## Scientific Selves: Discerning the Subject and the Experimenter in Experimental Psychology in the United States, 1900–1935

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Modern American experimental psychology requires a minimalist cast of actors, taking what appear to be precisely defined roles. From the 1930s onward, the "experimenter" and "subject" served as its principal actors, for a long period holding the abbreviated titles "E" and "S" in experimental reports. Excepting the introduction of "confederates and machine-technology substitutes" (Bayer, 1998; Morawski, 1998), these prescribed roles have endured. Subjects were rendered anonymous and purportedly passive actors whose thoughts and behaviors have been represented almost exclusively through experimenters' terms or numeric systems, and they were "run" through the factory-like operations of the experiment. By eliminating the participant's subjective observations, dropping the misnomer of calling him or her an "observer," and using the controls of precise laboratory procedures, experimenters aimed to remove subjectivity from the experiment. According to J. F. Kantor, "objectivity, that is, making psychological data into autonomous facts to be observed and described," must include "objectifying attitudes." Kantor affirmed a purportedly incontrovertible distinction between observer and object, consequently insisting that "psychology studies the 'other one'" (1922, p. 431). Indeed, Max Meyer (1921) titled his introductory text *The Psychology of the Other One*. Such codification of scientific participants (in terms of capacities for objectivity) was but one of the techniques for standardizing experiments; other techniques include quantification, scales and tests, and aggregate statistical methods.

Experimenters, by contrast to subjects, came to be seen as beings who no longer themselves generated objects of analysis or engaged in self-reflection (introspection) but, instead, regarded themselves as practitioners of scientific objectivity. Their "aperspectival" vantage constituted a cognitive superiority over other scientific selves, a superiority psychologists themselves came to call the "psychologist's advantage," "psychologist's point of view" or the "psychologist's frame of reference" (e.g., see Allport, 1940; Ladd, 1899). Although this advantage was deemed to be an acquired attribute of the experimental psychologists, even students could "enter the kingdom of psychology," wrote Yerkes (1911, p. 15), once they attained such scientific skills.

These laboratory role distinctions and the tacit psychological attributes associated with them led to ready adoption of J. F. Dashiell's 1929 proposal to standardize the term subject. According to Dashiell, the term subject was most appropriate for the simple reason that "In many contemporary lines of psychological investigation the so-called 'observer' does no observing" (Dashiell, 1929, p. 550). However, the new articulation of subjects did not incorporate all of the identities found to be inhabiting the psychological laboratory. In his objection to Dashiell's move to standardize the nomenclature and, consequently, certain features of the subject's psychology, Madison Bentley (1929, p. 682) described additional traits of these scientific characters, including that of the experimenter. Regarding the experimenter's "excess" character, Bentley noted an authority borne of suspiciousness, claiming "The point of the objectivist seems to be that he prefers to do all the reporting and recording himself and not to trust another." Behind such standardization were psychological and not scientific motives; these motives, in turn, had unscientific consequences, *including* the fact that "This creature the objectivist prefers to call the subject, so overlooking the mild inconsistency between having subjects and rejecting with phobic scorn everything 'subjective'" (Bentley, 1929, p. 682). Bentley astutely detected how these modern experimentalists

harbored not only some unacknowledged self-attributes but also other features of the subject, ones at odds with subject's purported role as routine producers of psychological data. Alongside the belief that (largely interchangeable) naïve or untrained subjects produce objects for analysis, objects that are scientifically superior to those of introspectors, emerged a sense that they are challenging, risky, and even dangerous. Subjects are untrustworthy beings ever prone to deceiving or fooling the experimenter, misinterpreting the experimental commands, or otherwise undermining the experiment. Prior to adopting this new psychology of the subject, psychologists who relied on the subject's (also called observer or reactant) observation took neither the subjects nor the experimenters to be infallible reporters without attentional or cognitive error. However, these psychologists expressed confidence that such problems could be eliminated, typically through training of the subject or skillful interventions by the experimenter. Charles Judd confidently held that "The untrained observer has variations in excessive degree because be is easily distracted. He does not know how to give himself up to the observation of what is offered; be begins to speculate about bis error. He may have chosen an experience so foreign to his ordinary life that its very newness disturbs him. As he becomes more accustomed to experimental work, these disturbances tend to disappear" (Judd, 1907, p. 8; see also Foster, 1923; Titchener, 1902). Carl Seashore believed it possible for the subject to "Be Impartial" and "not self-centered (Seashore, 1908, p. xi).

