinction between the two aspects of mental states allows him to employ the word feeling in two fundamentally different senses. That is, feeling can be employed as a philosophical (or phenomenological) description of any particular segment of the stream of experience taken in its subjective aspect. In this sense, James could write, as he did in 1884, that

99Ibid., pp. 18-19. (Italics mine.)
"from the subjective point of view all [mental facts] are feelings;" meaning that a portion of the stream is being taken as it immediately appears, without reference to its relation to its object or subject. In fact, there are places in the Principles where he seems to be using the word feeling in this monistic sense. For the most part, however, he used the word feeling in the Principles in what he called the psychological or cognitive sense as a synonym for knowledge by acquaintance. In this sense, feeling refers to a primitive type of sense data and, as such, it is an essentially dualistic concept.

James's failure to make clear the two senses of the word feeling, and hold to it, has resulted in a confusion among a number of commentators. Linschoten, for example, states that 'thought', for James, is an essentially dualistic concept while 'feeling' is essentially monistic. But this characterization ignores large tracts of the Principles in which James uses feeling or knowledge by acquaintance in an explicitly dualistic sense. Given this initial confusion, Linschoten, in considering James's distinction between knowledge by acquaintance and knowledge about, came to the inelegant conclusion that James is "simply contradicting himself but this is not to be wondered at if we remember how unsystematic James is."

Rather than contradicting himself, it seems more accurate to say that James, at times, adopts a method of describing experience that is reminiscent of Hodgson's method of reflection in the Principles. And in carrying out this method James too reveals his dissatisfaction with metaphysical dualism and his movement toward a monism

100 Ibid., p. 19. 101 James, Principles, 1:163.
102 See, for example, James's Principles, 1:221-222; 2:6.
103 Linschoten, Psychology of James, p. 150. 104 Ibid.
of pure experience. By not recognizing this strain of the Principles, Reck set forth the untenable thesis that James is entrenched in an epistemologically dualistic metaphysics in the Principles.

That James did adopt an epistemological dualism for scientific psychology in the Principles is incontestable. He tells us in the preface, for example, in language reminiscent of Hodgson, that

Every natural science assumes certain data uncritically, and declines to challenge the elements between which its own 'laws' obtain, and from which its own deductions are carried on.\(^5\)

Then in summarizing his chapter on the "Methods and Snares of Psychology" he writes that "psychology assumes that thoughts successively occur, and that they know objects in the world."\(^6\) His epistemological dualism is clear in this passage, but in the next passage he states clearly that such a dualism is not incompatible with a monistic philosophy,

. . . the dualism of Object and Subject and their pre-established harmony are what the psychologist as such must assume, whatever ulterior monistic philosophy he may, as a metaphysician have in reserve.\(^7\)

James's repeated reference to the fact that a scientific psychology must assume its subject matter and their causes is important in light of Hodgson's distinction between philosophy and the natural sciences. Within Hodgson's system, the distinction between these disciplines is that science, but not philosophy, has the right to make a series of methodological assumptions. And for both James and Hodgson, an epistemological dualism is part and parcel of these assumptions.

The important question for Reck's thesis is whether this methodological assumption is symptomatic of James's entrenchment in a deeper,
metaphysical distinction between subject and object. The passage from his 1884 essay would lead us to be skeptical of such a position. This skepticism is reinforced by one of James's fleeting excursions into the metaphysical realm in his chapter on "The Stream of Thought." His answer, which is presented in the section entitled 'Human thought appears to deal with objects independent of itself', leaves no doubt that he had overcome a dualistic metaphysics by the time of the Principles. In considering an altogether unprecedented experience, a "new taste in the throat," he asks a question which goes to the heart of the metaphysical status of the distinction between subject and object—"Is it [the new taste] a subjective quality of feeling, or an objective quality felt?" His answer is uncharacteristically clear.

You do not even ask the question at this point. It is simply that taste. But if a doctor hears you describe it, and says: 'Ha! Now you know what heartburn is', then it becomes a quality already existent extra mentem tuam. . . . The first spaces, times, things and qualities experienced by the child probably appear, like this heartburn, as simple beings, neither in nor out of thought. 108

Dewey recognized the similarity of this passage to James's later monism of pure experience, where the subject-object distinction was conceived of as a functional distinction made for a specific purpose within experience. What Dewey did not recognize, however, was the similarity between the metaphysics which underlies this passage and Hodgson's monistic metaphysics.

With regard to this passage, it is also interesting to note that James saw himself adopting a philosophical point of view in this description, one which abstracted away the epistemological dualism of adult common-sense. In terms of the language he used in 1884, he is describing

108 Ibid., p. 272. (Italics mine.)
a feeling here from a purely subjective point of view. Thus, after offering a monistic conception of experience, he retreats into the psychological point of view.

But later, having other thoughts than this present one, and making repeated judgements of sameness among their objects, he [the child] corroborates in himself the notion of realities... This... is the psychological point of view, the relatively non-critical point of view of all natural sciences, beyond which this book cannot go.109

The most glaring signs of James's disenchantment with epistemological dualism can be seen by examining the differences between his treatments of the flow of experience in the Principles and his Psychology of 1892. In the two years which separated these works James saw the need for two important changes in his characterization of experience; both of which seem compatible with the interpretation that James was moving away from the metaphysical distinction between subject and object. In fact, both these changes suggest that by 1892 the movement had culminated and James had done away with any remnants of a metaphysical dualism. First, in the Principles James diffidently offered the fact that "thought seems to deal with objects independent of itself" as one of the five essential characteristics and its dualistic nature is the feature which James omitted. Second, the title of the chapter in Psychology called "The Stream of Consciousness," changed from "The Stream of Thought" in the Principles. These changes are obviously related; if the subject-object distinction is not an essential characteristic of the stream then the word thought must be dropped since thought, for James, had clearly dualistic connotations. As he wrote in the Principles, thought "suggests the... reference to an object.

109 Ibid., pp. 296-297.
other than the mental state itself."¹¹⁰ Given this, James's choice of
the word consciousness in 1892 can be taken as a sign of his desire to
employ an epistemologically neutral term to describe the flow of experi-
ence. Neither of these changes could be made by a person entrenched in
a dualistic metaphysics. Instead, these revisions are those of a skept-
tic, whose epistemological heresies were nurtured by the philosophy of
Shadworth Hodgson.

Thus, in examining James's treatment of epistemological dualism
between 1884 and 1892 we have found evidence of a psychologist-philoso-
pher in the process of transition. That is, we have seen James question-
ing the ultimateness of the distinction between subject and object as
early as 1884, offering an alternative in 1890 and finally putting
epistemological dualism aside in 1892. Thus James does not seem to have
been entrenched in the metaphysical distinction between subject and
object in the period he was writing the Principles, as Reck has argued.
This can be said in spite of the fact that he retained an epistemologi-
cal dualism as a methodological postulate for scientific psychology.
In this important respect we have shown that James was following Hodgson's
distinction between philosophy and science.

We have presented a rather detailed argument for the importance
of Hodgson's system on James's philosophical psychology but the agreement
in detail can itself be taken as support for the interpretation. Things
become even more complicated, and confusing, when it is recognized that
the monistic strain of the Principles is in conflict with James's argu-
ment for the efficacy of consciousness in the Principles. This is the
case because the efficacy of consciousness does, in fact, implicate a

¹¹⁰ Ibid., p. 186.
dualism between mind and body, i.e., a psycho-physical interactionism. In this respect, James was in fundamental disagreement with Hodgson and was, as Reck argued, entrenched in a dualistic metaphysics. What must be made clear, however, as we have sought to do in the first chapter, is that James defended the efficacy of consciousness for moral reasons—to challenge what he saw as the presumptuous speculation of materialistic scientists.
CHAPTER 3

ASSOCIATION, REASONING AND THE A PRIORI:

THE TELEOLOGICAL FOUNDATION OF JAMES'S

PSYCHOLOGY OF THINKING

Pretend what we may, the whole man within us is at work when we form our philosophical opinions. Intellect, will, taste and passion cooperate just as they do in practical affairs, and lucky it is if the passion be not something as petty as a love of personal conquest over the philosopher across the way. . . . It is almost impossible that men who are themselves working philosophers should pretend that any philosophy can be, or ever has been, constructed without the help of personal preference, belief, or divination.1

This is an excerpt from an essay which James wrote in the late 1870's and published in 1882 under the title "Rationality, Activity and Faith." Thematically, this article is intimately related to his "Sentiment of Rationality," which we examined in some detail in the first chapter. Both analyzed the motives of philosophical belief, seeking to make clear to an age which was dominated by a scientific credo that the subjective ideals of the thinker play an essential role in determining the contents of his system.

Let us turn now to the concluding chapter of the Principles, to James's response to Helmholtz's observation that, as scientists, we must assume that the "phenomena of nature must be reduced to motions of material points with inalterable motor forces acting."2 To this proposition

2William James, The Principles of Psychology, 2 vols. (New York:
he remarked that:

The subjective interest leading to the assumption could not be more candidly expressed. What makes the assumption 'scientific' and not merely poetic, what makes Helmholtz and his kin discoverers, is that the things of Nature turn out to act as if they were of the kind assumed. They behave as . . . mere drawing and driving atoms would behave . . . 3

James is obviously excited by the proclamation of the great German physiological psychologist, he saw it as a confirmation of the formulation of the motives of philosophical belief which he offered in the late 1870's. Subjective ideals are expressed in the fundamental assumptions of one's system and these assumptions, in turn, structure the contents of a given system. But James is not writing as a philosopher in this section of the Principles. Instead, he is a psychologist offering his concluding remarks on the psychology of thinking. Within this context, too, however, Helmholtz's statement confirms James's fundamental thesis, for a teleology pervades Helmholtz's proposition. Assumptions are acts of faith which are rooted in the emotional commitments of the thinker; thus a teleological commitment underlies the thought of even the most rigorously mechanistic thinkers.

There is, therefore, a fundamental continuity in the development of James's thought from the late 1870's to 1890, from his analysis of the motives of philosophical belief to his psychology of human thinking. This continuity is rooted in a commitment to a teleological conception of the higher mental processes. This chapter will examine the origins, development and essential features of James's formulation of the higher mental processes in the Principles. To the extent that a teleology pervades

[3] Ibid.
This formulation, this chapter might be viewed as a continuation of the first chapter of this study. This chapter goes beyond the first chapter, however, by examining the details of James's psychology of the higher mental processes in the Principles.

This chapter is divided into three sections. We shall first examine the impact of Hodgson's thought on James's reformulation of the laws of association. We shall argue that the central feature of James's interpretation of association is that the knower is conceived as actively selecting those aspects of experience which are important and interesting for him. In the second section we shall examine James's formulation of human reasoning, a formulation which emphasizes the interested, teleological nature of thinking. In this section we shall also find James going beyond Hodgson in his biological interpretation of the a priori. In the third section we shall examine the relationship between believing and thinking in the Principles, attempting to articulate the sense in which James conceived of thinking as embedded in and conditioned by the emotional and aesthetic ideals of the thinker. In doing so, James's psychology of thinking will be presented as an extension and elaboration of the model he first presented in his early essays on the motives of philosophical belief. The value of this interpretation is that it integrates the descriptive and explanatory aspects of James's system.

A Dynamic Interpretation of Association

In the first chapter we saw that the notion of subjective interests pervaded James's early work on the motives of philosophical belief. The chronological, as well as conceptual, priority of this theme in James's psychological thought can be seen by turning to his review of Wilhelm Wundt's
Grundzüge der physiologischen Psychologie. This work is generally recognized as the first systematic experimental treatise in psychology. It is significant to note that James chose to describe Wundt's work on selective attention in some detail in this 1875 review. Given his own inclinations toward an empirical philosophy, his intention is clear. He wanted to emphasize the importance of the activity of the knower, a phenomenon which had long been overlooked in the British school of empiricism. Thus he wrote that

... these acts [selective attention and recognition] postulate interests on the part of the subject--interests which, as ends or purposes set the emotional constitution, keep interfering the pure flow of impressions and their associations. ... It is amusing to see how Spencer shrinks from explicit recognition of this law ... Mr. Bain, in principle, admits it, but does not work it out ... .

Since James's aim was to reform British empiricism, it is important that he could contrast the crude empiricism of Herbert Spencer with the more progressive empiricism of Alexander Bain. With Spencer, the importance of subjective interests is lost in the midst of associationistic reductions. His definition of mind as the 'correspondence of inner to outer relations' minimizes, if not wholly ignores, the role of the subject in the process of knowing. In Bain's Emotions and Will, however, James found the hegemony of British associationism cracking in a number of areas. In describing Bain in this review, James probably had the last chapter of Emotions and Will in mind. There Bain reluctantly admits that


5Ibid., p. 201.

6Alexander Bain, The Emotions and the Will (London: J. W. Parker and Son, 1859). Bain broke with traditional philosophical associationism by bringing the motor aspect into the foreground of his psychology.
the emotional interests of the knower can affect his beliefs by directing his attention selectively. But Bain's acknowledgement is guarded and heavily qualified. More importantly, he fails to recognize that his acknowledgement, however qualified, has important implications for his interpretation of the laws of association. But while James saw a hesitant recognition of the importance of subjective interests in empiricism, the position he opted for in the Principles was far more radical than either Wundt or Bain. There he argued that the interests of the knower are an essential ingredient in all levels of experience. Such a position made a passive interpretation of the laws of association untenable, it demanded an interpretation which placed selective attention on an equal theoretical footing with associative relations. It is just such an interpretation which James offered in the Principles.

James's "Association" chapter is an elaboration of an essay he published in 1880. This chapter is remarkable in a number of respects. First, it provides the reader with a succinct illustration of the contrasting-bordering-on-contradictory tendencies of the Principles. Second, James gives Hodgson the highest of compliments in the historical section of the chapter, writing that: "Dr. Hodgson's account of associationism is by all odds the best yet propounded in English." Beyond these,  

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7 Ibid., pp. 599-641. Bain wrote, for example, that: "...different minds have a different motive of selection out of the countless multitude of impressions that we all alike open to. It is, therefore, a material consideration of the problem of knowledge, to ascertain what are the motives to the specialized consciousness, or the forces governing attention, as something over and above disinterested and equal sensation." p. 637.


9 James, Principles, 1:603.
however, there is a fundamental conceptual reason which makes this chapter an ideal gateway to James's treatment of the higher mental processes. That is, the laws of association stood at the foundation of empiricism's account of thinking. If that tradition was to be reformed, the laws of association would first have to be reformulated.

The curiously ambivalent tone of this chapter is evidenced by James's reduction of the laws of association to a neural mechanism,

\[ \ldots \text{the psychological law of association} \ldots \text{would thus be an effect, within the mind, of the physical fact that nerve-currents propagate themselves easiest through those [brain] tracts} \ldots \text{which have been already most in use.}^{10} \]

This is nothing more than what was then called the law of neural habit or law of least resistance, a principle which any automaton theorist would have whole-heartedly endorsed. This law seeks to assign physical causes to the observation that thought Y succeeds thought X because it has been most frequently associated with X in the past. There is certainly nothing revolutionary in this principle.

But before we write James off as contradicting himself, two observations must be made. First, James's discussion of the laws of association takes place within a very circumscribed region of experience, what he called the spontaneous or involuntary driftings of thought.\(^{11}\) These experiences are epitomized by what would be called thoughtless musings and reveries. Thus rather than positing that association could account for the highest forms of human thinking, James relegates it to a subordinate role in his psychology. The second point is even more important, however, because it became the basis of his challenge to traditional associationism. This is James's claim that any particular association

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\(^{10}\text{Ibid., p. 563.}\) \(^{11}\text{Ibid., p. 567.}\)
presupposes a prior selection of the objects to be associated. In other words, before two objects can be associated in experience they must be attended to by the organism. And as we have seen, attention, for James, implicates the subjective interests of the knower. In recognizing the importance of selectivity and subjective interests, James inserted an active subject into the most primitive levels of experience:

Just as in the original sensible experience our attention focalized itself [sic] upon a few of the impressions of the scene before us, so here in the reproduction of those impressions an equal partiality is shown, and some parts are emphasized above the rest.12

Thus a distinctive conception of experience underlies James's treatment of association in the Principles. Subject and object are no longer distinct entities; the distinction between a tabula rasa, upon which objects are impressed, and external objects is collapsed into the interactive process of attention within a field of experience. For James, experience is given as a 'swarming continuum' which is fundamentally ambiguous and devoid of meaning. At the subject pole of this field James found a multitude of simultaneously existing subjective interests which are limited only by the knower's biological capacities, knowledge and ideals. At the object pole he found a corresponding diversity, in his words, a 'teeming multiplicity of objects and relations'. Given this description, the role of selective activity of the knower comes to the foreground. There are literally too many possibilities offered to assume that knowledge is a passive mirroring of the relations given in the external world.

Paradoxically, James's recognition of the importance of selective attention seems tied to a method which involves the voluntary suspension of attention. Although he uses this method rather unsystematically in

12 Ibid., p. 572.
the *Principles*, it is clearly related to what we called Hodgson's method of reflection in the last chapter. James's description of experience without normal attention is worth quoting at length:

We all know of this . . . state, even of its extreme degree. Most people probably fall several times a day into a fit of something like this: *the eyes are fixated on vacancy, the sounds of the world melt into a confused unity, the attention is so dispersed that the whole body is felt* . . . at once, and the foreground of consciousness is filled, if by anything, by a solemn sense of surrender to the empty passing of time. In the background of our mind we know meanwhile what we ought to be doing. . . . Every moment we expect the spell to break. . . . But it does continue, pulse after pulse . . . until . . . *an energy is given*, something . . . enables us to gather ourselves together . . . .13

James's description of visual and auditory experience when attention is dispersed is particularly important. Without an act of attention such experience is devoid of the structure and organization which characterizes our normal state of mind—"the eyes are fixated on vacancy, the sounds of the world melt together into confused unity." This is the world of sensory experience. But when we attend to some particular portion of this original flux—"an energy is given"—the world of related objects reappears. Thus an act of attention becomes essential to our normal experience. Whole, related, stable objects are not impressed upon us from the outside world. Instead, James wrote that:

Out of what is in itself an undistinguished, swarming continuum, devoid of structure or emphasis, our senses make for us, by attending, a world full of contrasts, of sharp accents, of abrupt changes, of picturesque light and shade.14

It must be made clear that James's emphasis upon selective attention by no means commits him to the psycho-physical interactionism which we found evidenced in some parts of the *Principles*. In the first chapter

13 Ibid., p. 404. (Italics mine.)

14 Ibid., pp. 284-285. (Italics mine.)
we took pains to distinguish two forms of selectivity in James's early thought; one which is deterministic and another which is ambiguous but seems to imply some form of interactionism. In his formulation of association it is clear that he had the deterministic notion of selectivity in mind. In fact, he speculated, following Hodgson's precedent, that subjective interests have a neurological basis in the prepotency of particular brain processes. This point is important because it clears the way for an examination of Hodgson's impact on James's formulation of association; for while Hodgson also steered clear of interactionism he, unlike other empiricists of his day, argued eloquently for the need to include the interests of the organism in an account of association. In the process, he offered a devastating critique of associationism which had a clear impact on James.

The process of formulating a definitive list of associative laws is almost as ancient an enterprise as philosophy itself. Aristotle's list, which included contiguity, similarity and contrast, may well be the best known but different epochs gave more or less prominence to one or another of these laws. A representative list for the mid-nineteenth century might include contiguity, similarity, cause and effect and contrast. For Hodgson, the crucial characteristic of this, or any other, list of associative laws was that they tacitly assumed that mind passively mirrors the relations given in the external world. James Mill, for example, thought that belief could be fully explained in purely intellectual terms, as a function of the frequency which a proposition's subject and predicate had been experienced together in the past. As George Brett wrote of Mill's system,

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15 Ibid., p. 572; p. 583.
he thinks the sequence of ideas reproduce the sequence of sensations; [and] if we add vividness and frequency to explain the strength of association, the whole theory may be considered complete.  

If we insert a few biological terms into this description it would apply equally well to Spencer's evolutionary associationism. Thus Hodgson was providing an essentially accurate description of orthodox associationistic empiricism when he noted that it assumes that the mind in producing her images in association . . . was imitating and repeating . . . the operations of nature, making use of certain laws which she observed originally from the observations of the sequences and coexistences of external things.

The selectivity of the subject is omitted in this formulation and imitation becomes the *modus operandi* of the human mind. In the last chapter we examined Hodgson's critique of the empiricist notion of ideas. Now we shall turn to his critique of its intellectual counterpart, the laws of association.

Hodgson saw a twofold vagueness in the traditional formulation of the laws of association. First, a list of associative laws provides no explicit way of explaining why one particular relation (i.e., associative connection) takes precedence over another in a given situation. That is, associationism never directly confronts the question of why object A is sometimes followed by object B, which has been experienced in spatial and temporal contiguity with A, but is at other times followed by object X, which resembles A. Why, for example, does an orange sometimes remind me of orange juice and other times of a baseball? While...
this phenomenon, Hodgson approached this question in terms of the interests of the knower.

In his Philosophy of Reflection in 1878, Hodgson made clear that he viewed the laws of association as empirical generalizations which describe the possible routes of the stream of thought. And while he recognized that such generalizations are essential to thought—they provide the basic materials of thought—Hodgson also recognized that they cannot, in and of themselves, explain the selection of the actual route taken. It was this shortcoming of William Hamilton's reduction of the laws of association to a general law of affinity which led Hodgson to write that:

If . . . we distinguish this general law of affinity into classes of contrast, resemblance and contiguity . . . this gives us no law of preference of contrast to resemblance . . . or, in short, of the preference of any of these [associative relations] to any other of them.19

In Hodgson's view, an associational account of the sequence of thought becomes plausible only if one ignores the fact that a particular object of experience has been associated with a large number of different objects through the various modes of associative connection. Put simply, associationism tended to ignore the multiplicity of possible relations which exist simultaneously in the stream of thought. For Hodgson, this multiplicity is an essential feature of the stream:

Any object . . . is connected by affinity [i.e., association] with all other objects whatever; and any object whatever stands in relation [of some sort] to any other object . . . and consequently to point out that they stand in some one or more of these relations . . . is no explanation at all . . . no discovery of the link between objects in redintegration.20

18Ibid., pp. 265-266. 19Ibid., p. 258. 20Ibid., p. 259. (Italics mine.)
And this fact makes it necessary to make explicit reference to what Hodgson called the law of preference or interest, that is, the emotional interests of the knower.

