ARISTOTELIAN-THOMISTIC TELEOLOGICAL BEHAVIORAL PSYCHOLOGY RECONSTRUCTION

The rudimentary concept of the trading zone is taken from Robert Kugelmann in his pivotal historical study of psychology, *Neo-Scholasticism and Catholicism: Contested Boundaries*. Kugelmann is a psychologist and researcher at the University of Dallas. He also has spent much his research and publishing on the contested boundaries between scientific psychology and neoscholastic rational psychology. Using Kugelmann’s historical study of Catholic psychology and the search for boundaries with empirical psychology, I will divide the quest into three periods: (1) Period One: 1879–1950, (2) Period Two: 1950 to 2000, and (3) Period Three: the present pursuit of the Thomistic behavioral option and neuropsychology ascendancy.

**Period One:**
Neoscholastic Rational Psychology (1879–1965)

Kugelmann spells out how Catholic psychology and neoscholastic rational psychology started with Pope Leo XIII and Cardinal Joseph

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Mercier’s classic work *The Origins of Contemporary Psychology*. Mercier was appointed in 1882 by Leo XIII to head the *Institut Superior de Philosophie* at the University of Louvain to engage in an effort to integrate the findings of natural science with Thomistic thought, and Mercier was most committed to integrating Thomistic rational psychology with the emerging science of experimental school of psychology founded by Wilhelm Wundt. Mercier describes Wundt’s ambitions as the following:

To study facts, psychological facts; to observe them by themselves, to press them closely, to disentangle their elements, and to measure these alike in their intensity and in their duration to study the “psychic compounds” formed by them and revealed to us by experience under the form of representations and emotions, to fix the empirical laws of their association and recurrence; such is the dominant interest of him who was, if not the creator, yet surely the most vigorous promoter of psycho-physiology.\(^2\)

Wundt is seen by Mercier as a scientist who is the product of enlightenment schools of philosophy, i.e. Descartes, Locke, Berkeley, and most of all Immanuel Kant. As a physiologist, he is a Kantian idealist who does not exclude a certain of type realism. It is impossible, Wundt taught, that we must not “deny the objects of our thoughts a certain being of their own . . . the subject matter of psychology is the data of experience, as provided immediately to the intuition of consciousness.”\(^3\)

It is as a Kantian that Mercier primarily describes Wundt:

The world is only made up of our representations and when at last he asks himself what the psychology of the future might be and ought to be, he lays upon it this condition—that it is never to contradict the ideological and critical theory to which he is inviolably true . . . hence the immediate data of experience are real.

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\(^2\) Ibid., 128.
But the concrete data of experience imply two inseparable but distinct elements: the content, and the apprehension of such content, the object of consciousness, and the conscious subject. The subjective point of view is that of the natural sciences. . . . Thus psychology is, by definition, the strictly immediate science of the concrete data of consciousness.\(^4\)

In Period One, Catholic psychology attempted to form a Thomistic synthesis between rational and scientific experimental psychology. The intention of neoscholastic psychology was rooted in the desire to blend the faculties of the soul with experimental testing methodology. This desire for a blending of the method of experimental psychology with neoscholastic psychology is apparent in Chapter 8, “Neo-Thomism,” of Mercier’s *The Origins of Contemporary Psychology* where he looks with enthusiasm for the integration of Thomistic rational and experimental psychology.

We should love science and cultivate it in our schools of philosophy more energetically than ever. The Aristotelian philosophy lends itself better than any other to the interpretation of the facts of experimental psychology. . . . Aristotelian animism, which connects psychology with biology, is the only plausible metaphysical conclusion to be drawn from experimental psychology. . . . On the other hand, if the soul be nothing but mind, if it subsists of itself independently of the living body, and is directly and solely observable through consciousness, a laboratory of experimental psychology becomes inconceivable, for it presupposes a claim to make the soul the subject of experimentation and to weigh it and test its forces, etc.—in other words, it presupposes the material character of the soul.

But if with, Aristotle and all the teachers of the School, we admit that man is a composite substance made up of matter and an immaterial soul that his higher functions are really dependent upon his lower functions, that not one of his inward acts is with-

out its physical correlative, not one of his volitions without its representations, not one of his volitions without sensible emotion, at once concrete phenomenon presented to consciousness gets the note of a combination which is both psychological and physiological. It depends both upon conscious introspection and upon biological and physiological observation. In short, we have a clear indication of the *raison d’être* of a science of psychophysiology.\(^5\)

The path to this integration will prove difficult because, driven by a spirit of anti-modernism, the neoscholastics are dedicated to apologetical criticism of the philosophical foundations of scientific psychology. For example, the neoscholastic Edward Pace captures an essential aspect of neoscholastic thought when he says of the desire “to pierce through the manifold of appearance to the ultimate reality beneath” as this passion of unity.\(^6\) As Robert Kugelmann points out, the neoscholastics sought to achieve a synthesis in a metaphysical system of truths discovered by positive sciences. Kugelmann writes:

> What this meant in practice was chiefly a repeated critique of the inadequate philosophical bases of psychology and reinterpretation of research along Neoscholastic lines. Synthesis existed as an ideal, one that proved elusive to actualize.\(^7\)

**Period Two:**

**After Vatican Two (1965 to present)**

Kugelmann documents that Catholic philosophy is no longer Thomistic, and Catholic psychology is no longer neoscholastic rational psychology. Catholic psychology was influenced by continental psychology and moved to a synthesis with existential phenomenology, psy-

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\(^7\) Kugelmann, *Psychology and Catholicism*, 83.
choanalysis, and humanistic psychology. Catholic psychology moved from a strong neoscholastic foundation of principles and faculties of the soul to a Thomistic pursuit of a dynamic personal self. After Vatican Two, Thomistic philosophy is no longer the official philosophical foundation of Catholicism, and the search is on for a new foundation. Catholic psychologists look for the foundation in the wave of scientific psychology. Coming into the seventies, Catholic universities’ departments of philosophy and psychology become completely separated. Scientific empirical psychology is no longer interested in the faculties of the soul and especially the nature of the internal senses. Catholic philosophical and practical psychology becomes engaged in the pursuit of a humanistic personality integration methodology.