Most psychologists, however, were or became less confident and undertook what was to be generations' long development of methodological procedures and protocols that specifically averted or contained subjects' unruliness, irrationality, or duplicity—a triad of experimental dangers. Experimental researchers devised means to avoid dependence on subjects' fallible and possibly devious self-reports: these included hiding the intention of the experiment from subjects, selecting subjects' who were unlikely to apprehend their intent, and eliminating subjects' ability to respond to experimental stimuli in ways that complicated the desired form of experimental data.

Subjects were not the only dangers in the laboratory: experimenters, too, were found to have problematic features that risked their objective selves (Morawski, 1996), although these self-features were only infrequently examined in scientific discourse. Proper training of experimenters was generally believed to control such problematic features, although eventually double-blind techniques were introduced to contain experimenters' non-objective attributes and actions.

How do we understand these scientific selves that emerged simultaneously and coexisted throughout the remainder of the century? What does it mean that psychologists routinely subscribed to these two types of experimental subjects? From where does the other, more vexing facets of subject and experimenter's selves originate? Some answers to these questions can be found in histories of standardization that describe psychologists' embrace of techno-scientific ideals as a means to generate useful knowledge for regulating individuals and institutions as well as producing efficient and interchangeable products. These histories show how psychologists substituted naïve for trained subjects in order to produce systematic knowledge about classes of people, knowledge that could be utilized by teachers and bureaucrats (for instance, Danziger, 1990; Rose, 1990). Historical studies reveal, too, psychologists' aesthetic appreciation of the techno-scientific ideals of standardization and uniformity (Coon, 1993). However, they do not tell us much about the "excess" or double identities of scientific selves and the psychological attributes circulating through the methodological mandates.

The complexity of the experimental selves that materialized in standardized laboratory methods and persists in contemporary experimental psychology is not examined in standardization histories. The evolution of these selves in the early 20th century, I propose, involved at once psychological and epistemic struggles and coincided with wider cultural struggles about the self, autonomy, and agency in what was perceived to be an increasingly industrialized, de-individualized world. The dialectics of these experimental roles took shape via tensions within modernity, notably tensions of authenticity versus artifice (or the real and the artificial). In the modernity of advanced industrial culture, psychological subjectivity was a ubiquitous notion, an ever presence that architectural historian Mark Jarzombek (2000) has described as the "everywhereness" of the psychological in Western popular culture (p. 12). Many educated Americans, exemplified by psychologist Gordon Allport, nervously contemplated the dehumanization brought by the modern emphasis on self-performance: the culture's plentiful invitations to role taking with their implications for free play of the self pushed against the venerated idea of an authentic self. In historian Ian Nicholson's words, moderns "were fascinated by their subjective experience, and they possessed a heightened awareness of their own transformative potential" (Nicholson, 2003, p. 38). Allport dramatically portrayed modernism's psychological dilemmas in a diary account of his graduate studies at Harvard: "Would you believe it if I told you that for eight hours to-day I have actually been administering monotonous intelligence tests to Portuguese, Lithuanian, Negro, and other miscellaneous children in a public school ...? I felt between a drained out school-marm and a relentless scientist who classifies, indexes ever, uses

a microscope and tweezers. But that I did, and shall continue for moons to come" (Nicholson, p. 75).

In a culture of modernism that advanced psychological notions of the subjectivity of an autonomous ego, the psychological was regulated and validated by the discipline of scientific psychology, but it is also the case that the culturally generated psychological permeated and influenced the science's core constructs. Jarzombek (2000) found in the psychology attending 20th-century art and architecture that "Psychologizing discourses outfox the very science that grounds its principles" (p. 31). Modernism's psychological discourse infused the very construction of experimentation in early 20th century psychology just as that discipline was undertaking scientific codification of subjects. Exploring these dynamic and reflexive iterations of psychological subjectivities—both in and outside the laboratory—is essential to understanding the aforementioned dualities and inconsistencies of the experimental selves that were being articulated in those laboratories.

The urgent drive to routinize experimental roles, despite responses like Allport's lament of the monotony of experimentation, depended on recognition of disorderly if more genuinely dynamic human selves. That is, the very standardized experimental selves were sustained through a sometimes uncomfortable regard of other features of these selves. In a multiple operation involving projection and compensation, the E and S were devised to reflect a tenuous difference, a bifurcation of psychological agents that was assumed to be necessary to obtain objectivity. The "unstandardized" or excess attributes of these experimental actors likewise rehearsed the psychological dialectics and complications of modernity: The roles compensated for the amoral, monotonous depersonalized laboratory roles and reaffirmed (in a circular fashion) the presumed differences. Experimental psychology thus simultaneously acknowledged the modern psyche and aimed to name and govern that psychology for societal as well as scientific ends. Even when Robert Yerkes still defined psychology as a "subjective science," for instance, he asserted the cultural power of experimental psychology, urging, "The least that any of us can do is to learn to observe psychological processes.... This much we owe to ourselves as educated members of civilized races" (Yerkes, 1911, p. 13).