Thus Hodgson objected to two complementary tendencies in orthodox associationism: (1) the over-emphasis of intellectual/associative factors and (2) the subsequent neglect of the dynamic, interested aspect of the stream of thought. Both features are manifest in the ad hoc nature of the associationist's explanation of particular sequences of thought. Within our example, the associationist might point out that orange juice had been experienced as an effect of operating on an orange in a particular way and therefore it is understandable that one should follow the other in thought. But such an explanation can be seen to be an oversimplification when it is recognized that the idea of an orange has also been experienced through a myriad of other associative relations with other objects. Why is it, Hodgson is asking, that the relation of cause and effect is selected?

Hodgson went on to argue that a complete explanation of the sequence involves a consideration of the emotional interests of the knower. Let us approach this dynamic aspect of the stream, which loomed so large in James's psychology, by examining the second sense which Hodgson thought the associationist account to be vague.

Imagine, for a moment, that associationism is able to provide a plausible theoretical basis—e.g., frequency—for the selection of one type of associative relation rather than another. In fact, frequency stood at the foundation of the systems of James Mill, Herbert Spencer and even Hodgson, who defined the interests of the organism in terms of frequency. But even if the power of frequency is granted at the level of the selection between the types of associative relations, one is still left with
explaining why one object, out of a multitude of possible objects in the stream, is attended to. Here again we find that one's description of experience has a tremendous impact on how one explains it. Orthodox associationism tended to describe the movement of thought as a kind of linear sequence of objects held together by associative links. For if thought really is a 'train of ideas', where one whole object is displaced by another, then the sense of multiple possibilities— the spatial spread-outness— which appears at every pulse of experience is either considerably narrowed or simply absorbed by associative connections. But if thought is described as a stream of teeming possibilities, then the selection of some objects and the ignoring of others can be seen as an essential part of normal experience. Thus both Hodgson and James saw that distinctness and clarity in thought is created by selecting one portion through an act of attention.  

And this attentional act is guided by the interests of the knower. Thus Hodgson did not merely deny the central tenet of associationism, i.e., the importance of habit or custom. His most important contribution was that he placed an act of interested attention alongside habit in explaining the direction of thought. The result for psychology was that the stream came to be seen as a joint product of what Hodgson called "retentive" and "reactive" factors. The knower not only reproduced the past, he reacted to the present in a selective manner. In this sense, Hodgson made past experience (our accumulated habits) subservient to the present interests of the knower.

It is important to note that for both Hodgson and James, the

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21 See James, Principles, 1:461; Hodgson, Philosophy of Reflection, 1:288-297.

22 Hodgson, Theory of Practice, 1:382.
'reactive' or interested nature of experience made a passive formulation of the associative laws unacceptable. As Hodgson wrote in the Philosophy of Reflection:

Consciousness itself appears to involve some reaction on our part, on the part of the organism. . . . To feel is to react. Pure passivity is as impossible as pure activity.23

Dichotomizing between pure activity and pure passivity is, in truth, partly rhetorical but it is important in that both James and Hodgson hoped to integrate the two dominant philosophical traditions with a revised formulation of activity. Each hoped to avoid the extremes of the Humean and Kantian traditions and emphasize the selective activity of the knower while rooting it in the brain.

In the Principles we find an explicit recognition of the reactive as well as the retentive nature of human experience. In fact, the three chapters which precede James's treatment of association—"Discrimination and Comparison," "Attention" and "Conception"—emphasize the reactive, interested aspect of experience. With such a preparation it is not surprising that James also began his critique of orthodox associationism by describing the multiplicity and complexity of experience:

. . . the same outer object may suggest either of many realities formerly associated with it . . . and a philosophy of association that should merely say that it will suggest one of these, or even the one of them which it has oftenest accompanied, would go but a very short way into the rationale of the subject.24

As we have noted earlier, Hodgson was willing to reduce interests to frequency and thus remain, at least in spirit, within the associationistic tradition. James, however, was unwilling to make such a reduction. In his examination of the laws of association he mentioned recency,
vividness, congruity in emotional tone and chance as factors which are not reducible to frequency. In terms of a full account of the higher mental processes, however, James's unique formulation of the a priori capacities of the human brain made his departure from the empiricist tradition inevitable and absolute. We shall take up this topic in the next section. For now it should be recognized that James too pointed critically to the ad hoc nature of a purely associationistic explanation.

Granted an object A, they [the associationists] never tell us beforehand which of its associates it will suggest; their wisdom is limited to showing, after it has suggested a second object, that that object was once an associate. But, as we have seen with Hodgson, since any object whatsoever has stood in any number of relations with any number of other objects in experience, merely pointing to that one object begs the question of why that particular object was, in fact, selected. The passive model of empiricistic associationism seems caught in a vicious explanatory circle when the richness and complexity of experience is articulated. And for Hodgson and James, an explicit recognition of the interests of the knowing subject was the only way out of this loop.

James's essentially active, dynamic reformulation of the laws of association becomes intelligible from this context. In the Principles he distinguishes three types of association which he arranges along a continuum of what might be called the specificity of interest. He took pains to root the concept of interests in neural terms, as the "difference in the amount of that portion of the nerve tract . . . which is operative in calling up the thought which comes." Most importantly, however, the

\(^{25}\)Ibid. (Italics mine.) \(^{26}\)Ibid., pp. 572-573.
emotional interests of the knower are now conceived as an essential aspect of the process of association. James called the first type "impartial redintegration" [or association by contiguity]; here the interest seems diffuse and unfocused. This is the most concrete type of associative reproduction, where there is a detailed "reinstatement in thought of the entire content of large trains of past experience." The important point is that while he posited this as a theoretical extreme, he doubted that it ever actually appeared in its pure form in human experience. At the same time, however, he suggested that this mode was "the usual state of brutes when [they] were not actively engaged in some pursuit." In fact, he stated that this passive, non-selective reproduction of the past is most nearly approximated in human experience when a person consciously adopts an interest in such a reproduction. The more usual state is what James called "ordinary or mixed association." Here some more or less clearly defined object is torn out of the stream and its associates gradually surround it until another, more interesting object appears and dominates. This form of experience is epitomized by the free-floating movement from object to object without ostensible direction. He offered the third type of association—association by similarity—as one of the distinguishing characteristics of human, as opposed to non-human, mental life. For James, human thought is literally founded upon the continual surfacing of similarities which transgress the limitations of spatial and temporal contiguity. In association by similarity the interesting portion of the stream is very narrow and specific, as, for example, when a football gives way to the thought

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27 Ibid., p. 570. 28 Ibid., 2:353. 29 Ibid., pp. 571-572.
of the moon because we momentarily focus on the rotund nature of the
former. This form of association is the basis of creativity, the meta-
phor and the recognition of abstract similarities in the face of percep-
tual difference.

We can summarize James's indebtedness to Hodgson's treatment of
the laws of association by pointing to a series of assumptive, critical
and explanatory features which both their interpretations shared. At
the assumptive level, both began with a conception of experience as a
flowing stream of simultaneous possibilities rather than a linear
sequence of discrete objects. From this shared perspective both were
critical of what they saw as an essential vagueness in orthodox associ-
ationism, a vagueness which: (1) acted to obscure the role of selection
based on subjective interests and (2) made ad hoc explanation necessary.
Cognizant of these shortcomings, both brought the notion of interests
into the foreground of their psychologies and both rooted it in brain
processes. In fact, a large part of the remainder of this chapter
examines James's attempt to work out the implications of the notion of
selectivity in his psychology of the higher mental processes.

Reasoning: James's Biological Interpretation
of the A Priori

James's interpretation of the laws of association formed the
foundation for his formulation of voluntary thought or reasoning. This
formulation, however, does not appear self-contained in one chapter or
even one section of the Principles. In fact, it is scattered through no
less than ten chapters of that work. In this section we shall consider
only three of those chapters in detail—"Reasoning," "Conception" and
"Necessary Truths and the Effects of Experience." Our objectives are
twofold. First, we shall attempt to sketch James's basic model of reasoning. We shall then ask how it is that James thought that humans came to be able to think. In presenting his answer to this question, we shall find him going beyond both the letter and spirit of Hodgson, and empiricism in general, and formulating a unique version of the a priori.

James opens his "Reasoning" chapter with a statement which reveals both the goal of his account of human thinking as well as the importance of his interpretation of association. In contrasting the mental activities of humans with animals he wrote that

\[\ldots\] it is by no means easy to decide just what is meant by reason, or how the peculiar thinking process called reasoning differs from other thought-sequences which may lead to similar results.\(^{30}\)

This remark gives voice to one theme which pervades James's account of human thinking. That is, he is less concerned with the results of reasoning than he is with articulating the distinctive psychological processes which humans employ in thinking. There are obvious historical reasons for James to have begun as he does. Evolutionary theory produced a mass of mostly anecdotal accounts of animal intelligence which tended to glorify the reasoning powers of animals. This approach seemed to assume that since animals, at times, perform remarkably intelligent feats, the processes through which these accomplishments are brought about must be similar to those evidenced in human thought. In essence, the pioneers of animal psychology either assumed or argued for a similarity of processes from an occasional similarity of results. As we shall see, James rejected this position and offered a formulation of human thinking which was fundamentally different from animal intelligence.\(^{31}\)

\(^{30}\) James, Principles, 2:325. (Italics mine.)

\(^{31}\) Ibid., pp. 329-330.
Perhaps the best way to approach this fundamental distinction is to first examine the one very general sense in which James acknowledged a similarity between human and animal thought. This can be seen most clearly in what James called "empirical thinking," the "simpler kind of rational thinking which consists in the concrete objects of past experience merely suggesting each other." The empirical thinker is the rule-of-thumb thinker, who reacts to the present by reproducing the past. The one similarity between animal and this crude form of human intelligence is that both are bound to the repetition of the past. But as soon as we speak of the processes involved, a difference overrides even this general similarity. That is, James maintained throughout the Principles that even the most prosaic human mind has a larger number of interests than the most intelligent animal and his thought is dominated by association by similarity rather than contiguity. Anyone who has heard a person free-associate can attest to the fact that the human mind moves between abstract categories rather than reproducing events which are contiguous with one another.

The distinctive processes of what James called "reasoning proper" are abstraction and analysis. First, rather than being bound to the concomitant or even similar associates of the whole object, the reasoner is able to select an abstract property of the object and substitute it for the whole object. That is, the reasoner is able to deal with objects in terms of their essential properties, to intend an object from an abstract frame of reference. This is the case because abstraction brings the person into contact with conceptual networks which might have no

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32 Ibid., p. 329. 33 Ibid., p. 330.
intrinsic spatio-temporal relation to the object as a whole. Thus, for example, both a dog and a human may approach a limping stranger but only the human knows the limp means that the person needs help. In fact, for James, abstraction is synonymous with the act of conception—"our attention singling out some part of the mass of matter for thought . . . and holding fast to it, without confusion"—and both are intimately related to the interests of the knower. And every act of attention implicates inattention and therefore in abstracting one aspect of the object we 'mutilate the fullness of reality'. That is, every time we conceive of a thing in a particular way we classify it as an instance of a general class of phenomena. In doing so we break up the stream of thought into discrete, permanent conceptual units and ignore, for the moment, the other possible relations. As James wrote:

Whichever one of these aspects of its being I temporarily class it under, makes me unjust to the other aspects. But as I always am classing it under one aspect or another, I am always unjust, always partial, always exclusive. My excuse is necessity. . . . My thinking is first and last and always for the sake of my doing.

This observation is important from a number of perspectives. With regard to the thinker, the process of abstraction and classification has obvious advantages since an abstract attribute has fewer and more general properties than the object as a whole. With respect to James's theory of thinking, this brings the internal activity of the thinker to the foreground; as we shall see, James posited that the processes of abstraction and classification must be a priori capacities of homo sapiens. Lastly, with respect to James's formulation of human thinking, the notion of breaking up the stream into discrete conceptual units makes clear that

34 Ibid., 1:461.  
35 James, Principles, 2:333.
his description of thought as a stream is propaedeutic to, but not the essence of, his psychology of thinking. In fact, it might be more accurate to follow Linschoten and say that it is experience rather than thought that James had in mind when he described it as a continuous stream. In this way we can save the word thinking for the process of tearing out portions of the stream and intending its objects with specific interests in mind.

This leads us to the second process which characterizes reasoning, a process which, in fact, is continuous with abstraction. Once the thinker conceives of an object as a member of an abstract class, he searches and checks to see if the relations which hold for the class are applicable to the problem he is facing. Thus analysis follows abstraction and it involves a covert or overt testing of the alternatives suggested. James understood, for example, that a cat could open a door by randomly stumbling upon the behavior of moving the latch. But this is a case of association by contiguity, not reasoning proper. That this is the case can be seen by examining what would happen if a door became jammed against the lintel on a humid day. Assuming it wanted to get out, the cat would remain at the mercy of chance. But the human would (1) search for and attend to the source of the problem, (2) after locating it at the top of the door he would classify it in terms of his knowledge about the characteristics of wood, resistance etc., and (3) assuming he simply wanted to leave the room he would press down on the handle and open the door. However trivial the example, it contains all the essential elements of James's formulation of reasoning. Thus reasoning is a

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problem-solving situation, a search for the means for obtaining specific ends; and James thought that *homo sapiens* was uniquely equipped to handle such situations. Rather than being bound to reproducing the past, the reasoner can creatively apply his knowledge to problems that he is interested in solving.

James's conception of the subject-object relationship underlies his account of reasoning in an interesting fashion. Rather than conceiving of objects as discrete, clearly defined entities, James wrote that objects are "well-springs of properties . . . . Every reality has an infinity of aspects or properties." A relativism pervades his conception of objects.

There is no property ABSOLUTELY essential to any one thing. The same property which figures as the essence of a thing on one occasion becomes a very inessential feature upon another. His own italics make it clear that he sought to overcome the common-sense notion that the essence of an object is fixed and resides in the object. At the same time, however, his account of reasoning is founded upon the proposition that people are able to deal with objects in terms of essences. In the face of this paradox James maintained that the capacity to deal with objects in terms of essences is an activity of the knower. Thus he wrote that...

... the only meaning of essence is teleological, and classification and conception are purely teleological weapons of the mind. The essence of the thing is that one of its properties which is so important for my interests that in comparison with it I neglect the rest.

Again, James's own italics reveal his fundamental contention. The thinker

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38Ibid., p. 332.  
39Ibid., p. 333. (James's italics.)  
40Ibid., p. 335. (James's italics.)
himself classes, names and conceives of an object in terms of the categories which he believes to be the most important or valuable. In other words, the interests, values and emotional beliefs of the knower cut through the relativism of objects and create worlds of truth. Thus Helmholtz's mechanistic conception of science offers us one perspective, one version of the essence of objects. But James's point is that even the scientific conception of objects is grounded in a commitment to a set of passionately held values.

At first glance, James might be criticized for simply assuming that all conceptual activity is embedded value-laden emotional considerations; but his detailed analyses of the motives of philosophical belief make such a contention less powerful than it might be. If his account of thinking in the Principles begins with the proposition that thinking is inextricably inter-penetrated by value judgments, it must also be noted that this position was adopted only after a great deal of scrutiny of the most abstract forms of human thought. We shall return to this theme in the next section. At this juncture we must complete James's account of human thought by examining his formulation of the a priori.

Morton White has made a distinction between two closely related strains of James's formulation of the a priori in the Principles. At one level, James is concerned with the question of psychogenesis, the evolutionary origin of the brain structures which make necessary or non-empirical truths possible. In addressing this question, however, White noted that James crosses over into the epistemological realm and considers the method of justifying necessary truths. The distinction between

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psychogenesis and epistemology is valuable for our discussion in two related respects. First, it serves to clarify the focus of our discussion since the question of psychogenesis alone plays a central role in James's psychology of human thinking. Second, given this focus, it must be made clear at the outset that James, along with the vast majority of nineteenth century experimental psychologists, interpreted Kant's a priori in biological terms. Our goal, then, is simply to understand James's formulation of the a priori, to attempt to integrate the role played by biologically-given brain structures with his psychology of human reasoning. This goal leads us to the question of psychogenesis.

James's formulation of the origin of biologically-given brain structures was offered as an alternative to what he saw as the seductively appealing but logically untenable "experience hypothesis" of Spencer. According to Spencer, a priori knowledge is the product of the accumulated experience of the race. Spencer's formulation is an extension of the Lamarckian position that the acquired knowledge of our ancestors is transmitted to successive generations until it becomes manifest as instinctual or biologically a priori reactions. The appeal of this formulation was rooted in its capacity to integrate seemingly contradictory philosophical positions. Most importantly, Spencer's a priori allowed him to acknowledge Kant's contention that some aspects of cognition are prior to the individual's experience while retaining the fundamental tenet of empiricism, viz., that all knowledge is ultimately the product of experience. Of course, the notion of experience must be expanded to include the history of the race as well as the individual, but even this concession turned out to be an attractive feature of Spencer's interpretation. Evolutionary theory had made the genetic history of the
organism an essential ingredient of the formation of distinct species and Spencer's position, at long last, brought attention to the biologically-given structures of the brain. Thus when he asked: "What is the meaning of the human brain?," his answer sought to integrate Kantian rationalism with evolutionary theory without sacrificing empiricism. "It is," he wrote,

... that the many established relations among its [the brain's] parts, stand for many established relations among the psychical changes. Each of the constant connections among the fibres of the cerebral masses, answers to some connexion of phenomena in the experiences of the race.42

Empiricism is upheld by the statement that the inherited brain structures of the individual are ultimately derived from his ancestor's adaptation to their environment. It might also be noted that this formulation is fully compatible with Spencer's definition of mind as the correspondence of inner relations to outer relations. As a complex of physical structures, Spencer conceived of the human brain as a continuously developing product of the history of an entire species.

James's argument against Spencer did not center around the existence of biologically-given brain structures, for both agreed that:

(1) Kant's a priori must be interpreted in evolutionary terms and (2) the human brain at birth possesses numerous instincts and capacities which distinguish humans from other species. What James challenged was Spencer's account of the mode of origin and nature of the innate structures of the human brain. That is, James rejected the notion that the mind (or brain) is wholly structured by phenomena of the external world. In other words, he rejected the fundamental tenet of Spencer's empiricism, viz., that

all knowledge can be conceived of as the product of the combined experience of the race and the individual. For James, there is something intrinsic to the human mind or brain which has absolutely no analogue or correspondent in the external world. And since this something can not be construed as the product of experience, it is itself in no way dependent upon or conditioned by the actual sequences and coexistences experienced by the individual for its continued application. Furthermore, James argued that this something is responsible for the unique features of human cognition, viz., that the human is not bound, like brutes, to the repetition of past experience. Before examining the nature of James's a priori let us consider his argument against Spencer's formulation of their mode of origin.

A strict Spencerian empiricism is committed to discovering the external relations which correspond to the internal relations exhibited by the organism. It is this feature of empiricism which James brought attention to when he wrote that:

Most psychologists nowadays believe that the objects first, in some natural way, engendered a brain from out of their midst, and then imprinted these various cognitive affections on it . . . . It must then be fair to assume universally [they reasoned] that, with time enough given, the mere presence of the various objects and relations to be known must end by bringing about the latter's cognition, and that in this way all mental structure was first to last evolved.43

This conception of Spencerian empiricism led James to make a distinction which became the foundation of both his critique of Spencer and his own formulation of psychogenesis. The distinction is between what he called brain-born (or back-door) and experience-born (or front door) modes of origin of brain structures.44 If we restrict the word experience, as

43 James, Principles, 2:629. (Italics mine.)
44 Ibid., pp. 629-633.
James did, to "processes which influence the mind by the front-door-way of simple habits and association," then Spencer's formulation calls for an entirely experience-born genesis of brain structures. With this notion of experience, the distinction between the race and the individual is less important than the empiricist contention that all brain structures are ultimately the product of experience.

James rejected Spencer's empiricism unambiguously and maintained that the origin of the fundamental structures which underlie human thought are brain-born—arising from accidental variations in the molecular structure of the human. Thus James countered Spencer's Lamarckian notion with the Darwinian notion that internally generated chance variations are inherited and come to characterize entire species by loading the evolutionary dice in favor of the lucky mutants. Thus, in describing his position James wrote that:

The higher thought-processes owe their being to causes which correspond far more to the sourings and fermentations of dough . . . than to the manipulations by which [its] physical aggregates came to be compounded.

If we can continue within the imagery of James's analogy, it might be said that he rejected the notion that the structure of the human brain is passively shaped by the poundings of external objects. Left to itself, James argued that transformations take place in the brain as they do in dough, and the results of these changes can not be conceived of as the product of external objects. Thus James conceived of the unique characteristics of human thought as originating as "pure idiosyncrasies,

46 White, Science and Sentiment, pp. 173-176.
47 James, Principles, 2:638.
spontaneous variations, fitted by good luck . . . to the cognizance of objects . . . without being in any intelligible sense immediate derivatives of them.48 And these "pure idiosyncrasies or spontaneous variations" produced the physical basis of the distinctive features of human experience. Thus he wrote that:

Our aesthetic, moral and intellectual life seems made up of affections of this collateral and incidental sort, which have entered the mind by the back stairs, as it were, or rather have not entered the mind at all, but got surreptitiously born in the house.49

While both accounts of the origin of a priori brain structures are speculative, Spencer's is riddled with a devastating logical problem. Spencer's position holds that all a priori knowledge was originally acquired during the lifetime of the organism's ancestors. This formulation seems immanently plausible when it is applied to particular, isolated relations between the organism and its environment. Thus that a bird of prey responds instinctively to its victim's movements is easily understandable within Spencer's account. In fact, it was instinctual responses and reflex actions which Spencer gave as examples when he presented his experience-hypothesis in his Principles of Psychology.50 But James's formulation of the a priori in his Principles was not primarily concerned with isolated response dispositions. Instead he sought to explain the origin of, in his words, the "theoretical part of our organic mental structure."51 The difference is of fundamental importance, as James sought to understand the origin of the basic capacities, activities and processes which distinguish human from non-human mentality. And in applying Spencer's

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48 Ibid., p. 631.
49 Ibid., p. 627.
50 Spencer, Principles, 1:419-425; 458-460; 465-471.
51 James, Principles, 2:677-678.
account to these general capacities, "the categories themselves," James called them, one arrives at a logical conundrum. An example will make this clear.

