Chapter 16
Smedslund and the Psychological Style of Reasoning

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I first encountered the ideas of Jan Smedslund almost 30 years ago as a doctoral student studying educational psychology. Noted educational theorist, Kieran Egan, prescribed his 1983 book, *Psychology and Education*, as an antidote for the belief that disciplinary psychology had a foundational role in informing educational design. Among the barrage of arguments Egan marshals in his scathing attack on the psychologizing of education, are those borrowed from Smedslund's writings published in the 1970s regarding psychology's pseudoempiricism. Smedslund's insights concerning the miscasting of analytic claims as empirical ones derived from psychological experimentation came as nothing short of a revelation for me. Having been firmly enculturated into the canon of psychological empiricism, the persuasive manner by which Smedslund delivered and substantiated his allegations resulted in a state of utter disorientation toward the discipline. Smedslund's analysis left a powerful impression and, three decades later, I find myself returning to it in formulating an expanded critique of psychology that I will outline herein and augment with the help of Smedslund's ideas.

The critique I have developed (Sugarman 2017) centers on explicating "psychologism" as a style of reasoning that has dominated psychology from its inception and set the course for how psychological phenomena are made intelligible and investigated. However, psychologism, as a style of reasoning, is not merely an epistemological doctrine. It also bears ontological implications by the ways in which it contributes to constituting the phenomena psychologists seek to know. I will begin

The author extends his appreciation to Jack Martin and Tobias G. Lindstad for their comments on an earlier draft of this chapter.

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T. G. Lindstad et al. (eds.), *Respect for Thought*, Theory and History in the Human and Social Sciences, https://doi.org/10.1007/978-3-030-43066-5_16

by explaining "styles of reasoning" and their common features. This will be followed by describing characteristics and assumptions of psychologism that fulfill the requirements of a style of reasoning and how these characteristics and assumptions, along with particularities of the procedures of psychologism, create conditions of possibility in which psychological properties become articulated and attain ontological status. I will then consider Smedslund's critique of psychological pseudo-empiricism. Lastly, I will show its applicability to psychologism using the example of self-regulation.

Styles of Reasoning

"Styles of reasoning" originate with Crombie's (1994) remarkable historical study, *Styles of Scientific Thinking in the European Tradition: The History of Argument and Explanation Especially in the Mathematical and Biomedical Sciences and Arts,* which charts the development of scientific thought beginning with the ancient Greeks and culminating in the nineteenth century. Navigating an immensity of historical detail, Crombie documents six distinct forms or "styles" of argumentation into which scientific thought has coalesced through the ages. Styles of thinking function as frameworks through which the regularities of phenomena are identified, defined, and understood, thus circumscribing the kinds of questions that can be posed about them and kinds of answers that can be justified. The six styles that Crombie discerns are: (1) mathematical postulation, (2) experimentation, (3) hypothetical-analogical modeling, (4) taxonomy, (5) probabilistic and statistical analysis, and (6) historical derivation.

Hacking (2002, 2012) has extended Crombie's analysis, replacing the terminology of "styles of thinking" with "styles of reasoning." For Hacking, "thinking" puts science "too much in the head" (2002, p. 182). Scientific inquiry involves not just thinking, but also, demonstrating, experimenting, arguing, and consensus. The conduct of science is as much public as it is private. Styles of reasoning are publicly sanctioned approaches to gaining knowledge. They set the criteria for judgments of truth and falsity. This does not imply that styles of reasoning are objective. Rather, they provide the terms for what we mean by objectivity. However, as Hacking (2002) elaborates, styles of reasoning pertain not just to epistemology and methodology. By providing the conditions for how phenomena "show up" for inquirers, styles of reasoning also can create possibilities for the occurrence of new kinds of phenomena. For example, with the advent of probability theory and statistics in the latter half of the seventeenth century came the possibility of a new form of evidence (i.e., the data gathered and recorded by public and private institutions), the concepts of population and normal distribution, equations for variance and standard deviation, techniques such as representative sampling, laws including the central theorem limit and the law of error, and objects like the quincunx and statistical software. One need not look far to see how probability theory not only has shaped profoundly our thinking about phenomena—from physics to politics and health—but also made possible a spate of new material innovations.