The traversing and looping of the psychological across cultural lines of science, literature, aesthetics, popular media, and commerce demand historiographical work. Their dynamics invite interrogation of subjectivity discourses beyond those of experimental reports, and this chapter introduces such an investigation. The chapter first excavates the dualities of experimenter and subject roles, using case examples that focus on the location, rhetoric, and hybridizations of these selves. Second, the ascribed attributes of the experimental actors are shown to connect with the larger cultural preoccupation with the psychological, and attributes of these selves can be mapped onto what can be called "axes of difference" and hierarchies of knowing. These connections are evidenced in the correspondences between the epistemic and methodological creeds of experimentation and the psychological premises, structures, and ambitions of realist fiction.

## MAPPING HUMAN KINDS THROUGH PSYCHOLOGY'S SCIE NTIFIC SELVES

In his 1890 introductory textbook, Principles of Psychology, William James cautioned experimenters about the "Psychologist's Fallacy," the unscientific tendency for the psychologist to assume that the perceiver knows his or her thoughts the way the psychologist knows them. In 1933, Saul Rosenzweig issued another warning of the experimenter's psychological assumptions about experimental participants. Rosenzweig delineated numerous unacknowledged psychological processes beyond those that are explicitly hypothesized in the experiment; in other words, experimental subjects are psychologically more present and cognitively complex than the laboratory methods presume. The two admonitions, issued 40 years apart, raise concerns about largely unarticulated psychological complexities in laboratory activities, yet these very critiques also anxiously affirm the need for regulated conceptions of experimenter and subject (Morawski, 2005). Looking more closely at experimenters' writings about laboratory participants makes evident that anxieties about psychological reflexivity (Woolgar, 1988) underlie both the standardized version of experimental selves and another version looming in those statements; each version intimates a cultural legacy more extensive than the laboratory's history.

The new experimental subject was never more accurately or vibrantly described than he or she was by John Dashiell:

But by no means are all the problems of psychology concerned with a person's (the "subjects") direct experience; and in the degree that they are problems of his efficiency, of his reactions or reaction tendencies, etc., they are a matter of observation less to him and more to the experimenter. In other words, in many contemporary lines of psychological investigation the so-called "observer" does no observing! (Dashiell, 1929, p. 550)

And,

In like manner for the psychological investigator the self-observations of the subject are of only auxiliary value. Perhaps the subject states that he sees orange-red; he may really be red-green colorblind. He may report himself as tired, only to show, when put to a test, no decrement in efficiency at all. He may sincerely insist that he is the prey to no embarrassment, resentment, or other agitation, while at the same time tell tale evidences may be appearing on the experimenter's dials. He may conscientiously give one reason for his conduct toward a person, whereas careful analysis by laboratory technique may bring to light another and quite different motive—which he himself may ultimately recognize and acknowledge. (Dashiell, 1928, p. 12)

Trained in the ethos of Dashiell's conception of the subject, a conception that soon was to become dominant, psychologist Neville Sanford looked back (at midcentury) to a seemingly distant era when a different human kind entered the laboratory. As Sanford described the pre-subject, Wundtian kinds: "In the experiments that got started in Wundt's laboratory the person whom today we are likely to call a 'subject' was called an 'observer.' These observers were real live persons, key figures in the interaction, who could be counted on to take responsibility for their actions, to tell the truth, to keep their promises" (Sanford guoted in Scheibe, 1988, p. 59). It warrants note that Sanford's nostalgia for a time of authentic people, honest and reliable beings, is reported at a moment of modernism's crisis when many American psychologists, apprehending an artifactual and inhumane atmosphere in culture and science, turned toward humanism for alternative versions of human nature. However, if one were to pause at Sanford's depiction of the subjects and ask how these subjects came into being-ask what transpired from the time of the Wundtian laboratories to the mid-20th century ---it would be necessary to search beyond arguments such as Dashiell's in order to locate these irresponsible, untrustworthy and otherwise lacking beings. However bewildering the modern S, and whatever perfidies he or she was inclined to commit, this S comprised a distinct human kind, one purposely described by experimental psychologists who were trying to replace the Wundtian observer.

