

Epistemological Dizziness: Subject and Experimenter in the Cold War Psychology Laboratory¹

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*Above all, "observation" means that special care is being taken: the root of meaning of the word is not just "to See", but "to watch over". The scientist observes his data with the tireless passion of an anxious mother. ` (A. Kaplan, *The Conduct of Inquiry*, 1964)*

*In investigating persons there are advantages to being a person...
(K.M. Colby, *An Introduction to Psychoanalytic Research*, 1960)*

In *Opening Skinner's Box*, Lauren Slater revisits what are taken as the "great psychological experiments of the twentieth century". As one would expect, the visit includes Stanley Milgram's sensational studies of obedience conducted in the early 1960s. A chapter devoted to his experiments offers an emphatic meditation on the "yes, you" implications that all of us might have harmed the Learner and, yet, from the experiment all of us also learn that we might act otherwise. A gloss of the methodological, theoretical, and ethical criticisms of the obedience studies is punctuated by interviews with two of Milgram's subjects, interviews conducted some forty years after the experimental events. One of these research subjects was defiant: he refused to obey experimental instructions. The other was obedient: he dutifully followed instructions by pushing the punishment lever, when the learner erred, ultimately "to the end of the shock

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board.”² This subject, as Slater disclosed, was at the time of his participation a 23 year-old male who was devastated by the end of first homosexual relation (his lover having left him for a girl). The subject, “Jacob,” was “struggling with a burgeoning homosexual identity.” Angry and “self-loathing,” Jacob appeared at “Milgram’s lab just three days after the breakup, his appendages hurting and bruised, semen-sticky hands.”³ The experiment made Jacob confront his own compliant tendencies, particularly his compliance with a homophobic culture as a closeted homosexual, and enabled him to abide less by authority in his subsequent life. Jacob’s story exemplifies Slater’s message that Milgram’s obedience project had the significant if “ironic effect of making his subjects, at least some of them, less obedient”. This quintessential study entails “an experiment so potent it does not describe or demonstrate, so much as detonate, a kind of social psychology equivalent of the atom bomb, only this time in the service of creation, not destruction...”⁴

Slater’s telling rehearses just as it relies upon two generally unstated notions about psychology experiments. First, the account assumes that experiments, or knowledge attained from experiments, change us, sometimes substantively. Such an effect of experimental knowledge is known among experimental psychologists as the “enlightenment effect.” The second and related notion is seldom acknowledged: full understanding of the psychology of an experiment requires yet another story. The obedience observed, recorded, and explained in Milgram’s study compels a further account. Therefore, an additional psychological explanation is needed in order to make full sense of the findings of the experiment. Such re-accounting of experiments’ psychology is not unique and to some extent accords with practices of *post hoc*

² Lauren Slater, *Opening Skinner's Box: Great Psychological Experiments of the Twentieth Century* (New York: W.W. Norton & Company, 2004).

³ Ibid.59

⁴ Ibid. 62.

(oftentimes counter) reasoning about experiments.⁵ In this particular retrospective reasoning, experimental figurings of obedience are re-figured through a description of the self-hate and rage of closeted homosexuality in early 1960s America, embellished with memories of vestigial body fluids and excessive sex acts. Readers are invited to comprehend the psychology of obedience in the context of post- gay liberation culture and, accordingly, are offered a psychology of the compulsion of physical needs, struggles with sexual identity, and biological fixedness of sexual kinds, psychic costs of sexual substitutions, and a normalizing narrative of homosexuality. Making sense of Milgram's most obedient subjects in the early 21st century, it seems, requires supplementary psychological explanation.

This recounting of a forty-year old experiment illustrates, albeit perhaps with a certain mundaneness, an essential condition in the human sciences where the subject and object are of a kind, the human kind. It is around this condition that Roger Smith orients his extensive historical survey of the human sciences, noting, "There is something disturbingly paradoxical about a science that has for its subject the agent that creates the science." Even the act of standing back to observe human conduct "is a way of being human that, in turn, some other person will be able to study."⁶ The way of being human observed and inscribed in Milgram's obedience

⁵ Psychologists unpersuaded by the explanation given for an experimental outcome routinely offer alternative explanations and sometimes submitting their alternative account to empirical test. In addition, experiments frequently acquire different explanations over time, usually in accordance with a then dominant theory or construct. For an illustration of such ongoing reinterpretations see B. Harris, "Whatever Happened to Little Albert?" *American Psychologist* 32, no. 2 (1979). On the evolving interpretations of Milgram's experiments see H. J. Stam, Lubek, I., & Radtke, H. L., "Repopulating Social Psychology Texts: Disembodied "Subjects" and Embodied Subjectivity," in *Reconstructing the Psychological Subject: Bodies, Practices, and Technologies*, ed. B. M. & Shotter Bayer, J. (Thousand Oaks, CA: SAGE Publications, 1998). For a sympathetic chronicle of Milgram's work, see T. Blass, *The Man Who Shocked the World: The Life and Legacy of Stanley Milgram* (New York: Basic Books, 2004).

⁶ Roger R. Smith, *The History of the Human Sciences* (New York: W. W. Norton and Company, 1997). , p. 13.

experiments becomes empirical material for acting differently and, eventually, for substantively rethinking this “way of being human.” The paradox of the S-O relation quietly but unremittingly haunts human scientists’ ambitions for objectivity: we aspire to step outside ourselves to observe, yet our reflections and subsequent capacity to act differently suggests that the very act of observation changes us. Whenever human scientists adopt experimentation, adopting practices from kin in the physical and life sciences, this paradox either recedes with promises of objectivity, mechanical and aperspectival, although such borrowing defers rather than eliminates the “agentic subjects responsible” for the resulting experimental representations.⁷ Leaving aside questions of whether or not such reflexivity is unique to the human sciences or whether it is a methodological or epistemic condition, these dynamics of the human sciences pose challenges for practitioners and historians of the human sciences alike.⁸

Experimental psychology -- a discipline expressly developed to generate objective, scientific knowledge about human behavior, thought, and experience through controlled experiments -- might reasonably be seen as an enterprise challenged by reflexivity. How do experimenters stand outside or beyond themselves as human kinds to generate knowledge that is objective -- and how do they produce knowledge that is not subjective or otherwise infused with human understandings of human subjectivity? For their part, how do subjects engage or comply with experimenters’ understanding of them as “scientific objects” and not autonomous, independent

⁷E. F. Keller, "The Paradox of Scientific Subjectivity," in *Rethinking Objectivity*, ed. A. Megill (Durham: Duke University Press, 1994), p. 34.

⁸ The nature of reflexivity in the human sciences is the topic of a recent issue of *History of the Human Sciences*. On the operation of reflexivity in the natural as well as human sciences face reflexivity, see Roger Smith’s essay in that issue: R. Smith, "Does Reflexivity Separate the Human Sciences from the Natural Sciences?" *History of the Human Sciences* 18, no. 4 (2005). For a claim that reflexivity is an unuseful term in the human sciences, see M. Lynch, "Against Reflexivity as an Academic Virtue and Source of Privileged Knowledge," *Theory, Culture, and Society* 17, no. 3 (2000).

human kinds (as generally represented by experimenters themselves)? What subjectivity is disclosed through experimentation? What knowledge of self and other, of human kinds, enters into experimental subjectivity, into understanding human subjects as “scientific objects”?

Approaching these questions requires some consideration of nomenclature. In philosophical terms, the subject is taken as the agent of action, one who perceives (or has introspective access to experiences). Through the evolution of modern scientific epistemology, subjectivity has come to be understood as the antithesis of objectivity which, defined largely in negative relation to all things subjective; objectivity features the self-discipline and self-restraint requisite to eliminate “the mediating presence of the observer.”⁹ In late nineteenth-century introspection experiments, the experimenter was interchangeable with the object of observation: after thousands of practice trials, an investigator was trained to serve as either experimenter or observer who self reports Introspections. Both participants were taken to be objective observers, “subjects” in the classical philosophical sense.¹⁰ With introspection’s demise in the early twentieth century,

⁹ L. Daston, & Galison, P., "The Image of Objectivity," *Representations* 40 (1992). ,82. Daston and Galison traced the rise of notions of objectivity as the absence of subjectivity, and the concurrent development of agentless or “mechanical objectivity.” See also L. Daston, "Objectivity and the Escape from Perspective," *Social Studies of Science* 22 (1992). Richard Bernstein has examined the psychic and philosophical accomplishments of objectivity as it repairs anxieties of radical relativism; Susan Bordo and Evelyn Fox Keller have analyzed connections between conceptions of objectivity and modern masculinity; Theodore Porter has shown relations between the rising use of quantification, objectivity, and aspirations of democracy. R. J. Bernstein, *Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis* (Philadelphia: University of Pennsylvania Press, 1983); S. Bordo, *The Flight to Objectivity: Essays on Cartesianism and Culture* (Albany: State University of New York Press, 1987); E. F. Keller, *Reflections on Gender and Science* (New Haven: Yale University Press, 1985); T. M. Porter, "Objectivity as Standardization: The Rhetoric of Impersonality in Measurement, Statistics, and Cost-Benefit Analysis," in *Rethinking Objectivity*, ed. A. Megill (Durham: Duke University Press, 1994).