There are several other interrelated features common across the variety of styles of reasoning, six of which I will note for the purposes of my analysis. First, styles of reasoning are *conditions of possibility*, not causes (Elwick 2012). To claim that A depends on, or is necessary for, B is not the same as claiming that A causes B. As Elwick illustrates, modeling and experimental styles of reasoning provided conditions of possibility for initiating the science of experimental embryology. However, it would be a gross oversimplification to say that these styles of reasoning are what caused Wilhelm Roux to begin poking hot needles into frog embryos in 1866. The distinction between possibility and cause creates explanatory room for contingency and agentive action to be considered. Second, styles of reasoning are *self-authenticating*. This is because they comprise their own criteria for objectivity and validity. This also effectively makes them self-contained and seemingly unassailable by criticism from outside their borders. The circularity between setting internal criteria and accepting as valid only those claims that fit them provides styles of reasoning with much of their *stability* over time; stability being a third common characteristic. Fourth, this stability also is bolstered by the *reciprocal relation* between the techniques of a style of reasoning and the subject matter to which they are applied, which is also another way in which styles of reasoning are self-authenticating—a point that will be elaborated later in discussing the self-authenticating character of psychologism. Fifth, styles of reasoning are *autonomous*. Although they arise in particular historical contexts, as a consequence of their general applicability, they can become extricated from their origins and persist even through seismic social transformations. They also are autonomous in that they are not allied with specific theories, but rather, are prerequisites to theory construction. It is only once a class of phenomena is identified through the framework of a style of reasoning that theories can be developed to account for it. Sixth, styles of reasoning are *combinatorial*. For instance, Hacking (2002) proposes the "laboratory style" as an amalgam of the modeling and experimental styles. Other styles of reasoning have been suggested. For example, Forrester (1996) has defended "thinking in cases" as a style of reasoning and Davidson (2001) has described a "psychiatric style" of reasoning. In line with the foregoing features, I offer "psychologism" to denote a distinctive style of reasoning that has dominated psychological theorizing and research over the past century.

Psychologism as a Style of Reasoning

"Psychologism," as a term of art, was introduced by Erdmann 1866 in his objection to Beneke's attempt to reduce philosophy to features of the mind (Kusch 1995). In the tradition of Kant, Beneke believed in apriori sources of human knowledge and experience furnished by mental properties. He was also convinced that these sources could be revealed empirically by psychology positioned alongside the natural sciences, all of which were to be founded on positivism. According to Beneke, metaphysical, epistemological, ethical, logical, and mathematical questions should be

understood as artifacts of the physiology of psychological processes that inevitably would yield to empirical research. In the ensuing debate, Beneke's all-encompassing naturalism fell victim to much criticism, most notably, the attacks of Frege and Husserl who argued, respectively, that logic was independent of context and philosophical truth was necessarily universal. The critiques were persuasive and most philosophers dismissed psychologism as a flagrant philosophical error (Kusch). However, the premise of psychologism has been resuscitated more recently with the promise of neuroscience and, especially, enthusiasm for new technologies (e.g., fMRI) many think are revealing the biophysical substratum and ultimate causes of all human thought, including philosophical thinking[1].

While psychologism has been formulated variously (Kusch 1995), it preserves the common premise that thought and experience are reducible to internal psychological characteristics. Martin and McLellan (2013) recently have adopted the term to highlight how this premise has been instantiated in psychology. As they define, "The core feature of psychologism is the attribution of the primary causes of the perceptions, experiences, knowledge, and actions of individuals to structures, processes, and/or operations internal to their mental lives" (Martin and McLellan, p. 158). My use of the term follows their definition.

As the prevailing instrument of psychology, psychologism has steered psychological explanation to inner mental properties assumed, in turn, to be manifestations of more primary biochemical and neurophysiological structures and processes. From the inception of disciplinary psychology and over the course of its history, psychologism has been remarkably durable. Generations of varieties of structuralists and functionalists embraced psychologism as the guide to psychological explanation. Notwithstanding its renouncement by behaviorists, psychologism populated the theoretical landscape and can be seen to operate across such diverse schools of thought as depth psychology, Gestalt psychology, humanistic psychology, cognitivism, and neuroscience. This evidences both its stability and autonomy.

Like all styles of reasoning, psychologism has generated its own specific procedures (see Sugarman 2017) and takes the following form. It begins with observations of persons' everyday activities and experiences. A putative feature of their observed actions or reported experience is identified and isolated. The assumption is made that the source of the feature is a discrete interior psychological structure or process. The structure or process is named and assigned deterministic causal force by which the observed action or experience is produced. Thus, for example, the person's apparent monitoring of her activity is caused by self-regulation, her opinion of herself is caused by self-esteem, her degree of confidence is caused by self-efficacy, her conception of herself is caused by self-concept, her failure to attempt tasks is caused by fear of failure, and so forth. It should be noted that something cannot be the cause of itself, a logical error that is conveniently overlooked.[2]

[1] Many are less sanguine about this promise, including Smedslund (2020).