Major mistakes were made in Period One and Two. Period One attempted the synthesis with the faculties of the soul and mostly scientific experimental psychology. Period Two attempted to redefine the soul as a process of introspective consciousness, personal identity, and discovery of *Dasein*. I argue that we are coming into a Period Three: born-again period of Thomistic psychology—in many ways a return to Period One without the influence of Cartesian transcendental and analytical Thomists.

In a third period, Thomistic psychology breaks cleanly from the synthesis with experimental measurement psychology and phenomenological epoche, i.e. transcendental reduction. Thomistic rational psychology becomes a Thomistic behavioral psychology grounded on a well-defined foundation of the faculties of the soul, metaphysical principles of one and the many (genus and species), creation and participation, particular reason, and, to some extent, sharing a “trading zone” (methodological common genus) with behavioral methodological observation of individual and social behavior in the process of coping with life, striving for a continuous sense of the soul as the behavioral
organizer of personal and communal identity and habits of behavioral activity.

This Trading Zone methodology is explained in Kugelmann’s Chapter Nine, “Trading zones between psychology and Catholicism.” The trading zone is concerned with what happens at disciplinary boundaries. Kugelmann turns to “Peter Galison’s metaphor of ‘trading zone’ between different cultures and applied to different sciences as working on a common project such as the development of radar or of nanotechnology.” Anthropologists have been most interested in trading zones.

One of the most interesting domains of such investigations has been in the field of anthropological linguistics surrounding the problems of *pidginization* and *creolization*. Both refer to languages at the boundary between groups. A pidgin is a simplified form of communication that is not a full-fledged language, whereas creole is a language, for example, Modern English began as a creole between Norman French and Anglo-Saxon. Peter Galison provides an example of a 1960 era textbook in quantum mechanics that attempts to create a stable pidgin language for an audience outside the subculture of theorist that is for the subculture of experimentalist in physics.

For example, cognitive science came from a variety of backgrounds: artificial intelligence, linguistics, neuroscience, philosophy, and psychology. Note, the places were the exchanges occurred were journals, university departments, and professional organizations, however, conferences are probably the closest analog to intercultural trading zones, as people from various discipline and countries gather to exchange ideas. Kugelmann claims that “the point of intellectual trading zones is the exchange of ideas,” that the trading zone exchange “has made it possible for some subcultures in psychology to engage in ex-

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change with religious communities and traditions." He adds, however, that some subcultures defined experimental ones have no interest in exchanges, nor do the religious groups seem interested in their wares. Yet in theoretical and applied areas of psychology, there has been lively interest in the boundaries, and much interest in what the other side has. In these trading zones, there are many crossings and exchanges, yet Thomistic psychology must exercise serious caution in a trading zone exchanges.11

In his formative work, *Thomistic Psychology: A Philosophical Analysis of the Nature of Man*,12 Robert Edward Brennan, O.P., one of the most influential creators of Thomistic psychology, warned that scientific psychology does not have the answers to the existential pursuit of meaning, purpose, spirituality, and the cure of mental illness. He concludes in the final chapter, “Modern Psychology Modern Psychology and The Thomistic Synthesis,” with an intrepid apologetical assertion:

Without a soul, psychology is like a temple without a deity or a home without a family spirit. . . . It is difficult to see, then, how the investigator can avoid assuming some definite philosophic attitude toward the subject matter which he is studying. In this case, the subject matter is man, regarding whom there can be but only one satisfactory attitude. It is the position which recognizes in every human being, regardless of race or age, a creature possessed of soul and body; a cosmic entity made out of spirit and matter, an organism quickened with a principle of rational life; a corporeal substance that not only vegetates with plants and senses with the animals but also, and more importantly, reflects on its

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11 *Ibid*.
own intellectual nature and stretches out, by its faculty of divine love, toward a Good that is supremely perfect.\textsuperscript{13}

Of course, slowly from the modern to postmodern period the straightforward problem is that scientific psychology has increasingly eliminated the soul and replaced it with consciousness.

\textbf{Period Three:}
\textit{Emerging Thomistic Teleological Behavioral Psychology}

\textit{A Reconstruction Behavioral Trading Zone, Neuropsychology, and the Loss of Soul}

I suggest that we must take Brennan’s warning about entering a “trading zone” relationship, especially in the Period Three development of Thomistic psychology. I define Period Three as really beginning in 1949 with Donald O. Hebb’s book, \textit{The Organization of Behavior: A Neuropsychological Theory}.\textsuperscript{14} The term (which St. Thomas would have understood to be a “scientific genus”) was undefined. In 1957, the term became a recognized designation for a subfield (St. Thomas would have called this a “scientific species”) of the neurosciences when Heinrich Klüver (\textit{Behavior Mechanisms in Monkeys}\textsuperscript{15}) suggested the book would be of interest to neuropsychologists. In 1960, the term was given wide publicity when it appeared in Karl Lashley’s writings (the neuropsychology of Lashley). Therefore, I select 1960 (when “neuropsychology” was scientifically first defined in terms of its genus and species) as when psychology became the science of human behavior based on the function of the brain. Neuropsychology aided by advanced brain scan-

\textsuperscript{13} \textit{Ibid.}, 364.

\textsuperscript{14} Donald O. Hebb, \textit{The Organization of Behavior: A Neuropsychological Theory} (New York: John Wiley and Sons, Inc., 1949).

\textsuperscript{15} Heinrich Klüver, \textit{Behavior Mechanisms in Monkeys} (Chicago: University of Chicago Press, 1933).
ning technology, e.g. functional magnetic imaging (MRI), positron emission psychology (PET) promised the science of psychology as the final response to B. F. Skinner’s challenge to non-behavioral psychology that it is possible to study behavior by entering the black box of the mind. Neuropsychology has become confident that a new age of human psychology is here because we can study neural networks by means of various extremely advanced methods of brain imaging.