¹⁰ The standardization of the subject of introspection experiments is examined in D. Coon, "Standardizing the Subject: Experimental Psychologists, Introspection, and the Quest for a Technoscientific Ideal," *Technology and Culture* 34 (1993). Orneil Dror has explored the rise of understanding subjects as biological organisms in early twentieth century physiological

experimentation evolved toward a new subject-object configuration. In short course the experimenter/observer became known as “the experimenter” or “E”, and the scientific object who was an observer no longer was called the observer but, instead, the “subject” or “S” because, as it was argued, in many instances, “the so-called ‘observer’ does no observing.”¹¹ The experimenter makes objective observations, and the subject produces subjective responses (usually assumed not to be objective).

As this scientific language indicates, psychologists’ configuration of the scientific object, the subject, and the objective experimenter disregards the reflexivity-laden paradox of the human sciences and, therefore, sidesteps the very idea of substantively changing the subjects through scrutiny of them. It is this impressive accomplishment of studied disregard that motivates the question, What knowledge of self and other, of human kinds, enter into experimental subjectivity, into understanding human subjects as “scientific objects?”

Conventional histories of experimentation neglect the subject as scientific object. With mainly presentist aims, these histories chronicle advances in experimental techniques that have fostered objectivity and the production of scientific fact. More critically attentive to scientific practices, Foucauldian oriented histories consider how experiments have utilized prevalent administrative forms and consequently produced “administratively useful knowledge.” Experimenters borrowed arrangements of the classroom, hospital, and workplace, thus submitting subjects to certain forms of social power. This power was neither personal nor violent but, rather, “kind of

psychology. T. Dror, "The Scientific Image of Emotion: Experience and Technologies of Inscription," *Configurations* 7, no. 3 (1999).

¹¹ J. F. Dashiell, "Note on Use of the Term 'Observer'," *Psychological Review* 36 (1929). Experimenters used an array of resources to claim their objective observational position and their newly named “subjects” non-observing one. J. Morawski, “Scientific Selves: Discerning the Subject and Experimenter in Experimental Psychology in the U.S., 1900-1935.” In M. Asch, Ed. (in press).

impersonal power that Foucault has characterized as being based on ‘discipline’.¹² Such impersonal power is taken as a given, with a consequential disregard of the efforts, resources, and even failures to attain or maintain such relations of power.¹³ The scientific object is understood to be as a certain kind of subject, a subject of discipline.¹⁴

While these perspectives contribute to an understanding of human subjects as scientific objects in experimentation, they leave aside the paradox of the human sciences. Acknowledging the reflexivity, actual or possible, of human science inquiry necessitates appreciating the dynamics of scientific practices: the back and forth relay of information, bodies, techniques and customs between what is taken as “science’ and “culture” -- the “connectivity of science.”¹⁵ These dynamics are described in various ways: as the human science’s “double hermeneutic” by

¹² K. Danziger, *Constructing the Subject: Historical Origins of Psychological Research* (New York: Cambridge University Press, 1990). 10.

¹³ Emphases on “impersonal power” concede, however inadvertently, to the orthodox scientific view of experimenter and subject for such structural analyses of impersonal power attend mainly to public not private, impersonal not personal, static not dynamic, corporate not domestic dimensions of experimental life. Focus on uninterrogated “impersonal power” also tends to sideline the power produced through social hierarchies, notably class, gender and race. On this tendency in science studies, see Donna Haraway and Betty Bayer B. M. Bayer, "Critical Contact: Psychology, the Subject, and the Self," *Feminism & Psychology* 12, no. 4 (2002); B. M. Bayer, "On Cultural History as Transformation- or, What's the Matter with Psychology Anyway?" in *Rediscovering the History of Psychology: Essays Inspired by the Work of Kurt Danziger*, ed. Adrian C. Brock, Louw, Johann, & van Hoorn, Willem (New York: Kluwer Academic, 2004). Situated between conventional and Foucauldian histories are empirical studies which document, usually through quantitative analysis of published experimental reports, changes in subjects, experiments, and techniques.

¹⁴ Some of these historians view the human sciences as producing changes in the subject. See N. Rose, *Inventing Our Selves: Psychology, Power, and Personhood* (New York: Cambridge University Press, 1996). Their perspective often resembles humanist arguments that the kind of psychology produced (mechanistic, reductionist, determinist) is productive of a kind of psychological being. For examples, S. Koch, "Psychological Science Versus the Science-Humanism Antimony: Intimations of a Significant Science of Man," *American Psychologist* 16 (1961). A. MacIntyre, "How Psychology Makes Itself True- or False," in *A Century of Psychology as Science*, ed. S. Koch, & Leary, D. E. (New York: McGraw-Hill, 1985).

¹⁵ P. Galison, *Image and Logic: A Material Culture of Microphysics* (Chicago: University of Chicago Press, 1997). p. 55.

Anthony Giddens; “dynamic nominalism” by Ian Hacking; and the “circuitry of the psychological” by Graham Richards.¹⁶ Richards’ perspective acknowledges the multiple reflexive turns or “circuitry” of the psychological through which scientific psychology both produces and is produced by experiments and “common” understandings. It acknowledges, too, that any account of those circuits “must itself be a Psychological model.”¹⁷ The circuitry of the psychological connects psychologists’ personal and professional self-knowledge, the psychological knowledge produced, and the social contexts in which that psychology is grounded and through which the psychological circulates. Laboratory experiments in psychology often were (and are) designed to interrupt this traffic in values, beliefs, actions, affect and ideas, but in crucial ways experiments depend on these imports and exports.

Experiments also need be understood as efforts as well as accomplishments, as variable and changing practices despite the overarching commitment to standardization. If psychological experiments are highly routinized and imitative of other administrative arrangements, then they are not only or always these things. Experiments can be innovations, creating not only genuinely new “data” or manipulations of subjects but also novel conceptions of subjects and experimenters alike; psychology experiments can change both classes of participants. Via experimental reformulations, subjects can be understood or understand themselves to be more or other than performers of experimental roles, emitters of data, or “models” for psychological

¹⁶ A. Giddens, *Central Problems in Social Theory* (Berkeley: University of California Press, 1979). A. Giddens, *The Constitution of Society: Outline of the Theory of Structuration* (Berkeley: University of California Press, 1984). Ian Hacking, “The Looping Effects of Human Kinds,” in D. Sperber, D. Premack, and A.J. Premack (eds.) *Causal Cognition: A Multidisciplinary Approach* (Oxford: Clarendon Press), pp. 351-83; G. Richards, “The Psychology of Psychology: A Historically Grounded Sketch,” *Theory & Psychology* 12, no. 1 (2002).

¹⁷ Richards, “The Psychology of Psychology,” p.8.

theory of subjectivity. Experimenters, for their part, can change the very model of experimentation, intentionally or inadvertently altering the nature of their represented selves.

Alterations in experimentation thus transpire within the circuitry of the psychological, realized through local and foreign exchanges of epistemic commitments, social representations, and material engineering. While experimental psychology rests upon and professes “realism,” it depends as well on the occasional appearance of contingency and error to affirm that realism. Experiments on the psychological depend on a juxtaposing of the real and staged (or contrived).¹⁸ Exemplary of these feats, Milgram’s experiment balances between fiction and reality yet reaffirms the real if responsible being even as it rehearses the sensationalism of reality TV.¹⁹ The epistemic and technological transactions between dramatic experiments and television’s candid camera, between psychological inventories and self-administered psychological tests found in magazines or on the internet, and between syllogistic reasoning tests and quiz game shows illustrate in Richards’ terms, a “double effect” of these modes of experience: “people become familiar with, and unselfconscious about, engaging in them but they take it all less seriously than when authority-figure teachers and psychologists were the only

¹⁸ Yaron Ezrahi has shown how the “civil epistemology of democracy” employs the analogy of the scientific (virtual) witness to describe the citizen’s witnessing of democratic practices and processes. The nineteenth-century emergence of standardized, objective and disciplined observation/seeing depended on a sense that observation has not been contrived, “hence the experience of the ‘real’ is achieved especially when the contingent captured by mechanical visual recording is juxtaposed with the experience of the stages, or the theatrically contrived.” Y. Ezrahi, “Technology and the Civil Epistemology of Democracy,” *Inquiry* 35 (1993).

¹⁹ A. McCarthy, “‘Stanley Milgram, Allen Funt, and Me’: Postwar Social Science and the ‘First Wave’ of Reality Tv,” in *Startling! Heartbreaking! Real! Reality Tv and the Remaking of Television Culture*, ed. S. & Ouellette Murray, L. (New York: New York University Press, 2005).

people using them.”²⁰ Experts relied upon as they produced dynamics of the real and constructed, the authentic and contrived.

Seeing experiments as culturally extensive and engaged projects, then, enables a conception of psychology’s scientific objects as constructed as well as real, agents as well as mechanisms, labelers and calibrators of reality as well as the labeled and calibrated. The subjects of psychology illustrate how scientific objects are both embodied and imagined in their historical emergence; they show the “ontological fecundity of the sciences” both inside and outside designated scientific spaces.²¹ As such, analyzing such experimental possibilities benefits from recent studies of “objects” in material culture and natural sciences, which understand objects as real and historical, weighty with biographical detail, and traveling across the borders of the laboratory.²² In their liveliness, scientific objects exceed the properties ascribed to them by either the psychological hypothesis or the assigned experimental roles they usually dutifully execute.²³ Experimenters, as observer subjects, likewise exceed the properties that they ascribe to themselves.