[2] A similar point has been raised recently by Valsiner and Brinkmann (2016) in their admonishment to avoid delusive causal variables in psychology; for example, claiming that depression is the cause of feeling depressed.

Once dissected and conceptualized in this way, frequently an instrument is constructed that is inferred to target and measure the hypothesized inner psychological property. It should be noted in passing that the use of the term "measure" here is at least very loose, if not entirely misleading. As Martin and McLellan (2013) argue, it is highly debatable whether psychological instruments perform measurement in any meaningful scientific sense of the term. Scientific measurement relies on standard units or metrics that stand independent of the thing being measured. So too with most of the measures we use in daily life whether it is in cooking, carpentry, or calculating weather. Not only are metrics of size, speed, distance, temperature, and so forth, independent of the particular things being measured, but so too are the devices by which measurements are indicated. However, psychologists have no such standard units or devices for the measurement of psychological phenomena and, therefore, they perform only "pseudomeasurement".

As Martin and McLellan distinguish, counting is not measuring. We might be able to count frequencies of ideas. But we can't measure ideas with standard units like we measure length in centimeters or electrical current in amperes. Human thought, action, and experience do not come in discrete independent units. Individuals' ratings of particular questionnaire items or reactions to stimuli are subject to the tremendous variability of idiosyncratic impressions and subjective judgments, individuals' capacities to observe and report on their experiences accurately, their moods and circumstances, and their manner of responding, all of which are contextually constituted and interrelated, undermining the possibility of discrete standardized units of psychological measurement. While it might be argued that measures of blood flow in the brain provide an instance of bona fide psychological measurement, establishing a clear relationship between specific psychological states and neurophysiological activation is notoriously problematic.

Most commonly, psychological instruments require individuals to introspect and self-report on particular thoughts, actions, or experiences believed to reflect the psychological property under investigation. However, whether the instrument employs introspection or behavioral observation, whether it is the Rorschach Technique, Weschler Intelligence Scales, The Self Esteem Inventory, or brain imaging techniques (which also depend on subjects' introspection to establish correlations between psychological phenomena and the neurophysiological structures assumed to produce them), the data generated are admitted as evidence of the existence of the hypothesized psychological phenomenon. Such evidence is considered sufficiently valid that it has spawned a prodigious array of phenomena and programs of research. In fact, it could be argued that the success of psychologism was key to providing psychology with its own distinctive subject matter and attaining status as a sui generis academic discipline.

Conceived thusly, psychologism operates as a style of reasoning. First, it provides conditions of possibility for the appearance of new phenomena: Intelligence, creativity, motivation, personality traits, attitudes, "self" characteristics, psychological disabilities, and psychopathologies, are just a few examples. However, importantly, psychologism sidesteps the question of whether the phenomena conceived through its assumptions and procedures actually exist. The issue here is not

simply whether the phenomena already are there waiting to be discovered or if they are artifacts manufactured by the assumptions and procedures of psychologism. The matter is more complicated. Psychological terminology, description, and classification interact with their objects creating what Hacking (1995) has called a "looping effect."

The looping effect designates the ontological implications of a dynamic interaction between our practices of naming and the things named (see Sugarman 2009, 2015a). More specifically, in describing ourselves psychologically, persons are uniquely capable of reacting to the ways we are described such that we can constitute or reconstitute how we understand ourselves. We come to define and act toward ourselves under psychological descriptions and, in the process, form and alter the kinds of persons we are. The looping effect begins with a psychological description or classification that prompts changes to an individual's self-understanding. This change in self-understanding enables new interpretations, intentions, actions, and experiences. New interpretations, intentions, actions, and experiences, in turn, can lead to revised descriptions and classifications or the invention of new ones. These fresh descriptions and classifications are then appropriated, sparking new self-understandings, interpretations, intentions, actions, and experiences, and so on, looping recursively. It is in creating a relation with ourselves through psychological descriptions—defining ourselves in the terms they provide—that we make ourselves intelligible. However, when the looping effect occurs and persons change the ways they describe and understand themselves, they are no longer quite the same persons they were before. By providing conditions of possibility for new forms of psychological descriptions and self-understandings to emerge, psychologism can have ontological consequences.