One capacity which James said distinguishes human from non-human mental life is the reflective memory of homo sapiens, our ability to recall objects of thought as distinct from objects in the world. Can it be reasonably argued that our ancestors gradually increased their capacity to reflect on what had occurred in the past in a manner analogous to the way that the ancestors of hawks gradually increased their efficiency as field-mice hunters? This evolutionary scenario is logically impossible because any particular instance of reflective memory presupposes a capacity which makes this type of memory possible. That is, the capacity to reflectively remember, a biologically given brain structure, is logically prior to any particular string of human-like memories. And this capacity, James argued, must be construed as the result of spontaneous variations in the brains of the ancestors of humans. Spencer's account would lead one to the untenable position that an organism, in adapting to its environment, could—in principle—outstrip its biologically given brain structures. How else could novel characteristics of the brain emerge in the evolution of a species? This aspect of Spencer's formulation was an artifact of the dualistic teleology of Lamarck's formulation of the inheritance of acquired characteristics—that the desire to perform some action creates, over a period of time, the ability to carry out that action. And while Spencer obscured this principle in his vague, systematic writings, James unearthed it and used it to refute Spencer's evolutionary empiricism.

52 The teleological foundation of Lamarck's formulation of the development of species is considered in John C. Greene's The Death of Adam: Evolution and Its Impact of Western Thought (Ames, Iowa: Iowa University Press, 1959), pp. 163-164.
The form of James's argument against Spencer—that any particular instance of a given type of experience necessarily assumes the brain structures which make that type of experience possible—has a distinctively Kantian flavor to it. James himself recognized the similarity; but before we call him a disciple of the great German philosopher a number of fundamental differences must be acknowledged. First, as we have said, James offered a biological interpretation of the a priori and its mode of origin. A second and more radical difference revolves around James's conception of the nature of the a priori. That is, the processes which James had in mind when he spoke of a priori brain structures are quite different from those of Kant or Spencer. In a little-quoted but revealing footnote in the Principles he tells us why such a difference is necessary.

Kant ... made a strange tactical blunder in his way of showing that the forms of our necessary thought are underived from experience. He insisted on thought-forms with which experience largely agrees, forgetting that the only forms which could not by any possibility be the results of experience would be such as experience violated. The first thing a Kantian ought to do is to discover forms of judgement to which no order in 'things' runs parallel ... I myself have already to some extent proceeded, and in the pages which follow shall proceed still farther to show the originality of mind in this way.

Footnotes are a historian's delight when they express, in a few sentences, a person's general orientation toward an extremely complex topic. And this is what we have here. James says that Kant's argument for an a priori

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53 James's adoption of a type of apriorism is explicitly admitted in the Principles, 2:618.

54 James, Principles, 2:664-665. (Italics mine.) This form of argument against Kant's formulation of the a priori is evidenced in Spencer's Principles, 1:467. James was obviously responding to the Spencerian argument when he offered a Darwinian interpretation of the a priori.
element suffers from the fact that his categories are themselves frequently encountered in experience! Consider, for example, Kant's hypothetical form of judgment, which can be expressed as if A, then B. The question is whether this category is derived from or logically prior to experience. Given these alternatives, the empiricist could argue that the hypothetical form of judgment is merely a generalization from a person's experience of two external events—a and b—invariably following one another. Aware of this problem, James's search for the a priori centered around psychological processes which correspond to nothing in the external world. If found, such processes would be more reasonable candidates for arguing for the "originality of the mind."

In carrying out this strategy, James effected an important change in the notion of the a priori. That is, the a priori was transformed from a fixed set of categories into the general capacities and processes which are built into the structure of the human brain. Psychologically, James's a priori amounts to a group of functional processes which are correlated with the unique structural features of the human brain. We have already examined one such process, the expanded memory of humans. We shall now turn to the process of conception.

The process responsible for the unique structure of human thinking is conception and conception, for James, is founded upon the fact that the "mind can always intend, and know when it intends, to think the Same." James called this the principle of constancy in the mind's meanings and it stands as the a priori foundation of human thinking. The a priori nature of this principle can be seen from two perspectives. First, James emphasized that this sense of sameness is rooted in the

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55James, Principles, 1:459.
"mind's structure alone." That is, he is speaking of a psychological or subjective given rather than an objective sense of sameness—the mind imposes sameness on a world that may or may not be offering the same things. As he said: "Without the psychological sense of identity sameness might rain down upon us from the outer world for ever and we be none the wiser." But given this psychological capacity, the thinker approaches the world in terms of meanings which remain the same. The principle of constant meanings is also a priori in the sense that the meanings created are ideal concepts which are able to transcend the spatio-temporal relations given in experience. That is, in employing this principle the human mind is able to create ideal concepts which are more than mere copies of things or relations experienced. The concept of white, for example, can not be thought of as an image of some white object, as the nominalism of empiricism would lead you to believe. Instead, it must be construed as one abstract property of an object which a mind has choosen to attend to and intend as a conceptual ideal. "Thus," James wrote,

... amid the flux of opinions and of physical things, the world of conceptions, or things intended to be thought about, stands stiff and immutable like Plato's Realm of Ideas.

In other words, no matter how often white objects change into black objects, or moving objects into stationary ones, what we mean by the concepts of white and motion remains the same by virtue of the principle of constancy in the mind's meanings. As concepts, white and motion are aspects of the sensible flux which have been attended to and intended in a way that is independent of the particulars of experience.

James effected the transition from isolated concepts to conceptual systems by positing another a priori capacity—comparison. For James,

56 Ibid. 57 Ibid., p. 460. 58 Ibid., p. 462.
comparison is actually a family of a priori activities through which people judge things to be the same, different or similar. As he said:

In noticing the differences and resemblances of things and their degrees, the mind feels its own activity, and has given the name comparison thereto.59

In other words, in classifying things as instances of abstract kinds or categories, the human mind employs a capacity which is independent of experience in two senses. First, James argued that the process of classification is itself independent of the particulars of experience. Thus he wrote that classification into kinds

. . . has nothing to do with the particular order of experience, or the outer coexistences and sequences of terms. Were it a mere outgrowth of habit or association, we should be forced to regard it as having no universal validity; for every hour of the day we meet things we consider to be of this kind or that, but later we learn that they have none of the kind's properties. . . . Instead, however, of correcting the principle by the cases, we correct the cases by the principle.60

That is, no matter how frequently we misclassify a thing as an instance of an abstract category, we never, as a result of our errors, question the process of classification itself. In this sense, classification is a principle which structures, rather than is structured by, experience. Classification also violates the order of experience in another sense. In classifying things, the person is able to bring things together which have never been experienced in close spatio-temporal contiguity.

James's formulation of the genesis of ideal conceptual systems is somewhat mysterious and entirely rational. Such systems are alleged to be the product of "our free mental play."61 What he seems to mean is that a mind gifted with the capacities to create concepts and compare

59Ibid., 2:643. 60Ibid., pp. 649-650.
61James, Principles, 2:638.
them will eventually discover relations between concepts which are wholly
dependent on the nature of the concepts compared. Thus, for example,

once the person has learned to ignore the sensible differences between
different objects and treat them in terms of their abstract numerical
quality, he will discover that "the same number, operated on . . . in the
same way will always give the same result." This relation between ideal
numerical concepts is grounded in what we mean by the concepts rather
than the actual relations experienced. Thus no matter how many times we
add drops of water together and continue to obtain one as a result, the
mathematical principle remains intact. The same basic framework holds
for the creation of ethical or scientific systems—abstract concepts are
created and then relations between the ideal concepts are discovered.
Thus there is a clearly rationalistic aspect of James's psychology of
thinking, the origin, creation or discovery of conceptual systems is in­
dependent of the order of experience.

As we have seen a number of times already, however, James's psy­
chology is an attempt to integrate rationalism and empiricism, and his
account of thinking is no exception to this rule. Thus he tempered even
the most rationalistic element of his psychology of thinking with a dose
of empiricism. The result is what John Wild has called the "testable"
nature of James's formulation of the a priori. For Kant, the cate­
gories of thought are a priori and legislate the structure of all experi­
ience for all time. They are the conditions which the knower must impose
on any particular thought and as such, they are not open to empirical
verification. In contrast, James's a priori is, as we have said, a

62 Ibid., p. 642. 63 Ibid., p. 654.

64 Wild, Radical Empiricism of William James, pp. 226–229.
general capacity of the human mind to create ideal conceptual systems. And while the capacity is a priori, the ideal systems created through its employment are neither universal nor ultimate. As James said:

They stand waiting in the mind, forming a beautiful ideal network; and the most we can say is that we hope to discover realities over which the network may be flung so that ideal and real may coincide. 65

In a sense, then, James's a priori can be viewed as an epistemologically neutral potential of the human mind. Ideal meanings and comparison can be employed to construct any number of internally consistent conceptual systems. But there is no guarantee that any one of these systems uncovers the real structure of reality. Any ideal system must therefore be viewed as tentative, an ideal construction which is subject to empirical verification.

Science, for example, offers us one way of looking at reality, one way of structuring and organizing sensible experience. Within the scientific frame of reference, we have a world which is assumed to be inhabited by ideal entities (e.g., atoms) and governed by ideal relations (e.g., mathematical laws). But any ideal system, however much it is dependent on a priori capacities for its origin, must, according to James, be verified in sensible experience to be recognized as true. Thus, while he argued forcefully for the need to posit an a priori element to explain scientific thinking, he clearly recognized that the power of science is rooted in its empirical nature, "the things of Nature turn out to act as if they were of the kind assumed." 66 Of course, other conceptual systems are possible, but they too must be verified in experience; they must demonstrate that the "ideal and real coincide."

65 James, Principles, 2:665. (Italics mine.)
66 Ibid., p. 668.
James also mentions the systems of metaphysics and ethics as examples of ideal conceptual systems which, like science, are made possible by the a priori capacities of the human mind. These enterprises also share another fundamental characteristic with science. That is, science, ethics and metaphysics are each rooted in the teleological nature of human thought—each seeks to show that the ideals contained in its system coincide with the real structure of the world. James stated that the areas of experience which metaphysics and ethics seek to systematize are less easily accessible to verification but he was unwilling to declare these systems barren on this basis alone. Metaphysical and ethical ideals serve as valuable guides to our systematic undertakings. The metaphysical notion that 'nothing can happen without a cause', for example, is a valuable aid to the scientist who continually acts as if this ideal were absolute truth. Similarly, the ethical principle that 'man is free' is valuable to the moralist who, in believing the principle, continually strives for a more just world. In both instances, faith in a contestable proposition helps create the world one posits to be real. Thus James's psychology of thinking offered a framework and world-view which left hope for the future reconciliation between the variety of seemingly conflicting conceptual systems.

It cannot be too often repeated that the triumphant application of any one of our ideal systems of rational relations to the real world justifies our hope that other systems may be found also applicable. Metaphysics should take heart from the example of physics, simply confessing that hers is a longer task. Nature may be remodeled, nay, certainly will be remodeled, far beyond the point at present reached.67

Thus the ostensibly contradictory ideals of science and ethics may well be integrated by an as yet undiscovered system of thought.

67Ibid., p. 671.
In summary, James's account of thinking is perhaps best viewed as an integration of rationalism and empiricism which is embedded in a teleological formulation of mind. The rationalistic strain is clearly evidenced in his suggestion that a priori capacities must be posited to explain the origin of ideal conceptual systems. But, as we have said, these capacities are epistemological neutral. They allow humans to create conceptual systems which function to structure, organize and clarify the flux of sense experience. In fulfilling these functions, however, the empirical strain of James's psychology of thinking becomes manifest. That is, the truth of a given conceptual system depends upon its verification in experience. The teleological foundation of this integration can be seen in his insistence that all conceptual activities are grounded in and conditioned by the subjective interests or purposes of the thinker. From this perspective, each stage of the process of thinking—abstraction, classification, testing—can only be understood within the context of the plans, purposes and ideals of the person engaged in that process. We shall develop this theme in the next section.

Transitive States and Beliefs: The Horizon of Values

Thus far we have examined James's reinterpretation of associationism, as well as his formulation of reasoning and the a priori. A theme which pervades each of these topics is that human experience is conditioned by the interests of the knower; that dynamic, emotional and aesthetic interests play a central role in the structuring of human experience. Given this, it is important to recognize a fundamental unity between James's early analysis of the motives of philosophical belief
and his treatment of thinking in the *Principles.* 68

In the first chapter we attempted to show that James, between 1874 and 1884, sought to understand the diversity of philosophical opinion in terms of the different emotional and aesthetic ideals which they contain. In essence, he argued that philosophical systems, however abstract they may appear in print, come wrapped in an inarticulate matrix of emotional commitments. Furthermore, he argued that the vague sentimental tendencies which suffuse philosophical systems affect one's choice between philosophies; that, all other things being equal, a person's choice between philosophies is determined by how compatible that system is with the believer's aesthetic ideals.

In this section we hope to show that James's early analysis of the motives of philosophizing served as the working model for his psychology of the higher mental processes in the *Principles.* 69 We shall build this interpretation by examining two important themes of the *Principles*, the transitive portions of the stream of thought and the psychology of belief. In fulfilling this goal we shall explore the implications of the teleological foundation of James's psychology of thinking.


69 See Perry, *Thought and Character of William James*, 1:495. Perry notes that the substance of these essays was completed during 1877. This is one year before James was contracted to write a psychology text. Thus James was interested in the 'psychology of philosophy', the psychology of philosophical belief, before he began his systematic writing in psychology.
The distinction between the substantive and transitive portions of the stream of thought is a fundamental feature of James's descriptive psychology. Hume, for example, described mind as a procession of distinct ideas, "a kind of theater," he wrote, "where several perceptions successively make their appearance; pass, re-pass, glide away and mingle." In terms of nineteenth century psychology, we have seen that Wundt's method of introspection institutionalized the empiricist concern for sensory elements by calling for a description in terms of the various contents of mind. In terms of James's distinction, empiricism was acutely sensitive to the substantive portions of experience; those seemingly stable images or sensations which seem to dominate experience. Beyond their stability and imaginal nature, these portions are easily labeled in terms of the objects they represent. From James's perspective, the nameability of these portions of the stream was a perniciously important feature, because that which could not be easily named was ignored and then explicitly denied! This position, taken to its extreme, can be seen in the nominalistic systems of Berkeley and Hume, who denied the possibility of forming an abstract idea.

It was with this trend in mind that James called for the recognition of the importance of the transitive portions of experience. He argued that experience is more analogous to the "life of a bird," with its "flights and perchings," than Hume's theater of mingling ideas. In this analogy, the perchings or resting places are the sensorial images of the empiricist

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tradition, what James called the substantive portions. He certainly did not deny the presence or importance of the substantive portions, but he did proclaim rather boldly that "the definite images of traditional psychology form but the very smallest part of our minds as they actually live."\(^{73}\) This is an audacious challenge to a psychology which had been dominated by the analysis of sensational contents. But James sought to make clear that inarticulate schemes of relations surrounded each substantive state like a halo or fringe and that dimly felt feelings of direction suffused and united the successive substantive states. He was fully aware of the difficulty involved in describing these transitive states in verbal terms:

As a snowflake crystal caught in the warm hand is no longer a crystal but a drop, so instead of catching the feeling of relation moving to its term, we find we have caught some substantive thing, usually the last word we are pronouncing.\(^{74}\) But despite this difficulty, he pointed to the pervasiveness of these portions of experience, "a good third of our psychic life consists in these rapid premonitory perspective views of schemes of thought not yet articulate."\(^{75}\) Confronted with the felt vagueness of the flow of experience as it actually appears, he asserted that his notion of the transitive states was aimed at "the reinstatement of the vague to its proper place in our mental life."\(^{76}\) These must surely seem like strange utterances to the contemporary psychologist, but we must not let James's rhetoric keep us from the descriptive richness of his formulation of experience. We must go beyond what he says about these states and focus on his descriptions.

\(^{73}\) Ibid., p. 255.  \(^{74}\) Ibid., p. 244.  
\(^{75}\) Ibid., p. 253.  \(^{76}\) Ibid., p. 254.
As soon as we do this the revolutionary nature of James's description becomes manifest. He is not only challenging the traditional way of describing experience, he is seeking to replace the very terms employed in such a description. But revolutions, however eye-opening, tend to be unsystematic; and James's notion of the transitive portions is no exception to this rule. A German reviewer of the Principles expressed exasperation at the diversity of phenomena he found in James's treatment of the transitive states and he was critical of James for not setting down organizing principles for classificatory purposes. In lieu of a systematic exposition, James offers the reader a long series of examples; brilliant, timeless descriptions of long-overlooked aspects of experience but without apparent organization. Happily, recent scholarship has begun the task of formulating the underlying structure in James's descriptions. Working from a phenomenological perspective, Aron Gurwitsch has articulated what might be called the temporal and cognitive horizons in this aspect of James's psychology. Though we shall add another, distinctively Jamesian, horizon to Gurwitsch's analysis, his interpretation can serve as a valuable introduction to an extremely complex topic.

In a very early paper Gurwitsch argued that a fundamentally new conception of consciousness appears in James's discussion of the transitive states, a conception which he said is "defined in terms of temporality." This is certainly true. The transitive portions are the means through which James pressed for the sensible continuity of the past,

78Ibid., p. 452.
present and future. In the second chapter we examined James's account of the given connectedness of the past-to-the-present in his analysis of the feeling of thunder. Instead of describing this feeling as an isolated impression, he noted the importance of the silence which interpenetrates and feeds into the experience of thunder. Although the silence has passed in objective, external time, his description of the feeling as thunder-breaking-upon-silence-and-contrasting-with-it makes clear that the past, in experiential terms, is contained in the present. For James, a primitive and dimly perceived "fading echo" mingles with and reverberates into the present. This vaguely felt transition from the past-to-the-present is at the basis of his argument for the continuity of experience; and this continuity is a perfectly general characteristic of experience as it actually appears. Imagine, for example, someone bursting into my office while I am writing. I am, for a moment, disoriented and my first reactions to my intruder are dimly but very definitely colored by the feeling that I have been interrupted. Note, however, that this inarticulate sense of having been interrupted is not composed of sensorial images. Similarly, the silence which is broken by the thunder is not an image or auditory echo. Instead, it might be better described as a dimly felt background of experience which is indigenous to the transition from silence to thunder. Thus Gurwitsch rightly pointed out that James was one of the first psychologists to recognize the importance of imageless thought.

79 Ibid., pp. 452-457.
80 James, Principles, 1:635.
The transition from the present-to-future also finds its way into James's discussion of the transitive portions in the Principles; and again the transition is accomplished by indistinct portions of the fringes of experience. He mentions "attitudes of expectancy" and "signs of direction" as two definite but only dimly perceived classes of experience through which the present melts unsuspectingly into the future.\textsuperscript{82} In another place he offers the 'intention to say something before it is said' as an example of what he has in mind. This is a perfectly definite feeling which points toward but precedes the actual utterance. Furthermore, this indistinct feeling has an effect on the substantive portions of experience. Thus we sometimes say, after finishing an utterance—"No, that's not what I mean!"—even before our listener has responded. It seems, then, that our intention to say something is retained and checked at some level with the actual utterance. In contemporary terms, it might be called a self-monitoring device of some sort. I have carried this example a bit beyond James to make clear that his formulation of the transitive portions is not simply an exercise in psychological description. James maintained that the transitive portions have an important function, although they are themselves devoid of sensorial content. He also examined the experience of trying to recall a forgotten name.\textsuperscript{83} Again, we have a definite feeling emerging from the past, filling our present and pointing intensely toward the future but again the feeling is imageless. Thus every pulse of thought, what he called the "specious present," contains a vague halo of the past and an inarticulate anticipation of the future.\textsuperscript{84}

\textsuperscript{82}James, Principles, 1:251-252.

\textsuperscript{83}Ibid., p. 251.

\textsuperscript{84}Ibid., 1:609.
In a later work Gurwitsch examined another dimension of James's treatment of the transitive states, one which is contemporaneous with the temporal horizon. That is, James observed that any substantive portion or idea appears surrounded and suffused by a "fringe" or "halo of relations." Like the feelings of temporal continuity, the fringe of felt relations is imageless and only dimly perceived by the thinker. The process James is describing in formulating the substantive portion-fringe relationship is perhaps best communicated through a perceptual analogy. That is, he is pointing to the non-perceptual analogue of the figure-ground relationship. Like the figure of perceptual experience, the idea or topic of thought stands out in clear focus as the central theme or problem toward which our thinking is directed. In other words, the topic of thought is the thing attended to—our reason for thinking. Surrounding this clearly felt topic, however, is a dim background or network of relations which form the frame of reference within which the problem appears. Again, James does not provide a systematic exposition of his notion of the fringe but from the examples he gives it is clear that it represents a terribly complex, multi-layered process. He notes, for example, that the rules of grammar are dimly felt in the periphery of experience and determine the sequence of words spoken:

A noun in a certain position demands a verb in a certain mood and number . . . . Adjectives call for nouns, verbs for adverbs . . . . And this foreboding of the coming grammatical scheme combined with each successive uttered word is so practically accurate that a reader incapable of understanding four ideas of the book he is reading aloud, can nevertheless read it with the most delicately modulated expression of intelligence.86

He also suggested that the "sense of familiarity" is supplied by the fringe

85 Ibid., p. 256. 86 Ibid., p. 254.
of relations. This is the feeling that the present thought is the same as, or of the same kind as, a previous thought. In the last section we saw that classification into kinds is an a priori activity of the human mind. We now see that the appropriateness of any particular classification is signaled by an inarticulate but very definite feeling in the fringe. James also alluded to the operational nature of thinking in his discussion of the fringe, the fact that thinking involves operating on symbols and relations. With respect to the cognitive or symbolic nature of thinking, he quoted a lengthy passage from G. H. Lewes in support of the proposition that thought is a kind of algebra. These examples make clear that the notion of the fringe is a multi-layered structure which contains a truly heterogeneous group of phenomena. In hopes of providing some degree of order, we might anticipate James's conclusion and state that he is going to describe the process of thinking in terms of a particular type of relationship between the terms or symbols in the fringe and those present in the topic of thought.

In contemporary terms, it might be said that the fringe was formulated to do justice to the role of the cognitive horizon in thinking—the fact that any idea appears within a network of related ideas, a complex scaffolding of conceptual relations. The horizontal nature of the fringe is perhaps most clearly evidenced in James's suggestion that the meaning of any idea is provided by the fringe:

The sense of our meaning is an entirely peculiar element of our thought. It is one of those evanescent and 'transitive' facts of mind which introspection cannot turn upon . . . . In the (somewhat clumsy) terminology I have used, it pertains to the 'fringe' of the subjective state, and it is a feeling of tendency whose neural counterpart is undoubtedly a lot of dawning and dying processes too faint and complex to be traced.  