Some of these features of experimentation have been explored in studies of specific experiments or experimental techniques. Examples of this work include Richard Gillespie’s micro-analysis of the collaboration of corporate and scientific interests in the classic Hawthorne

²⁰ Richards, “The Psychology of Psychology,” p. 15.

²¹ L. Daston, “The Coming into Being of Scientific Objects,” in *Biographies of Scientific Objects*, ed. L. Daston (Chicago: University of Chicago Press, 2000).

²² I. Kopytoff, “The Cultural Biography of Things: Commoditization as Process,” in *The Social Life of Things: Commodities in Cultural Perspective*, ed. A. Appadurai (New York: Cambridge University Press, 1986). Samuel J. M. M. Alberti, “Objects and the Museum,” *Isis* 96, no. 4 (2005); B. Brown, ed., *Things* (Chicago: University of Chicago Press, 2004).

²³ Official ascriptions of human subjects can be discordant, illustrating the surplus value of these scientific objects. Compare, for instance, the legal-rights-bearing subject who is expected to enter rational contract (giving informed consent) to that very same subject who then serves as observational object of human’s inherent decision-making biases.

experiments; Benjamin Harris' tracing the creative afterlife of J. B. Watson's Little Albert experiment; Betty Bayer's exposition on the cybernetic fantasies under girding the invention of experimental confederates; Jan Haaken's uncovering of the gender assumption embedded the technical apparatus as well as theory of field dependence; Orneil Dror's demonstration of the making of emotions in Walter Cannon's physiology lab; and Henrikus Stam, Ian Lubek, and Lorraine Radke's inventory of the various bodies inhabiting the Milgram experiments.²⁴ By so probing the diverse collaborations that make an experiment work, these studies demonstrate the dense culture of laboratory life in which the scientific objects are situated, described, observed, acted upon, and found to react.

Histories of the subject encounter challenges regarding evidence as nearly all of it comes to us through experimenters. Subjects' lives are essentially lived with and by experimenters; they inhabit a life with them in several senses. Most directly, experimenters solicit, select, prepare, and submit subjects to certain acts, thereby prohibiting or restricting other possible acts and other possible subjects. Scientific objects are only that in relation to the experimenter: they (subjects and experimenters) are always in relationship, even when apparatus, electronic recording devices or experimenters' accomplices mediate that relationship. Even within the meticulously structured, unparalleled relations of laboratories, experimenters and subjects communicate, and

²⁴ R. Gillespie, "The Hawthorne Experiments and the Politics of Examination," in *The Rise of Experimentation in American Psychology*, ed. J. G. Morawski (New Haven: Yale University Press, 1988). Richard Gillespie; Ben Harris, B. Harris, "Key Words: A History of Debriefing in Social Psychology," in *The Rise of Experimentation in American Psychology*, ed. J. G. Morawski (New Haven: Yale University Press, 1988); Harris, "Whatever Happened to Little Albert?" B. M. Bayer, *Between Apparatuses and Apparitions: Phantoms of the Laboratory*, ed. B. M. & Shoter Bayer, J., *Reconstructing the Psychological Subject: Bodies, Practices, and Technologies* (Thousand Oaks, CA: SAGE Publications, 1998). J. Haaken, "Field Dependence Research: A Historical Analysis of a Psychological Construct," *Signs* 13 (1988). Dror, "The Scientific Image of Emotion: Experience and Technologies of Inscription."; Stam, "Repopulating Social Psychology Texts: Disembodied "Subjects" and Embodied Subjectivity."

even when the communications are neither formally observed nor recorded, both parties “hypothesize”, sometimes imaginatively and sometimes not, about that communication (See Table I, Skinner’s cartoon of rat communication). And these communicative relations are enabled as well as complicated by the fact that experimenters and subjects share a culture beyond the laboratory, one that includes vocabularies for explaining and interpreting human conduct. In these regards, the history of psychology’s scientific objects is necessarily one of intersubjectivities, the coupled lives of experimenters and subjects.

Understanding the dynamics of psychology’s scientific objects poses historiographical difficulties but not impossibilities. The complexities of the laboratory’s sequestered life become more visible in moments of trouble, for instance, during controversies over the interpretation of significant data, the appropriateness of using non-human models, and ethics of experimental protocols. Similarly revealing are the rare occasions when psychologists have attempted to inspect the black box of the subject’s psychology and even the experimenter’s own thinking.²⁵ When the nature of scientific intersubjectivity is so re-appraised, experimenters elucidate otherwise tacit beliefs about their scientific objects and their relationship to them. In doing so, they convey their own uncertainties as well as convictions, worries as well as hopes. Such episodes make more visible the circuitry of the psychological through which experimental knowledge challenges and even sometimes changes its participants and, in turn, compel new accounts informed by psychologies traveling through the culture.²⁶

²⁵ On psychologists inadvertent reflexive thinking about the mental life of psychologists see J. Cohen-Cole, "The Reflexivity of Cognitive Science: The Scientist as Model of Human Nature," *History of the Human Sciences* 18, no. 4 (2005). J. G. Morawski, "Reflexivity and the Psychologist," *History of the Human Sciences* 18, no. 4 (2005).

²⁶ Richards, "The Psychology of Psychology: A Historically Grounded Sketch."

The Psychology of the Psychology Experiment

One opportunity for better seeing the human subject as scientific object can be found in the two decades following World War II when psychologists of varied professional affiliations (experimentalists, testers, surveyors, and clinicians) reported a complex, even frightening, array of problems with their respective scientific objects and, not inconsequentially, with their own scientific selves. Quandaries concerning the scientific objects were soon found to be extensive as researchers began to wonder whether the volunteer subjects who populated most of the research were representative of the population and even whether they were normal. Soon there emerged additional questions about the psychology of these subjects and, eventually, about the experimenters themselves. From initial concerns that subjects might be reacting to the experimenters (and not simply the experimental variables), evolved anxious scrutiny of experimenters' behavior and personal characteristics -- their very psychology -- and their relationship with subjects in the laboratory.

Whether couched in the technical language of experimental reports or philosophical essays, concerns were voiced sporadically before the war but, in both number and intensity, escalated in the 1950s and continued through much of the 1960s. Relevant or potentially relevant to every realm of human psychology, this relay of doubt that traveled from the subject to the experimenter and throughout the experimental situation signaled seemingly boundless complications, leading one psychologist to claim that the condition had produced "epistemological dizziness."²⁷

Not all psychologists reported serious vertigo; few actually did. Many psychologists took the problems as methodological matters to be remedied by technical means, and still others fixed on

²⁷ Neil Friedman, *The Social Nature of Psychological Research: The Psychological Experiment as a Social Interaction* (New York: Basic Books, Inc., 1967), p.5.

their broader implications for theories of human nature. By the mid 1970s, the symptoms of dizziness had all but disappeared; the “psychology of the psychology experiment” was restrained, ultimately reconceptualized as the “artifact crisis” or the “crisis in social psychology”. The subsequent re-appropriation of the array of subject and experimenter problems not only substantially downgraded its apparent magnitude and scope but also radically reframed its history. In the 1985 *Handbook of Social Psychology*, Edward Jones recounts a simple history where, “A unique convergence of events in the late 1960s brought about an exacerbation of self-criticism that became identified as ‘the crisis in social psychology.’ To some extent this despairing rhetoric fed on itself.... And it is hard to detect any direct effects of malaise in the journals carrying this prime research.”²⁸ Jones assuredly concluded that the crisis “has begun to take its place as a minor perturbation in the long history of the social sciences”.²⁹

Closer examination of this perturbation finds its emergence not in the late 1960s but approximately twenty years earlier and shows the concerns to be, in fact, dizzying. Although routinely framed in the technical language of “representativeness”, “validity,” “experimental controls” and the like, psychologists actually were confronting fundamental matters, notably the *nature of reality* (what is real and apparent in the psychological), *human nature* (especially what is determined and what is autonomous; what is controlled and what is free) and the *unique identity status of the S and the O* (the differences between S and E often posited terms of salient cultural representations, notably race and gender). Rereading these confrontations with the antinomies of reality/appearance, agency/determinism, and of intersubjectivity shows them to be informed by and inflected through postwar American culture. The critical (self) analyses

²⁸ Edward Jones, “History of Social Psychology,” *Handbook of Social Psychology*, 3rd ed. 1985, p. 47.

²⁹ *Ibid.*, p. 49.

rehearsed the anxieties of conformity, emphasized virtues of democracy in opposition to an authoritarian state, and exercised a militarized psychology of suspiciousness of self as well as others – a psychology of brainwashing, vigilance, surveillance, and self-defense. The enemy could be anywhere, anywhere in the world, in fact, and could appear in any number of guises. This profoundly psychological war, as Frederick Dolan described it, “ a ‘looking glass war’ in which the enemy one fought was to an unusual degree an unverifiable creature of one’s own imagination.”³⁰ Thus, the Cold War figured doubly into psychology, on the one hand, through generous funding of research on matters of national urgency and, on the other, through a generalized Cold War psychology of human relations, including phantasmal ones.