Second, psychologism is self-authenticating. The existence of a psychological property is accepted if individuals are able to give self-reports of it or exhibit behaviors believed caused by it. In this way, there is circularity between the objectivity and validity of claims and methods on the basis of which claims are derived. What justification is there that a psychological property exists? Because people can report on it or we can observe its behavioral manifestation. Why are people able to make self-reports of it or behave accordingly? Because it must exist. Third, this circularity between the methodologies of self-report, behavioral observation, and brain imaging, and the phenomena they supposedly reveal, also gives psychologism much of its stability. The credibility of the methods relies on the assumption of an inner psychological realm that can be detected by them and, reciprocally, the assumption of an inner psychological realm lends the methods their legitimacy. Fourth, not only has psychologism been resistant to criticism from outside its boundaries, but it also has been autonomous in traveling far past its origins and finding application across a wide variety of psychological schools of thought. It is not allied with any specific psychological theory but, nevertheless, has served instrumentally in producing an entire class of phenomena on which these schools of thought and their theories have been founded. Fifth, psychologism, while a distinct style of reasoning, is combinatorial having incorporated elements of experimental, modeling, statistical, taxonomic, and historical styles of reasoning.

Smedslund and Psychologism

Since the 1970s, Smedslund (1978a, 1978b, 1979, 1988, 1991, 1994, 1995, 2002, 2008) has made a compelling case that many, if not most, empirical claims derived from psychological research are already established by prior conceptual relationships and, consequently, should be seen as only "pseudoempirical." According to Smedslund, what often are taken to be empirical findings from psychological research are the misleading result of confusing "analytic" with "arbitrary" aspects of research design. Smedslund terms "analytic" propositions those made true by definition or logical necessity.[3] In analytic or apriori propositions, the concept of the predicate is entailed implicitly in the concept of the subject such that negating the proposition results in a logical contradiction. In other words, the analytic structure of the proposition ensures the relationship between the two things under consideration. "Arbitrary" refers to contingent circumstantial features, particularities of the context of the specific research being conducted that are legitimately empirical, but have little generalizability beyond the confines and unique features of the research setting. As Egan (1988) simplifies with a clear, if somewhat trite, example of the problem Smedslund insinuates:

> "all unmarried men in Vancouver are bachelors" is true as a matter of logical necessity or by definition. We could treat the question "Are all unmarried men in Vancouver bachelors?" as an empirical question. We could design a tight survey, run it with great care, and analyse the results by the most sophisticated statistical methods. We could then announce that we had empirically established that 100% of the bachelors in Vancouver are unmarried. And, by such a procedure, we would indeed have established the truth of the proposition empirically. The empirical research is, of course, unnecessary; and we need feel no caution in generalizing our results to Chicago or Paris. The connection between bachelors and unmarried men is established by analysis or definition. (p. 71)

Smedslund argues that empirical research in psychology is rife with such analytic entailments the consequence of which is to render the research unnecessary,

[3] It should be noted that while Smedslund used the term "analytic" in his writings in the 1970s, in subsequent publications, he tended to avoid it, opting instead for "a priori," "noncontingent," and "nonempirical" (e.g., Smedslund 1991, pp. 325–326) and, more recently, "a priori and contingently true" (Smedslund 2012a, p. 300). This shift in terminology owes to Smedslund's (2002) attempt to sidestep philosophical difficulties with the Kantian analytic-synthetic distinction voiced by Quine (1951) and, also, recognition that in his attempt to articulate a system of "psychologic," he did not differentiate sufficiently between "logical relations built into language and basic psychological assumptions that go beyond language" (Smedslund 2012b, p. 661). As Smedlund (2012b) explains, the latter do not follow strictly from the lexical meaning of words and, thus, are not semantic. Rather, they pertain to functions of persons that are assumed (e.g., learning from experience, having feelings). Consequently, although Smedslund does not take psychologic to pertain exclusively to conceptual relations, he nonetheless interprets its aim to make explicit what he alleges is a conceptual framework implicit in language and psychological common sense. In this light, analyticity still appears to have relevance for the specific aspects of Smedslund's thought on which I am drawing, and I have retained use of the term with limited reference to those propositions the truth or falsity of which is determined by analysis in contrast to those requiring empirical test for validation.