Neuropsychology of the present, in a way, is a return to the Renaissance science that began to explain many aspects of the world in purely physical terms, e.g. discovery of the circulation of blood and the function of the heart as a mechanical pump was the most successful example of this widespread movement. Descartes was a contributor to this movement. He expanded the concept of involuntary behavior to include the behavior of all non-human animals and some of the behavior of humans. Involuntary behavior consisted of automatic, relatively simple motions: sneezing, pulling one’s foot from the fire, focusing one’s eyes, and so forth. Such behavior was explained by Descartes in terms of causal chains (later called “reflexes”) originating in the environment (and ultimately in God as the creator of the world).16 Descartes’s reflexive behavior worked as:

A stimulus, such as a hot flame (A) on a boy’s foot (B) tugged at a thin string within a nerve (C); the string opened a valve (D) in a chamber (F) in the center of the brain and allowed animal spirits (a vitalistic gas distilled in the boy’s heart and fed into his brain) to flow down the tube and inflate the muscle; the inflation contracted the muscle and moved the boy’s foot out of the fire.17

In the case of voluntary behavior, the opening and closing of valves in the chamber at the center of the brain were caused by minute movements of the pineal gland, which in turn were controlled directly

17 Ibid., 37.
by the boy’s will. Thus, the ultimate cause of involuntary human behavior was placed by Descartes inside the behaving person, directly knowable by that person but not observable by anyone else.\textsuperscript{18}

Johannes Müller (1801–1858) was the foremost authority on physiology of his day. His law of nerve energies (LOSNE) extended Descartes’s conception of the mind as prisoner within the body to nineteenth-century physiology. He formulated “the law of specific nerve energies” that stated the mind communicates not with objects in the outside world but only with our nerves. LOSNE says that our sensations, perceptions, thought, and so on, have no qualities in common with things in the world, but serve only as arbitrary signs or markers or representations of objects. As E. G. Boring points out, “The central and fundamental principle of the doctrine is that we are directly aware not of objects, but of our nerves themselves; that is to say, the nerves are intermediaries between perceived objects and the mind and thus impose their own character on the mind.”\textsuperscript{19} Although Müller was a vitalist, it was not the case with his students. Boring says:

> In 1845 . . . four young, enthusiastic, and idealistic physiologists, all pupils of the great Johannes Müller, all later to be very famous, met together and formed a pact. . . . They were in order of age, Carl Ludwig, who was then twenty-nine, Emil du Bois Reymond, Ernst Brücke, and Hermann von Helmholtz, then twenty-four. They were joining forces to fight vitalism, the view that life involves forces other than those found in the interaction of inorganic bodies. The great Johannes Müller was a vitalist, but these men were of the next generation. Du Bois and Brücke [later to become Freud’s teacher] even pledged between them a solemn oath that they would compel the acceptance of this truth:

\textsuperscript{18} Ibid., 37–38.
“No other forces than common chemical ones are active within the organism.”

We could say that the beginning of neuropsychology, cognitive psychology and introspective psychiatry really starts with Müller’s law “that our conscious experience of the stimuli [St. Thomas would call these ‘formal objects’] is directly due to the place in the brain where nerves end and not all to the stimuli themselves.” For Müller, a blow to the head stimulates the visual nerves and we “see stars” or auditory nerves and we “hear chimes.” But there are no sounds or lights within our bodies—only are nervous energy. As Howard Rachlin explains Müller held that our minds have access only to this nervous energy:

From this energy, plus whatever innate tendencies our minds possess (according to Müller the Kantian categories: space, time, moral sense, and so forth), they must construct the world. How our minds, manage this construction became the business of all psychology for the next hundred years and of non-behavioristic psychology, even up today.

Müller’s students were identity theorists who “believed that the construction of the world from nervous energy took place in the physical brain rather than in a non-physical mind.” Helmholtz’s identity theory, as well as modern neural identity theory, recognized the existence of the unconscious mind. The neural identity theory neatly separates the mental from the conscious and opens psychological investigation to methods other than conscious introspection. As Howard Rachlin suggests,

The project of modern neural identity theory may be likened to the study of an unknown computer-neuroscientists opening it up

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20 Ibid., 708.
21 Rachlin, The Escape of the Mind, 46.
22 Ibid.
23 Ibid., 48.
in an attempt to discover its hardware, psychologists operating its keys and mouse and observing the results on its screens in an attempt to discover its program.\textsuperscript{24}

I suggest that it is obvious why the desired synthesis between scholastic rational psychology and the experimental psychology of Müller, Helmholtz and Wilhelm Wundt was never a possibility. For example, in his classic text book of 1938, \textit{Principles of Psychology}, Francis L. Harmon writes in the introduction:

The psychologist observes, describes, and classifies; then attempts to organize his data and to formulate hypotheses and laws of nature. This constitutes the first step in psychology; because it is based upon the actual experience of mental phenomenal or empirical psychology.

The second phase of psychological investigation emphasizes the exercise of reasoning rather than direct observation. Rational psychology, as the study is called, is concerned with the nature of the mind. Starting with the conclusions established through observation, the inquirer applies these conclusions to the solution of such problems as attributes of the soul, its union with the body, the nature of intellectual activity and freedom of the will. Although both observation and reasoning necessarily play a part in rational as well as empirical psychology, the ultimate test of the latter is the adequacy of observation; of the former, logicality of inference—presupposing, of course, that the data have been noted accurately and completely.

In practice it is a mistake to attempt too sharp a separation between empirical and rational psychology. Knowledge of the one is but a stepping stone to an understanding of the other. If psychology is to be called the study of human nature, this study must be carried through to its completion, which, as we have remarked, involves the recognition of the soul itself as the final animating principle of human life. Thus, while the emphasis in this book will be primarily upon the observation of mental life as

\textsuperscript{24} \textit{Ibid.}, 49.
manifested in man’s conscious experience and behavior, we shall not hesitate, where the occasion demands, to draw necessary conclusions as to the nature of man himself.  

Obviously, Francis Harmon follows in the tradition of period one, “Neoscholastic Rational Psychology.” Harmon, as a 1930s Catholic hybrid experimental/rational psychologist, boldly and convincingly holds that “knowledge of the one is but a stepping stone to an understanding of the other.” In other words, it is a synthesis waiting to happen. He is not really looking so much for a “trading zone” between empirical and rational psychology because a trading zone is a transitional genus for an exchange of ideas and methods between psychological traditions, for example, as a rule, research in mutual areas of concern, such as, research in marriage counseling, addiction treatment, and so on. Harmon, and the period one tradition, assume the synthesis is possible based on an inevitable and emerging empirical rational metapsychology. More specifically, note should be made that it is really a synthesis with the principles and methods of nineteenth-century experimental psychology. In fact, it seems as if there is the possibility of an eventual empirical-rational genus of the science of the mental life “as manifested in man’s conscious experience and behavior.”