These interrogations of the most prized method of inquiry occurred when the discipline was confronting new challenges as well as opportunities. The postwar promotion of a natural science model for the social sciences at once enhanced psychology’s image and lucrative prospects for research funding. Gains in prestige and support heightened self-scrutiny, prompting psychologists to reassess, on the one hand, the science’s correspondence with the physical sciences and, on the other, and the discipline’s longstanding mandate to serve human welfare through practical research. The growth of clinical and applied psychology during the war years brought to the forefront the need to provide clinical psychology with scientific grounding, and the creation of a scientist-practitioner model of clinical training was one immediate outcome of these aspirations.³¹ An overlooked but potent effect of the war related efforts was

³⁰ F. M. Dolan, *Allegories of America: Narratives, Metaphysics, Politics* (Ithaca: Cornell University Press, 1994), p. 61.

³¹ On the promotion of the social sciences as natural sciences, see Mark Solovey. After the war, clinical psychology, spurred by NIMH funding opportunities, crafted the “Boulder Model”, a “science-practitioner” model, mandating that graduate programs in clinical psychology offer scientific as well as practical training. On the funding and flourishing of psychological research after the war see L. T. Jr. & Baker Benjamin, D. B., *From Seance to Science: A History of the*

experimenters' exposure to clinical tropes of patient-therapist relations, transference and counter transference, and the skills of empathy, self-presentation, reflection, and communication.

Clinical psychology provided experimental psychologists with a mirror and an aesthetic for self-appraisal just as Cold War discourse provided a model of psychological functioning.

During the fifteen years between 1945 and 1960, psychology's scientific objects became more complex, and psychologists came to apprehend their objects' apprehension of them. By the end of the 1950s the experimenter sometimes was made a scientific object in experiments. Such technical strategies to eliminate apparent contaminants from the experimental chamber unsteadied the precepts of mechanical and aperspectival objectivity – the scientist's ability to suppress values and idiosyncrasies borne of his position in the world.³² The resultant quandaries, the epistemological dizziness, motivated a few psychologists to probe the political structure of the experiment. Most, however, eventually followed a course to reassert mechanical objectivity; they refigured these matters as experimental noise requiring merely technical fine-tuning of laboratory practices (or requiring no notable alterations at all).

Discovery of Complex Objects

After the demise of introspection with its exchangeable roles of trained observers, psychologists designed human experimental situations peopled by naïve subjects. Aggregate

Profession of Psychology in America (Belmont, CA: Wadsworth/Thomson Learning, 2004); E. Herman, *The Romance of American Psychology: Political Culture in the Age of Experts* (Berkeley: University of California Press, 1995). J. H. Capshew, *Psychologists on the March: Science, Practice, and Professional Identity in America, 1929-1969* (New York: Cambridge University Press, 1999). Seymour Sarason retrospectively described this period of expansion driven by funding: "Psychology did not explore the universe of alternatives available to it, and few things rival money on the table in its capacity to short-circuit imagination." S. B. Sarason, "An Asocial Psychology and a Misdirected Clinical Psychology," *American Psychologist* 36, no. 8 (1981), p.833.

³² Daston, "Objectivity and the Escape from Perspective." Daston, "The Image of Objectivity.", Keller, "The Paradox of Scientific Subjectivity."

statistics, random sampling, and experimental replication provided assurance that these subjects adequately represented the population to whom the subsequent scientific knowledge could be generalized. Experimental subjects might be ascribed certain social attributes, for instance, Negro schoolchildren or college men; however, their status as interchangeable naïve objects who generated psychological data was a given. In a 1935 pronouncement on the necessity of operationism in psychology, S.S. Stevens described the science of “*the psychology of the other one*” (italics original): “That science relates to verifiable responses obtained from organisms treated as objects of study by capable experimenters who may or may not have served in the role of investigated organism.... A human being enters the situation as a complex physical system whose characteristics can be investigated by a method essentially the same as the methods used for investigation of all physical systems. The essence of the procedure is the performance of a known operation on the system and the observation of the resulting changes or, in more conventional terms, the application of a stimulus and the observation of a response.”³³ Treating human organisms as objects required, according to arch experimentalist Clark Hull, a “prophylaxis against anthropomorphic subjectivism.” Using subhuman organisms instead of human ones is not a sufficient prophylactic. More effective, Hull argued, “is to regard, from time to time, the behaving organism as a completely self-maintaining robot, constructed of materials as unlike ourselves as may be.”³⁴ Even the apparent paradox accompanying the perceiving

³³ S. S. Stevens, "The Operational Basis of Psychology," *The American Journal of Psychology* 47, no. 2 (1935). 328.

³⁴ C. L. Hull, *Principles of Behavior: An Introduction to Behavior Theory* (New York: D. Appleton-Century Company, 1943).

scientist's study of human perception was dismissed by asserting "the privileged, even unique position" of the scientific empiricist, a necessary epistemological "dogma" of science.³⁵

Psychologists' enduring admiration of physics notwithstanding, the conceit of interchangeable, nonreactive, "naïve" subjects was something of an open secret even early in this new era of experimentation. Researchers occasionally commented on the unruly or manipulative subject, a few conducted empirical studies of experimental deception on the part of subjects, and at least one experimenter in 1933 published an expose of the hidden psychology of the psychology experiment.³⁶ Personality experts observed subjects' manipulation of inventories, prompting some to disguise the nature of their tests.³⁷

By the late 1940s published evidence indicated that all was not well with the standardized scientific object, and concerns increased dramatically in the 1950s. Empirical reports indicated that the "volunteer" subject was a special kind of scientific object: volunteers were something other than the representative of the population to which researchers aimed to generalize their findings. The casual observation that subjects were recruited predominately from colleges and universities grew to what was to become a recurrent, half-joking lament that psychology was a psychology of the college sophomore.³⁸ The rapid expansion of testing and survey work in the 1930s and through the war years along with researchers' incentives to apply their knowledge heightened the stakes surrounding the volunteer issue. Survey researchers confronted problems

³⁵ G. Bergmann, & Spence, K. W., "The Logic of Psychophysical Measurement," *Psychological Review* 51, no. 1 (1944). p.3.

³⁶ D. Strumberg, "A Comparison of Sophisticated and Naive Subjects by the Association-Reaction Method," *American Journal of Psychology* 36 (1925). S. Rosenzweig, "The Experimental Situation as a Psychological Problem," *Psychological Review* 40 (1933): 337-54.

³⁷ The first masculinity/femininity test, for instance, used a test booklet with a cover indicating that it was an attitude and interest questionnaire.

³⁸ On the continued use of "college sophomores" in psychology experiments see D. O. Sears, "College Sophomores in the Laboratory: Influences of a Narrow Database on Social Psychology's View of Human Nature," *Journal of Personality and Social Psychology* 51 (1986).

in sampling as well as investigator bias and offered some methodological correctives.³⁹

Counterintuitive and socially sensitive findings initially drew attention to the procedures for recruiting subjects. For example, Alfred Kinsey noted a volunteer bias in his studies and despite his own methodological caveats, concern with the Kinsey volunteers persisted. His data on sexual practices of American males stirred discomfort. If his was a representative sample, then the finding of homosexual practices among seemingly heterosexual American males indicated that persons were not as they appeared, and that presumably core psychological attributes were not readily detectable.⁴⁰

Growing increasingly wary about what researchers did *not* know about their scientific objects, the volunteers who populated most experiments, researchers began investigating the question implicit in the title of Ivan Scheier's experimental report: "To Be or Not to be a Guinea Pig." Scheier's volunteers, unlike guinea pigs, were recruited and compensated for participating. Their incentives were multiple: "service to one's country and science, \$10.00, interpretation of individual scores after the experiment, and excuse from a physical education course

³⁹ H. Cantril, *Gauging Public Opinion* (Princeton: Princeton University Press, 1944). On the methodological problems of polling research, especially sampling, and the uneven correction of these problems, see S. E. Igo, "'a Gold Mine and a Tool for Democracy': George Gallup, Elmo Roper, and the Business of Scientific Polling, 1935-1955," *Journal of the History of the Behavioral Sciences* 42, no. 2 (2006)..

⁴⁰ Abraham Maslow had reported volunteer bias in 1942, finding that the female college students willing to participate in a study of sexual practices were more extroverted than those who did not volunteer. Responding to concerns about the representativeness of Kinsey's data, Maslow, along with a colleague collected volunteer data on some of Kinsey's subjects. J. D'Emilio, *Sexual Politics, Sexual Communities: The Making of a Homosexual Minority in the United States 1940-1970* (Chicago: The University of Chicago Press, 1983). C. Lutz, "Epistemology of the Bunker: The Brainwashed and Other New Subjects of Permanent War," in *Inventing the Psychological: Toward a Cultural History of Emotional Life in America*, ed. J. Pfister, & Schnog, N, (New Haven: Yale University Press, 1997).

examination” (even with those incentives, only 60% volunteered).⁴¹ The “psychology-of-the-volunteer”, he found, was less anxious than the “psychology-of-the-population;” further, differences between these psychologies depended on the “perceived severity of experimental situation.” Both conclusions, the particular nature of volunteers and the relativism of experimental conditions, suggested the need for future work on the “immensely significant personal and social ramifications” of volunteering. Despite such edicts, researchers like Scheier either missed or avoided one significant ramification: the potentially mind-boggling task of fully and adequately testing the myriad features of the experimental situation. Likewise overlooked was the confounding of volunteering and contractual exchange (compensation for work performed) despite the meticulous attention given to inventorying that compensation.