redundant, and delusive. Thus, we should not be impressed when researchers conclude that individuals are likely to be surprised when an alternative outcome is expected (Choi and Nisbett 2000), that individuals tend to help only when they notice a situation requiring help and think that helping would be useful (Latané and Darely 1970), that those predisposed to taking risks are more prone to practicing unsafe sex (Farley 1991), that individuals who have had a history of repeated failure are less likely to attempt tasks (Sears 1940) and those who are confident about their ability to do them successfully are more likely to attempt them (Bandura 1977), that we tend to repeat activities we find pleasurable (Thorndike 1932), or children who have yet to develop the idea of one-to-one identity are unable to determine if two different placements of the same number of items are equivalent (Piaget and Szeminska 1952). It is difficult to see how the outcomes could be otherwise. If the experimental outcomes did not confirm their hypotheses, we would not question the hypotheses. Rather, we would suspect something faulty owing to the experimental conditions, methods and procedures, or broader context that was corrupting the data. Smedslund concludes that such studies are pseudoempirical because the hypotheses under investigation masquerade as empirical propositions but, in fact, need not be verified by any empirical test whatsoever.

Smedslund (2008) credits Heider (1958) for drawing his attention to the observation that common sense is composed of conceptual relations for which validation by empirical study is not required. Smedslund saw three major implications for psychology. First, common sense psychology is a system of meanings contained by concepts and axioms that have established connections among the mental terms of ordinary language (e.g., believe, desire, do, intend, hope, fear, sadness). Second, these meanings can be comprehended by conceptual analysis and without empirical investigation. And consequently, third, psychology must include the study of ordinary language. We think, act, and experience through the descriptions given in language. Not only do people describe, understand, and explain their conduct and experiences using shared ordinary language, but so do the psychologists who study them. In order for the discipline of psychology to exist, a language for understanding ourselves psychologically already had to be in place. The development of language has occurred over millennia during which myriad psychological concepts have been developed to lend meaning to our thoughts, actions, and experiences, making them intelligible and allowing individuals to address themselves reflexively and conceive of others psychologically. If these meanings and a psychological common sense were not already in place, psychologists would have had nothing to study (cf. Danziger 1997).

Furthermore, in order to have any social currency, psychologists' concepts, theories, and research must make contact with the terms and meanings of everyday ordinary language conveys. However, as Smedslund deciphers, ordinary language sets constraints on the logical possibilities by which words and symbols can be combined and there are specific restrictions regarding the deployment of psychological concepts. For example, to say "I am delighted that I never get what I want" doesn't make sense. At the very least, the statement calls for something to be added in order for it to be made meaningful. Further illustrating the point, the game of

chess cannot be defined or understood as something independent of the rules that constitute it. I can consider a host of strategies about how the game can be played, but these strategies depend on adhering to the rules of the game. If a strategy violates the rules of the game, it ceases to have a relevant or meaningful application. The same is true of psychological terms. If they violate the rules of ordinary language, they cease to have relevant or meaningful applications. Even if we modify the rules to accommodate a new term or new usage of a term, these rules still are apriori to, and provide constraints on, any meaningful empirical examination of them we might conduct.

Anyone immersed in psychological literature will find little discussion of these matters among psychologists and much confusion of the analytic with the arbitrary. As Smedslund (1991, 1994) attests, such consideration is rare because psychologists, by and large, are inclined to treat all meaningful hypotheses as if they are empirical. There is little attention to defining concepts formally rather than just operationally and, consequently, to distinguishing apriori from empirical propositions. The origin of the problem, as Smedslund (1991) recounts, is that right from the start, there was a fervent belief that psychological knowledge rested on developing methods of acquiring and representing data in highly reliable ways, the accumulation of which eventually would result in scientific advance.

In this light, it is easy to see why Bridgman's (1952) operationalism was received by psychologists as a godsend. But while Bridgman recommended operational definitions only as aids or cues to comprehending the meaning of concepts, psychologists treated operational definitions as if they were exhaustive of conceptual meanings (Koch 1999; Martin et al. 2003). The operational definition was wielded like a wand with which all the conceptual complexity of psychological phenomena could magically be made to disappear and the reliability of methods and data assured. Operationalism ascended and conceptual analysis quickly went out of fashion. However, as Smedslund (1991) has been at pains to point out, rarely is it addressed explicitly exactly what features of an item on an instrument make it an indication of the hypothesized psychological property being studied. It is simply taken for granted that everyone knows what the words mean and the connection between the item and the psychological property is assumed to be intuitively obvious. However, in the absence of adequate conceptual analysis, concepts are applied loosely, an explicit link is never established between operationalized item and response, and phenomena are reduced narrowly to the terms given by specific procedures, materials, and responses.