The *S* described in Dashiell's proposal differs substantially from *E*, and their differences can be visualized as lying on several axes. First of these axes is the obvious one of rationality: the rational self-knower occupies one end of the axis and the not-so-rational, at times even wildly irrational, knower occupies the other. Another axis has on its one end, authenticity or veracity of self and at the other, inauthenticity or performance and artifice. A final axis of consciousness extends from hidden or deep (unconscious) to visible and apparent (conscious). These three axes—rational–nonrational, authentic–artifice, and conscious–uncon-

scious—were laid on a tacit, hierarchical grid of (kinds of) persons that had been centuries in the making but was refined and legitimated through the modern sciences. Mirroring dominant cultural typologies of persons, the hierarchy categorized and ranked beings according to the social distinctions of race, religion, ethnicity, sex, class, educational attainment, and age. Animals, children, the uneducated, the non-White or "primitive," and the mentally impaired occupied the lower echelons; the college psychology student occupied a high position on the grid. The grid's segments signaled psychological differences; for instance, kinds of persons placed in the lower echelons were considered less likely to deceive because they were more honest and also were less likely to comprehend the nature of the experiment, given their different consciousness (Morawski, 1997). This hierarchy is simply reflected in Mary Calkins' classification of scientific methods: "Introspective psychology is the study of one's own consciousness; and its immediate and dominant method is introspection. Comparative psychology is the stuff of other consciousness than one's own. The most important objects of its study are the conscious experience of animals, of children and of primitive men" (Calkins, 1901, p. 12). Likewise, in proposing means to control the psychological problems of the psychology experiment, Rosenzweig, although sensitive to the dynamic influence of the experimenter's race, gender, and religion, nevertheless readily ranked subjects according to which kinds were most "naïve," mainly children and "Unsophisticated adults-by which is meant adults who are not well educated, perhaps even below normal intelligence" (Rosenzweig, 1933, p. 346).

These axes of difference were not discovered in the laboratory any more than they were drawn from other psychologies, both informal and formal ones, of the early 20th century. Culturally circulated psychologies increasingly understood individuals to be performers, ad men or con men, at worst; they are ruler followers and multifaceted, fragmented "social" selves, in a more positive sense. The new psychoanalysis, although purportedly the sign of the devil in American experimental psychology, the *sine qua non* of the unscientific approach to human psyches, actually comprised a vital resource in psychology (Hornstein, 1992). Among other things psychoanalysis effectively differentiated authenticity from performance, the real from the posed. Psychoanalytic conceptions of the analyst's stance likewise became instrumental to asserting differences between the consciousness of the experimenters and subjects. Echoing the language of analysis, psychologists increasingly made reference to the inauthenticity, nonrationality, and faulty consciousness of ordinary beings. Designers of tests and measures engaged in complex reasoning about the subject's capacities, and introduced increasingly complicated procedures to divert, eliminate, or otherwise control these capacities.

Pressey and Pressey's (1919) invention of "cross-out" tests (for intelligence and personality) bears such complex detective work. Criticizing standardization as "artificial and unnatural," they alternatively advocated more "natural" methods such as crossing out: "To cross out a mistake is a very natural thing to do. It is a child's own method.... From the subject's point of view the task presented in the tests is thus not at all unreasonable" (Pressey & Pressey, 1919, p. 138). Laboratory precautions ranging from the recruitment of naïve subjects to techniques of secrecy and deception were introduced precisely to control these beings. Common sense and cultural knowledge informed psychologists about their subjects and, consequently, guided their experimental practices. These cultural understandings reverberate with anxieties of the modern age and reveal how the struggles of scientific selves resemble tensions common to an elite class of writers, artists, and intellectuals.

Two psychologies in particular provided phenomenal and discursive material for claiming differences both between experimenter and subject and between experimenter and his/her lower-self. The modern S and E were informed by a psychology of performative role taking sort (the social veneer of individual selves) and another of psychoanalytic or depth psychology. During the period 1900 to the 1930s, psychologists drew on performative as well as psychoanalytic models to introduce the scientific persona of E and S. They designed technical operations-experimental procedures-that secured these persona while also calming their own anxieties about themselves and the reality of these different beings. Such techniques for clarifying and fixing the attributes of E and S greatly benefited the laboratory. Most importantly, the techniques structured relations of research whereby experimenter and subject could perform their respective duties without contamination, contest, or ambiguity: the experimenter would avoid confusing his or her standpoint with the subjects (James' Psychologist's Fallacy) and the subject would restrain or be restrained from displaying any democratic, civic, moral or other agenic actions (Rosenzweig's psychologizing subject).