Some investigators expressed confidence that experimental interrogations would reveal the psychology of volunteers in all their “gross” and subtle variations from the population, but others were less assured about the status of the subject. Noting the seemingly irrelevant details of the Kinsey volunteers as “less inhibited sexually, and possibly less likely to have had socially taboo items, such as premarital intercourse and homosexual contacts, in their past histories,”⁴² Ephram Rosen, too, conjectured that the psychology of volunteers depends on the experimental situation. Rosen’s college “freshmen” volunteers (matched with another group of freshmen who were required to take a battery of psychological tests), admitted to more anxiety, discouragement, and inadequacy feelings. These volunteers also were more “intraceptive and psychological minded;” less prone to church attendance; and male volunteers produced higher femininity scores (than non-volunteer) while female volunteers generated higher scores on

⁴¹ I. H. Scheier, "To Be or Not to Be a Guinea Pig: Preliminary Data on Anxiety and the Volunteer for Experiment," *Psychological Reports* 5 (1959). P. 239.

⁴² E. Rosen, "Differences between Volunteers and Non-Volunteers for Psychological Studies," *Journal of Applied Psychology* 35 (1951).

dominance and aggression. The volunteer seemed to look less and less like a representative n in the population N . Convinced that using volunteering subjects can affect outcomes, Rosen nevertheless acquiesced, stating, “dependence on highly cooperative volunteers seems inevitable.”⁴³ Others would voice such an attitude of resignation, almost a lament over the seemingly unavoidable conformism of experimental practices.

Volunteering frequently was assumed to be something of a patriotic act: subjects wanted to contribute – “to volunteer” -- to science and, accordingly, to their country. These premises probably muted confusion about the relation of volunteering to compensation. By contrast, not always ignored was the political antimony between this understanding of volunteering as a dignified agentic act and determinist models of subjects. A study comparing rates of volunteering when subjects were offered attractive consequences (be excused from class) or unattractive ones (be made to stay in class and take a “pop quiz”) found volunteering can be “an avoidance act.”⁴⁴ The expected experimental outcome (volunteers avoidance of an unattractive alternative) prompted an apparently counterintuitive conclusion. The authors observed that subjects’ experiences -- of making a choice to volunteer or not -- differed from what actually occurred, generating “a basis for assigning meaning to the term ‘volunteering’”. In other words, “decisions that in personal experience seem to be free, independent, and personal are, from another standpoint, determined by the psychological properties of the force field within which the action occurs.”⁴⁵ Discipline and pop quizzes are determining forces; choice is illusion; volunteering is an illusion. Ignored by these researchers but not by others was the possibility that

⁴³ Ibid., p.155.

⁴⁴ M. & Blake Rosenbaum, R. R., "Volunteering as a Function of Field Structure," *Journal of Abnormal and Social Psychology* 50 (1955)., Berkowitz et al 1956.

⁴⁵ Ibid, p.155.

the experimenter might participate in these illusions in so much as he, too, inhabits the “force field.”

Even less comforting were the reports of abnormal characteristics of volunteers in medical studies. A frequently cited report in *Science* in 1954, cautioned “generalizations and predictions deserve to be exceptionally reserved when *volunteers* are the sole source of data.”⁴⁶ The physician authors note that Huxley’s recently published *Doors of Perception* should remind readers that much of the literature on such drug research is “derived from the experiences of ‘volunteers’ with unusual psychological orientation and imagination, including romantic proclivities. Without denying the ‘reality’ of responses in such people, it has proved scientifically unwise to assume that such responses are typical of those experiences by all individuals under all circumstances.” These Harvard medical school researchers’ psychological study of their own volunteer group revealed that 27 of their 56 volunteers “would qualify as deviant”. Six of these “maladjusted” subjects were designated “overt homosexuals.”⁴⁷ Another medical research team also found their NIMH volunteers, a group that included conscientious objectors and members of “peace religious denominations,” to exhibit high rates of “psychopathology.”⁴⁸ In addition to the volunteers’ stated motivations, the researchers detected “unconscious and preconscious ones.”⁴⁹

⁴⁶ L. & von Felsinger Lasagna, J. M., "The Volunteer Subject in Research," *Science* 120 (1954).

⁴⁷ Ibid. 361. The authors took care to note that the reported “incidence of homosexuality refers only to those volunteers freely describing overt and continuing homosexual activities and excludes any volunteers for whom evidence of homosexuality was only presumptive (for example, Rorschach responses or behavior under drugs)” p.359.

⁴⁸ W. & Perlin Pollin, S., "Psychiatric Evaluation of "Normal Control" Volunteers," *American Journal of Psychiatry* 115 (1958). 11 out of 29 of their subjects were determined to suffer psychopathology.

⁴⁹ Ibid., 131. These distinctions between reality (normality) and abnormality are highlighted, while the authors merely report that the conscientious objectors had been “automatically assigned to appropriate Volunteer Service Committees,” making them NIMH “volunteers”.

The accumulating knowledge about volunteering disturbed boundaries between reality and appearance, agency and determinism, authenticity and the superficial, and gifts and economic exchanges. This knowledge complicated the scientific object, the other one's psyche, which just twenty years earlier was unproblematically assumed to be a lawful and observable object. The scientific art of distinguishing between "naïve" and "sophisticated" subjects no longer seemed to be simply based on subject's experience (or lack of) in psychological experimentation.⁵⁰ Further apprehension accompanied experimenters' heightened worry about subjects' trustworthiness, their authenticity as well as their honesty. Aware of subjects' self-awareness during personality testing, researchers devised techniques to detect what was becoming a nearly ubiquitous problem of "faking" ("faking good" and "faking bad"). One researcher who introduced what became a popular technique for detecting faking, a scale measuring an individual's tendency to give "socially desirable" responses, claimed social desirable characteristics to be "culturally determined," shared by normals, "Skid-Row" alcoholics, TB sufferers, and psychiatric patients.⁵¹

However universal, detectable, or containable, faking escalated investigators' uneasiness. Within experimental practices his discomfort grew to a tangled play of who was faking whom. On the one hand, faking was dishonest, socially inappropriate, and a close kin to "malingering." This view of faking sometimes even accompanied demands for subjects to fake. One experimenter instructed his subjects to intentionally fake a Rorschach test "as if you wanted to be

⁵⁰ The terms naïve and sophisticated had gained common usage. However, in the 1950s these terms were questioned, even in research on non-human animals. For consideration of the experiential and experimental sophistication of nonhumans, see R. Christie, "Experimental Naivete and Experiential Naivete," *Psychological Bulletin* 48 (1951).

⁵¹ Allen L. Edwards, *The Social Desirability Variable in Personality Assessment and Research* (New York: The Dryden Press, Inc., 1957). Edwards, 1958, pp.11-12.

disqualified from military service for psychiatric reasons.”⁵² Faking was morally unacceptable, yet experiments increasingly were designed to instruct subjects to feign or fake (often to ascertain whether experimenters can differentiate the feigned from the so called real). On the other hand, this “as if” quality of faking hovered as a perpetual threat to so called experimental realism. Faking, cheating or otherwise conniving was an “as if,” an appearance that could ever shift as investigators added measures to guard against it. Worse yet, such “as if” behavior might actually constitute the reality of the experiment. Whether experimenters claimed accurate recognition of subjects’ faking or suspected that some faking escapes their notice seemed less important than the overarching realization that subjects are not always or not only what they seem to be. Investigators were advised to guard diligently against subjects’ urges – conscious as well as nonconscious – to present other than their authentic selves.