Smedslund's analysis of pseudoempiricism is highly applicable to psychologism. First, pseudoempiricism contributes to conditions of possibility for the emergence of new phenomena. In the absence of establishing a clear relation between the conceptualized phenomenon and the instruments by which it is investigated, the phenomenon can simply be assumed to exist, evidenced by the self-reports and behaviors of experimental subjects. Second, pseudoempiricism strengthens psychologism as self-authenticating. The ways psychological propositions are analytically entailed not only result in empirical research being merely restatements of what already resides in everyday language and understanding, but also ensures that

experimental outcomes appear as validations of empirical hypotheses. Defining phenomena operationally also abets the self-authenticating character of psychologism. Narrowing and simplifying concepts by defining them operationally renders them more amenable to the (unnecessary) empirical test by furnishing means (e.g., pseudomeasurement) by which procedures and outcomes can appear more easily interpreted. Third, analytic, semantic, and/or conceptual entailment ensures the success of psychological hypothesis testing, and continued success lends psychologism stability. Fourth, as the examples mentioned earlier show, pseudoempiricism provides for the autonomy of psychologism, both in its persistence over time and its application in the highly diverse arena of psychological hypotheses and theories.

The Psychologism of Self-Regulation

As promised in the introduction, I now turn to sketch briefly an illustration of psychologism using the currently popular psychological concept of self-regulation, but also incorporating Smedslund's critique.[4] Self-regulation is so prized in psychology that philosopher Stuart Shanker (2017) asserts it will be as consequential for the discipline in the twenty-first century as intelligence was in the twentieth century. While some trace the origins of the scientific study of self-regulation to cybernetics (Carver and Scheier 1998), and others to information processing models of cognitive psychology (Weinstein et al. 2000), the notion that people have, and ought to cultivate, the capacity for self-control can be traced to the ancient Greeks. As early as the sixth century BCE, Heraclitus lauded the virtue of self-mastery and rational control in ruling one's passions (Baloyannis 2013), an admonition reiterated throughout the succeeding centuries. So prominent is this characteristic of the human condition, what Smith (1976/1759) called "the great school of self-command" (p. 145), that almost every major enlightenment, romantic, and modern philosopher has had something to say about it (cf. Seigel 2005).

Given such a rich history, we might expect present studies of self-regulation to be guided by a clear conception of what it is and methods properly suited to its investigation. However, such is not the case. Scanning the psychological literature reveals a host of terms by which it has been conceptualized, including self-control, self-management, self-regulated learning, effortful control, effortful attention, problem-solving, behaviour management and control, goal-directed behavior, conscious impulse control, mood control, delay of gratification, willpower, agency, metacognition, principled structure, central governor, and executive function. While some researchers are highly specific in their use of these terms, others use them interchangeably (Martin and McLellan 2013). Often conceptualizations are tied to specific theoretical frames. There are neo-cybernetic perspectives that comprehend

[4] Elsewhere (Sugarman 2017), I have detailed another example; specifically, how the psychological study of attitudes has been built on psychologism.

regulatory processes in terms of feedback loops, goal states, and error detection; neuroscience approaches that theorize an executive function produced by neural processes; systems theoretical perspectives that highlight the dynamics of self-organization; and cognitive theories emphasizing processing and representational features of impulse control and delay of gratification, or metacognitive skills, behavior skills, personal beliefs, motivation, or ego depletion. This diversity of terms and approaches has led Zeidner et al. (2000) to remark, "there are almost as many definitions and conceptions of self-regulation as there are lines of research on the topic" (p. 750).

On Martin and McLellan's (2013) reading, it would take Herculean effort to clarify the meanings of these terms and ways they are employed. Nevertheless, in the absence of such conceptual work, as they state,

> the entire area of self-regulation risks a solipsistic fragmentation in which each researcher or research team works with concepts, frameworks, and methods that defy translation across programs of research that may be united only in so far as they employ some rubric tied loosely to "self-regulation." (p. 137)