Several examples can serve to illustrate psychologists' anxious acknowledgment of complex subjectivities and their consequent technical inventions to curb, remove, or hide such complexity. Floyd and Gordon Allport's (1921) empirical study of personality constitutes a classic contribution to the development of personality assessment within experimental psychology; their study grappled with the new subject. The resultant paper establishes the rationale, content, and scoring procedures for an innovative personality inventory. Typical of

the emerging rhetoric of scientific psychological reports, Allport and Allport's text began by admonishing earlier scientific efforts to investigate such personality attributes as "truthfulness, neatness, conscientiousness, loyalty, perseverance, tactfulness, and the like" (Allport & Allport, 1921, p. 8). These attributes, the authors' contended, have been inaccurately measured: they were distorted by the peculiarities of the observational situation. More importantly, measurement of these attributes was contaminated by the attributes' superficiality: they fail to detect "more pervasive, more deeply lying, and far less evident, tendencies of the personality" (1921, p. 8). Take their illustration: "Neatness, for example, may be due to such diverse causes as (1) the persistence of the parental ideal, and the passive attitude toward parental authority, (2) a phobia toward dirt, arising as a defense reaction against infantile habits, (3) the compensatory striving of a plainlooking girl to make herself attractive in all ways possible, (4) an extreme sensitivity to the social behavior and attitudes of one's fellows. Thus, we see that the deeper and more pervasive tendencies are of far greater importance than the superficial attributes that themselves are merely the product of more fundamental tendencies in their play on the particular environment" (1921, p. 8). Asserting such a deeper subjectivity makes evident an indebtedness to Freud and psychoanalysis in general (see also Morawski, 2005; Nicholson, 2003).

Moreover, these notions of the subject informed research method as well as theory: endowed with a deeper, less readily accessible and less trustworthy self, the subject in the laboratory must be treated with caution and, unavoidably, it would seem, with manipulative, even deceptive techniques. Allport and Allport (1921) argued that methods must be designed in accord with the assumption that subjects *cannot* be trusted. To use self-report techniques and then "To ask the subject whether he is honest, moral, thoughtful, literary in tastes, etc. or to analyze himself by inward searching, is only to encounter the obstacles of carelessness, rationalization, and defense reactions. The questions asked should be in terms of what the subject actually does in his daily life; let the subject judge himself as another person might—by his habitual behavior" (p. 11). Even with such methodological prophylactics against deceit and concealment, methodological protections that soon were to involve routine deceit on the experimenter's part, the subject's hidden self still posed problems. For instance, the Allports' noted, "A general difficulty lies in the impossibility of knowing whether a certain negative reaction in a test is due to a repression or to an actual absence of that element in the individual concerned. This opposition between Freudian and non-Freudian reactions pervades a great deal of the work in personality study, and renders many apparently ingenious tests almost impossible to interpret" (1921, p. 13). The subject is a bifurcated self, able to more or less freely express one or another self in an experimental situation unless one self or part of one self is constrained by experimental protocols.

Despite their awareness of so-called "Freudian reactions" and recommended techniques for control, the Allports wavered in their trust of the subject. In one section of their personality scale (approximating a projective measure), the subject was "asked to react in a spontaneous, emotional manner to these situations, and to write down immediately the way in which he would conduct himself if faced with the conditions described" (1921, p. 14). Here the two psychologists, unlike many subsequent researchers, displayed a measure of experimental trust, albeit a self-doubting trust for they added "This type of test, to be sure, presupposes the co-operation of the subjects, and an interest on the part of each in actually analyzing and truthfully presenting his own type of behavior rather than in merely making a good impression" (1921, p. 14). Allport and Allport extended this optimistic if noteworthy trust in another section of the test. In the "Insight and Self-Evaluation" section, they postulated that some subjects can see themselves honestly: in other words, some subjects can see themselves as experimental psychologists do. "A person of good insight," they wrote, "is not likely to be deceived by his own rationalization and by the self-extenuation of his acts by refusing to recognize their motives" (1921, p. 19). In fact, human improvement depends on this psychological capacity for "The process of reformation of a criminal or of character improvement in the socialized individual is possible only when one's personality is revealed to one's own eyes" (1921, p. 19). Subjects' insight is literally measured in terms of the psychologist's insight or standpoint: a subject is said to have insight to the extent that his self-rating corresponds with the statistical average of the expert raters' rating of his personality. Here the psychologist's fallacy-that the psychologist takes the subject's mental state to be like his/hers—is inverted and transvalued, rendering the subject's approximation to the psychologist's mental state the ideal. Given the wariness of test makers, and the technical devices they crafted to detect and/or eliminate subjects' so called defense reactions (see also Rosenzweig, 1934), it is not surprising that after several decades these same test constructors eventually found themselves designing measures of test anxiety (Goldberg, 1971).