Perceiving Experimenters

As their scientific objects came to be seen as more alert, complex, and seemingly unpredictable, investigators attended more carefully to their subjects’ perceptions in the lab, including subjects’ regard for the investigator. This new scientific watchfulness was informed by psychologists’ work experiences during the war. Many laboratory-trained psychologists had gained clinical experience, including a modicum of understanding of psychoanalytic notions and clinical relations. For their part, clinically trained psychologists acquired an interest in making their work more scientific. A member of the latter group, Emily Lord, undertook study of “experimentally induced variations in Rorschach” following a “laboratory” question inspired by

⁵² M. J. & Graley Feldman, J., "The Effects of an Experimental Set to Simulate Abnormality on Group Rorschach Performance," *Journal of Projective Techniques* 18 (1954)., p. 327.

a 1947 Air Force report that test examiners influence subjects' test performance.⁵³ Lord trained three Rorschach examiners each to act according to three different administrative styles: negative, positive, and neutral. The subjects' scores were found to be affected by the administrative styles but were more influenced by the different examiners. She concluded that their performances "may be considered a mirror of the administrator's personality."⁵⁴ Although the three Es "were not different in any grossly apparent way," (holding psychology degrees, trained in test administration, etc), the outcomes revealed otherwise. Through close analysis of the Rorschach scores of subjects who had been tested by "Examiner A," Lord inferred that Examiner A would be cold and threatening. To confirm this reality of the examiner, she then asked the opinion of "two psychologically sophisticated persons, acquainted with all three examiners" who corroborated that A was "the coldest, most inflexible," one judge adding that she was "masculine" and a "castrating type of female."⁵⁵

In other words, attempting to fake subjects with experimenters' enactments of cold, warm, and neutral roles, however assiduously scripted in the experimental design and enacted by the three experimenters, was unsuccessful. Perhaps this failure was nonconscious, Lord concluded. For their own part, the experimenters seemed not to have full access to their own reality: their limited conscious self-awareness mirrored that of subjects who were sometimes conscious, sometimes not, of their perceptions and actions. Experimenter's selves were as complex, engaged, and elusive as the subjects'. Upon getting similar results on an experiment on

⁵³ E. Lord, "Experimentally Induced Variations in Rorschach Performance," *Psychological Monographs* 64, no. 10 (1950). A 1947 Army Air Force study had found that examiners affected subjects' performance. Although Lord never explicitly called the testees' "affective reactions" transference, she hastened to suggest that the study's findings would "throw some much needed light on the subject of transference elements." P. 3.

⁵⁴ Ibid.

⁵⁵ Ibid., p. 27.

experimenters, Emmett Baughman pondered whether an ideal objective examiner is possible or even desirable. The attributes to submit to empirical scrutiny were many, including the experimenter's encouragement, physical appearance, personality, and even a "slight change in phraseology."⁵⁶ Another researcher found that even "standardization of the inquiry does not eliminate examiner differences."⁵⁷

Laboratory psychologists heeded these clinically inspired studies along with admonitions from phenomenologically informed colleagues who had been urging them to attend to the entire experiential field of the experiment.⁵⁸ What was called the "new look" in perception likewise beckoned experimenters to study the total dynamics of the experiment and not just the designated stimulus. Whether motivated by theory or methodology, these advisements were weighty with implications. Above all, once the experimenter was recognized as part of the experimental field, his or her own psychology came under scrutiny and the operationist precepts about the experimenter lost certainty. Just as S.S. Stevens had, in 1935, defined the subject as "the other one," so he believed operationalism pre-empted worries about the experimenter: "Science has a lot to say about the subject, but little about the *experimenter*. There is, in fact, little to say, for in all science the experimenter is assumed. He is a being capable of performing the elementary,

⁵⁶ E. E. Baughman, "Rorschach Scores as a Function of Examiner Difference," *J. Proj. Tech.* 15 (1951), 247. Given that even as "passive recorders", examiners fall short of the ideal of objective, Baughman thus urged careful self-evaluation "to determine our own unique deviations, and then determine corrective measures if such appear to be desirable."

⁵⁷ R. G. Gibby, "Examiner Influence on the Rorschach Inquiry," *Journal of Consulting Psychology* 16 (1952). 452. See also R. G. Gibby, Miller, D. R., & Walker, E. L., "The Examiner's Influence on the Rorschach Protocol," *Journal of Consulting Psychology* 17 (1953).

⁵⁸ Egon Brunswik, *Perception and the Representative Design of Psychological Experiments* (Berkeley and Los Angeles: University of California Press, 1956). K. R. Hammond, "Representative Vs. Systematic Design in Clinical Psychology," *Psychological Bulletin* 51, no. 2 (1954); K. R. Hammond, "Subject and Object Sampling- a Note," *Psychological Bulletin* 45 (1948).

fundamental operations of observation in the same way that other scientists perform them.”⁵⁹ Stevens’ scientist was assumed to be self-aware in the sense of having distinct and unwavering awareness of his abstract absence. Reality was his: reality was available to him through proper scientific gaze. Although conversant with psychoanalysis and depth psychology, Stevens’ scientist was confident not only about the existence of the real but also, and more importantly, about his or her access to the real.⁶⁰

This confident observer of the other one’s reality seemed less believable after the war. Dramatically different views of self and other emerged alongside what has been called the “epistemology of the bunker”. Postwar thinking promoted a world with real and apparent selves who were in a state of permanent conflict, suspected all was not what it seemed and maintained vigilance in relations with “the other one.” The postwar atmosphere of invisible enemies, containment, constant surveillance, adversarial relations, and suspicions that persons might not be whom they seemed to be (even to themselves), rendered the other one – and even one’s self – cause for apprehension.⁶¹

After the war researchers grew more vigilant about the experimenter. Some took the task of experimenters’ presence quite literally, designing experiments that virtually caricatured various cultural differences between experimenters. One fairly typical study explored the effects two

⁵⁹ Stevens, "The Operational Basis of Psychology." p. 328. According to Stevens, the matter is simple, “By carefully controlling the conditions of the antecedent operations (stimulus), accurate knowledge of the system is obtained in terms of the subsequent changes (response).”

⁶⁰ Despite their vehement criticism of psychoanalysis, sustained from Freud’s 1909 American visit onward, experimental psychologists took seriously certain psychoanalytic ideas and some even underwent analysis. See Gail A. Hornstein, "The Return of the Repressed: Psychology's Problematic Relations with Psychoanalysis, 1909-1960," *American Psychologist* 47 (1992).

⁶¹ D. D. Noble, *The Classroom Arsenal: Military Research, Information Technology, and Public Education* (London: The Falmer Press, 1991). Lutz, Noble, E. Martin, *Flexible Bodies: The Role of Immunity in American Culture from the Days of Polio to the Age of Aids* (Boston: Beacon Press, 1994). Dolan, *Allegories of America: Narratives, Metaphysics, Politics*.

different experimenters had on subjects' rate of learning. One E was "an attractive, soft-spoken, reserved, young lady who was 5'1/2" in height and 90 pounds in weight" and the other E "was very masculine, 6'5" tall, 220 pounds in weight, and had many of the unrestrained personality characteristics which might be expected of a former marine captain".⁶² With similar caricaturing, the researchers found the diminutive female, initially hypothesized to be a less successful conditioner of hostile word use than the "big, prestigious male experimenter", actually proved to be the better conditioner. The *post hoc* explanation of this unexpected outcome conjectured that she "provided a less threatening environment, and the *Ss* consequently were less inhibited in the tendency to increase their frequency of usage of hostile words".⁶³ And even basic verbal learning experiments comparing the effects of very similar experimenters yielded outcomes showing the "far-reaching consequences of these seemingly minimal differences between *Es*".⁶⁴ Even when investigators introduced simple and culturally obvious experimenters as variables, the causal dynamics of the laboratory were far from uncomplicated.

The experimenter question began with probing the basic assumption that "Objectivity implies that one examiner can be considered as interchangeable with another" but soon expanded to become a psychological inquisition into the experimenter as well as the subject, and eventually, into certain intimacies of their relationship.⁶⁵ The experimenter was discovered not to be a simple "stimulus object" or "passive recorder", this discovery mirrored the growing anti-behaviorist claims that the *S* was more than a passive recorder.⁶⁶ Amalgamating clinical and

⁶² A. Binder, McConnell, D., & Sjolholm, N. A., "Verbal Conditioning as a Function of Experimenter Characteristics," *Journal of Abnormal and Social Psychology* 55 (1957). P. 309.

⁶³ *Ibid.*, p.313.

⁶⁴ F. H. Kanfer, "Verbal Conditioning: Reinforcement Schedules and Experimental Influence," *Psychological Reports* 4 (1958). P. 451.

⁶⁵ Baughman, "Rorschach Scores as a Function of Examiner Difference." P. 246.

⁶⁶ Binder, "Verbal Conditioning as a Function of Experimenter Characteristics." P. 243.

experimental perspectives, researchers scrutinized “the total stimulus value of the examiner to the patient in the production of the inquiry.”⁶⁷ Just as the independent variable was meticulously designed to prompt the subjects, so the experimenter, albeit inadvertently, prompted the subjects but not in any straightforward way. Experimenters triggered subjects’ inhibitions, suspiciousness, caution, defensiveness, and hostility (both overt and latent). Moreover, experimenters activated subjects’ “subjective hypotheses.” Researchers used so-called “Common sense” reasoning, not logic, to apprehend subjects’ tendencies toward “caution and inhibition” and toward responding defensively in ways that merely look like they are “seeing things as most other people are likely to see them.”⁶⁸ Anxiously, although not always openly, subjects respond to experimenters’ anxieties and hostilities; thus, in a mirroring process the anxieties and hostilities of subjects are connected to hostilities and anxieties of experimenters. To complicate matters further, subjects apparently strived to conceal their strategies and anxieties, resisting even persistent post-experimental interrogations aimed at uncovering their true thoughts. Secrecy, double-talk, and hiding ran through investigations. Researchers admitted that potential subversion or duplicity was extremely difficult to detect, if it were detectable at all, implicating themselves in what resembles episodes of spy against spy.⁶⁹

Perception of subjects’ perception of the experimenter increasingly relied on clinical concepts of defense mechanisms and anxieties mingled with new language of a permanent war being waged not only internationally but also interpersonally (and intra-personally). Interpretations of subjects’ lively engagements with experimenters also drew upon dominant social representations of race, gender, class and age. While experimenters might attribute subjects’ behavior to their

⁶⁷ Gibby, "Examiner Influence on the Rorschach Inquiry." P. 252.