87 Ibid., p. 252. 88 Ibid., p. 270. 89 Ibid., p. 472.
Having recognized the symbolic nature of thought, James is calling for what might be called a cognitive horizon formulation of meaning, a formulation in which ideas appear escorted by a network of semantic relations. What he is reacting against is the correspondence theory of meaning. According to the latter formulation, meaning or knowledge is understood to be an image of the thing signified, the mental correlate of the external object. My thought of a man, for example, was thought to involve a mental image of some kind of a particular man. James criticized this account as a "preposterously false descriptive psychology" and an examination of a few of his examples will make clear why he was unsympathetic with this account.\footnote{Ibid., p. 471.} He examines the meaning of man in two sentences—"What a wonderful man Jones is!" and "What a wonderful thing Man is!" In both sentences the same sound—man—is uttered but the word is intended and understood in two distinctively different senses in these sentences. His fundamental contention is that the difference in these meanings is not reducible to a difference in images, in the substantive portion of the stream. Having established this, he went on to argue that the different meanings of the word man are supplied by the fringes which surround the utterances. Thus the same word can mean different things depending on the penumbral halo of relations which surround one's utterances. And however vague these halos might be, James argued that they are essential to the psychology of meaning. He also noted that entirely different words or phrases can have the same meaning if they are escorted by the same fringe of relations.\footnote{Ibid., p. 269.} There is no paradox in this position, he wrote, if one recognizes that words or images can be taken in two senses, as physical stimuli—"qua sensations"—and as meanings—"qua
thoughts, qua sensations understood." In other words, James saw the need for distinguishing between two levels of meaning, what might be called the surface and deep levels; and he recognized that the deep level could only be understood by articulating the cognitive horizon which surrounds a particular word or idea.

Gurwitsch employed the notion of the fringe in offering his own phenomenological account of thinking. But there is something distinctively unJamesian in Gurwitsch's account. That is, he makes no mention of the interests of the knower, a construct which we have argued is central to James's psychology of thinking. By surveying his treatment of the transitive states we hope to show that the notion of interests is a fundamental constituent of James's formulation of thinking, as fundamental as the sensible continuity or symbolic nature of thinking. In other words, without denying that James recognized the cognitive nature of thought, we shall try to show that he demanded more of his psychology of thinking and that this something more is an explicit recognition of the role of the subjective interests of the thinker.

Prima facie evidence for this interpretation is not difficult to find; remember that James posited that the interested nature of thought is one of its five essential characteristics. More detailed evidence can also be found in his descriptions of the fringe. He wrote, for example, that "the significance, the value, of the image is all in the halo or penumbra that surrounds and escorts it." He is referring to more than cognitive meaning in this statement, he is alluding to the

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92Ibid., p. 261.
94James, Principles, 1:284-288.
95Ibid., p. 255.
value of an idea, its specific relation to the present purpose of our thinking. Hodgson had taught James that cognitive relations, in and of themselves, were too numerous to explain the particular path taken in thought. What was needed was the recognition that the interests of the knower function to select the particular direction or flow of thought. Thus James suggested that the primary function of the transitive states is "to lead from one substantive conclusion to another." Interests, felt in the fringe, function to select the most relevant cognitive relations offered in the stream. In this way, the particular interest or purpose stands within the vaguely felt background of awareness and guides and directs the flow of thought. As James wrote:

Relation, then, to our topic or interest is constantly felt in the fringe, and particularly the relation of harmony and discord, of furtherance or hindrance. . . . When the sense of furtherance is there we are 'all right'; with the sense of hindrance we are dissatisfied and perplexed and cast about us for other thoughts. Now any thought . . . whose fringe lets us feel ourselves 'all right', is an acceptable member of our thinking . . . . Provided we only feel it to have a place in the scheme of relations in which the interesting topic lies, that is quite sufficient to make of it a relevant and appropriate portion of our train of ideas.

This passage stands at the foundation of our interpretation for a number of reasons. At one level, this description of what goes on in thinking corroborates James's teleological account of reasoning. For James, thinking begins with a consciously felt interest or purpose in some segment of the stream, a desire to discover the means to a clearly envisioned end. But when the cognitive operations of thinking begin, i.e., selecting, classifying, searching for alternatives, this superordinate interest or purpose recedes into the dim background of our awareness. At this stage,

96 Ibid., p. 243.  
97 Ibid., p. 259. (Italics mine.)
our attention is focused on particular cognitive relations. In terms of the figure-ground analogy, the cognitive relations become the figure and the interest recedes to the ground. In moving to the background, however, James says that the interest continues to be felt and continues having an important effect on our thinking. The superordinate interest effects thinking by guiding the selection of particularly interesting or relevant cognitive relations. This effect is experienced as a dimly felt "feeling of harmony," that distinctive relation between a particular cognition and the purpose of thought. If one idea feels particularly relevant it is brought into clear focus in thought and, if a feeling of harmony is experienced, the person continues working out that idea until the desired end is reached or discord is felt. If the latter feeling appears first, we withdraw our attention from the discordant idea and return to the original purpose and begin the process again. One must not underestimate the importance of these transient feelings of harmony and discord. They play an essential role in James's psychology of thinking. As he wrote, "the most important element of the fringe is . . . the mere feeling of harmony or discord, of right or wrong direction in our thought."98 These feelings continually monitor the relation between the interests and cognitions of the thinker.

It is also important to note that James's description of the role of feelings of harmony and discord in thinking in the *Principles* is remarkably similar to his analysis of the nature of philosophical belief. Remember that James posed the question of how the philosopher recognizes a rational answer to a problem in his 1879 essay, "The Sentiment of

98Ibid., p. 261.
Rationality."\(^99\) The answer he offered at that time was that a rational answer is accompanied by an inarticulate but very distinctive feeling, which he called the sentiment of rationality. In his 1879 essay he described this experience as a "strong feeling of ease," or "perfect fluency" in thought, or as simply a feeling of "relief."\(^100\) In contrast, an unsatisfactory solution is accompanied by a "state of puzzlement and perplexity" or "distress."\(^101\) His early analysis of philosophical belief sought to demonstrate that the aesthetic ideals and interests of the philosopher play an important role in determining just what sort of system will produce these feelings of "ease" or "distress." What we are arguing is that the same basic model underlies James's account of thinking in general in the *Principles*, but by 1890 he had developed the sentiment of rationality into the notion of the fringe. There can be no doubt that James himself was aware that his formulation of thinking in the *Principles* was an elaboration and extension of the model he first articulated in his analysis of philosophical belief in the late 1870's. In both he says that the process of thinking is governed by the absence of feelings of discord.\(^102\)

\(^99\) James, *The Will to Believe*, pp. 63-110.  
\(^100\) Ibid., pp. 63-64.  
\(^101\) Ibid., p. 63.  
\(^102\) In the *Principles*, for example, James wrote that "the feeling of rationality . . . seems rather a negative than a positive thing, being the mere absence of shock, or sense of discord, between the terms of thought" 1:263-264. Compare this with the fundamental thesis of his "The Sentiment of Rationality" essay of 1879; that the sentiment of rationality "seems to be a negative rather than positive character." He then goes on to ask: "Shall we then say that the feeling of rationality is constituted merely by the absence of any feeling of irrationality? I think there are very good reasons for upholding this view" pp. 63-64.
In his early analysis of philosophical belief, James conceived of philosophical systems as a kind of projective test for intellectuals in the sense that they reveal a person's commitment to aesthetic and metaphysical ideals which are unprovable. They disclose a person's fundamental world-view, which James argued was based on a teleological act of faith. Now if he really is extending his motives of philosophical belief model to thinking in general in the Principles, one would expect to find that a thinker's fundamental metaphysical commitments play a central role in James's psychology of thinking. In fact, these fundamental metaphysical commitments do appear in James's psychology of thinking in the Principles as a very special layer of interests. In recognizing this fact we arrive at the paradoxical core of James's treatment of the higher mental processes, a theme appears which is continuous with his earlier work and it becomes the source of both richness and contradictions. His position can be stated in any number of ways. Most simply, James is contending that thinking (cognition) is embedded in and conditioned by feeling (the thinker's aesthetic ideals). In terms which James might have used, we might say that thinking is inextricably interwoven with the emotional beliefs of the person engaged in thinking. In contemporary terms, it might be said that thinking always implies valuing, or that the cognitive horizon is suffused by a horizon of values.

Until now we have used the concept of interest rather loosely to denote a covert valuing process which becomes manifest in the knower's selection of particular aspects of phenomena. In fact, James himself uses the concept rather loosely throughout the Principles, although an important distinction in his usage is discernable. At one level, he describes the knower as interested in achieving particular ends before he begins
searching for whatever means which are available. This is the way he uses the concept of interests the vast majority of the time. We have called this the transient teleology in James's account of reasoning, or we might speak of the interests of the knower with a small 'i'. In this sense, the means are wholly subordinate to the ends. This transient teleology is fully compatible with the biological-functional strain in James's psychology, a strain which conceives of mind as an organ or tool for adapting to the ever changing environment. This sense of interests admits the biologically obvious—that mind is wholly dependent upon the continued integrity of the body for survival.

But in presenting his psychology of belief, which occurs in his "Perception of Reality" chapter of the Principles, a deeper and more pervasive level of Interests emerges. This level of Interests, with a capital 'I', does not refer to a person's transient adaptations to his environment. At this level, the means become at least as important as the ends. This deeper realm of Interests refers to the relatively stable complex of metaphysical commitments which the person believes to be the most valuable way of viewing reality. It is, in fact, the thinker's tacitly-held world-view, which we have called the fundamental teleology in James's early thought. And like his analysis of philosophical belief, he rooted this fundamental teleology in the thinker's emotional constitution. Thus, not only will the thinker strive to make the world intelligible, he will also strive to make its intelligibility compatible with his fundamental emotional sensitivities. As a way of orienting oneself in the world, James's fundamental teleology gives notice to the fact that thinking of any form implicates and emerges from a horizon of values. If James's transient teleology gives notice to the fact that the thinker
approaches any problem with plans of action, then his fundamental teleology
gives notice to the fact that all the specific plans and purposes are
grounded in a Life Plan which the thinker is continually trying to verify.

As we have seen, James analyzed philosophical belief with the hope
of showing that different philosophers work on different "orders of real-
ity." Similarly, in the Principles he speaks of the various "orders"
or "sub-universes of reality;" but now he distinguishes seven sub-univer-

s}_{\text{verse}}$ in hopes of accounting for every shade of human belief. The seven
are:

(1) The world of sense, or of physical 'things' as we instinc-
tively apprehend them.
(2) The world of science, or of physical things as the learned
conceive them.
(3) The world of ideal relations, or abstract truths believed
or believable by all, and expressed in logical, mathematical,
metaphysical, ethical, or aesthetic propositions.
(4) The world of 'idols of the tribe', illusions or prejudices
common to the race.
(5) The various supernatural worlds, the Christian heaven and
hell, the world of Hindoo mythology etc. Each of these
a consistent system.
(6) The various worlds of individual opinion.
(7) The worlds of sheer madness and vagary.

He distinguished these sub-universes as a preliminary attempt to formulate
the very general frames of reference in which human thinking takes place:
"Every object we think of gets at last referred to one world or another
of this or some similar list." In this sense, the sub-universes are
an essential aspect of James's psychology of thinking as well as belief.
They become, for James, the real life categories of human thought. But in
calling the sub-universes categories or general frames of reference, we
must make clear that James was speaking of more than knowledge systems

\begin{itemize}
\item[103] James, The Will to Believe, p. 65.
\item[104] James, Principles, 2:292-293.
\item[105] Ibid., p. 293.
\end{itemize}
per se. The notion of personal values permeates James's formulation of the sub-universes, and these values are rooted in the person's emotional make-up:

... reality means simply relation to our emotional and active life. This is the only sense which the word ever has in the mouths of practical men. In this sense, whatever excites and stimulates our interest is real; whenever an object so appeals to us that we turn to it, accept it, fill our mind with it... so far it is real for us, and we believe it. Whenever, on the contrary, we ignore it, fail to consider it... so far it is unreal for us and disbelieved.\textsuperscript{106}

Beyond their emotional basis, a number of features of James's formulation of the sub-universes deserve to be made explicit. First, note that James places attention at the center of his formulation of psychological reality (or belief)—what is attended to is \textit{ipso facto} real and what is ignored is unreal. Thus the sub-universes of reality have a rather precarious existence for James, "each world whilst it is attended to is real after its own fashion; only the reality lapses with the attention."\textsuperscript{107}

Thus, for example, a scientist leaves the 'world of sense' and enters a very special enclave of the 'world of sense' when his child or wife enters his laboratory. Again, when he is teaching, his students bring him face to face with the 'world of opinion'; and when our scientist sits down at night to read a novel he enters the tenuous but entertaining 'world of vagary' (fantasy). These transitions between the various sub-universes are commonplace but generally unrecognized happenings and they depend upon changes in attention. As one might suspect, this view of reality brings us perilously close to a rampant subjectivism. James himself sees this as an unavoidable conclusion at some level: "The \textit{fons et origo} of all reality, whether from the absolute or practical point of view, is thus subjective, is ourselves."\textsuperscript{108}

\textsuperscript{106}Ibid., p. 295. \textsuperscript{107}Ibid., p. 293. \textsuperscript{108}Ibid., pp. 296-297.
James also notes that each sub-universe has "its own special and separate style of existence." This characteristic is as important as it is commonplace and obvious. What he is referring to here is that each sub-universe has its own, somewhat unique, criteria of credibility and its own particular region of applicability. In a sense, each sub-universe is conditioned by the demands, possibilities and limitations of its own region of experience. An old adage, for example, might be positively false within some sub-universes but to the extent that it serves as a valuable and reliable guide to action in our common-sense world, it will continue to be believed. Again, James seems to be heading toward an untenable subjectivism in his attempt to do justice to all regions of human experience. If he was a pure logician he would have to choose between the variety of sub-universes and present one set of criteria for belief. But James is writing as a psychologist and his task is to do justice to all regions of human experience; he is concerned with thinking as it actually occurs in human beings rather than an abstract schematization of how people ought to think to arrive at absolute truth. And the psychological fact is that people face a wide variety of situations in their lives and they employ a variety of criteria to come up with answers to different types of problems. Thus James's recognition that different sub-universes have separate and somewhat unique styles of existence is a brilliant psychological observation, however inappropriate it might be as a formulation of truth.

James sought to escape an untenable subjectivism by offering two general criteria for true belief (or knowledge). He presents the first as nothing more or less than the verifiability principle in science:

109Ibid., p. 291.
... no mere floating conception, no mere disconnected rarity, ever displaces vivid things or permanent things in our belief. A conception, to prevail, must terminate in the world of orderly experience ... What science means by 'verification' is no more than this ... Sensible objects are thus our realities or the tests of our realities. Conceived objects must show sensible effects or else be disbelieved.110

He later elaborated this criterion for belief into his pragmatic conception of meaning, and then truth, but we are concerned with his psychology rather than his philosophy. Within this context, it is imperative to note that James's criterion for belief falls significantly short of rigorous scientific verifiability in practice. That is, he states that, to be believed, a proposition "must terminate in the world of orderly experience." In other words, a proposition will be believed if its effects are manifest in sensible experience. Conversely, a proposition will not be believed if it does not have any sensible effects. But, as any number of critics of pragmatism have noted, there is a difference between providing a scientific verification of a proposition and showing that it has an effect in sensible experience. That is, there are some classes of statements which can not be verified scientifically but which can be construed as producing effects in sensible experience. The most obvious example is, of course, metaphysical statements. Thus propositions like 'Man is free' or 'Everything has a cause' are not verifiable but it can be argued that they do have important effects in sensible experience. The former gives the moralist the energy needed to continue striving to accomplish the seemingly impossible, e.g., to wipe out evil. The latter gives the scientist the energy to continue striving for his impossible, e.g., to build a unified understanding of the universe and wipe out ignorance. In other words, as ideals, these metaphysical statements have

110 Ibid., p. 301. (James's italics.)
important effects in experience although neither is strictly verifiable. And taken psychologically, both are believed (by some people) and both function to create the somewhat different styles of existence for their particular sub-universe.

The second general criterion which James presents is that a proposition will be believed only if it does not contradict some already established belief. Belief, wrote James, is the "mental function of cognizing reality," and as such, it is experienced as an inarticulate but distinct feeling of harmony or non-contradiction. For James, then, a proposition is believed if it produces a "cessation of theoretical agitation." The opposite of belief is experienced as a feeling of discord and it leads to the activities of "doubt and inquiry." When this description of belief and doubt is taken in conjunction with the notion of a variety of sub-universes, we have a kind of 'struggle for existence' between beliefs, with propositions competing with one another within a given sub-universe. The loser of any particular struggle finds itself 'hustled and bandied about' among the various other sub-universes until it finds a region where it is not contradicted. Thus, for example, while a moral postulate may contradict established beliefs in the sub-universe of science, it will come to rest uncontradicted, and even warmly welcomed, in the sub-universe of ideal, ethical relations. The philosophical question which begs to be answered is how one determines which of two contradictory propositions is true when they come to rest uncontradicted in different sub-universes. That is, is there a criterion to settle disputes between James's sub-universes? The fact is that James avoided the philosophical question in the Principles, although he spent the rest of his life

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111 Ibid., p. 283.  
112 Ibid.  
113 Ibid., p. 284.
trying to answer it. In the Principles, however, we do find a psychological answer to this question and it leads us directly to the fundamental teleology in James's psychology of thinking.

James answers this question, and inserts what we have called a fundamental teleology, in the following seemingly innocuous passage:

Each thinker . . . has dominant habits of attention; and these practically elect from among the various worlds some one to be for him the world of ultimate realities. From this world's objects he does not appeal. Whatever positively contradicts them must get into another world or die.\(^\text{114}\)

In terms of the text, he has just finished stating that the different sub-universes have separate and special styles of existence. Now, with this passage, he answers the question of how real people settle real life disputes between the claims of different sub-universes. The answer is strikingly simple, but it has far-reaching implications for a psychology of thinking. His answer is that each individual comes to choose the one sub-universe which is most compatible with his emotional constitution. As he wrote:

The world of living realities as contrasted with unrealities is thus anchored in the Ego, considered as an active and emotional term. . . . Whatever things have intimate and continuous connection with my life are things of whose reality I cannot doubt.\(^\text{115}\)

This dominant sub-universe is the person's court of last appeal, his ultimate reality. In terms of a psychology of thinking, it might be said that a person's most serious work emerges from and is conditioned by his passionate commitment to a world-view which is itself unverifiable! It is as if a structured horizon of values comes to be superimposed upon the horizon of knowledge and effects a rearrangement and reorganization of

\(^{114}\) Ibid., pp. 293-294. (Italics mine.)

\(^{115}\) Ibid., pp. 297-298. (Italics mine.)
valued meanings which function as that person's Life Plan. In fact, it seems more reasonable to say that a person's horizon of values determines the content of his knowledge by leading him toward areas which are most compatible with his values. Whatever the case may be, the important thing for James is that our seemingly objective knowledge stands on a foundation which is itself unprovable and a function of our emotional tendencies.

All human beings begin their lives with the practical 'world of sense' holding the preeminent and irrefutable position. This is a world filled with objects and subjects and things that must be done to survive. Other sub-universes may possess a reality of sorts but "these things are usually real with a less real reality than . . . the world of sense."¹¹⁶ The person who never relinquishes the practical 'world of sense' displays, in his orientation and actions, an emotional commitment to a set of tacitly-held beliefs which act to structure and organize his experience. The assumptions, values and beliefs of this world-view represent the fundamental teleology of the layman; and he imposes this world-view onto all experience and creates a more or less organized whole from a chaos of sensory flux. Of course, his world-view is partial—he may be unimpressed with the ideal worlds of theoretical science or religion unless they directly touch his world—but his world-view is the means through which he confers truth and reality to certain objects of experience.

Of course, other world-views are possible; humans, according to James, have the a priori capacity to create ideal conceptual systems which function as alternatives to the 'world of sense'. But any other world-view is also partial and it also both contains and reveals a fundamental teleology which is rooted in the inarticulate emotional commitments of the

¹¹⁶Ibid., p. 294.
thinker. The scientist, for example, subordinates the 'world of sense' to the abstract terms and relations of the 'world of science'. But this world is also founded on unprovable emotional commitments and its unique style of existence makes atoms in motion and universal laws the ultimate realities. For the scientist, these terms and relations contain an aesthetic beauty which is unparalleled in the cruder 'world of sense'. And thus he too imposes the assumptions, values and beliefs of his ideal world onto experience in an attempt to transform a chaos into a rigorous, logically consistent whole. But the only way he can accomplish this transformation is to be partial or selective; to ignore some, and explicitly deny the reality of other, aspects of experience in favor of those realities which his fundamental teleology claims to be the 'most real reality'.

With regard to the selectivity of the scientist's world, James wrote quite frankly that the concepts of science:

\[ \ldots \text{are never matters of experience at all, but have to be disengaged from under experience by a process of elimination, that is, by ignoring conditions which are always present. The elementary laws of mechanics, physics and chemistry are all of this sort. The principle of uniformity is of this sort; it has to be sought under and in spite of the most rebellious appearances . . . .}^{117} \]

In other words, the process of science is a very human process, with its practitioners making a determined effort to show that the real world really is as their ideal system describes it. But the attempt of science to show that the 'ideal and real coincide' is grounded, like any other attempt to reconcile the ideal and real, in the emotional and aesthetic interests of the thinker. Thus James wrote that:

The conceiving or theorizing faculty works exclusively for the sake of ends that do not exist in the world of impressions . . .

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117 Ibid., p. 636. (James's italics.)
but are set by our emotional and practical subjectivity. It is a transformer of the world of our impressions into . . . the world of our conception; and the transformation is effected in the interests of the volitional nature, and for no other purpose whatsoever.  

This conclusion, which stands at the foundation of James's psychology of thinking, should sound familiar, for it is the same conclusion he obtained in his analysis of the motives of philosophizing. For a psychology of thinking, it means that human conception is forever embedded in and conditioned by the fundamental teleology of the thinker. Thinking, like any other aspect of human existence, involves a teleological act of faith; and before we can understand human thought, we must understand the emotional and aesthetic ideals which the thinker believes are the most accurate representation of reality. This means that every ideal, logically consistent way of conceiving of the world is grounded in an inarticulate, tacitly-held world-view. In other words, every concrete, potentially answerable question emerges from a world-view which is unprovable and dripping with value judgments which serve to guide the person's thought.