As suspicious of the subjects' shifting self as were the Allports, Lewis Terman and Catherine Cox Miles (1936), were more so. Engaged during the 1920s and 1930s in a massive project to measure masculinity and femininity, Terman and Miles chided other researchers for their naïvete regarding the experimental subject. Addressing psychologists' practice of honestly reporting the specific aspect of psychology being measured in an inventory, Terman and Miles detected a gigantic opportunity for subjects' subterfuge should they be told what the study was measuring. "One would not need to be a psychologist," they wrote, "to be able to score as fair-minded on the Watson test, extroverted on the Laird C2, or self-sufficient on the Bernreuter inventory, provided one know what the test was intended to measure." Psychologists needed to "keep the subject in the dark with respect to the purpose of the test" (Terman & Miles, 1936, p. 77).

To support their admonitions, Terman and Miles conducted an experiment where the subjects were told that their test assessed masculinity and femininity, and they were instructed to respond either as masculine or as feminine as possible. The results confirmed their suspicions of the subject's duplicity as the male out scored the female subjects on femininity scores and the female out scored the male subjects on the masculinity scores. Such "test faking" undoubtedly confirmed, too, both the performative, role-taking capacities of otherwise ordinary subjects and also the need for the experimenter's surveillance. As Woodworth (1945) described the problem, "To control the external situation is a matter of laboratory technique for example, a dark room may be needed and a piece of apparatus for exposing a picture exactly 1/10 of an second. But how shall *E* control the conditions that lie within *O*?" (Woodworth, 1945, pp. 11–12). He then suggested that such control requires deception.

Personality research might be seen as an obvious site to find fragments of a psychoanalytic subjectivity. The situation, however, is no different when we turn to the more conventional experimental studies of mental processes and behavior (studies of learning, forgetting, judgment and the like). Although these latter studies rarely mention psychoanalysis proper, reference to unconscious motives nevertheless is made. More often, evidence is found for the modern trickster or ad man persona that parallels the discourse of play, disguise and management of surface appearances in the early 20th-century culture of consumption (Lears, 1989, 1991; Pfister, 1997). In textbooks, references to the everyday management of appearance, along with a less explicit signaling of unconscious processes, are sometimes made with literary flare, whereas in laboratory reports they appear in experimentalist shorthand. Textbook authors like John Dashiell (1928) liberally invoked the advertiser's or salesman's desire for control, as well as the individual's yearning for self-control: "What boy, practicing stance and grip, has not given a little thought to his future possibilities in the major leagues, and what girl has not at some time attentively scrutinized her costuming, her speech, or her special little proficiencies with a view to making an effective impression?" Acknowledging these human ambitions and simultaneously criticizing them, ironically associating such observations and self-observations with being a "good psychologist," researchers essentially found them faulty because they are *merely* about appearances, not reality.

With heightened caution about the overt-covert and the apparent-real dimensions of personhood, experimenters in the 1920s moved toward more systematic detection (or presuming) subjects' resistances and, in turn, regulated them through apprehending and intervening experimental techniques-through laboratory controls. Introduced were a variety of such techniques for apprehending subterfuge and managing the so-called sophisticated subject. Deception was the most common tactic. Experimenters began by deceiving the subject about the real intent of the study or the actual operative variables and, later, about their very performance on initial portions of the experiment. Experimenters even trained subjects to be sophisticated and conniving. A 1925 experiment compared the performance of naïve subjects with others trained to be "sophisticated": they were made more sophisticated by learning experimental protocols along with tactics for deception-by learning the ways a "guilty person might appear innocent" (Strumberg, 1925, p. 95). This play of deception found that experimenters could not readily detect so-called "crimes" committed by the sophisticated subjects. As the experimenter woefully cautioned, "Could the sophisticated subjects not only prevent detection of the crime, but also prevent detection of their sophistication" (1925, p. 95)? Calling the psychological effects of experimentation either an "experimental attitude" or "experimental posture" (terms that both convey the performative and resistance), some researchers actually conducted experiments to test their concerns about these very psychological phenomena (see Anderson, 1930; Fernberger, 1914).