⁶⁸ E. M. & Rotter Henry, J. B., "Situational Influences on Rorschach Responses," *Journal of Consulting Psychology* 20, no. 6 (1956). P.458.

⁶⁹ *Ibid.*, p. 461.

dual identities as scientific subjects and college students (of experimenter/professors), resting their attributions on stereotypic ideas about college-aged adolescents, perhaps the most powerful social representation of subject-experimenter relations was race. Studies of interviewing, projective and intelligence tests, and experimental situations indicated that Negro subjects responded differently to white experimenters than did white subjects. Between 1945 and 1965, a host of studies revealed this race of experimenter effect, yet the majority of the studies specifically explained the effects in terms of the Negro subjects. Negro subjects established less rapport with white investigators than did white subjects. They reportedly were more fearful, withholding, defensive and reluctant to “express their opinions freely to whites”⁷⁰ With Negro experimenters, Negro subjects also behaved in distinctive ways. Some researchers concluded that such experiments confirm the salience of the “social reality” of the laboratory, a reality that included themselves; so salient was this social reality that racial dynamics might better explain experimental outcomes than did the formal experimental hypothesis. Thus, one research team suggested that what had been taken to be “perceptual defenses” against recognizing derogatory words might actually be “suppression of response:” especially in the presence of Negro Es, Negro’s Ss hesitated to utter racially derogatory terms such as “nigger”, “darky”, and “coon.”⁷¹ In such studies, the intersubjective experimental dynamics were deciphered via cultural notions of the Negro psyche, while matters of the experimenters’ racial awareness or sometimes even

⁷⁰ H. H. Hyman, *Interviewing in Social Research* (Chicago: University of Chicago Press, 1954). P. 159.

⁷¹ E. M. Whittaker, Gilchrist, J. C., & Fischer, J. W., "Perceptual Defense or Response Suppression?" *Journal of Abnormal and Social Psychology* 47 (1952).

their own race was sidelined. The hierarchy of experimental actors mapped smoothly on the hierarchy of race.⁷²

At times reflection on experimental perceptions entailed a series of interpretive moves. A researcher might question another experimenter's perception of the subject's perception of the experimenter, thus adding another point of image reflection to the matter. Commenting on a study comparing the effects of "Jewish appearing" and non "Jewish appearing" interviewers on subjects' endorsement of anti-Semitic statements, Kenneth Hammond queried the experimenters' determination of how a Jewish appearing researcher should appear. Could it be the case, he asked, that what was Jewish appearing to subjects in New York City might not appear so to subjects residing elsewhere?⁷³

Most often the question of the experimenter as stimulus object was framed as a methodological not an epistemological or psychological problem. Whereas some investigators doubted the possibilities or even desirability of an "objective experimenter," many others reacted to strong evidence of experimenters' effects by insisting that "we must, of course, always strive for as complete uniformity in experimental procedure as possible" even if complete standardization of Es behavior is impossible.⁷⁴ So concluded Leo Postman and Rheem Jarrett whose experiment revealed that different experimenters produced different learning patterns in subjects. Making the experimenter another stimulus object was deemed a methodological advance that would eliminate psychology's "double standard" whereby "they scrutinize

⁷² Despite experimental evidence the race of experimenter effect, the problem all but disappeared from experimental practices until a recent reappearance. J. G. Morawski, "White Experimenters, White Blood, and Other White Conditions: Locating the Psychologist's Race," in *Off White: Readings on Race, Power, and Society*, ed. M. Fine, Weis, L., Powell, L. C., & Wong, L. M. (New York: Routledge, 1997).

⁷³ Hammond, "Subject and Object Sampling- a Note."

⁷⁴ L. & Jarrett Postman, R. F., "An Experimental Analysis of 'Learning without Awareness'," *American Journal of Psychology* 65 (1952).

carefully populational generality yet continue experiments following the classical design of *one* stimulus variable.”⁷⁵ Importantly, these methodological correctives would usher psychology from its refuge in eighteenth-century Newtonian physics into the company of twentieth-century physics and, notably, the theory of general relativity. Quoting Einstein’s claim that all observations occur within a certain coordinate system, Kenneth Hammond argued that psychologists must examine their own coordinate system by representative sampling of all experimental conditions. The typical “systematic sampling,” (for instance, the sampling of male and female experimenters) are arbitrary choices, resulted in “glaring overgeneralizations”, and violated assumptions of the statistics being used.⁷⁶ In accord with general relativity theory, representative design required more scientific labor than, say, comparing the effects of a male and a female experimenter; it would require a sampling of any number of characteristics of experimenters. Egon Brunswick, devoted methodologist and promoter of representative design, acknowledge that it would constitute “a formidable task in practice,” adding, “ideally, it would take concerted research projects of a magnitude hitherto unheard of in experimental psychology.”⁷⁷

The task of “attacking” the experimenter problem seemed formidable in more ways than magnitude of the requisite labor. It raised a host of hypothetical questions about methods. How many Es must be run in an experiment? Of the myriad characteristics, both gross and subtle, of the experimenter, which ones needed to be manipulated? Statistical correction of experimenter

⁷⁵ K. R. Hammond, "Relativity and Representativeness," *Philosophy of Science* 18, no. 3 (1951). Kenneth R. Hammond “Relativity and Representativeness,” p. 208.

⁷⁶ Brunswick, *Perception and the Representative Design of Psychological Experiments*. Egon Brunswick, *Perception and the Representative Design of Psychological Experiments*, 2nd ed., 131, 43. See also, Hammond, "Relativity and Representativeness."; Hammond, "Representative Vs. Systematic Design in Clinical Psychology."; Hammond, "Subject and Object Sampling- a Note."

⁷⁷ Brunswick, *Perception and the Representative Design of Psychological Experiments.*, p.viii.

biasing effects might not be appropriate or even possible given that not all biases are equal in either quality or magnitude. And even if one could determine and control all of the experimental “variance” between Es, what about the variations in pre-experimental performances of Es (their experiences and performances before the experiment formally begins)? The potential for continual methodological slippage, for recognizing yet new variables to calibrate and monitor, prompted haunting contemplations. What about, as Postman and Jarrett wondered, “the possibility that the variation among the results of different Es was due, at least in part, to the differential selection of Ss” that, in turn, was the result of some yet unknown differences between the E?⁷⁸ Such a possibility demanded monitoring of yet another formidably complex “source of systematic variance” – the world outside the laboratory.

Surveillance of experimenters’ experimental engagements implied constant vigilance; it demanded continual attention to the experimenter’s characteristics, the dynamic interactions between experimenters and subjects, and the distressing possibility that what they said to and thought about each other might not be the real thing. Given the plethora of possible inner and outer psychological factors and end states, methodological mandates sometimes read like symbolic defense statements against the ever dangerous and escalating intersubjective play. Following these mandates certainly would entail massive increase in scientific labor yet provided no guarantees of experimental validity.

Psychology of the Psychology of the Psychology Experiment

Two studies that have become eponymous with this period of experimental malaise focused directly on experimenters’ psychology and not merely on their presence in the experiment. Embracing distinctly different tacit psychologies of the experimenters, Martin Orne and Robert

⁷⁸ Postman, "An Experimental Analysis of 'Learning without Awareness'." P. 353.

Rosenthal independently tracked the experimenter's psychological operations, overt and covert, conscious and unconscious. Both researchers accomplished their work from the experimenters' vantage point(s), occupying the position of a disinterested, distanced experimental observer. However, the paradox of using experiments to sleuth the experimenter's action win experiments was largely irrelevant to them because neither Orne nor Rosenthal intended to find the experimenter to be a leading figure in their inquiries. Each had set out on different scientific missions, but suspicions about the experimenter emerged along the way.

Orne was studying hypnotism, a technique with a long history as a technique to detect truths and untruths. His project departed from the orthodox view of hypnosis as a special or abnormal state of consciousness and rejected the notion of "a passive S in a sleeplike state who has amnesia for the events occurring in hypnosis, and responds only to the hypnotist's suggestions."⁷⁹ Alternatively, Orne proposed that "hypnotic behavior results from the subject's conception of the role of the hypnotic subject as determined by past experience and learning, and by explicitly and implicit cues provided by the hypnotist and the situation."⁸⁰ This alternative theory understands subjects to be perceptive, responsive, and motivated; subjects are eager to comply with the experimenter's "wishes" while at the same time "reticent" about revealing their own thoughts about the situation. As reported in a 1959 article and developed extensively over the next five years, Orne considered hypnosis analogous to experimentation: both hypnotized subjects and experimental subjects act "as if" they are hypnotized or affected by the explicit experimental expectations. Just as subjects to be hypnotized enter the scene with considerable cultural knowledge about hypnosis, so experimental subjects enter the general experimental

⁷⁹ M. T. Orne, "The Nature of Hypnosis: Artifact and Essence," *Journal of Abnormal and Social Psychology* 58, no. 277-299 (1959). Pp. 280-281.