Robert Kugelmann’s historical study is about contested boundaries between psychology and Catholicism. In the nineteenth-century neoscholastic period, the boundaries are clearly defined based on the superseding boundary. It is the issue of the soul as Kugelmann explains:

The Neoscholastic solution to the problem of science and religion lay in granting science its proper autonomy and situating it within a hierarchy of knowledge. At the summit gained by human reason unaided by Divine Revelation lay metaphysics,

which studies the ultimate causes of things. This partitioning and hierarchical arrangement gave room for scientific psychology to develop. The nature of the human soul, however, remained both the pole star and a stumbling block for Neoscholastic psychologists.26

However, as Vatican Two began to call for a renewal of a more progressive and ecumenical theology, Thomistic philosophy assumed less of a clear and defined boundary line between Catholic teaching and science. Notably, in terms of the boundaries between Catholics and psychology, neoscholastic considerations of the soul changed as well. Kugelmann writes:

Catholic psychologists, drawing on Jung and others still explicitly spoke of the soul, for the most part the discourse changed to the person, the self, the I-Thou relationship, and concepts such as existence and Dasein. These concepts, while still keeping psychologists focused on the uniquely human aspects of psychology and thus countering reductionistic tendencies, do not have the theological denotations that soul carries. . . . They thus fostered the development of a psychology that deals with religious and spiritual aspects of life without being tied to a specific religious tradition as was Neoscholasticism. While psychology and religion remained knotted together in many ways, the soul as a stumbling block was removed along with Neoscholasticism.27

The problem is that neoscholastic and Catholic empirical psychologists attempted an impossible task: forming a common genus with nineteenth-century empirical psychology that had no desire to understand the soul and the faculties of the soul as the very foundation of a science of human behavior, as did Aristotle and Aquinas. How is it possible to form a meta-psychology with the disciples of Müller who had taken an oath that “no other forces than common chemical ones are

active within the organism?” The attempt at this synthesis could only end with a type Faustian bargain where the soul becomes an existential spiritual metaphor for empirical psychology, and Thomistic psychologists must sell their nobility for modern academic recognition. What else could be expected when neoscholastics sought a synthesis with the nineteenth-century and modern identity theorists who held the science of behavior is based on a scientific cult myth of “common chemicals active within the organism,” as opposed to the Thomistic tradition of matter and form and human nobility, as Aquinas teaches:

But we must observe that the nobler a form is, the more it rises above corporeal matter, the less it is merged in matter, and the more it excels matter by its power and its operation; hence we find that the form of a mixed body has another operation not caused by its elemental qualities. And the higher we advance in the nobility of forms the more we find that the power of the form excels elementary matter; as the vegetative soul excels the form of the metal, and the sensitive soul excels the vegetative soul. Now the human soul is the highest and noblest of forms. Wherefore it excels corporeal matter in its power by the fact that it has an operation and a power in which corporeal matter has no share whatever. The power is called intellect.

with behavioral psychology came from the larger-than-life modern Aristotelian-Thomistic philosopher Mortimer J Adler, who was known in popular parlance as a “critical-realist” and who authored a book on the mind and the limitations of the brain in terms of defining the nature of a person, *Intellect: Mind over Matter*.\(^{30}\) Adler treats the basic issues regarding the boundaries between classical philosophy and a neuropsychology of the brain, such as: whether (1) the mind is observable and (2) our intellect is unique and immaterial, and (3) the nature of artificial intelligence, and (4) if extraterrestrial beings exist, the nature of their intelligence. Crucial to note is that Mortimer Adler’s first Ph.D. was in experimental psychology. He soon started to realize that scientific psychology was not providing answers to fundamental questions about the pursuit of truth, moral good, education, political order, and the nature of human happiness. Consequently, he turned to classical philosophy, particularly common-sense realism. This transition is obvious in *Intellect: Mind over Matter* where he treats the primary obstacle between classical metaphysics and postmodern scientific psychology: the dematerialized intellect.

In antiquity, the word “soul” (in Greek, *psyche*; in Latin, *anima*) was used to signify whatever it was in living organisms that made them alive, active without being acted upon. Since plants are living organisms, they too, have souls, conferring on them the vegetative powers of nourishment, growth, and reproduction. Animals have souls that confer upon them additional powers—the powers of sense, of appetite or desire, and of locomotion. In addition to endowing man with all the vital powers possessed by plants and other animals, the human soul gives man his distinctive power of conceptual thought, the power of judging and reasoning and the power of free choices.\(^{31}\)

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\(^{31}\) Ibid., 10.
The concept of an Aristotelian-Thomistic philosophical apologetics seems to describe most of Adler’s writings, but the *Intelect: Mind over Matter* is vitally important in the confrontation between metaphysics and scientific neuropsychology. Therein Adler starts his defense of the importance of the dematerialized human being in the tradition of psychology and points to the source of scientific psychology’s beginnings and meta-traditions. He develops a metaphysical defense of the dematerialized nature of a human being based on a philosophical psychology of methodological behaviorism.

I will try to explain at length why like behaviorists of this century, beginning with John B. Watson, I reject the whole tradition of introspective psychology that had its beginnings in early modern times with Thomas Hobbes and John Locke. . . . If the supposed introspectively observed contents of the mind—its percepts, memories, images, and thoughts, concepts, or ideas—called attention to themselves, they would necessarily distract our attention from the objects that we consciously experience. If they drew attention to themselves exclusively, such attention would exclude those objects entirely from our conscious experience.\(^{32}\)

The objects, consciously experienced, are of two sorts: private and public. Private are all bodily feelings and emotions—feelings of pleasure and pain, of hunger and thirst, of fear and anger. These private objects of consciousness belong exclusively in the experience of this individual or that. Public are the objects that we and others apprehend in common and being the same objects experienced by two or more individuals can be talked about by them.

This distinction between public and private objects of our conscious experience calls for a parallel distinction between two kinds of mental processes: cognitive and affective. The affects are directly experienced bodily feelings and emotions. They are always that which we experience, never that by which we experience something. In sharp contrast, cognitions-perceptions, mem-

ories, imaginations, and thoughts are always that by which we experience the objects they make present to our minds. They are never the experienced objects themselves, never that which is apprehended by the mind.

In denying an introspective awareness of the cognitive contents of the mind, I would describe myself as a methodological behaviorist. I agree with Professor John B. Watson that, apart from subjectively experience bodily feelings, the contents of the mind cannot be introspectively observed. At the same time, I disagree with his metaphysical materialism—his assertions that only bodies, and their motions exist and his denial that anything mental exist.