During the 1920s, psychologists also grew increasingly uneasy about their own hidden selves, voicing concern that the heated debates over contending theories actually indicated their own emotionality and irrationality. In this atmosphere, E. G. Boring (1929), a staunch experimentalist, proposed that heeding psychologists' own split selves is scientifically beneficial. Advocating that psychologists "cultivate dissociation," he announced that "Too much has been said in favor of the integration of the personality, and too little in favor of dissociation. The scientist needs to be a dual personality" (p. 120).

## LITERARY PLACES, PSYCHOLOGICAL POSITIONS

In drawing on local psychologies, both professional and indigenous ones, psychologists were doubly reflexive, at once invoking scientific,

technical, and cultural concepts to identify the occupants of experiments. They simultaneously labored to differentiate these occupants, at least partly in response to their sense of their own fallibility as human observers. Their reflexive entanglements represent unavoidable complications of a human science whose objects are the self-same creatures as the observers (Flanagan, 1981; Morawski, 1992; Smith, 1997). Viewed from another perspective, psychologists' efforts to decipher experimental participants belong to a larger history of scientific vision: their efforts signal what we know as the objective perspective that (paradoxically) assumes some specific observational position while locating the perceiver outside the space. According to Evelyn Keller, that scientific vision "is a history of erasure, of the progressive disembodiment and dislocation of the scientific observer and author that ultimately became sufficiently complete to permit the comprehensive and apparently subjectless representation of the world that emerges today, in the late 20th century" (1992, p. 138). Subjectless representation was precisely what Yerkes desired when he emphatically urged psychologists to create: "devices that shall free us from the observation imperfections (sic) of the experimenter," enabling a freeing of scientists' attention in order to control urgent matters (Yerkes, 1915, p. 258).

The working psychologies of E and S devised in the early decades of that century made possible the smooth functioning of controlled experiments and heightened psychological confidence in those experiments. Their manufacture comprises a peculiar chapter in the emergence of "subjectless representation" within scientific epistemology. By delineating and refining differences between experimenters and their objects of analysis, psychologists could impose rules of conduct, limit spontaneity and transgressions, and ultimately be sole witnesses to the real and not real, the authentic and superficial, in the experimental situation. The anxieties evident in psychologists' refinements of scientific selves also owe much to the culture of modernism. The distinct human kinds of E and S, each endowed with complicated, bifurcated if not internally strained personalities, resemble other depictions of subjectivity at this cultural moment.

The rise of "realism" in art and intellectual life, with eventual modifications in "naturalism" and their ultimate undoing in the immediately subsequent modernist turn, reverberate in the dense personas of *E* and *S*. Intertwined intellectually, socially, and interpersonally with scientific thought (Klein, 1932; Taylor, 1969), literary realism "offered coherent representation of a new social order that seemed increasingly inaccessible and fragmented" (Shi, 1995, p. 100). In Henry James' words, realism "represents to my perception the things we cannot possibly *not* know, sooner or later, in one way or another" (quoted in Shi, 1995, p. 120). Some realists, of course, comprehended too, the distinction between *duplicating* and *representing* the world, and naturalists or "savage realists" aimed not simply to reveal the world but to see the primitive, irrational, and determined features of humanity. Modernism, fomenting at the dawn of the new century, embraced not some superior vision but "perceived" reality: modernism began acknowledging illusion, the made up, the pretend, and pretense as well as the mobility and mutability of subjectivity. The modernist edict that "reality is not always, in fact, what is seen" challenged just as it corroborated scientific vision. So, too, is modernism's very dependence on the autonomous subject who experiences and discerns (Jarzombek, 2000).

The work of literary realists of the period reveals the variations and contradictions available in then current constructs of subjectivity: This period of transitional worldviews and "person views" generated varied ideas about human nature. The ingredients available to describe personhood included rational (realist observational stance), not rational (psychoanalytic models), natural (evolutionary theory), mechanical (new biology and engineering), artifice (culture of consumption), fragmented (psychoanalysis and criticisms of modernity), and as emergent (Bergsonian idealism). Alongside writers, artists, and social commentators, psychologists confronted a plethora of choices and contradictions in understanding the subject positions of their laboratory beings.