We have covered an enormous amount of heterogeneous material in this chapter; a critique of philosophical associationism, an account of reasoning which was aimed at distinguishing human from brute intellect, a biological interpretation of Kant's a priori and lastly, a conception of experience which sought to bring the person's dimly felt interests and purposes back into the psychology of thinking. In the midst of this heterogeneity, however, there lies a fundamental unity which all the particular formulations and critiques stem from. This theme is a teleological conception of mind. James's critique of a passive interpretation

118 Ibid., p. 634. (Italics mine.)
of associationism set the stage for a formulation of reasoning which emphasized the interested, purposive nature of human experience. But his account of reasoning raised further questions, most importantly, how is it that humans are able to deal with objects in terms of their essential properties. In answering this question James offered a unique, biological interpretation of the a priori, an interpretation which tied the process of conception to the purposes and interests of the conceiver. Finally, this interpretation of the a priori gave rise to a conception of human nature in which human beings are passionately striving to show that the flux of sensory experience is really only a working out, in concrete form, of a system of ideal terms and relations. We began this chapter with an excerpt in which James said that the "whole man within us is at work when we form our philosophical opinions." We have tried to show that the "whole man"—with his intellectual, volitional, aesthetic and emotional demands—is also at the foundation of James's formulation of the higher mental processes in the Principles.

119 James, "Rationality, Activity, and Faith," p. 74. (Italics mine.)
CHAPTER 4

JAMES'S INTEGRATION OF NATIVISM AND EMPIRICISM:

PERCEPTUAL REALISM

I must say a word or two on your articles now appearing in Mind, on the "Perception of Space." I don't know anything that has given me greater pleasure, or excited more genuine admiration in my mind, than these articles... You are working out in detail, and with psychological proofs, my very conception of space as an inseparable but distinguishable element of certain classes of sensations... [Hodgson to James, April 8, 1887].

I'm glad you smiled on Santayana... and still gladder you smiled on my space articles, which were all written out seven years ago. I always supposed myself that they were but a filling out of your Time and Space framework [James to Hodgson, April 18, 1887].

The articles which Hodgson is expressing admiration for in the above letter are a series of four essays which James published in the journal Mind during 1887. They were later revised, integrated and republished as the "Space Perception" chapter of the Principles. The goal of this chapter is simply to understand what James meant when he said that his account of space was "but a filling out" of Hodgson's "Time and Space framework." We shall argue that Hodgson's method of reflection, and the new conception of experience which it produced, formed the essence of the "framework" of James's formulation of space perception. Specifically, we shall attempt to show that these elements of Hodgson's philosophy stood at the foundation


2 Ibid., p. 642. (Italics mine.)
of James's critique of, and alternative to, the empiricist account of space. In the process, we shall present James's explanation of the perception of spatial attributes as an attempt to integrate nativism and empiricism through a perceptual realism which emphasizes selective attention.

Realism is a position which states that material objects exist externally to us and independent of our perception of them. These objects are conceived of as emitting a wide variety of patterns of physical energy which are structured by other sources in the environment. Put simply, the perceptual realist conceives of the perceiver as possessing mechanisms (e.g., sense organs, perceptual structures) which allow him to perceive and respond to a subset of the objective properties of objects. As such, the properties of external objects are directly apprehended by the perceiver in perception. 3 From the context of nineteenth century philosophy and psychology, this doctrine can be distinguished from idealism and phenomenalism. In the words of Berkeley, the originator of modern idealism as well as the empiricist account of space, esse is percipi—"to be is to be perceived." 4 For the idealist, objects simply do not exist apart from our perception of them. Phenomenalism can be viewed as a refinement of idealism. It states that the perceiver is only immediately aware of his own mental states, which nineteenth century philosophers and psychologists called sensations. The phenomenalist sought to reduce material objects to particular combinations or groups of sensations, transitory events which the perceiver learns to locate in the external world. Phenomenalism can

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4 Ibid., 7:77.
be viewed as an improvement on the intuitively offensive doctrine of idealism in the sense that material objects came to be defined in terms of groups of possible as well as actual sensations. Thus John Stuart Mill defined matter as "groups of permanent possibilities of sensation," thereby evading the position that objects cease to exist when not perceived.\(^5\) We shall find James rejecting the phenomenalistic accounts of empiricism and offering a unique version of perceptual realism.

This chapter is divided into three sections. In the first section we shall examine James's critique of the empiricist account of the origin of spatial attributes. The aim here is to show that he employed Hodgson's critique of elementism to refute the empiricist attempt to create spatial attributes from the association of non-spatial sensations. In the second section we shall examine James's nativistic formulation of the direct apprehension of primitive spatial attributes. In addition to the importance of Hodgson, it will be argued that James's commitment to a perceptual realism underlies the nativistic strain of his account. The latter theme will be explored more fully in the last section, where we shall examine James's attempt to retain a perceptual realism while acknowledging the importance of intellectual factors in our mature perception of spatial relations.

James's Critique of the Empiricist Account of Space Perception

It is difficult, and perhaps impossible, to present a general sketch of the empiricist account of space perception in the second half of the nineteenth century. Theories of visual perception literally abounded

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during this period and there was a variety of somewhat different theories even within the empiricist camp. Faced with this diversity at the theoretical level, we shall turn to the empiricist account of three concrete issues in the psychology of perception. The issues are the unconscious inference explanation of color contrast, the doctrine of the eccentric projection of sensations and the muscular feeling explanation of visual form. Our reasons for choosing these topics are twofold. First, they will provide the historical and theoretical background for our examination of James's account of space perception. Second, in examining James's critique of the empiricist accounts of these issues, we shall see the sense in which the Principles is a continuation of Hodgson's polemic against an elementistic conception of experience.

**Simultaneous Color Contrast**

The first thing we must do in approaching this topic is to divest ourselves of the Freudian notion of the unconscious. Our topic demands that we examine a pre-Freudian formulation of unconscious mental processes, a formulation which had its roots in the early nineteenth century idealistic philosophies of Arthur Schopenhauer and Eduard von Hartmann. From these speculative beginnings, a truncated and less extravagant version of the unconscious found its way into the early perceptual theories of Wundt and Helmholtz. Thus, in the period when psychology was beginning to achieve institutional status as a natural science, reference to unconscious mental processes was a central feature of the empiricist formulation

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of perception. At the same time, however, there was a great deal of confusion, and some controversy, over what the concept of unconscious mental processes really meant.

David Klein has recently examined Helmholtz's use of the phrase *unbewusster Schluss*, literally "unconscious conclusion" rather than "unconscious inference." Helmholtz's fundamental contention is rather straightforward. If perception is viewed as a genetic process, then it is obvious that an intellectual or cognitive component is an essential aspect of that process. That is, certain meanings or relations are habitually associated with certain sensory contents and after much practice the cognitive terms come to be perceived immediately, as if they were directly given by the sensory object. Helmholtz's primary theoretical objective was to make clear that these acquired meanings and relations are the products of past experience, thus challenging that nativist position that certain relations (e.g., spacial attributes) are intuitively given. In this respect Helmholtz was working in the venerable tradition of British empiricism, which sought to reduce perception to the association of phenomenal contents with learned meanings and relations. Helmholtz employed the term *unbewusster Schluss* to make clear that perception is pervaded with inferences or conclusions which are unconscious in the sense that the perceiver is not directly aware of the intellectual act which gives meaning and stability to his perceptual experience. Thus, in explaining why certain illusions persist, Helmholtz wrote that:

> Even when we have learned to understand the physiological origin and connection of the senses, it is impossible to get rid of the illusion in spite of our better knowledge. This

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is because inductive reasoning is the result of the unconscious and involuntary activity of the memory.8

This explanation is clear and seems innocent enough. Perception involves the generation of inductive generalizations based on the effects of past experience. Let us now turn to Helmholtz's explanation of a more complicated phenomenon, simultaneous color contrast.

The phenomenon of simultaneous color contrast is easy enough to describe. If a rather small gray patch is placed on a colored background and a piece of transparent white tissue paper covers both surfaces, the area of the gray patch takes on a hue which is the complement of the colored background. If, for example, the background is green, the center patch is perceived as pink-red. Pastore, who examines the empiricist explanation in some detail, quotes Helmholtz stating that the induced complementary hue results from "acts of unconscious or involuntary judgment" acquired in experience.9 Helmholtz's explanation can be summarized as follows. First, since the green background covers a larger surface, the person unconsciously assumes that the entire surface has a greenish hue to it. At the same time, however, the person also unconsciously perceives the white patch in the center, i.e., the retinal impressions of the center patch are objectively white. The person then makes yet another unconscious inference, that the white patch is, in fact, an object located behind a greenish veil. As we shall see, this reversal of the spatial relations of the green and white surfaces is essential to Helmholtz's explanation.

Through these unconscious mental operations Helmholtz obtained the premises

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8Ibid., p. 55.

9Nicholas Pastore, A Selective History of Theories of Visual Perception: 1650-1950 (New York: Oxford University Press, 1971), p. 167. Although we shall criticize Pastore's interpretation of James, the value of this work for organizing this chapter must be acknowledged.
from which the final unconscious inference is made. It is as if a person in the color contrast situation is obtaining white sensations from an object located behind a green veil. The question then becomes—what color would such an object have to be to produce white sensations? The answer, in terms of the laws of color combination at least, is pink-red; the wavelengths of green combine with those of pink-red to produce white. But Helmholtz argued that an analogous series of unconscious acts produced the experience of pink-red in the color contrast situation. If this is the case, the illusion certainly is intellectual or cognitive rather than sensory. Sully, an English follower of Helmholtz, described the series of intellectual acts in the following manner:

Not directly seeing the under sheet, and perceiving the green light shimmering through the thin white veil, we necessarily conceive this visible upper sheet to be of a pale green hue; and from this assumption, we reason that beyond the inferred greenish veil where the scrap lies—the pure retinal impression of which must be a dull white—there is a red.10

Sully offered this explanation as scientific fact, an example par excellence of how a series of unconscious acts could produce an experience which armchair philosophers had supposed was directly given.

However convoluted this explanation may seem to someone acquainted with the lateral inhibition explanation of color contrast, the Helmholtz-Sully explanation is important in the sense that it reveals a number of tendencies of the empiricist program. At one level, this explanation is an example of the psychologists' fallacy, the tendency to substitute our knowledge about the object under study for its internal means of production. We have already quoted James giving credit to Hodgson for clearing

up the confusion of the "analysis of an idea with its means of production" in our discussion of James Mill's analysis of a complex idea. Now, while Helmholtz's explanation is based on a mechanical analysis of a perceptual phenomenon, the underlying logic is identical to Mill's. That is, both shared the assumption that if some sort of model can be schematized which produces the same results as are evidenced in a given organism, then the operations which produce the results in the model must also occur in the organism. In other words, in building a model which simulates the behavior of an organism, one also obtains a full articulation of the theoretically relevant internal structures of the organism. A number of philosophers who have examined the relation between computer simulation and explanation have concluded that such a position is tenuous, at best. Thus, for example, just because a computer can be programmed to play a more or less good game of chess, it does not necessarily mean that the programs which the computer employs are in any way similar to the rules which govern the behavior of the human chess player.

Of course, Helmholtz did not have computers, but he did have the materials needed to combine colors mechanically. With this primitive technology, it was easy to demonstrate that a pink-red object viewed through a greenish veil produces the impression of white. Most importantly, it also seems clear that Helmholtz had this color mixture model in mind when he sought to explain the perception of pink-red in the color contrast


situation. That is, in offering a psychological explanation for the illusion, he assumed that the mental state under study (the perceiver in the color contrast situation) must also know what he, the scientist, knows about the laws of color mixture. In making this assumption he imposed his own knowledge into his explanation of how pink-red is actually produced in the human brain. The foremost difficulty with this explanation involves understanding why the perceiver should reverse the spatial relations between the green and white surfaces. Helmholtz's answer, that the color contrast situation unconsciously reminds the perceiver of a white object partly occluded by a green surface, seems forced. In fact, positing this hypothetical reversal, which must take place if the perceiver behaves just like the mechanical model, seems to be rooted in the demands of the mechanical model rather than empirical evidence. If and only if the white object was behind the greenish veil would the perceiver's brain simulate the laws of color mixture. Thus, in lieu of empirical evidence, Helmholtz allowed his model to dictate the particular operations which go on within the perceiver's head.

There must have been some rather powerful reason for Helmholtz, the arch-empiricist, to forsake experience; and this something is rooted in his undying commitment to atomistic conception of experience and the nervous system. This commitment is manifest in what Pastore called the "law of isolated conduction," the physiological model which underlies Helmholtz's theory of perception. It can be viewed as the physiological embodiment of Hume's description of mental life as a succession of discrete impressions. "We may allow," wrote Helmholtz,

... that each of... the cones has a nervous fiber which, through the mediation of the optic nerve, extends to the brain in isolation in order to conduct there the impression it receives, so that the state of excitement of each of these cones may give rise to one isolated sensation.¹⁴

In fact, this physiological model represents Helmholtz's reformulation of Johannes Muller's doctrine of the law of specific nerve energies, and, as such, it set the foundation for both his research and theory in perception.¹⁵ Pastore has noted that Helmholtz's assumption was an essential feature of nineteenth century empiricism and he integrates it with the constancy hypothesis, the notion that there is a point for point correspondence between retinal excitations and visual sensations.¹⁶ Within this assumptive frame of reference there can be no interaction between adjacent retinal receptors, either excitatory or inhibitory, and any difference between retinal receptors is assumed to result from an intellectual contribution. Its pervasiveness should also be noted. Here we have a physiological model of the nervous system which provides the believer with a philosophical conception of experience as well as the fundamental categories of a psychology.

In a sense, Helmholtz's law of isolated conduction can be viewed as an expression of his aversion to the positing of innate physiological mechanisms, which he saw as overused and unverified. His explanation of color contrast is certainly consistent with the assumptive foundation of the law of isolated conduction. Adding the green background to the gray patch does not, for Helmholtz, change the nature of the retinal excitation corresponding to the gray patch. What is changed is the perceiver's conception of what the gray patch is seen as, from a simple patch of color to an object located behind the green background.

¹⁴Ibid. (Italics mine.) ¹⁵Ibid., pp. 128-132.

¹⁶Ibid., pp. 164-165.
Of course, the law of isolated conduction (and the constancy hypothesis) is diametrically opposed to Ewald Hering's nativistic explanation of color contrast in terms of the lateral inhibition of adjacent retinal receptors. But James found nothing aversive in positing innate physiological mechanisms and he did see problems with adopting Helmholtz's explanation in particular and the constancy hypothesis in general. Thus he endorsed Hering's explanation and rejected Helmholtz's. Gurwitsch and Linschoten have documented James's rejection of the constancy hypothesis. We shall close this section by sketching the relation between James's rejection of the constancy hypothesis and Hodgson's critique of empiricism.

The constancy hypothesis is rooted in a physicalistic conception of experience, where the contents of experience are assumed to perfectly mirror the physical attributes of objects in the world. As we have seen, Hodgson rejected this frame of reference on the basis of his distinction between first and second intention descriptions. We have also seen that Hodgson's critique of elementistic empiricism became the empiricist version of the psychologists' fallacy in the Principles. Thus it should not be surprising that James viewed Helmholtz's law of isolated conduction as an example of the psychologists' fallacy. He wrote that:

Helmholtz . . . is no more careless than most psychologists in confounding together the object perceived, the organic conditions of the perception, and the sensations which would be excited by several parts of the object . . . providing they came into action separately . . . . If each organic condition or part of the object is there, its sensation, he thinks, must also be there, only in a 'synthetic' form— which is indistinguishable from what the authors we formerly reviewed called an 'unconscious'— state.18

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18 James, Principles, 1:521.
This passage is illuminating in two respects. First, we find James applying a Hodgsonian principle—the psychologists' fallacy—against Helmholtz's explanation of simultaneous color contrast. Second, from this passage it is also clear that James viewed references to unconscious mental processes as an erroneous but necessary supplement to a psychology which assumes that experience comes to us in a disjointed, elementistic manner. The unconscious synthesis must be called upon to give the unity and structural integrity which disjointed sensations can not themselves possess. James chose to view the automatic categorizations of perception as simply cerebrally represented habits, thus avoiding the confusing connotation that mental states could be unconscious.  

The Eccentric Projection of Sensations

The doctrine of the eccentric projection of sensations is a nineteenth century version of a problem which was first created and answered by Bishop George Berkeley in his eighteenth century empiricist manifesto, An Essay Toward a New Theory of Vision. The problem involves the phenomenal locus of visual impressions experienced for the first time, and more generally, with a psychological explanation of the genesis of external space. The two questions are intimately related. In fact, Berkeley's answer to the first question, that the first visual impressions are located in the "eye or mind," is little more than a corollary to his more general position that distance judgments are "entirely the effect of experience."  

Ibid., 1:164-176; 2:111-114. In discussing the role of unconscious inferences in the process of perception James wrote that: "To call perception unconscious reasoning is thus either a useless metaphor or a positively misleading confusion between two different things." 2:113.

the association of tactile feelings (e.g., reaching, walking) and visual impressions, then as yet unpaired visual impressions must have the same phenomenal location as thoughts or feelings. In fact, Berkeley adopts this line of reasoning in his examination of a newly resighted blind person.

From what hath been premised, it is a manifest consequence, that a man born blind, being made to see, would at first have no idea of distance by sight; the sun and stars . . . would all seem to be in his eye, or rather in his mind. The objects introduced by sight would seem to him (as in truth they are) no other than a new set of sensations, each . . . as near to him as . . . the most inward passions of the soul.21

Berkeley's account and its idealism literally set the foundation for later empiricist theories of space perception. The notion of the muscle sense, for example, became a seminal issue in the nineteenth century because Berkeley held that spacial relations are entirely derived from muscular feelings.

The empiricist account seemed to gain experimental support from Cheselden's report in 1728 that a resighted boy said that objects "touched his eyes" in a fashion analogous to the way objects touch the skin.22 Although this description is open to alternative interpretation, it made Berkeley's theory sufficiently attractive for the late eighteenth century French empiricist, Etienne de Condillac, to adopt it with only slight revisions. In the mid-nineteenth century, John Stuart Mill described Berkeley's account as "one of the least disputed doctrines in the most disputed and disputable of all Sciences, the Science of Man."23

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21Ibid. (Italics mine.)

22Pastore, Visual Perception, p. 97.

period between 1860 and 1890 George T. Ladd, Alexander Bain, Hippolyte Tain and Helmholtz adopted the fundamental tenets of Berkeley's empiricist position, including the eccentric projection of sensations.

The doctrine of the eccentric projection of sensations can be broken down into two complementary parts. The first is a refinement of Berkeley's contention that visual impressions are originally experienced in the eye or mind. By the mid-nineteenth century this position was embodied in the empiricist contention that only the spectral colors and shades of light are immediately given in retinal stimulation. Form, solidity, distance, direction and location were thought to be learned through the association of muscular feelings and visual sensations. But in stating that only colors and shades of light are given in vision, the empiricist was left with explaining the fact that visual objects seem to be immediately apprehended in external space. The specifics of this explanation took a variety of forms but all seemed to agree that we learn to project or extradict our originally non-spatial visual sensations into space. This is the second part of the doctrine of the eccentric projection of sensations. Ladd, for example, said that this projection was achieved through a mental act, "an act which in its perfection results from a long and intricate process of development." For Bain, the location of sensations in external space was the result of the association of muscular feelings and visual sensations. Perhaps the most detailed, and certainly the most audacious, exposition of this process was presented in Taine's On Intelligence.

Taine, the French empiricist, saw the implications of Berkeley's position clearly and he brought them to their logical conclusion. "A sensation," he wrote, "engenders, by its presence alone, an internal phantom which appears as an external object." Now, if objects are themselves simply groups of sensations, we are led to the inevitable conclusion that external objects are "nothing more than resemblances or phantoms." For such a phenomenalism, it becomes a matter of semantics whether perceived objects are real or merely veridical hallucinations, and Taine devoted over thirty pages of his treatise to defending the latter proposition. In the process, he explained that these phantoms appear in external space because of "localizing judgements," through which we project our sensations to "the spot in which we are accustomed to meet the cause or conditions it excites." In a passage which states clearly everything James thought was wrong with the eccentric projection doctrine, Taine wrote that:

All our sensations of color are thus projected out of our body, and clothe more or less distant objects, furniture, walls, houses, trees, the sky, and the rest . . . . Thus all our sensations are wrongly situated, and the color is no more extended on the arm-chair than the sensation of tingling is situated at my fingers' ends. They are all situated in the sensory centers of the encephalon; all appear situated elsewhere, and a common law allots to each of them their apparent location. The crucial part of this passage is the contention that sensations are really situated "in the sensory centers of the encephalon." It is this confusion between the spatial reference of a sensation and its physical

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26 Ibid., p. 265.
27 Ibid.
antecedent, argued James, which stood at the heart of the doctrine of the eccentric projection of sensations.

Again, this confusion can be presented in terms of the psychologists' fallacy. The fallacy involves the psychologist imposing his knowledge about the location of the cause of the sensation onto his description of the spatial properties of the sensation itself. That is, the psychologist knows that the neural antecedent of a sensation is located within the cranium of the perceiver. Knowing this, he mistakenly assumes that the sensation under study must also locate itself in the same physical space as the psychologist locates its cause. As James said, the eccentric projection theorists tacitly assume that the sensation "must place itself where they place it." Thus when Taine asserts that sensations are really located "in the sensory centers of the encephalon" he is confusing physiology with psychological description. In fact, this initial confusion does create a phantom and it haunts the empiricist until it is projected into the external world through a mental act of some sort. As we shall see in the second part of this chapter, James argued that spatial qualities are given, along with colors and shades of light, in visual experience. Within this formulation, the phantom is transformed into a real object and the mysterious mental act of projection becomes unnecessary.