To be a methodological, but not materialistic, behaviorist is to take the position that whatever can be said about the mind and its contents, or its processes and products, neither of which can be directly observed must be inferred from behavior that is directly observed. From the observable fact that you and I are discussing a painting on the wall, I need not infer that each of us is perceiving it, for that is an act of our minds that each of us can introspectively observe. But I must infer that there is in my mind a percept—product of our acts of perceiving that by which the painting has become an object we can discuss with one another.

That is the first inference I must make as a methodological behaviorist. A second inference is that each of us, being reflexively aware of the acts of his or her own mind, can infer that minds have certain generic powers and also as many different specific powers as there are distinct types of mental acts that we are able to perform. On what basis do we distinguish the diverse powers of our mind or the diverse acts that are the basis of inferring the existence of these powers?33

The other major issue that Adler addresses is the principle of the sufficiency and insufficiency of scientific materialistic neuro-brain psychology. In his chapter on “Is the Intellect Immaterial?”34 he develops

33 Ibid., 21–22.
34 Ibid., 50.
his apologetics of insufficiency. The basic argument is that the brain is necessary for the understanding of the human intellect, but it is not sufficient. The argument then reaches its conclusion in a first principle of an Aristotelian-Thomistic first principle of behavioral psychology.

Our concepts are universal in their signification of objects that are kinds of classes of things rather than individuals that are particular instances of these classes or kinds. Since they have universality, they cannot exist in our minds. They are there as acts of our intellectual power. Hence that power must be an immaterial power, not one embodied in a material organ such as the brain. Consequently, we have a first principle for an Aristotelian-Thomistic science of human behavior.

The action of the brain, therefore, cannot be the sufficient condition of conceptual thought, though it may still be a necessary condition thereof, insofar as the exercise of our power of conceptual thought depends on the exercise of our powers of perception, memory, and imaginations which are corporeal powers embodied in our sense organs and brain.  

*Aristotelian-Thomistic Teleological Behavior (ATTB) and the Reconstruction of Behaviorism*

From reading Kugelmann’s history of *Psychology and Catholicism: Contested Boundaries* and Adler’s *Intellect: Mind over Matter*, evident to me is that, if Thomistic psychologists were looking for trading zone relationships with empirical psychology, then it is best to look for dealings in behavioral psychology, such behavioral school psychology called “Teleological Behaviorism” founded and developed by Howard Rachlin.

He constructs Teleological Behaviorism based on an Aristotelian psychology that the mind is behavior on a higher level of abstraction. The mind stands to behavior as a more abstract pattern (such as a dance) stands to its particular elements (steps of a

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35 Ibid.
dance). For Aristotle the more abstract pattern is what he called the final cause of its components; that is, the mind is a final cause of behavior. Final causes answer the question: Why did this or that action occur? Q. Why did you take that step? A. Because I was doing that dance. (Our more familiar efficient causes are answers to the question: How did this or that occur?) A science of final causes is called a teleological science. Based on Aristotle Rachlin’s approach to the mind (his theory of mind) is teleological behaviorism.36

Powers of Rational Thought and Behavioral Action and Passions

In terms of behavior, Aquinas’s mechanism for action can be understood as a kind of decision theory with the sensitive powers allowing a living being to interact with and respond to the outside world:

- Locomotion (self-movement).
- Five external senses: hearing, sight, smell, touch, and taste.
- Four internal senses: memory, imagination, common sense, and particular, or cogitative reason (estimative sense in brute animals).
- Eleven passions (emotions): ○ the six concupiscible passions of love and hate, desire and aversion, and joy and sorrow; ○ the five irascible passions of hope and despair, confidence and fear, and anger.37

Behavior Powers of the Soul Movement, Action and Passions

Stimuli arouse the sense powers inside or outside of the person in the approach of a teleological psychology. We refer to these stimuli as discriminative stimuli: the external senses correlate with behavior. Tel-


eological Behaviorism (TB) is quite different than the Skinnerian school of stimuli, response and operant behavior based on classification of behavior in terms of classical and instrumental conditioning.

Table 1. Four basic kinds

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<tr>
<th>Pleasing Stimulus</th>
<th>Noxious stimulus</th>
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<tr>
<td>Pleasant Stimulus</td>
<td>Positive reinforcement</td>
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Instrumental conditioning is classified by the consequences of a specific act. For example, if a specific act is followed by the presentation of a pleasant stimulus (a reward), the instrumental conditioning is classified as positive-reinforcement conditioning.38

Howards Rachlin’s Teleological Behavior differs from Skinnerian behavior, according to Aristotle, as governed by the rational aspect of the soul and is, therefore, unique to humans. The process of actions is as follows:

In the world, an object, consisting of a certain substance in a certain form, transmits its form through the air or another medium (making an impression much as a signet ring makes an impression of its form on wax) to one or more of a person’s sense organs. The form of the object combines in the person’s imagination with other forms from memory. The combined images are reflected upon by thought and the person engages in thoughtful (i.e., rational) behavior (see Figure 1).

Aristotle believed that animals other than humans are not capable of rational thought. However, because all animals (including humans) have sensitive souls, all are capable of a different kind of movement-passions. Aristotle’s concept of passion differed from modern notions in the sense that passions, for him, are movements—they cannot boil up inside. For him a man cannot just feel passionate, he has to be passionate.

38 Rachlin, Introduction to Modern Behaviorism, 79.
Again, an object in the world transfers its form through a medium to a sense an organ and into a person’s body. When the form of an object of the body, it interacts with the soul. Aristotle conceived of the soul as a kind of organization; therefore, we can say that the form of the object comes into contact with the body’s organization (not the more complex organization of the rational soul possessed only by humans, but a subcategory of that organization, possessed by all animals).

At that point the form of the object can be in harmony with the form of the soul or out of harmony with the form of the soul (much as a square peg is in harmony with a square hole and a round peg with a round hole). If its form is in harmony with an animal’s soul, the object causes pleasure. Pleasure in turn implies the existence of a desire to move towards the object, and the desire implies the occurrence of the movement itself. If, on the other hand, the form of the object is out of harmony with the animal’s soul, the object causes pain; pain implies the existence of a desire to move away from the object, and the desire implies the occurrence of the movement itself (see Figure 2).  