In their critical analysis of the self-regulation literature, Martin and McLellan (2013) detect that sometimes self-regulation is treated as something in the mind; other times, as an activity. Sometimes it is treated as an aptitude; other times, as an event. Sometimes self-regulation is used to designate regulation of the self; other times, regulation by the self, which raises the all too infrequently addressed question of what the self is that is doing the regulating. Relatedly, how is the regulation of activity and learning different from the self-regulation of activity and learning? As Smedslund might ask, in what ways might the activity of persons not be self-regulated? Aren't most of the things we do the result of at least some modicum of purposeful planning and deliberative action? A major issue, according to Martin and McLellan, is that there appear little grounds for distinguishing those actions that are self-regulated from those that are not. As Martin and McLellan elaborate, how can anyone, including researchers, be sure when thoughts, emotions, and motivations are self-determined in ways that transcend the operations of bodies, brains, and contextual constraints? And, further, are neurophysiological processes and structures hypothesized to be causally influential to be considered part of the self or external to it?

While most researchers appear content to work within their chosen paradigms and ignore the conceptual and theoretical morass, some have attempted to address the problem. Martin and McLellan (2013) identify two proposed solutions, both of which they regard as defective. One strategy has been to reconcile what are clearly incompatible definitional and conceptual differences through some kind of integration. However, this approach courts incoherence by mixing apples with oranges. The second strategy looks at empirical research to solve the problem. However, this approach falls victim to precisely the kinds of issues Smedslund has raised. As an example, Winne and Perry (2000) have employed both strategies. In their integrative model, Winne and Perry suggest that self-regulation "has dual qualities as an aptitude and an event … and manifests itself in recursively applied forms of metacognitive

monitoring and metacognitive control that change information over time as learners engage with a task" (p. 563). Examining the techniques researchers have employed in studying self-regulation, Winne and Perry further offer that "self-report questionnaires, structured interviews, teacher judgments, think aloud measures, error detection tasks, trace methods, and observations of performance—foreground different components of conditions, cognitive operations, standards, and event-related change" (p. 563). What Winne and Perry seem to be suggesting is akin to the fable of six blind men touching an elephant. They assume all of these things can be integrated as pointing to a singular phenomenon of self-regulation. But, as Martin and McLellan rightly respond, this doesn't solve the problem. It simply evades it. For instance, Winne and Perry fail to clarify how, as both aptitude and event, self-regulation can be one thing.

Furthermore, by contending that empirical "measurement is akin to model building and testing" (p. 563), Winne and Perry (2000) are guilty of pseudoempiricism. Empirical inquiry cannot solve conceptual problems. On its own, empirical inquiry cannot generate a conception of what one is attempting to study. Before something can be studied empirically, there needs to be in place some conception of the phenomenon that stipulates what the phenomenon is and what counts as a case of having seen it. Otherwise, how would a researcher be able to identify it in the first place? As Smedslund would admonish, what is needed is not empirical research, but rather, conceptual clarification of the concept's rules of correct employment that warrant its application to phenomena of interest.

Nevertheless, tacitly assuming a unified conception of self-regulation, researchers have delivered a spate of pseudoempirical claims. For example, the recently published third edition of *Handbook of Self-Regulation: Research, Theory, and Applications* (Vohs and Baumeister 2016) is replete with studies cited as evidence for such claims: "self-regulation plays an important role in inhibiting undesirable impulses from influencing behavior in many situations encountered in everyday life" (p. 62), "self-control requires prioritizing more valued, distal outcomes over smaller yet immediate ones" (p. 146), "self-directed behavioral change usually occurs when individuals perceive discrepancies between their goals or ideals and their current standing on these goals/ideas" (p. 284), "low trait self-control significantly predicted more imprudent behaviors" (p. 49), "use and abuse of alcohol and drugs often result from self-control failure and, likewise, are largely predicted by low self-control" (p. 47), "restraining oneself from expressing sexual thoughts and behavior requires self-control" (p. 48), "some people feel a similarly strong impulse to shop, so self-control is necessary to resist such overspending or impulsive buying" (p. 48), "impulsivity and risk taking that result from low self-control are also important factors in gambling behavior" (p. 49), and "the lower an individual's self-control, the more likely he or she is to engage in risky behaviors, commit a crime, or be imprisoned" (p. 49). The obvious analytic entailments of such claims obviate the need for any empirical research whatsoever.