Muscular Feelings and the Perception of Form

We must now turn to some of the murky details of the empiricism-nativism controversy in the second half of the nineteenth century. Given this as unavoidable, it will be helpful to offer a means for distinguishing empiricist from nativist theories of perception. The criterion we

29James, Principles, 2:34.
have chosen involves the perception of two-dimensional spatial attributes, i.e., length and width or visual form. This is the criterion which underlies Woodward's classification of nineteenth century theories of perception. It is also the criterion which Ribot pointed to when he summarized the empiricism-nativism debate in the following manner:

What is the peculiar object of sight? This very simple question sums up the debate. If we reply: Color, we are empiricists. If we reply: Color extension, we cast our lot with the nativists.

Thus the nativists argued that length and width—two-dimensional visual form—is given in visual sensations. In contrast, the empiricists stated, following Berkeley, that visual sensations are originally non-extended and they sought to explain all spatial properties in terms of non-visual muscular feelings. This criterion gains historical support from the fact that Berkeley tried to reduce visual form as well as distance and solidity, to the association of visual impressions and muscular feelings.

In moving from Berkeley to the second half of the nineteenth century however, one must take note of an important change in what empiricists meant by muscular feelings. That is, after 1850 the feelings arising from the movements of the ocular-motor muscles of the eye-ball migrated to the center of theoretical interest in the empiricist explanation of visual form. A number of factors facilitated this change, but at the theoretical level, Woodward has shown that Hermann Lotze's theory of local signs served to redirect the visual form debate around the question of feelings arising from eye-movements. 

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32 Woodward, "Hermann Lotze's Theory of Local Signs."
Lotze's theory of local signs first appeared in 1846 and it is best viewed as an attempt to explain the perception of two-dimensional extension (form) in terms of non-visual feelings. Imagine that a point of light stimulates the periphery of the retina. According to Lotze, an innate reflex automatically brings the visual sensation to the fovea. While this reflex is innate, Lotze hypothesized that the reflex gives rise to psychological "feelings of movement" which are not innate but which specify the relation between the point stimulated and the fovea. For Lotze, there are as many unique feelings of movement as there are points on the retina and the person gradually learns the system of muscular feelings which correspond to the spatial relations of the visual field. This is a unique combination of nativism and empiricism, non-spatial visual sensations are associated, by means of an innate reflex, with feelings of movement which specify the spatial relations of the visual field. In time, each retinal point comes to have its own local sign which is defined in terms of feelings of movement. With experience, the spatial relations of the visual field are mapped out in terms of a coordinated system of muscular movements.

The perception of visual form becomes possible when the local signs for each retinal point have been learned. Once these relations have been learned, an array of visual sensations would suggest, through what Lotze called the mere "tendencies of movements," the connected series of eye movements which would be needed to outline the figure. Thus, for example, a straight line would be signalled by a connected series of increasingly strong feelings of movement in the same direction. In contrast, a circle would be signalled by a connected series of movements equidistant from the

33 Ibid.

34 Ribot, *German Psychology*, p. 87.
fovea. Although the details of Lotze's theory are complex and assume an incredible degree of sensitivity to minute muscular movements, it is historically important because it established a precedent, plausible rationale and terminology for understanding the origin of spatial relations.

Wundt was one of the many experimental psychologists who developed and elaborated Lotze's theory. He agreed with the two fundamental features of Lotze's theory: that spatial qualities are not given in vision and that they must be explained in terms of feelings which arise from eye-movements. In fact, even when Wundt differs from Lotze's formulation of the theory of local signs, the difference seems to consist of a Wundtian twist to a basically Lotzean theme. One area of difference is Wundt's doctrine of "feelings of movement," which states that any visual impression produces a feeling of the motor (efferent) discharge needed to bring the impression to the fovea.35 There are subtle differences between "feelings of innervation" and "tendencies of movement" but the explanatory principle is the same: the intensity of muscular feelings are the psychological basis of spatial estimations. Thus Wundt explained the over-estimation of a filled (###) line as opposed to an empty (-----), line by saying that a filled line offers more muscular resistance than an empty line of equal length. This increased resistance results in greater amounts of motor innervation and the illusory expansion of the length of the filled line. Wundt also departed from Lotze in suggesting that a psychological synthesis occurs when muscular feelings are combined with local visual sensations. This synthesis is similar to Mill's mental chemistry in the sense that attributes present in neither of the elements are created when the elements are combined. For Wundt, spatial attributes are created out

35Ibid., p. 204.
of non-spatial elements in the synthesis. But Lotze too had stated that spatial attributes must be reconstructed by the soul and whether one calls it a reconstruction or synthesis, the fact remains that an internal pro-
cess creates attributes not present in the elements given.

Empiricism found its most rigorous proponent in the work of Helmholtz. For Helmholtz, visual sensations come to be interpreted as signs or symbols for practical action. Spatial attributes are entirely the product of the association of muscular feelings of the eye with the bodily movements needed to outline the object. The message is essentially the same if we move to the British school of empiricism. Bain, for example, wrote that "visible picture [form] is, in fact, a train of rapid movements of the eyes, hither and thither, over luminous points, lines and surfaces." For both Helmholtz and Bain, visual sensations functioned to merely direct the eye movements which define the variety of visual forms.

James's critique of the empiricist account of the derivation of spatial attributes can be broken down into two parts: (1) the rejection of the proposition that spatial attributes are not intrinsically visual and (2) the subsequent subordination, in James, of the role of muscular feelings in explaining the origin of spatial attributes. Given Ribot's criterion for distinguishing nativist from empiricist theories, we shall emphasize his critique of the empiricist contention that visual form is not immediately given. This emphasis leads us to a passage where Helmholtz gives voice to the rule or principle which underlies the empiricist approach to space preception. In his Physiological Optics he wrote that:

No elements in our perceptions can be sensational which may be overcome or reversed by factors of demonstrably experimental

origin. Whatever can be overcome by suggestions of experience must be regarded as itself the product of experience and custom. If we follow this rule it will appear that only qualities are sensational, whilst all spatial attributes are results of habit and experience.³⁷

By qualities Helmholtz means light and colors, those sensational properties which the empiricist thought to be given in retinal stimulation. By spatial attributes he means form, direction, distance, solidity, etc., those ostensibly visual properties which empiricism sought to reduce to more primitive sensory data, viz., muscular feelings. Pastore has called this Helmholtz's modification rule and it stands at the foundation of the empiricist program in ways which deserve to be made explicit.³⁸

First, the relationship between the law of isolated conduction and the modification rule should be made explicit, for together they created the fundamental categories of the empiricist approach to perception. As a law which assumes a point for point correspondence between retinal excitation and psychic effects, the law of isolated conduction provides a physiological model which portrays the receptor-to-brain connection as a telegraph system. In assuming this type of connection, Helmholtz allows his physiological model to create the fundamental unit of his psychology, viz., sensations. His elementistic definition of sensation is, in fact, a deduction from an elementistic physiological model; nothing else is possible with punctate receptors transmitting excitations through isolated nerves. With this definition of sensation in hand, Helmholtz reasoned that any attributes of perception which change with experience cannot, by the very fact that they change, be sensational. Thus, in a sense, the

modification rule is simply an elaboration of the physiological model
which underlies the law of isolated conduction; it states that any changes
which do occur must be intellectual or cognitive, the result of brain
processes. The two rules complement one another perfectly. The law of
isolated conduction defines what is sensational and the modification rule
specifies the processes through which sensations are changed. Together
these assumptions created the most powerful tradition in nineteenth cen­
tury psychology, an atomistic empiricism. Its fundamental strength lies
in its professed ideal of imposing a scientific, physicalistic framework
onto the last frontier of science—the human mind.

The empiricism of Helmholtz's system becomes clear by applying his
modification rule to the question of the origin of spatial attributes.
It is obvious that spatial attributes vary continuously in perception;
widely different spatial relations are perceived as the same (e.g., the
constancies) and the same spatial stimulus can be perceived as different
(e.g., the Muller-Lyer illusion). Since spatial attributes vary with
experience, they must be themselves products of experience. In this
manner Helmholtz rejected the sensational status of spatial attributes
and he went on to argue, based on the law of isolated conduction, that
all spatial attributes are the product of intellectual acts.

James wrote that the modification rule had achieved "an almost
deporable celebrity" in his time. At a purely logical level, James
pointed to a glaring inconsistency in Helmholtz's employment of the maxim.
On one hand, Helmholtz maintained that spatial attributes cannot be sen­
sational because they are easily changed with experience. On the other
hand, Helmholtz was willing to say that light and color are immediate

\[39\] James, Principles, 2:218.
visual sensations. To this James wrote that:

Helmholtz's reservation of 'qualities' is inconsistent. Our judgements of light and color vary as much as our judgements of size, shape, and place, and ought by parity of reasoning to be called intellectual products and not sensations.40

That is, brightness and color constancies are at least as easy to demonstrate as shape and size constancies. If Helmholtz applied the modification rule consistently, he would have to deny that anything is sensational by his definition. But this conclusion would then contradict the law of isolated conduction, which states that percepts are the joint product of sensory elements and memory. In fact, James argued that any sensory quality whatsoever can be changed or overpowered by our knowledge and therefore that the modification rule is an inadequate criterion for distinguishing between the sensational and intellectual components of perception.41

Thus far we have attempted to show that the modification rule is intimately tied to the physiological model underlying the law of isolated conduction and that James rejected the former. It should not be surprising, then, that he rejected the law of isolated conduction also. In fact, we have already examined his critique of the law of isolated conduction in our discussion of Hering's explanation of color contrast. A more general point deserves mention at this juncture. That is, James offered the lateral inhibition explanation for an entire class of illusions (e.g., the rotating spiral, color contrast, apparent motion, Wundt's filled line illusion) which the empiricists offered as evidence for their claim that spatial qualities are derived from muscular feelings. Take Wundt's

40Ibid.
explanation of the over-estimation of the length of a filled line as an example. His explanation in terms of the increased feelings of innervation needed to traverse the filled line is more than a way of understanding a curious visual illusion. If verified, Wundt's account gives credence to the entire empiricist program of seeking to reduce visual form to muscular feelings! Thus when James offered the lateral inhibition explanation for this entire class of illusions, he was challenging the empiricist account of space as well as their explanations for these particular phenomena. Instead of assuming that spatial attributes are the product of intellectual acts, James's explanation assumes that these illusions are entirely visual. In place of the atomism of empiricism, he offered what might be called a field-view of sensation or perception; what is given in the stimulation of a sense-organ is conditioned by the state of excitation of the entire field of sensory receptors. Just as the substantive portion of the stream of thought is conditioned by the transitive portions which surround it, the focus of the perceptual field is conditioned by the stimulation of its peripheral portions. In both cases James went to experience rather than a physiological model to obtain the fundamental categories of his psychology.

Let us briefly turn to James's rationale for relegating muscular feelings to a subordinate role in the perception of spatial attributes. It is obvious that muscular feelings do come to signify spatial relations. We can, after all, indicate the unit of space called a foot with our hands even when our eyes are closed, or trace a figure in the air with the tip of our finger. How can he argue that muscular feelings do not constitute our spatial ideas without denying the obvious fact that muscular feelings come to signify spatial relations? The answer is easier than it at first seems.
Even if one holds that spatial attributes are given in vision, it is reasonable to argue that particular muscular feelings come to be associated with particular visual lengths and forms; and that after enough practice the originally visual sensation can be signified in muscular terms. Within this framework, James conceived of muscular representations of spatial relations as the learned product of afferent feedback obtained by tracing visual forms with the hands and arms.  

James's Spatial Quale and Perceptual Realism

James's account of space perception is notoriously difficult and painfully detailed. The chapter on "The Perception of Space" is the longest in the Principles, filling 148 pages! Given this we must go directly to the theme which integrates the details of this frightfully complex subject. Our examination of the empiricist account will help us understand the importance and uniqueness of James's fundamental contention. Thus, in the face of the empiricist attempt to create spatial attributes from some more primitive sensory elements, James wrote that:

> all spatial knowledge is sensational at bottom, and that, as sensations lie together in the unity of consciousness, so no new element whatsoever comes to them from a supra-sensible source.

This is James's fundamental contention, but what exactly does he mean? One way it can be clarified is to contrast the role which intellectual factors are supposed to play in the space perception theories of James and the empiricists. For the empiricist, spatial ideas were thought to be composed of, or constituted by, intellectual contributions which are the product of experience. Since empiricism from Berkeley to Helmholtz

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42 James, Principles, 2:193-197.
43 Ibid., p. 152. (Italics mine.)
denied that spatial attributes are immediately given in vision, these attributes had to be construed as the product of some sort of intellectual construction. Thus in Helmholtz's system space was explained in terms of *unconscious inference*, or an *act of the understanding*. Similarly, Wundt conceived of space as a product of a *psychological synthesis*, J. S. Mill viewed it as a product of *mental chemistry* and finally, Lotze's psychology created spatial attributes through a *reconstruction of the soul*. Beneath the terminological diversity, however, there is a fundamental conceptual unity. Having denied that spatial attributes are immediately given, the empiricist sought to construct space in a piece-meal fashion through a mental act.

In the face of this approach, James sought to explain the origin and development of our knowledge of space "without the aid of any mysterious 'mental chemistry' or power of 'synthesis' to create elements absent from the original data of feeling." In other words, James sought to reduce all our spatial knowledge to terms which are themselves sensational and immediately given. He called this immediately given feeling of extensity the spatial *quale* (feeling). For James, the spatial *quale* is a primitively given feeling of three dimensional space; it is immediately given in the same sense that light or color is immediately given. Just as any visual sensation must contain a specific quality of light, so it must also contain a specific spatial quality. Here, then, is the fundamental contention of the passage we began this section with: all spatial knowledge is entirely derived from a primitive spatial feeling, the spatial *quale*, which is immediately given. In one place James states his position

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44 Ribot, *German Psychology*.
45 James, *Principles*, 2:203.
in terms of the contents of our perception of space, "the content of the ordered [our mature space perception] remains identical with that of the multiplicity [the spatial quale]—sensational through and through." Of course, by saying that the spatial quale is immediately given James is siding with the nativists. And while we shall treat the nativistic aspect of James's formulation of space perception in some detail, the remainder of this chapter is organized around a more fundamental contention—that James was, above all a perceptual realist. As he says above in rather bold terms, all the contents of attributes of our mature spatial knowledge (e.g., form, solidity, distance) are contained, in potential form, in our first visual experience. In this sense, James—the perceptual realist—was directly challenging the claim of a phenomenalistic empiricism. Our senses bring us into contact with real, externally located and potentially discriminable objects rather than discrete, mind-located sensations. In addition, James held that the attributes embedded in our first primitive space-sensations are discovered, but not created, through acts of selective attention. This important qualification will be examined in the next section. It saved James from an untenable naive realism and brings the activity of the perceiver into the foreground of his account of perceptual development.

We must begin our examination by clarifying the somewhat clumsy terminology which surrounds James's treatment of sensation. For James, sensation is "the immediate psychic effect of a peculiar sort of nerve-process excited." That is, sensation is the most primitive psychological effect of a physiological process, an effect which is uncontaminated by

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46 Ibid.
47 Ibid., p. 145.
intellectual (brain) processes. The word uncontaminated is somewhat controversial in the abstract but it becomes less so in concrete cases. That is, sensations, for James, are uncontaminated in the same sense that the lateral inhibition theory of color contrast portrays that phenomenon as uncontaminated by brain (intellectual) processes. James was fully aware that his definition of sensation created an abstraction which was never fully realized in adult life. But he said that sensations must be postulated as the psychic function through which "we first become aware of the bare immediate natures" of the objects of experience. Defined in this manner, sensation is synonymous with what James called knowledge by acquaintance. In fact, the latter phrase is preferable because it does not imply that sensations actually constitute our experience of whole objects; we are first acquainted with objects, as-yet-undiscriminated wholes rather than disjointed sensory elements. In the second chapter we argued that James's knowledge by acquaintance is synonymous with what Hodgson called first intention descriptions. Thus it should not be surprising to find James writing, in a section of "The Cognition Function of Sensation," where he is discussing our primitive acquaintance with light, that

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\ldots\text{the best taught born-blind pupil lacks a knowledge which the least instructed seeing baby has. They can never show him light in its 'first intention'; and the loss of that sensible knowledge no book-learning can replace.}^{49}
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Thus sensation, knowledge by acquaintance, and first intention descriptions are synonymous for James; he employed Hodgson's philosophy to define the most primitive units of his psychology in a non-elementistic way.

In the Principles he argued that a primitive space-sensation is given in sensory stimulation of any kind, just as intensity is given.

\[\text{\textsuperscript{48}Ibid., p. 3.}\]  
\[\text{\textsuperscript{49}Ibid., p. 4. (Italics mine.)}\]
Every experimental psychologist was willing to admit that intensity is an inseparable but distinguishable element of sensory stimulation. But it was James's contention that extensity should also be assigned the same sensational status as intensity. "Extensity," he wrote,

... being an entirely peculiar kind of feeling indescribable except in terms of itself, and inseparable in actual experience from some sensational quality which it must accompany, can itself receive no other name than that of sensational element.\(^{50}\) For James, a spatial quale accompanies not only visual sensations but all sensory stimulation whatsoever. This immediately felt sensational quality is what allows us to feel thunder as more extensive than a squeaking blackboard, that full immersion in a bath is more extensive than a wet finger. While James examines all the senses in some detail, our discussion will be limited to visual extensity.

In vision, James describes the spatial quale as a vague, undifferentiated feeling of "vastness" or "volume" which accompanies any visual sensation.\(^{51}\) This primitive visual space contains all the attributes of our mature spatial knowledge in potential form. It is a space within which depth has yet to be discriminated from length and width, where left and right have yet to be assigned a specific direction. James said that the first primitive feeling of space is experienced as a mere "there" which accompanies the first visual sensation, but these vague spatial feelings are without a specific location or direction.\(^{52}\) In calling it a mere "there," James was simply trying to avoid committing the psychologists' fallacy, which in this case would involve imposing his mature knowledge about space onto his description of the primitive spatial quale. As he wrote in describing a child's first experience of a visual object, the

\(^{50}\)Ibid., p. 136.  \(^{51}\)Ibid.  \(^{52}\)Ibid., p. 8; p. 35.
object "fills its own place" but the location of that place can only be determined after the child acquires a more refined spatial knowledge. In spite of the vagueness of the first spatial quale—a vagueness which is, in fact, an essential feature of that notion—one thing must be made clear. That is, for James, our first visual sensations are spatial. In other words, what we mean by visual sensations as they are actually experienced is inherently, though originally only vaguely, spatial; just as any visual sensation must be of a certain intensity to be experienced, so it must also possess extensity.

However straightforward this point might be, given James's notion of the spatial quale, it deserves to be elaborated upon for two reasons. First, the spatial quale makes the doctrine of the eccentric projection of sensations superfluous. There is no need to project sensations into external space if sensations are themselves intrinsically spatial. The need for an additional mental act disappears when sensations are not confused with the brain processes which produce them. Only the brain processes are inside our heads and only those physiological processes would need projecting into the world. But, since we become conscious of objects rather than brain processes, the act of projection is an unnecessary encumbrance on the psychology of perception.

More importantly, however, Nicholas Pastore, whose Selective History of Theories of Visual Perception has become the authoritative work in this area, has argued that James contradicts himself with regard to the notion of the spatial quale. That is, Pastore suggests that there are two contradictory perception theories in the Principles and that what he calls James's "second theory" is founded upon the "apparent denial of any

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53 Ibid., p. 35.
One of the central pieces of evidence which Pastore offers in support of his interpretation is that James once wrote, in discussing sensation, that "the first time we see light, in Condillac's phrase, we are it rather than see it." He interprets this sentence to be a tacit endorsement of the empiricist position that visual sensations are originally located in the mind rather than in the world. If this can be substantiated, then James is: (1) saying that visual sensations are originally non-spatial and (2) setting up a purely empiricist account of space alongside his avowedly nativistic notion of the spatial quale. Although James is ambiguous in places, we shall argue that he offers only one theory of perception in the Principles, a theory which integrates empiricism and nativism. In the course of this chapter we will examine other evidence which Pastore offers in support of his interpretation. For now we shall show that James's allusion to Condillac was merely a passing jab at the rationalistic theory of knowledge.

Pastore's interpretation is prima facie implausible because it amounts to a blatant contradiction of the notion of the spatial quale. It becomes strikingly implausible, however, when one reads the pages which immediately precede and follow the controversial sentence. Two pages before the Condillac allusion James wrote, and I retain his own italics, that "in both sensation and perception we perceive the fact as an immediately present outward reality." Although James's reputation as a consistent thinker has been much-maligned by historians of psychology, it seems incredible that he would reverse his position on such an important

54 Pastore, Visual Perception, p. 239.
55 James, Principles, 2:4; also see James, Psychology, p. 14.
56 James, Principles, 2:2.
issue without warning, in a matter of two pages! Furthermore, four pages after the controversial sentence we find him again describing a position which is thoroughly consistent with his formulation of the spatial quale. Here again he considers the hypothetical case of a child's first sensation.

The first sensation which an infant gets is for him the entire Universe. . . . In this dumb awakening to the consciousness of something there, a mere this . . . the infant encounters an object in which all . . . the 'categories of the understanding' are contained. It has objectivity, unity, substantiality, causality, in which any later object or system of objects has these terms.\(^5^7\)

James's reference to "objectivity" is nothing else than the spatial quale which accompanies the child's first sensation. Again, these are the words of a perceptual realist; the child's first sensation is identical, in terms of content, to the same sensation experienced by a mature person. Of course, the mature person will know more about the sensation—he can locate it in space and time and assign a meaning to it—but these conceptual operations do not transform the content of the sensation.

Given these two explicit statements which are fully consistent with his spatial quale, it seems positively incredible that James would insert between them, as Pastore says, an implicit endorsement of the empiricist account of space. But what else could James have had in mind when he wrote that "the first time we see light, in Condillac's phrase, we are it rather than see it"? The key to a different, and entirely consistent interpretation of this sentence is contained in James's 1885 essay, "On the Function of Cognition."\(^5^8\) It is here that he first challenged Ferrier's First Proposition, that any knowledge whatever presupposes a knowledge of a self as distinct from the object of knowledge. Now by writing that "the

\(^{57}\)Ibid., 2:8.

first time we see light . . . we are it . . . ." in the Principles he may be simply challenging the epistemological foundation of the rationalist formulation of knowledge. This challenge is fully compatible with the spatial quale, as well as the related position that the "primordial condition" of human experience is a "consciousness of objects." In terms of our interpretation, the child is light simply because he has, as yet, no knowledge of self, or anything else except light. In other words, I understand James to be agreeing with Condillac's position that knowledge of self is itself derived from our knowledge of objects. Later experience will bring the child knowledge of self, as well as other optical knowledge but, as James wrote in the sentence immediately following his allusion to Condillac, "all our optical knowledge is about what this experience gives." Although James's reference to Condillac is ambiguous because he does not specify the particular sense in which he is agreeing with the empiricist, it does not necessarily contradict his formulation of the spatial quale. What Pastore fails to recognize is that James could agree with the empiricist critique of the rationalist formulation of knowledge without endorsing the empiricist formulation of knowledge or space.