As we examine, in Figure 1, a more complete teleological behavioral Aristotelian-Thomistic construct, we can clearly recognize an extreme difference between radical behaviorism of the Skinnerian school and teleological behaviorism.

Rachlin establishes his teleological behaviorism on the principle that “for Aristotle, the relation of mind to bodily movement was as a final cause to its effects.” He argues that modern science and psychology hold that the mind must be inside the body and controlling the body.

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It seems to hold that the mind must be inside the body and controlling it, as a driver controls the motion of a car. The reason for the confusion is that for modern science a cause is usually what Aristotle called *efficient cause*. “For Aristotle, the mind is not an efficient cause but a final cause of bodily movement.”  

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Radical Skinnerian efficient causality behaviorism uses a narrow classification of environment or behavior. The belief that complex processes, whether mental or behavioral, may be explained in terms of small units and rules for their combination. Whereas, Teleological Behaviorism uses a broad classification of environment or behavior. The belief that stimuli or responses broadly classified may be lawfully described without reference to smaller units:42

Teleological Behaviorism accepts mental states as objects of scientific study but, once and for all rejects introspection as a path to scientific truth. From the viewpoint of TB, introspective reports are parts of patterns of overt behavior that can be explained, like any other such patterns, in terms of contingencies of reinforcement. And this includes such apparent introspective certainties as “I know my own head,” “I know what I like.” TB does not deny that we know things, that we may be certain of things, that we have sensations or that we think. However, TB does deny that such events occur inside the organism and are available to the organism alone. TB asserts that those events occur in patterns of the organism’s overt behavior and are available to anyone who can observe those patterns over extended periods of time.43

I argue that TB is compatible with a Thomisitic teleological behaviorism that involves the interaction of rational thought, actions, and passions. We could also refer to it as Thomistic rational behavioral psychology which is different than cognitive behavioral psychology. Mainly, cognitive psychologists differ in that their aim is to use their observations to discover the internal (computer-like) mechanism underlying behavior; behavioral psychologists attempt to explain behavior in its own terms.44 If we agree Thomistic behavioral psychology holds that

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44 Rachlin, *The Escape of the Mind*, 58.
the intellect desires the truth of things (i.e. to know things in themselves), this means we agree that we are able, by rational thought, to know that we know, think about our thinking. Consequently, we agree that the proper operation of the intellect is to know, and the proper operation is to know the truth. Therefore, the intellect (rational thought) has three proper operations: abstraction, judgment, and reasoning.

In Figure 2, we learned that an Aristotelian-Thomistic behavioral construct is about the nature and operation of desire. Furthermore, it is of the nature of the will to desire the good and move forward (see Figure 2: Passions), i.e. the aim is to unite to the good. The will is a rational appetite. Another way is to say this is that the will is the intellect’s appetite. It is moved by the good, desires the good and rests in the good. It is not domineering as an imposition or commanding action of something to be done or resisted. It is absolutely incorrect to say that the intellect perceives the good and the will chooses it. The will never, never chooses anything without the combined operation of the intellect. The proper operation of the will is to desire and to delight.

We turn now to the work of Peter A. Redpath, CEO of the Aquinas School of Leadership, and his seminal work, *The Moral Psychology of St. Thomas Aquinas*, as we develop the construct of an Aristotelian-Thomistic Teleological Behaviorism (ATTB). Redpath’s moral psychology is of critical importance in many ways that are impossible to articulate in this brief essay. Nevertheless, at the risk of over simplification, I find one of its most fascinating achievements is that he can be read and comprehended on four levels of Thomistic inquiry: (1) His teaching is grounded in a metaphysics of organization, i.e. one and the many, virtual quantity, and philosophical inquiry as a habit of wonder; (2) It is a moral psychology of the faculties of the soul and human

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flourishing; (3) It is an organizational psychology about the nature and path to organizational excellence; and (4) Redpath, similar to Howard Rachlin, is a teleological behaviorist.

Although it is not one of the glaring purposes of his book, there we can discover Redpath the Aristotelian-Thomistic Teleological Organizational Behaviorist. We, especially, encounter Redpath’s Aristotelian-Thomistic Teleological Behavioral Psychology in Chapter 15, “Pleasure and Happiness.” It is beyond the scope of this essay to construct an in-depth and extensive trading zone of the two schools of behavioral psychology. We can give, however, some crucial examples from Chapter 15 of common behavioral principles.

1. ATTB Principle of Pleasure and Passionate Behavior:

1.1. Citing Aristotle and Aquinas, Redpath: “Pleasure appears to be especially adapted to human nature, and most so to human education in general and moral education in particular . . . as human beings, we are naturally inclined to love and enjoy what is really good, and hate and abhor what is really bad, for us. Because moral virtue consists in regulation and education of the concupiscible appetite in which is located the emotions of love/hate and pleasure/pain (emotions that generate all other appetitive movements, including those of the irascible appetite and the human will), pleasure and pain extend to all phases of human life and exert great influence upon us to become virtuous and live happily.”

1.2. Rachlin: “As Aristotle conceived it, all human behavior is some mixture of action and passion. For instance, a contemporary family buying a house may calculate very carefully whether the house is affordable, well built, resalable, and energy efficient. These calculations seem to make buying the house an action. However, the information that is put into the calculations (the wording of the advertisement, the claims of the seller, the off-the-wall estimates of resale value, the rejection of

46 Ibid., 468–469.
more practical but less physically attractive alternatives) may reveal to an observer a large element of passionate behavior.”

2. ATTB Principle of Overt (Insight-Outsight) Behavior:

2.1. Redpath: “Aristotle and St. Thomas disagree. Because ‘actions speak louder than words,’ they do not consider saying what we do not hold to be true to be prudent. If we do the very action we say is evil, we encourage by example more than we restrain by words and arguments. They maintain that all of us incline to choose the object of human actions as it appears good to us. When a person’s arguments are manifestly contrary to his actions, people tend to ignore his arguments and the truth they express is destroyed.”

2.2. Rachlin: “The Self, from a teleological-behavioral viewpoint, a person’s self is that person’s pattern of interactions with the world, particularly interactions with other people—social interaction. . . . It may be argued that a person can have both insight and outsight to different degrees and that we are creating a false dichotomy between them. But ‘insight’ and ‘outsight’ stand for two explanations from a single phenomenon. From a teleological viewpoint, attributing some specific act to an internal cognition or emotion (apparent insight) is actually attributing that act to a temporally extended pattern of interaction with the environment (actual insight). There is only one thing to explain, not two things. For the teleological behaviorist, cognitions and emotions are such patterns and not internal events at all. . . . From the teleological perspective, it is a myth to think that we necessarily know ourselves better than the people who observe us, especially the significant people in our lives.”