Self-regulation, like all mental constructs is considered latent and directly unobservable. Consequently, a number of instruments have been devised to operationalize it. The most widely used instrument for assessing self-regulated learning is the

Motivated Strategies for Learning Questionnaire (MSLQ) containing 81 items scored using a 7-point Likert-type scale (Dunn et al. 2012). The *MSLQ* consists of two primary scales—Motivation and Learning Strategies—and 15 subscales. The Motivation Scale is intended to tap goals, beliefs, skills, and anxiety. The Learning Strategies Scale targets cognitive strategies and resources management skills. Two of the subscales are designed specifically to assess self-regulation: The Metacognitive Self-Regulation Subscale and Effort Regulation Subscale (Duncan and McKeachie 2005). These subscales contain such items as "During class time I often miss important points because I'm thinking of other things," "When I become confused about something I'm reading for this class, I go back and try to figure it out," "I work hard to do well in this class even if I don't like what we are doing," and "When I study for this class, I set goals for myself in order to direct my activities in each study period." As Smedslund would argue, hypotheses and outcomes are logically entailed. How could subjects giving positive ratings to such items not be self-regulated?

The structure of the *MSLQ*, like the *Learning and Study Skills Inventory* and other instruments used to investigate self-regulation are predicated on the assumption that self-regulation can be distilled into a set of distinct components that can be isolated from each other and from an integral human being functioning in the world. This assumption is where psychologism begins. Observing the dispositions persons express in their everyday actions—dispositions to plan and act intentionally—psychologists isolated these features and moved them inward, invoking self-regulation as an inner mental property that explains and determines conduct and experience. However, the assumption of such an inner property or entity is neither a logical necessity nor is it made persuasive by the results of psychological study.

As a function of psychologism, the invention and administration of instruments designed to measure self-regulation circumvent the ontological question of whether it exists. The data obtained by such instruments simply are assumed to represent the influence of an inner psychological property or entity. As the study of self-regulation evinces, there is self-authentication and stability created by the reciprocally reinforcing relation between methods and the phenomena of investigation. Instruments such as the *MSLQ* and fMRI studies favor the assumption that there is an interior property or entity of self-regulation to be measured, while belief in the internality of self-regulation lends legitimacy to the instruments. There is also a looping effect. Psychologists measuring self-regulation have promoted ideals of the self-regulated person and self-regulated student, and people are learning to understand themselves and be the kinds of persons who are or who are not self-regulated to varying degrees. By drawing attention to certain individual attributes, claiming to measure and classify them, and making visible what might have remained concealed or vexatiously complex, psychologists have provided conceptual and material means by which we may examine ourselves and others, especially how we or others might deviate from the majority. As Smedslund persistently has argued, such means have been readily adopted largely because they already jive with our psychological common sense.

However, the effect of emphasizing self-regulation as a presumed individual interior feature not only has been to influence our self-understanding, but also to

make ourselves and others more readily susceptible and subject to forms of expert intervention and management. For example, schools and other educational institutions now abound with practices designed to encourage students to conceive of and assess themselves in particular ways; more specifically, as autonomous, self-governing, self-responsible and self-reliant individuals. And, it appears as no coincidence that such values are consistent with those of contemporary neoliberal democracies (see Martin and McLellan 2013; Sugarman 2015b).

Conclusion

As Smedslund's work reveals, much of the success of psychologism owes to the ways in which it enables the research practices of psychologists to capitalize on psychological common sense by recapitulating what already is contained and expressed in everyday language and understanding. However, as I have intimated, such practices can transcend what is given and have profound ontological implications by redefining, transforming, and supplanting everyday psychological phenomena. The fundamental problem of psychologism is more than pseudoempiricism. It is that psychologists have located their explanations in cognitive, affective, and volitional structures internal to individuals without adequate consideration of the historical, social, cultural, moral, ethical, political, and economic contexts within which we develop and are constituted as persons. By neglecting the constitutive influence of these contexts, psychologists frequently have attributed features of persons to an inner psychological nature rather than to characteristics of the contexts and interactions within and through which we become persons. We might do well to ask whether self-regulation and other supposed individual psychological properties are simply part of what it is for integral, fully functioning persons to act purposefully in the world given the conditions of possibility and constraint afforded by the contexts in which they develop and live, and not inner psychological antecedents separate from their acting (Martin et al. 2003).

Clearly, the kind of reconsideration called for would require a significant departure from psychologism as an investigative and explanatory style of reasoning. It is beyond the scope of this chapter to detail a style of reasoning appropriate to psychology. However, as a gesture in this direction, a style of reasoning adequate to psychology's purposes would create a space of possibility for, and orientation to, persons acting in worldly contexts; in which key constituents of personhood that transcend the boundaries of an assumed psychological interiority—language, culture, society, history and human relationality—are not ignored or given only cursory treatment.

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