When one examines the assumptions which underlie James's treatment of the visual spatial quale the importance of Hodgson's thought appears at a number of levels. For example, that the psychologists' fallacy continually surfaces in his critique of the empiricist account is itself testimony to the importance of Hodgson. It is hardly coincidental, then, that it is at the end of his "Perception of Space" chapter that James accuses empiricism, as a school, of being "guilty of that confusion which

59 James, Principles, 1:273.  
60 Ibid., 2:3.
Mr. Shadworth Hodgson has done so much to clear away, viz., the confounding of the analysis of an idea with its means of production. This allusion to Hodgson is hardly coincidental because Hodgson provided the clearest formulation of what James called the psychologists' fallacy in his examination of the empiricist formulation of the origin of spatial attributes in his *Time and Space* in 1865. We began this chapter with James writing that "I always supposed myself that they [the 1887 space perception articles] were but a filling out of your *Time and Space* framework." We shall now see what James had in mind when he spoke of Hodgson's "framework."

We must return to Hodgson's *Time and Space*, but not simply because his account of space is the same as the *Principles*. In fact, there are significant differences in their formulations of space. We must turn to *Time and Space* because Hodgson cut through the Gordian knot which had bound empiricism to an atomistic elementism from the time of Hobbes in that work. How did he accomplish this feat? Put simply, he turned to experience and refused to allow a physiological model to determine the nature of his description of visual experience. Put more complexly, Hodgson called for an assumptionless description of the phenomenon of seeing itself. His basic message to psychology might be summarized in the following manner:

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61 Ibid., pp. 280-281.
62 Hodgson, *Time and Space*.
64 Hodgson, still working partly within the traditional empiricist framework with regard to the psychological origin of space, argued that the third dimension was a joint product of visual and tactile sensations, see *Time and Space*, pp. 80-82. In contrast, James maintained that all three dimensions of space are the immediate product of visual sensations, see *Principles*, 2:212-216.
if psychology is going to deal with experience at all, it must begin with rigorous descriptions of experience and let those descriptions be the data from which psychological theories are constructed. In effect, Hodgson called for a reversal of the methodological orientation of traditional empiricist psychology, replacing physicalistic assumptions with pure descriptions. In doing so, he set the "framework" for James's account of the perception of space.

This reversal can be seen in Hodgson's argument for the immediate visual apprehension of form. As we have seen, empiricism sought to reduce form to a series of muscular movements over time. In response to this formulation Hodgson turned to a description of visual experience.

The eye opened to light sees a whole surface, one small portion of it distinctly, the rest indistinctly; it see part bright, part dark, part clear, the rest obscure; this is the phenomenon of seeing; and I cannot conceive how any one can suppose that the space-relations of this surface are reducible to relations in time .... the extended surface is seen at once, and is seen as something different from feelings which are not extended.65

As a refutation of a time-honored theory this statement seems simple-bordering-on naive. Is it at all reasonable to attempt to refute a psychological theory on the basis of a description of the phenomenon being explained? With this question, what had seemed simple becomes frightfully complex. As we noted in the second chapter, Hodgson devised his method of reflection to guard against the imposition of assumptions of any kind onto our descriptions of experience. According to the method of reflection, one must voluntarily abstract all of one's knowledge about the experience being described and present the experience as it is actually experienced. Most importantly, one must guard against the seemingly irresistible tendency to assume that the logical elements which are distinguishable upon reflecting

65 Hodgson, *Time and Space*, p. 66.
on an experience are the psychological elements from which the experience is produced. For example, even though we can logically distinguish visual space into length, width and depth, we have no right to assume that any one of these dimensions antecedes the others within the life of the individual. But this is exactly what empiricists since Berkeley had done in formulating a psychological theory of the perception of the third dimension! By applying this logic to the perception of the third dimension, Hodgson reasoned that one must not assume that depth appears later than the other two dimensions.

Sight contributes, at the least, perception of superficial extension; so also touch; the combination of the two produces, at the least, perceptions of the three dimensions, for part of the visual superficies is pushed to a distance from the body . . . when we touch the body and not the rest of the superficies . . . . This is the origin, the creation of the third dimension of space when reasoned of as if it were an empirical object.  

Hodgson is playing the role of devil's advocate in this passage; this is the logic behind the empiricist account of space. It is his refutation of this position that is of the utmost importance. Thus, immediately after this description he points to the fallacy underlying this line of reasoning.

Sight and touch, however, come into operation together, and consequently the perception of the third dimension of space begins simultaneously with that of its superficial extension. The perception . . . of things in space of three dimensions is a highly complex state and object but not necessarily later in time than that of the simpler states . . . of which it is composed; it is we who import the notion of growth in time to it, by our analyzing it into its elements and then composing it afresh by their combination.  

This argument, which James later called the psychologists' fallacy, is the

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66Ibid., p. 80. (Italics mine.)

67Ibid., p. 81. (Italics mine.)
first step in Hodgson's critique of an atomistic empiricism. To complete
his refutation and set the "framework" for James's account of space, we
must return to Hodgson's method of reflection.

In the second chapter we noted that Hodgson, in an article written
in 1876, said that one of the persistent problems of traditional empiri­
cism was that it failed to give serious consideration to the question of
what is given in sensu. 68 In other words, empiricism tacitly assumed an
atomism which it inherited uncritically from the Newtonian conception of
science. What we have referred to as the law of isolated conduction can
be viewed as a nineteenth century rendition of this atomistic Weltanschaunng.
Hodgson recognized that this world-view provided a curiously a priori
answer to the question of what is given in sensu. What is given must be
discrete sensory elements, the mental analogues to Newton's atoms.
Hodgson also recognized that empiricism's alliance with a physicalistic
atomism resulted in an unconscious abnegation of its professed master—
experience. Thus in an 1884 essay we find Hodgson demanding that empiri­
cism return to experience:

... we must have recourse in the first instance to experi­
ence itself, and see what its content is, apart from any hypo­
thesis of its cause ... . What I say then is this,—throw
yourself frankly on experience ... . Experience without leading
strings is the thing to aim at and work for.69

Instead of assuming that experience is composed of elements which are as
discrete as their assumed causes, Hodgson said that the question of what
is given in sensu can only be answered by returning to experience. He
recognized that this return involved a "radical change in our method of

68 Shadworth Hodgson, "The Metaphysical Method in Philosophy,"
Mind 9(1884):48-72, p. 55.
69 Ibid.
philosophizing" but this was the only way to get at "experience without leading strings." This radical change in method is, of course, the method of reflection. What must be made clear, however, is that Hodgson stated that a rigorous application of this method would allow us to answer the question of what is given in sensu. In fact, for Hodgson, employing the method of reflection was the only way philosophers and psychologists could rediscover what is given in sensu.

We can now offer Hodgson's answer to the question raised earlier—whether a description of the experience of a phenomenon can, in and of itself, serve as a refutation of a psychological explanation of that phenomenon. Hodgson's answer is clearly yes, but only if the explanation makes reference to inferred psychological processes which can not be verified in a rigorous application of the method of reflection. Thus, if an explanation makes reference to hypothetical mental processes which can never be experienced—like, for example, Wundt's sensations or Helmholtz's unconscious inferences—it is necessarily wrong. Hodgson's method of reflection also had a vitally important influence on James's account of space perception, for the empiricism-nativism controversy revolved around the question which Hodgson's method was designed to answer—what is given in sensu.

One way of approaching this issue is to contrast the implications of Hodgson's method of reflection and Helmholtz's modification rule with the origin of spatial attributes in mind. We have already seen that Helmholtz employed the modification rule as a criterion for arguing that spatial attributes are not given in sensu, i.e., he reasoned that since

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70 Ibid.
spatial attributes vary with experience they must themselves be products of experience. He also noted, however, that the converse of this rule is definitely not valid. That is, just because perceptual attributes cannot be altered, we can not assume that they are given in sensory stimulation, for large amounts of practice will make some attributes so strong that they can not be overcome by even a determined effort. Remarkably, in employing the method of reflection one obtains a criterion which is the exact opposite of Helmholtz's!

Hodgson's method of reflection involves the voluntary adoption of an attitude which is radically different from our usual way of experiencing the world. In 1884 he described this attitude as one of "pure receptivity," and its rigorous application allows one to get at "experience pure." In our everyday experience we immediately impose learned meanings onto the objects of our perceptual experience, so that a particular configuration of green and brown is seen as a tree. Hodgson said that the method of reflection was designed to "undo" or "invert" the effects of past experience by consciously holding our everyday assumptions in abeyance. Thus, in a state of pure receptivity one ignores the tree-ness and even the object character of this particular segment of perceptual experience. Instead, Hodgson wrote that one

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\text{... takes the green and brown expanse as it comes, in its proper place in the stream of consciousness ... So taking it, I am aware of the larger expanse of which it was a part, and also that while seeing it I heard (suppose) a sound, making part with it of one stream of consciousness.}
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73 Ibid., p. 61.
74 Ibid.
This, for Hodgson, is what is given in the experience of seeing a tree—patches of extended color in particular forms. The difference between Hodgson and Helmholtz reduces to one fundamental proposition: Hodgson believed that one could, and in fact, must "undo" the effects of past experience by a systematic suspension of everyday assumptions, while Helmholtz believed that such an inversion was unnecessary. While Hodgson's method is an expression of his desire to achieve absolute certainty, its plausibility and attractiveness is tied to his demand that we adopt a state of mind which is radically different from normal experience. Within this state of pure receptivity, experience appears as it is given in sensu. Thus, in marked contrast to Helmholtz's criterion, Hodgson would argue that what remains unchanged and intact within this radically different state is the uncontaminated product of sensory stimulation. Thus in Hodgson we find an alternative to Helmholtz's modification rule.

Although James rejected the modification rule, he seems to offer no explicit, general alternative criterion for determining what is given in sensu. Instead, he seems to treat each topic in space perception individually, bringing experimental evidence to support his position whenever possible. He refers to Exner's studies on apparent motion, for example, in the context of his argument that movement is a "primitive form of sensibility." But there are large gaps in the experimental literature and he fills these gaps with descriptions which seek to bring the reader back to the sensational or acquaintance mode of experience. Most importantly, these descriptions give credence to the idea that he had Hodgson's method of reflection in mind when he claimed that spatial attributes are given in vision. We have already noted that his knowledge by

75 James, Principles, 2:172.
acquaintance is synonymous with Hodgson's first intention descriptions, but now we are making a more specific claim. That is, we shall attempt to show that there are times when James says that spatial attributes are given in vision on the basis of descriptions which approximate Hodgson's state of perfect receptivity.

Evidence for this contention is not hard to find. We have already noted, for example, that James describes the "primordial condition" of human experience as a vague "consciousness of objects." What he calls the "primordial condition" is remarkably similar to Hodgson's state of "perfect receptivity" except that James, the psychologist, points to altered states which appear involuntarily, e.g., during a hypnotic trance, a faint or our experience under the influence of anesthetics. He provides a more elaborate description of anesthetic intoxication in one part of the Principles:

Such anesthetics as chloroform, nitrous oxide, etc., sometimes bring about transient lapses [of self consciousness] even more total, in which numerical discrimination seems gone; for one sees light and hears sound, but whether one or many lights and sounds is quite impossible to tell. Where the parts of an object have already been discerned . . . we can with difficulty feel the object again in its pristine unity.

In terms of the structural tone of experience, this passage is reminiscent of James's description of a state of dispersed attention, and in both he is describing a state similar to Hodgson's perfect receptivity. The active, discriminating, attentive mode of experiencing the world recedes and objects return to their "pristine unity." The important thing for understanding James's nativistic notion of the spatial quale is that the pristine objects which appear in this state are accompanied by a primitive


77 Ibid., pp. 487-488. (Italics mine.)
spatial vastness. Thus James wrote that even when consciousness is reduced to its most primitive level it "presents us with concreted objects, vaguely continuous with the rest of the world which envelops them in time and space."\(^{78}\) Thus, after abandoning Helmholtz's criterion for distinguishing between the sensory and intellectual components of perception, James seems to adopt the criterion contained in Hodgson's method of reflection. The importance of this fact cannot be over-emphasized— it served as the basis of the nativistic strain of James's formulation of space. Hodgson's criterion is also implicit in James's retort to the doctrine of the eccentric projection of sensation.

As I look at my bookshelf I cannot frame to myself an idea, however imaginary, of any feeling which I could ever possibly have got from it except the feeling of the same big extended sort of outward fact which I now perceive.\(^{79}\)

What is striking about this passage is that here James is offering the irretrievability of non-spatial visual sensations as proof of the untenability of the notion of projection. Like Hodgson's purely experiential refutation of the empiricist account of the perception of the third dimension, James is rejecting a psychological theory on purely descriptive grounds.

Helmholtz would interpret the irretrievability of non-spatial visual sensations as an example of the overriding importance of past experience and unconscious inferences—we have had so much experience locating the bookshelf in external space that the originally non-spatial character of the visual sensations is unrecoverable. But then his psychological theory must contain an additional unconscious act of projection. In contrast, Hodgson would interpret the irretrievability of non-spatial visual sensations

\(^{78}\)Ibid., p. 487. \(^{79}\)Ibid., 2:31-32. (Italics mine.)
as James does, as evidence that visual sensations are themselves originally spatial! The criterion actually employed determines whether one offers a nativistic or empirical formulation of space. If more explicit evidence of Hodgson's impact is needed, one need only turn to James's purely descriptive argument for the givenness of the third dimension. Here he wrote that:

> It is impossible to lie on one's back on a hill, to let the empty abyss of blue fill one's whole field, and to sink deeper and deeper into the merely sensational mode of consciousness regarding it, without feeling that an indeterminate, palpitating, circling depth is as indefeasibly one of its attributes as its breadth... Mind, I say nothing as yet about our estimate of the 'real' amount of this depth or distance. I only want to confirm its existence as a natural and inevitable optical consort of the other two dimensions.\(^{80}\)

What James calls "the sensational mode of consciousness" is, for all intents and purposes, Hodgson's attitude of "perfect receptivity;" and, on the basis of a description of experience in this state, we find James arguing that three dimensional space is immediately given in visual stimulation.

James's contention that a primitive three dimensional spatial quale is given in vision is perhaps his most radical departure from the empiricist account of the origin of spatial attributes. And while he expressed sympathy for Hering's and Stumpf's formulations of the direct intuition of three dimensional space in the *Principles*, two factors suggest that Hodgson was also important in this respect.\(^{81}\) First, and most importantly, James admitted that the physiological process which underlies the immediate

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80 Ibid., pp. 212-213. (Italics mine.)

81 For James's examination of the nativistic theories of Stumpf and Hering see his *Principles*, 2:220-222. Surprisingly, he endorses neither of these explanations explicitly, although he is clearly sympathetic to these nativistic formulations.
apprehension of depth had yet to be discovered. This fact would be something of an embarrassment to a nativistic theorist unless he had some other means to support his formulation. According to our interpretation, however, Hodgson's method of reflection provided James with exactly what he needed—a criterion, independent of physiology, for determining what is given in sensu.

Second, Hodgson himself offered a preliminary outline of the psychological origin of the formal elements (space and time) in his *Time and Space*. The interesting aspect of this sketch is that he noted that the "constitution of the nerve" had been curiously ignored in previous theories. In response to this omission, he made reference to Johannes Müller's doctrine of specific nerve energies, which states that the nature of the sensation is conditioned by the structure of the nerve stimulated. Given this principle, he speculated that the psychological origin of time and space may be rooted in the constitution of the nerve.

May it not depend on the constitution of the nervous matter that we have space and time at all in our perceptions, and on the particular constitution of the objects perceived that we have this and that size, length, figure and order in the perceptions?

Although there is no indication that Hodgson was aware of Hering's theory, which appeared a year before his *Time and Space*, both share some fundamental similarities. Both, of course, are clearly nativistic. More importantly, however, both Hodgson and Hering grounded their nativism in hypothetical neural mechanisms which operate within the sensory systems. In this way, both avoided the untenable elementism and mental synthesis

82 James, *Principles*, 2:213; 220.
84 Ibid.
of the empiricist formulation of space. I am certainly not suggesting that Hodgson's preliminary outline held more weight in James's mind than the more elaborate theories of Hering and Stumpf. What I am arguing, however, is that Hodgson's method of reflection, and, to a lesser degree his outline, provided the "framework" for James's theory of space perception and disposed him to view nativistic theories with a sympathetic eye.

Before turning to James's account of the development of mature perceptual knowledge, we must return to Pastore's "second theory." In addition to asserting that James's second theory holds that sensations are originally non-spatial, Pastore states that it portrays the first perceptual experience of a child as being "totally chaotic." He bases this rather extreme characterization on James's often-quoted remark that the first experience of a child is "one great, blooming, buzzing, confusion." From this premise, Pastore reasons that a total chaos has no stable, internal subdivisions and therefore James's second theory fails to provide a conception of objects which the child's primitive perceptual structures can discriminate. In support of this contention, Pastore states that James himself wrote that sensations are "originally homogeneous." If this is true, James places himself in a curious logical bind--how can one explain how attentional acts single out objects from an originally homogeneous sensory mass? We shall attempt to show that James never stated, or even implied, that the first real perceptual experience of a child is either: (1) totally chaotic or (2) entirely homogeneous. In doing so, we must conclude that Pastore's formulation of the "second theory" in the *Principles* is based on a series of fundamental misconceptions of James's psychology of perception.

85 Pastore, *Visual Perception*, p. 239.
86 Ibid.
87 Ibid.
Pastore's second allegation is easily dispelled by giving voice to Linschoten's distinction between the two ways which James employs the term sensation. At times, James uses sensation in a genetic sense, to signify the first real experience of a child. In this sense, a child's original experience is sensational because it is the immediate effect of sensory stimulation. At other times, however, he uses the word sensation in a quite different sense, to refer to an abstraction which results from a conscious isolation of logically distinguishable qualities of experience. In this sense, and in this sense alone, particular colors, sounds, extensity and other homogeneous feelings are sensations. Pastore's claim that "James supposes sensations to be originally homogeneous" is founded upon a failure to distinguish between these two meanings of sensation.

That James himself had this distinction in mind becomes clear when one turns to the section of the Psychology where he states that sensations are homogeneous. He had just completed discussing sensations as abstract sensible qualities when he wrote:

Sensation, thus considered, differs from perception only in the extreme simplicity of its object or content. Its object, being a simple quality, is sensibly homogeneous.

Taken in context, it becomes obvious that James was speaking of sensations as abstract sensible qualities when he stated that they are homogeneous. These sensations are adult abstractions which James stated are never actually experienced alone in real life. Thus there is no reason to believe that James ever maintained that the first real experience of a child is homogeneous. In fact, a child's original experience is as heterogeneous as the objects which he is innately prepared to discriminate.

88 Linschoten, Psychology of William James, pp. 88-98.
89 Pastore, Visual Perception, p. 239.
90 James, Psychology, p. 14.
Pastore offers remarkably little support for his claim that "James describes the original experience of a baby as being totally chaotic."\(^91\) The substance of his interpretation consists of his unquestioningly assuming that when James says that a child's first experience is a "primordial chaos," he means that it is totally chaotic. Beyond this, the only textual evidence he offers is a segment of the 'blooming, buzzing confusion' sentence. In fact, if he had reproduced that sentence in its entirety he would have found James writing that even these first confused sensations possess a primitive extensity.\(^92\) In response to Pastore's contention, we might simply list some of the perceptual structures which James does say would function to structure a child's first experience. These include figure (form), solidity, color, shades of light, movement, and relative magnitude and distance. Of course, he maintained that these features are only vaguely cognized by the child, but these features would provide enough structure to guide the child's first discriminations and actions.

The crux of Pastore's claim seems to be rooted in the fact that James describes the child's first experience as "primitive," "vague," and even "chaotic." But there is no need to assume, on the basis of these adjectives alone, that James ever conceived of the child's first perceptions as being totally chaotic. It may well be primitive in the sense that it is not guided by a mature knowledge about the objects perceived,

\(^{91}\)Pastore, *Visual Perception*, p. 239. (Italics added.)

\(^{92}\)James, *Principles*, 1:489. The complete sentence reads: "The baby, assailed by eyes, ears, nose, skin and entrails at once, feels it all as one great blooming, buzzing confusion; and to the end of life, our location of all things in one space is due to the fact that the original extents or bignesses of all the sensations which came to our notice at once, coalesced together into one and the same space."
vague in the sense that only the most gross objective differences are
immediately perceived, and even chaotic in the sense that the constancies
which give stability to adult perception have yet to be learned, but it
still possesses a certain form and structure. A more accurate summary of
James's position is contained in his suggestion that: "The law is that
all things fuse that can fuse, and nothing separates except what must." And as a perceptual realist, gross differences between figures, colors
and shades of light are just the sort of objective differences which James
said must separate themselves immediately in the child's first experience.
These discriminations are the immediate result of the innate physiological
mechanisms of the child's sense organs.

Perceptual Realism and the Role of Intellect

In the previous section we found, among other things, that James's
nativistic formulation of space was rooted in his commitment to a perceptual realism. That is, by holding that a primitive sense of space is
immediately given, he avoided the need to posit that spatial attributes
are created, through a mental synthesis, from elements which are them­
selves non-spatial. But James's nativism is only the first step toward
a complete account of perception. He recognized clearly that intellectual factors (viz., knowledge) play an essential role in a person's mature
perception of spatial relations. In fact, James's full account of the
perception of space is best viewed as an attempt to integrate nativism
and empiricism and we shall now show that a perceptual realism also stood
at the foundation of the empirical side of his account of space. In the
process we shall look at his formulation of space from two perspectives.

93James, Principles, 1:488.
We shall first examine his explanation of one type of perceptual relation, shape constancy, viewing it as paradigmatic of his treatment of spatial relations. After noting the problems with his explanation, we shall contrast his general approach to perceptual development with that of traditional empiricism.