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47 Rachlin, Judgment, Decision and Choice, 232.
49 Rachlin, The Escape of the Mind, 183, 188 and 191. See also above, note 43, overt behavior extended patterns over periods of time.
3. ATTB Principle of Habits of Behavioral Intensity:

3.1. Redpath: “Thanks to the possession of particular reason and intellectual reason, by nature, to some extent (unlike brute animals), all human beings have the ability to distinguish between real and apparent goods and greater and lesser goods. Even in wicked men some desire for real good might still be probable because even in them some natural inclination to real good still remains and tends by nature to be desired as a real human good.

Just as virtue improves, strengthens, perfects more intensely and unifies and harmonizes a natural composite whole (a real nature), moral virtue improves, strengthens, and more intensely unifies a human composite with qualitatively greater, more intense, and unbreakable strength of organizational unity and action.”

3.2. Rachlin: “Aristotle’s golden mean is not a midpoint between two extremes, as is often understood, but rather a wider perspective (a final cause) different from either extreme. For example, the extremes of rashness and cowardice are resolved by courage. The extremes of surliness of obsequiousness are resolved by friendliness. Similarly, justice is a mean between too much for one person and too much for another. [‘Actions . . . are called just and temperate when they are such as the just and temperate would do; but it is not the man who does these as just and temperate men do them’ (Nicomachean Ethics, Chap. 4, 1105b, 5). For example, two people may perform the same just act (say the storekeeper who returns an overpayment to a customer), both acts are not necessarily just. To be just, the act has to appear in the context of a series of other acts that form a pattern or habit. A particular act done merely to win praise (as determined by other acts in the pattern), or in the context of a promotional campaign, or by compulsion, or by accident, would

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not be just—no matter how closely it resembled a particular act within a just pattern.[51]

4. ATTB Principle of Discriminative Stimulus:

4.1. Redpath: “Pleasure is an act of being, not a process of coming to be. It exists in the present moment, in a doing now, not in an approach to a doing, almost a doing, now. Because generation (motion) presupposes (exists in the genus of) relation, and relation presupposes the existence of terms, of limits, boundaries (a starting point and an end point extremes existing within the genus), pleasure is not some indeterminate process of generation. Generation is no indeterminate process. Generation, motion, exists within a genus, proceeds from a definite relation as from a proximate first principle! The indeterminate, chance, generates nothing!

Since the terms of its relation regarding what is the subject that is coming to be and what this subject is going to be, its potency as a subject (an organization, or composite whole) is determinate, so is its external stimulus or formal object. Motion, change, does not just happen by chance. It happens within a genus after a relation has been established/fixed between a determinate potency (for example, the faculty of sight) and a formal object/external stimulus (for example, a colored body)!”[52]

4.2. Rachlin: “The teleological behaviorist sees aims and purposes as patterns of movements . . . sounds and sights correlated with behavior are, in the behaviorist’s language, called discriminative stimuli. For the behaving person they serve as signals for valuable behavioral patterns. A red traffic light is a discriminative stimulus for stopping the car because, in the red light’s presence, it is safe to stop then go. The actor who acts one way while on the stage and another way off the stage is responding in complex ways to two complex sets of discriminative stimuli. Good actors are able to turn on and off entire personalities (that is, behavioral patterns) in different situations

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as one or another situation presents itself . . . psychologists are not building organisms. We have to work with what we are given. In the psychologists’ task—prediction and control of the behavior of the whole organism—such internal hypothesizing can only hinder.”

5. ATTB Principle of Narrow and Wide Behavioral Causality:

5.1. Redpath: “Every motion is also a means to an end, a relational act from a start to a final act; has a first act from which it relationally starts and a last act it intends, moves toward.

For example, St. Thomas says, the act of building naturally intends, through completion of its final act, to finish in the last act what it first intends: a completely built, finished, house. The builder builds the house by means of, through, a multitude of ordered (an ordered multitude being a number) of imperfect, incomplete acts (motions). Since all these incomplete acts are ordered toward (essentially and successively related to) one final act (the finished house), these incomplete acts are processes, parts, of the whole act, one generic act, of building a house.”

5.2. Rachlin: “Playing baseball would be the final cause of buying the bat. . . . That is, the entire sequence of actions—the pattern of actions—is the cause of each individual component of the pattern of actions. From the wide view, the relationship (the contingency) between bat buying and baseball playing is the final cause of the increase in bat buying. The wide view alters the traditional concept of reinforcement in a subtle way. From the wide view, the reinforcer (the cause) of the bat buying is no longer just playing baseball but is the (more abstract) relationship between buying a bat and playing baseball. Thus, with the wider view, in order to determine the (final) cause of bat buying, it is not necessary to find a reinforcer for each instance of bat buying; the overall contingency of baseball playing on bat buying is both necessary and sufficient to count as a cause. When no particular event, such as a baseball game, follows a given act, such as

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53 Rachlin, *The Escape of the Mind*, 181 and 77.

buying a bat, it is therefore not necessary to postulate an inner ‘satisfaction’ of owning the bat to explain the purchase. It is not necessary, for example, to suppose that after each dessert refusal the dieter inwardly pats herself on the back; the overall relationship between dessert refusals and weight (hence social approval, better health, job performance, etc.) is sufficient. Such abstract relationships gain control over behavior only with difficulty (that’s why dieting is so hard to do successfully) but from the wide view, when dieting is successful, that abstract relationship is the actual cause of the dessert refusal. . . . The effects of a wide final cause are intrinsic to their cause, the effects of a narrow final cause are extrinsic to their cause. To take another baseball example, running bases is intrinsic to playing baseball, whereas buying a bat is extrinsic to playing baseball. From both wide and narrow views, playing baseball may be a final cause: From the wide view, playing baseball is a final cause of running bases; from the narrow view, playing baseball is a final cause of buying a bat.”