The variations of subjectivity appearing in the work of literary critic and writer William Dean Howells bear some striking resemblances to the subjectivities being described and inscribed by experimental psychologists. Adopting the unmarked subject standpoint of an "outsider," Howells held that the realist writer is endowed with "critical faculty" to discern conscious and unconscious life processes. As literary scholar Henry Wonham described Howells' authorial stance, "In order to promote the psychological well-being of his readers and himself, the writer must 'be constantly in the position of an outsider studying carefully his effects.' He must learn to juggle conscious and unconscious material, maintaining 'self-possession and self-control' by treating suppressed anxieties 'as if they were alien'" (Wonham, 1995, p. 704). This authorial stance, described by Howells himself as that of a "psychological juggler," served as the vantage point for objective writing. Howells believed authors should retain "self-control" and he disliked any personality of the author appearing in his or her writing (quoted in Peyser, 1992, p. 24). By contrast, his fictional characters cannot occupy such an objective purchase: they have fragmented selves, (those "other selves" as he once described them), shifting consciousness, and internal tensions (pp. 34-35). Social regulations along with the will, taken to be a restraining mechanism, are embraced as means of holding the self together, containing those "other selves" and thus averting moral, social, and psychological disaster.

Howells' subjectivity differs from those of both Henry and William James, who tended toward celebrating the expansiveness of consciousness (Peyser, 1992, p. 34-5). However, not all of Howells' characters have the capacity to restrain consciousness or control (even partially) the fragments of self. His fictional representations of subjectivity contain another version of selves: the Black characters whose subjectivity is lack or blandness, without adequate critical vision, artificial, and driven by primitive impulses of the unconscious. Howells' "therapeutic objectification" projected onto the Black characters his own psychological difficulties and anxieties about self-control, morality, and authenticity. In analyzing the characters in Howells' fiction, Wonham found that "the savages, barbarians, and children who appear with surprising frequency in his critical prose offer an image of the mind prior to the sorting out of individual identity that becomes possible through the realist's power of objectification, his ability to project unwanted aspects of the self outward and to treat his fears 'as if they were alien'" (Wonham, 1995, p. 714).

Literary analysts have explained Howells' conceptions of the ideal author as one who stands beyond personality-beyond his own self. This abstract authorial self along with his "alien others," or others who cannot fully stand outside their personalities, constitute his notable realist position. Some scholars have interpreted this stark realism as a psychological defense: Howells is understood as defensively responding not only to the social upheaval after the Civil War but also to his own personal life struggles. His realism is defensive, composed through classic psychic projections and splitting. As John Crowley described it, "the psychological juggler, unlike his circus counterpart, did not allow the right hand to know what the left hand was doing: as a writer, Howells was given to splitting off conscious control from unconscious inspiration and allowing his characters to arise as mysterious strangers from his own unacknowledged depths" (Crowley, 1983, p. 49; see also Delbanco, 1993). In the swirling mix of notions about the self and subjectivity, Howells engaged his own anxieties to craft several different, although certainly interdependent selves, ranging from the detached observer to those with less veridical access to will and unification of self.

The struggles and anxieties of subjectivity, internal to individuals as well as cultural, that are detected in early 20th-century fiction illuminates psychologists' scientific project of fashioning two distinct scientific selves. These latter types of selves had a distinctive feature: they are internally double beings, at times capable of either suppressing or expressing unwanted tendencies. They were held to be capable of acting with abandon or cunning or with controlled restraint and proper (expected) conduct. At the cusp of the aesthetic movements of realism/ naturalism and modernism, psychologists' two selves—the *E* and *S* acquired their now orthodox form through a play of difference. The distinctly realist standpoint accorded the experimenter resembles the realist writer's gaze on a social world of confused characters, and the complex, primitive if not artificial self accorded the subjects paralleled realist projects that presaged modernist subjectivity. The triumph of modernism, with its paradoxical free self and criticality of the very possibility of that self, and with growing emphasis on self-constructions and experience undeniably troubled the privileged purchase of experimentalist. In the end, such modernist apprehensions trouble the objective stance precisely because the very problematics raised by modernism were acknowledged, incorporated, and sometimes reified in the dual versions of selves in experimentation.

Both constellations of selves were produced through psychological (enjoining the moral and epistemic) reflexivity on the part of their producers. Just as Howells drew on the psychology of the day to explain his writerly style, so experimentalists used the psychologies of a dawning modernism to examine the psychological experiment. Both the literary and the techno-scientific productions of selves occasionally endowed these beings with common cultural markers such as race and gender; as they did so they confirmed or affirmed the social hierarchies of urban culture. Finally, both productions appear to have been therapeutic for their creators as well as consumers. Regarding scientific psychology, the laboratory inhabited by *E*, with his anxieties as well as self-control and objectivity, and *S*, with her fragmented, confused if not subversive self, contain potential therapeutic outcomes for the scientist as well as society.

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- 148 뷧 MORAWSKI
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