Let us begin James's treatment of shape constancy by presenting his own summary of the role which intellectual factors play in the perception of spatial relations. He wrote that:

In completely educated space-perception, the present sensation is usually just what Helmholtz (Physiol. Optik, p. 797) calls it, 'a sign, the interpretation of whose meaning is left to the understanding'. But the understanding is exclusively reproductive and never productive in the process; . . . its function is limited to the recall of previous space-sensations which the present one has been associated and which may be judged more real.94

Although he is not speaking specifically of shape constancy in this passage, the principles and processes he alludes to can be applied to shape constancy, or any other space relation (e.g., distance, solidity, position). His commitment to perceptual realism stands squarely behind his qualification of Helmholtz's position. In stating that the "understanding is exclusively reproductive and never productive" he is bringing attention to the fact that association can only recall sensations which have themselves been given in previous experience. What he is challenging, of course, is the empiricist tendency to give association the power to create attributes which have never actually been given as sensations. His perceptual realism therefore demands that he show that even our most refined spatial knowledge can be conceived of as a reproduction of space-sensations which are immediately given. Of course, he recognized that association and

94Ibid., 2:269. (Italics mine.)
selective attention may "shuffle and manipulate these data [the originally given space-sensations] and hide them behind imagined ones," but it is his task as a perceptual realist to show that all the shuffling and manipulating in the world does not create new sensational attributes. Let us now turn to shape constancy.

Shape constancy is easy enough to describe. A square table can produce an infinite number of retinal configurations and only one of them is actually square. Similarly, if a person looks down the length of a dinner table at a row of plates, the retinal configurations produced are a series of ellipses rather than circles. In spite of the diversity of retinal configurations, however, we perceive the shapes of objects as remaining constant. Now the first item James's explanation of shape constancy needs is an immediately given sensation of form or shape. Of course, he argued that visual form is immediately given in retinal stimulation. His task therefore involves showing how experience enriches an initially vague and meaningless visual form so as to achieve shape constancy without positing any sort of mental synthesis; how our primitive acquaintance with visual forms develops into our mature knowledge about objects. Of this developmental process James wrote that:

We have native . . . optical space-sensations; but experience leads us to select certain ones from among them to be the exclusive bearers of reality; the rest become mere signs and suggesters of these. 

As we shall see, James limited the role of past experience to the reproduction of past space-sensations. These reproductions give meaning to and guide our selection of that which is given by the senses but they do not anything de novo to the content of what is given.

\textsuperscript{95}Ibid., pp. 145-146.  \textsuperscript{96}Ibid., p. 237.
James's explanation of the acquisition of shape constancy actually involves two complementary processes, selective attention and association. First, in the process of dealing with the object, the perceiver gradually learns to choose or select one version of it to represent its "real" shape. A number of characteristics of this selection process should be made explicit. Most importantly, James said that the real shape is a sensational copy of the object, retrieved from memory. This proposition saves his perceptual realism, it gives him the power to reduce our mature knowledge of objects in space to reproductions of previously experienced sensational objects. This real shape is the retinal configuration produced when the object is viewed under ideal conditions. The circular sensation of a plate, for example, is obtained by viewing the plate in a vertical plane directly in front of the perceiver. Although he was aware that this perspective was statistically rare, he seemed to think that it held "so many aesthetic and practical advantages" that everyone would eventually discover it. Moreover, he said that once this real shape is discovered, it acquires an "extraordinary pre-eminence" over any of the other retinal configurations which the object can produce. This leads to the second process involved in James's explanation of shape constancy. At the same time that the perceiver is learning to choose the real shape of a given object, he is also learning that the real shape can be signaled by a wide variety of related retinal configurations. Depending on the perceiver's perspective, for example, a circle can produce, by a series of continuous gradations, any number of elliptical configurations. According to James, the perceiver must learn to associate an entire class

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97 Ibid., pp. 237-238.  
98 Ibid., pp. 237-239.  
99 Ibid., p. 239.  
100 Ibid.
of retinal configurations with the real shape; the non-circular deviations are relegated to the status of mere "signs" for the real shape "signified."\textsuperscript{101}

With this introduction, James's explanation of shape constancy can be summarized in the following fashion. Suppose, for example, that a person is looking at a round plate from an oblique perspective. According to James, the elliptical pattern of retinal stimulation does not get combined with, and then transformed or synthesized by stored representations of the perceiver's knowledge about the plate. Instead, the perceiver simply ignores the elliptical retinal configuration. In this sense, non-circular deviations of a real circle have the same status for James as a wide variety of subjective phenomena which do not serve as signs for external objects. There are, for example, fibers and granules floating in the vitreous humor of the eye which cast shadows on the retina and can appear as little dark moving dots. But these \textit{muscae volitantes} are rarely attended to in everyday life because they do not signal the appearance of external objects. Similarly, the non-circular retinal configurations are not attended to because they too do not represent a practically important reality. Both James and Helmholtz agreed that perception is dominated by attention to phenomena which are important to the perceiver.\textsuperscript{102} In contrast to \textit{muscae volitantes}, however, James said that the non-circular patterns of the plate are important to the perceiver in an indirect way; they function as signs for the real shape signified, which has been stored in memory. In other words, the non-circular sensation suggests or evokes an "imagined sensation" of the real shape of the object.\textsuperscript{103} And the perceiver, who has learned through experience that it is more convenient to

\textsuperscript{101}Ibid., pp. 240-244. \textsuperscript{102}Ibid., 1:285; 2:240-244. \textsuperscript{103}Ibid., pp. 179-180.
deal with one real version of a visual form than a multiplicity of fluctuating forms, attends to the "imagined sensation" and completely ignores what is given in the senses. James offered the same basic explanation for both size constancy and the perception of other spatial relations (e.g., distance, location). As he wrote:

Our rapid judgements of size, shape, distance and the like, are best explained as processes of simple cerebral association. Certain sense-impressions directly stimulate brain-tracts, of whose activity ready-made conscious percepts are the immediate psychic counterparts. They do this by a mechanism either connate or acquired by habit.104

There is no synthesis or unconscious inference in James's explanation, the sense data simply stimulate brain tracts which lead to the reproduction of previously experienced, and more practically valuable, sensations.

In this way, he sought to give experience a vital role in our mature spatial perceptions while retaining the fundamental tenet of perceptual realism, "that all spatial knowledge is sensational at bottom."105

There are a number of problems with James's explanation of perceptual relations. First, his suggestion that sensory stimulation gives rise to an "imagined sensation" of the real object makes his theory cumbersome—bordering-on-unwieldy. If we take James at his word, the perceiver would need a distinct "imagined sensation" for every concrete object perceived. That is, every plate, glass, table, door, picture ad infinitum would need a stored replica of its real shape for its shape to be conserved. James's theory can be viewed as a template-matching model and it shares all the problems of such a model. Furthermore, if "imagined sensations" play such a vital role in perception, why are they so difficult to experience?

James himself seemed to be aware of this problem when he wrote, somewhat

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104 Ibid., 1:169. 105 Ibid., 2:152.
unconvincingly, that the imagined sensation "is felt in its entirety but vaguely." The problem is, how can one be sure that a vaguely felt object is, in fact, a sensational copy of a previous sensation? Thus James's account of the perception of spatial relations can be challenged from the theoretical and experiential perspectives. What he was unwilling to admit is that an abstract rule system could serve as the general basis for the conservation of the shape (or size) of an infinite number of objects, that knowledge can supply stability and meaning to what is given without changing its contents. This position would have been inconsistent with his version of perceptual realism.

James's perceptual realism can be viewed as a reaction to a complex of related tendencies which formed the empiricist approach to perception and perceptual development. In fact, to the extent that this principle led him to offer an untenable formulation of spatial relations, it is perhaps best viewed as an over-reaction. At the same time, however, it must be noted that James's commitment to perceptual realism stood at the foundation of his alternative to the general empiricist approach to perception. In closing this chapter we shall contrast these two divergent approaches to perceptual development.

As we have seen throughout this study, empiricism conceived of sensations as punctate mental analogues which result from isolated sensory excitations. As such, sensations were assumed to be the atomistic elements of mental life. Linschoten noted the problem with this position by stating that: "Empiricism presupposed atomism on simply rational grounds—and there certainly are some traces of contradiction in this position."  

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106 Ibid., p. 163.

107 Linschoten, Psychology of William James, p. 87.
In any case, the empiricist conceived of these mental elements as devoid of intrinsic structure; the unrelated elements were thought to be united or synthesized into whole objects through association. This conception of sensation set the stage for two intimately related features of the empiricist approach to perceptual development. First, empiricism conceived of perceptual development as a progression from the simple to the complex, from the meaningless element to the meaningful whole object of mature perception. All knowledge could therefore be reduced to the various combinations of a fixed number of simple sensory bits. A child's first experience begins as a hodgepodge of internal sensations and he must gradually learn that certain sensational complexes signify whole objects located in the external world. Moreover, they supposed that the elements which constitute the percept can be discovered through a reflective analysis of the percept of idea. The second dominant feature of the empiricist program is that the association of ideas became the fundamental organizing principle of the human mind. This internal organizing mechanism was the necessary complement to sensations which were themselves incoherent. Thus, the process of association was forced to carry an awesome load single-handedly—creating structure, unity and meaning from an originally chaotic, meaningless mass of sensations.

The empirical psychology of James's era was clearly dominated by this approach, and we have tried to show that James criticized this tradition throughout the Principles. And although he does, at times, slip back into the terminology of that tradition, one finds a new and radically different conception of perceptual development taking form in James's psychology. This formulation appears most clearly in his descriptions of perceptual experience. Thus, in reconstructing the first experience
of a child, he found "original sensible totals" rather than an incoherent mass of elements.

Experience from the very first, presents us with concreted objects, vaguely continuous with the rest of the world which envelops them in space and time, and potentially divisible into inward elements and parts. These objects we break asunder and reunite.108

The structure or form of a child's first experience is therefore very primitive, and even chaotic by adult standards. It is a world in which objects appear in an indefinite space and change their shapes and sizes continuously. It is a world in which objects make abrupt exits and entrances, and emit strange, sometimes frightening, sounds. But the fact remains that James's conception of a child's perceptual world does contain a certain structure. First and foremost, it is a world which is composed of objects located in the world rather than in the child's head. Moreover, it is a world in which the objects stand out from their background; a world in which gross visual discriminations can be made and motions can be perceived.109 In this sense, the original experience of a child is, for James, far more than a total chaos. It is perhaps best conceived as a perceptual field whose primitive structure is a joint product of the objects perceived and the primitive structure of the child's innate physiological mechanisms. In this light, the nativistic strain of James's formulation of perception can be viewed as a retort to the empiricist conception of sensation. Where the empiricist found a jumbled, incoherent mass of sensations, James found a primitive structure. And his own conception of the child's original experience set the stage for his approach to perceptual development.

108 James, Principles, 1:487.

109 On the sensory basis of the figure-ground distinction see James, Psychology, p. 339.
Linschoten has shown that James conceived of perceptual development as a movement from whole to part rather than from part to whole.\textsuperscript{110} That is, in contrast to the empiricist approach, James conceived of perceptual development as a progressive articulation of the originally given "sensible totals" into more differentiated, segregated, meaning-filled objects. Within this framework, 'attention carves out objects' and the brain assigns meaning to what is given in the senses.

While Linschoten's treatment is valuable and illuminating, we would add that a perceptual realism underlies James's approach to perceptual development. That is, his psychology of perception is grounded in a methodological dualism between the "knowing mind and the thing known."\textsuperscript{111} This is the framework which psychology, as a science, must adopt and within it, objects are conceived of as existing independent of the perceiver, emitting patterns of energy which are structured in accordance with physical laws. On the other hand, the perceiver is conceived of as possessing perceptual structures which enable him to attend to particular patterns of energy. It is within this realistic formulation of the subject-object relation that James's account of perceptual development is articulated.

At first, the perceiver's perceptual structures are very crude and lack differentiation. Thus, as James said, a child's first experience is "potentially divisible into inward elements and parts," but his innate perceptual structures allow him to discriminate between only the gross differences in physical stimulation, e.g., bright lights, loud sounds, moving objects. But even these primitive structures give form and meaning to the child's first awkward explorations of the world. From this first


\textsuperscript{111} James, \textit{Principles}, 1:218.
exploration onward, experience functions to enrich and articulate the child's diffuse perceptual structures, thereby actualizing discriminations which had existed previously as mere potentials. The process is cyclical and mutually enriching: exploration provides the child with more knowledge about the world, and that knowledge, in turn, allows him to make finer and more meaning-filled discriminations and explorations. In time, sensory experience comes to be subordinated to learned meanings, the sensory flux serve as mere signs for the real objects signified. But knowledge does not add something de novo to sensory impressions; throughout the process of perceptual development our senses bring us into contact with real objects and relations which exist externally to us. Within James's formulation of perception, knowledge simply enables the perceiver to understand and attend to the increasingly complex relations which the world offers continuously. Thus, while James was willing to speak in terms of the creativity of the knower within the context of the higher mental processes, he steadfastly avoided the temptation to state that the perceiver creates his world in perception.
CHAPTER 5

CONCLUSION

The objectives of this final chapter are twofold. We shall first summarize the impact of Hodgson on the three areas of James's psychology that have been examined in this study. The aim here is to provide a succinct statement of the fundamental insights which James—the-psychologist obtained from the works of Hodgson, which he described early in his career as "the greatest mine of philosophical wealth now extant."\(^1\) In conjunction with this synopsis, we shall offer a brief, and admittedly truncated, outline of the ramifications of the essential tenets of James's psychology in the period between 1890 and 1920. A detailed or extended examination of the legacy of James's psychology is clearly beyond the scope of this study. At the same time, however, it is important to situate James within the mainstream of psychological theory in the late nineteenth and early twentieth centuries for two reasons. At a rather egocentric level, this outline will provide a preliminary scheme for the future research of this writer. More importantly, however, there is the hope that even a preliminary sketch will give the reader some sense of the continuity between the issues which emerge in the *Principles* and early twentieth century psychological theory.

In terms of philosophical assumptions, we have argued that Hodgson's

system provided James with a set of principles which served as the methodological foundation of his psychology. Beginning with a critique of the two dominant philosophical traditions of the nineteenth century, Hodgson offered a new philosophical method (the method of reflection) which gave rise to a fundamentally new conception of experience (the stream of consciousness). Of course, the history of philosophy is littered with new methods and a wide variety of appeals to experience. What Hodgson recognized, however, was that any given appeal to experience appeared within and was buttressed by a deeper, more pervasive and less explicit theory of experience. In addition, he recognized that this tacitly-held theory of experience is important for philosophers and psychologists because it contains the principles which specify what different thinkers mean by and count as experience. It is this deeper, tacitly-held theory of experience which Hodgson's method of reflection sought to clarify and make explicit.

Hodgson's philosophical principles appear in a variety of forms at each level of the Principles. They appear most clearly in the critical strain which pervades James's psychology, in the unambiguous and continual rejection of the sensationalistic atomism of nineteenth century empirical psychology (viz., the psychologists' fallacy). Most importantly, it was the empiricist theory of experience as a succession of discrete ideas which James sought to replace with his formulation of the stream of thought. Thus when he said that psychology must begin with a rigorous description of the immediate experience of individual minds, he meant to exclude the abstract sensorial elements of the empiricist on methodological grounds.²

description of the concrete experience of human beings in real life which
gave rise to the fundamental units of analysis of his psychology. In
terms of the higher mental processes, the unit of analysis became a person's
purposive search for the attainment of an adequate means to particular ends.
Thinking came to be treated as an essentially cognitive-emotive process,
with the thinker choosing one of the "teeming multiplicity of objects and
relations" which appear simultaneously with the stream. The nature of
the explanatory constructs of his psychology of the higher mental processes--
a biological a priori, his teleological formulation of conception and his
recognition of the importance of belief--all stem from his initial descrip­
tion of the fundamental unit of human cognition. The disembodied passage
of successive ideas was replaced by a formulation of thinking which em­
phasized its plan-filled, goal-directed character. The predominance of
James's descriptive orientation also appears at each stage of his treatment
of perception. Here too, we find a continual rejection of any attempt to
create the objects of perception from the synthesis of sensory elements
which are never encountered in real life. Here too, there is a method­
ological commitment to begin with descriptions of perceptual experience,
where whole objects are carved out of what is immediately given. Finally,
the nature of his explanation of the process of perception--which combines
nativism and empiricism and recognizes both the activity of the perceiver
and the reality of external objects--is conditioned by his description of
the fundamental unit of perception. This intimate reciprocity between
the descriptive (methodological) and explanatory (theoretical) aspects of
James's system is the means through which he tried to integrate scientific
psychology and what would today be called phenomenological description.

3Ibid.
And it is in this sense that James's psychology is an attempt to bring Hodgson's conception of scientific psychology to fruition.

In terms of the specifics of James's formulation of the higher mental processes, Hodgson's influence appears at two levels. It appears most clearly in the adoption of Hodgson's dynamic or active interpretation of the laws of association in the Principles, which portrays the particular direction of thought as a joint product of association and the interests of the thinker. At a less explicit level, however, James retained the ideal of rigorous description even when he rejected the explanatory constructs of Hodgson's system. Thus, for example, he went beyond Hodgson in stating that a priori processes must be posited to explain human thinking, but he supported his claim with detailed descriptions of thinking as it actually occurs in the lives of individual minds.

In a very important sense, evolutionary theory is the doctrine which stands between the formulations of the higher mental processes found in Hodgson and James. While both clearly recognized the dynamic, as well as cognitive aspects of human thinking, James had the advantage of developing his formulation of thinking in a period which recognized the importance of phylogenetic development for psychology. James took advantage of this opportunity and offered a dynamic, cognitive psychology which was founded upon a biological interpretation of the a priori. At long last, associationism could be challenged on scientific grounds. In the process, he set the foundation for a functional psychology, a psychology which, James Angell later wrote, conceived of mind as "primarily engaged in mediating between the environment and the needs of the organism."^4 If we only

substitute the notion of *interests* or *subjective interests* for Angell's *needs*, the Jamesian flavor of the functionalist program comes through clearly—the organism approaches any situation in search of a solution to a problem which is interesting, or satisfies some momentary need.

While the substitution of needs for interests seems innocuous enough in some respects, at another level it represents a significant change in the direction of psychology in the early twentieth century. Psychology after James became more experimental, more biological and less concerned with the grand problems of human nature which inspired James. If purpose was to be considered at all, as it was in the most sophisticated behaviorisms of John Dewey, Ralph B. Perry and Edwin B. Holt, it first had to be cleansed of its teleological implications. Purpose had to be construed as a predetermined effect of the past on the present. James had an important and direct influence on each of these thinkers, whose works in psychology can be viewed as an attempt to deal with the notion of subjective interests in an objective, thoroughly scientific fashion.

But alongside this trend there was another strain of functional psychology which, for a variety of reasons, refused to carry the banner of an objectivistic, mechanistic, experimental psychology. Mary Calkins, William MacDougall and James M. Baldwin are representatives of this strain of functionalism. At first glance, these thinkers seem to have little in common. In fact, each developed a somewhat unique system during their careers—MacDougall's hormic psychology, Calkins' personalistic psychology

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and Baldwin's genetic logic. But looking closer we find that each of these people took up a theme which James himself championed and each, like James, sought to do full justice to the complexity of human nature. For MacDougall, the themes were teleology and human freedom, as he sought to show that the foresight of future goals have a causal efficacy in experience. In the process, he explicitly rejected the mechanistic format of Holt, Perry and Dewey. The central feature of Calkins' psychology is "a mind in process, a someone who is experiencing . . . in a word in introspection I find a self." Thus Calkins' personalistic psychology was founded upon the introspective description of immediate experience and she continually refused to reduce the self to terms which are not directly experienced. Baldwin, as a thinker and a person, was perhaps most like James. Tiring early of laboratory work, he took up the task of articulating a genetic account of the origin of the principles which make human thought possible. Within this Kantian program, he developed and elaborated James's notion of the biological a priori. Most importantly, however, Baldwin offered a psychology of the higher mental processes which sought to account for the values (interests) as well as the knowledge (cognition) of human experience. Baldwin went beyond his mentor in a number of important respects, but his life-long concern with the origin and development of the higher cognitive and aesthetic features of human experience reveals a clear indebtedness to James's psychology.

With regard to James's formulation of perception, our interpretation emphasizes his commitment to a perceptual realism and relegates the nativism


7 Ibid., p. 4; pp. 16-19; p. 21.
vs. empiricism controversy to a conceptually subordinate position. Taken historically, it seems likely that evolutionary theory diffused the latter issue, so that philosophical empiricists (e.g., Spencer, Huxley, James) could embrace a nativism based on racial inheritance without necessarily contradicting themselves. We have argued that Hodgson's method of reflection was important for James because it served as his methodological basis for a perceptual realism. That is, those properties which we later point to as constituting the reality of objects (e.g., externality, substance, form) are immediately given in sense experience. For James, then, the intellect carves out, but does not create, whole objects in external space.

Our interpretation becomes significant when we look to the theoretical issues which dominated the psychology and philosophy of perception at the beginning of the twentieth century. What we find is the emergence of New Realism, a doctrine which was articulated in the works of Holt, Perry, Dewey and Bertrand Russell between 1905 and 1912. Like James in the Principles, the New Realists sought to refute the idealism and phenomenalism which reigned supreme in late nineteenth century philosophy and psychology. Furthermore, their fundamental contention was that the perceiver directly apprehends the objective properties of objects. The psychology of illusions played an important role in the New Realist program and Holt—the psychologist in the group—applied a version of James's selection theory of perception to that problem in the cooperative manifesto of that school.

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9 Holt et al, New Realism, pp. 303-373.
Not surprisingly, the more tender-minded interpreters of James refused to embrace the principles of the tough-minded New Realists. Calkins, for example, adopted the position of a thoroughgoing idealist and became an outspoken and remarkably persistent critic of New Realism.  

Baldwin, like James, is more difficult to classify. In his *Thought and Things* he developed a theory of reality called pancalism, which sought to integrate the data of fact (truth) with the data of value (interests). From our perspective, Baldwin's system might be viewed as an elaboration, from the developmental point of view, of James's pluralistic notion of the sub-universes of reality. Most importantly, both recognize the psychological importance of a variety of somewhat different worlds or realities in the life of the individual. Moreover, unlike the New Realists, neither thinker opted for what Morton White has called "scientific imperialism," the belief that observation and experiment are the only methods of achieving true knowledge. In terms of the integration of realism and idealism, James, and to a greater extent Baldwin, viewed human development as a progressive movement from a perceptual realism to a biologically-based

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