Conclusion

Robert Kugelmann expresses one clear theme of the rise and fall of neoscholastic rational psychology in his Psychology and Catholicism: Contested Boundaries that between 1879 and the symbolic beginning of both neoscholastic rational psychology and the Thomistic revival and 1965, the year the Second Vatican Council ended Catholic philosophy was not officially Thomistic. By the end of Vatican II, the opening appeared for other types of philosophizing, including phenomenology. As a result, “psychology after the mid-1960s underwent considerable upheaval and the assumption” was made by Thomas Verner Moore, and members of the ACPA “that there was one way for psychology to be scientific, came under fire.”

56 Kugelmann, Psychology and Catholicism, 397.
What Kugelmann, however, fails to treat in his work is that Moore and the members of the ACPA, as they rejected Thomistic rational psychology as foundational for Catholic psychology, did adhere to one way of studying psychology, i.e. the path of mentalism. For example, Thomas Moore, an M.D. psychiatrist, and Ph.D. experimental psychologist, was perhaps one of the most leading figures in defining the boundaries between Thomistic rational psychology and scientific psychology. He was both respected in neoscholastic and academic psychological circles. He was most known for his classic work *Cognitive Psychology*\(^57\) that received significant scientific attention. He marked the beginning of the movement toward cognitive psychology with his theory of meaning as a mental structure different from sensations, images and feelings, the product of mental function of perception, which occurs outside of consciousness. Moore argued that meaning is a mental act and has sensory qualities, consequently he rejected the Thomistic concept of phantasm. Moore and the members of ACPA had rejected Thomistic rational psychology as a necessary meta psychology as foundational, but in turn “experimental mentalism” became the new ACPA meta psychology.

I have argued in this essay that, when Thomistic psychology enters into a trading zone (transitional genus) relationship with the principles and methods of scientific-empirical psychology, it is necessary to heed Brennan’s first principle of inquiry and exchange of theory and methods that “without a soul, psychology is like a temple without a deity or a home without a family spirit.”\(^58\) Kugelmann concludes his study on boundaries writing:

The paths cutting through the borderland between psychology and Catholicism are many. What we have seen has dispelled any

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notion of a rigid boundary or even of merely opposing forces. . . . However conceived, the center of this paradoxical discipline is the soul. To think anew the possibilities for moving within the boundaries established between psychology and Catholic thought and life, for this reossormente, we shall need some new—and old—categories. The most significant of these is the soul. The soul’s dismissal was the foundational condition for the establishment of modern scientific psychology, even though in some quarters—for example, the Jungian and the Neoscholastic—soul endured. So it is wrong to say that the soul was merely a discarded category in modern psychology. It remained in the ‘minority reports’ of the discipline. That was not the case with the soul in the pre-modern world, where the soul had center stage.59

In this essay, a future for Thomistic psychology is recommended much different than Kugelmann’s of an eclectic minimalistic soul foundational Catholic psychology. Thomistic psychology is boldly and confidently a return to the premodern Aristotelian-Thomistic soul. More so, it is a return to an Aristotelian-Thomistic metaphysics of human organizational behavior and a faculty teleological behavioral psychology of the soul. The argument has been made that Thomistic rational psychology discovers a highly compatible trading zone exchange with Aristotelian Teleological Behaviorism. As a matter of fact, ATTB, as presented in this essay, allows for the reconstruction of scientific behavioral psychology based on the five above ATTB principles: (1) Pleasure and Passionate Behavior, (2) Overt (Outsight-Insight) Behavior, (3) Habits of Behavioral Intensity, (4) Discriminative Stimulus, and (5) Narrow and Wide Behavioral Causality.

Therefore, I propose we should not think in terms of an emerging neo-Thomistic rational psychology. We should think in terms of a third period, a period of construction of an Aristotelian-Thomistic Teleolog-

59 Kugelmann, Psychology and Catholicism, 396 and 424.
I suggest that we avoid the terminology of neoscholastic rational psychology because of its failure to understand the relationship between the faculties of the soul and teleological behavior. In this age of neuropsychology, cognitive psychology, personality theory, phenomenology, and positive psychology, etc., I want to make clear that an ATTB is deeply concerned about mental life. Mental life is not opaque or vague; it is not mere interpretations. It does not view mental events as entirely public, “as extended patterns of overt behavior, or as covert muscle twitches plus over behavior.” ATTB “sees mental life as overt behavior patterns extended widely over time.” Such temporally extended patterns, according to ATTB, are indeed proper objects of rational and moral study of individual and social behavior. However, ATTB rejects introspection as a path to philosophical/scientific truth. Introspective reports are always seen as “parts of patterns of overt behavior.”

Finally, ATTB is a method of psychology that allows Thomistic psychologists to address various psychological and social issues based on a faculty psychology and the principles and methodology of ATTB, such as the nature of organizational leadership, family structure, ATTB and Christian Education, ATTB and alcohol, drug and addiction recovery, life cycles and moral development, pastoral counseling, financial counseling, rational living and virtuous habits.

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AN ARISTOTELIAN-THOMISTIC TELELOGICAL BEHAVIORAL PSYCHOLOGY RECONSTRUCTION

SUMMARY

The article is based on Robert Kugelmann’s work, *Psychology and Catholicism: Contested Boundaries*. It examines the development of Catholic psychology as a history of defining boundaries within scientific empirical psychology from 1829 to the present. The author divides the historical period into three periods: One: Neoscholastic Rational Psychology (1829–1965); Two: After Vatican II Psychology (1965 to present); and Three: An Emerging Thomistic Rational Teleological Behavioral Psychology. The essay examines the development of Neoscholastic rational psychology as a response to modernist experimental psychology. The neoscholastic movement approached the new discipline of empirical, as opposed to rational, psychology with the firm conviction in the formulation of a meta-psychology, based on a Thomistic metaphysics that would allow for an eventual synthesis of rational and empirical psychology. However, a synthesis with empirical psychology never came to realization, mainly over the issue of the faculties of the soul as foundational for a science of human behavior. The author argues that, even to the present day, the best approach to entering into a trading zone (transitional genus) with the principles and methods of scientific psychology is by avoiding all expressions of past, present, and future introspective psychology and brain mentalism, and turning to a synthesis with teleological behavioral principles and Aristotelian-Thomistic faculties of the soul psychology.

KEYWORDS

rational psychology, teleological behaviorism, trading zone, introspection, experimental psychology, behavioral reconstruction, identity theory, pleasure and passionate behavior, overt behavior, insight-outsight behavior, habits of behavioral intensity, discriminative stimulus, narrow behavioral causality, wide behavioral causality.

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