⁸⁰ *Ibid.*, 277.

psychology lab with, "...some sophistication in regard to the philosophy of experimentation."⁸¹ Ss confront a paradoxical situation in the psychology experiment: they are to act naïve but they know, too, the necessity of being "honest." Alert and engaged, "Ss are motivated to avoid recognizing explicitly the purpose of the experiment even though it may be communicated by its design. Thus, the response to the direct question, 'What do you think this is about?' tends to be 'I don't know'."⁸² Only with careful (clinical) interrogation not unlike interrogation of prisoners, only when the "S is pressed," can the truth of their awareness of the E's objective be revealed.

Orne's investigations uncovered the previously unseen "demand characteristics" which functioned to make both hypnosis and experiments work. A complex series of studies elaborately situated "real" and "fake" trance Ss in experimental settings with "naïve" or "blind" Ss and informed Es. To emphasize the universality of active role-taking subjects, Orne interspersed his report with parenthetical anecdotes of other experiments in which subjects denied having foreknowledge. Deceptions and double deceptions run through his 1959 article. What is real becomes entangled with what is simulated, as do what is objective and what is subjective. In the end, subjects' "denial" of foreknowledge does not necessarily mean what one supposes; the experimenter's scientific findings (either of experimental effects or success at hypnosis) do not necessarily mean what he or she thinks they do. So guarded were subjects in feigning ignorance that accurate discrimination of their faking required "a clinical diagnosis with an inordinate amount of subjectivities uncertainty and about 20% error."⁸³ Faking Ss have a psychology, one necessitating special psychological skills to comprehend. Paralleling this account of subjects is the idea that experimenters' psychology also transverses the experiment,

⁸¹ Ibid., 281.

⁸² Ibid., 287.

⁸³ Ibid., 294.

dynamically influences the subjects' psychology. In other words, the experimenter's social relations with subjects warranted appraisal. While aiming to assess critically a purported state of consciousness, to separate the "valid" aspects of hypnosis from "artifact," Orne generated a theatre of the superficial, an "as if" world of duplicitous yet interdependent experimenters and subjects. This understanding of "demand" was an understanding of power relations in the laboratory but only rarely did Orne use the terms power and authority; his was a theatre of tacit power.

Although frequently neglected in later work on demand characteristics, Orne's debunking of the naïve subject was significant and corroborated others researchers' wariness about what was called the "sophisticated" subject. Moreover, his claims about the general availability of knowledge about experiments, knowledge circulating outside the confined culture of experiments, intimated a possible unending relay of purportedly but not actually confidential information.

As Orne was running his experiments on hypnosis at Harvard, Rosenthal was completing his dissertation on projection at U.C.L.A. His thesis, "An Attempt at the Experimental Induction of the Defense Mechanism of Projection," begins with a didactic survey of theories of projection, a concept reportedly laden with "surplus meaning." Projection appeared so elusive, he claimed, that a clinician who interprets a patient's fantasies could himself be described as projecting. Aiming to avoid "knowledge by revelation, by edict or by authority," as well as "epistemological meanderings," Rosenthal used scientific methods of controlled experimentation to demonstrate the "process of projection by inducing it" – to make it real by experimental

simulation.⁸⁴ Disguising the experiment's purpose, he then again deceived the Ss into thinking they performed either successfully or unsuccessfully on an intelligence test; both before and after the test Ss were instructed to rate portraits in terms of the pictured person's success or failure. Rosenthal hypothesized that the Ss who believe themselves to be failures as measured by an intelligence scale would project their negative self-feeling onto the individuals represented in the portraits. Even with several statistical analyses, these measures failed to reach statistical significance, save one: the pretest assessment of the portraits by the Ss assigned to the success test group differed significantly from those of the Ss assigned to the unsuccessful group. These data indicated an experimental effect had occurred *before* the experimental intervention. Given that both experimental groups had received identical pre-test instructions, Rosenthal reasoned that the only explanation for this pre-test effect were unconscious processes - processes not merely in the Ss but also, and more importantly, in the E. The pre-test outcome was just what the experimenter would have wanted in order to obtain his predicted experimental effect. Therefore, the outcome was due to "unconscious experimenter bias" influencing the Ss processes. "There are subtle, important processes occurring within the experimenter which bias the outcome of his research," Rosenthal wrote, "Thus it is felt in this research that the Es hopes as to the outcome led his treating the experimenter groups differently in subtle ways even while reading them identical instructions."⁸⁵

Experimenter biases, Rosenthal held, could occur everywhere in the scientific process, from choosing a theory and experimental design all the way to interpreting findings. However, the bias operating "during the performance of the experiment itself" was categorically different from

⁸⁴ R. Rosenthal, "An Attempt at the Experimental Induction of the Defense Mechanism of Projection" (University of California, 1956). P. 10. On the simulation of the world in physics experiments see P. Gallison, & Assmus, A., "Artificial Clouds, Real Particles."

⁸⁵ Rosenthal, "An Attempt at the Experimental Induction," p. 64.

these other occurrences. Experimenter bias was not public – it was not accessible to public scrutiny -- and, further, it may well be inaccessible to experimenters themselves who might not realize their psychological involvements.⁸⁶ Upon acknowledging the seriousness of this experimental bias, he recommended several methodological solutions, including submitting experimenters to experimental measures – exposing them to the disguises, duplicity, and surveillance in experimental “as if” worlds. As he admitted, this solution dramatically altered the experimental situation: “Of course, the Es used would really in a way be Ss and it would be necessary for them to remain in ignorance of the real nature of the research.”⁸⁷ Rosenthal ultimately reassured his readers and himself, “That the infallibility of the experiment has been questioned need not be disconcerting even to a science which is often self-conscious in regard to its scientific status.”⁸⁸

The complex, dynamic contact between experimenters and their scientific objects, the similarity between their psychic states, the proposed interchangeability of their experimental functions, and even the relays of subtle unconscious forces reported by Orne and Rosenthal did not need experimentation to uncover. Orne’s view that all subjects were sophisticated, along with Rosenthal’s that the experimenter’s unconscious message might be either stimulant or “antidote” to subjects, simply underscored already common knowledge about psychology experiments. Thus, experimenters replicated as they sought to remedy the tangle of real and apparent, authentic and artificial, which transpire in experiments. Yet such tangles were already known. By the 1950s the cultural lore of psychology experiments exceeded what Orne described as philosophical sophistication; they already were renowned for compelling subjects to act other

⁸⁶ Ibid., p. 67.

⁸⁷ Ibid., p. 71.

⁸⁸ Ibid., p.71.

than they would choose. Subjects were forced either to reveal or conceal, comply or resist, in an interrogation sequestered from the rest of the world. The skills of Skinner, Watson, and Pavlov were woven into popular accounts of coercion and covert force. Vance Packard's *The Hidden Persuaders* and popularizations that linked experiments and mind control, or "brainwashing," further educated readers about the psychic dynamics of psychology experiments.⁸⁹

Psychodynamic details of experimenters and subjects' engagements also figured in fiction. In 1956, when Orne and Rosenthal were conducting their experiments, Eugene Burdick published *The Ninth Wave*, a novel with a chapter featuring a psychology experiment. Burdick later became known for his 1962 novel, *Failsafe* (a scenario of the strategies and counterstrategies, secrets and lies that trigger catastrophic nuclear attacks between the Soviet Union and the United States). In *The Ninth Wave*, the protagonist of, the undergraduate Mike Freesmith, volunteers to participate in an experiment to earn money. Surmising that the proclaimed color preference experiment is really one of learning with reinforcement, he painstakingly deciphers the reinforcement schedule to earn himself two bulging pockets of pennies. Committed to participate for several sessions, Freesmith returns the next day to find he is to work alongside two other subjects; the experiment is unchanged, save the added feature of group decision-making. Freesmith's behavior in that group session counters democratic decision-making as he bullies his fellow Ss to comply with his strategies. But his detection of the hypothesis, gleaned with constant observation of the experimenters' nonverbal responses – what Orne might call their demand characteristics and Rosenthal their unconscious biases -- turns out to be just wrong as the experimenters' hypothesis. In the end, the three subjects make little money and the irate experimenters abandon their scientific project. Capitalizing on the

⁸⁹ V. Packard, *The Hidden Persuaders* (New York: David McKay, 1957). E. Hunter, *Brainwashing: From Pavlov to Powers* (New York: The Bookmailer, 1956).

skills of his PhD in psychology, Burdick designed an experimental scenario where the ever alert Es and Ss at once were both correct and incorrect in their psychological strategizing: the experiment really was on color perception but the mechanical device displaying the colors was set to display a fixed pattern of colors, thus effectively functioning ‘as if’ it was a reinforcement instrument. The experimental game, although engineered without duplicity, nevertheless is understood by this suspicious S to require Cold War tactics of vigilance, disbelief, counter-defense, and an us-them adversarial regard. Even so armed, Freesmith misread the experimenters’ unscripted influences and the Es were frustrated by his.

Orne and Rosenthal’s psychologies of the psychology experiment ultimately became a psychology. Within a decade they rose to be regarded as champions of the “artifacts” of experimentation and their names still routinely appear in methodology textbooks. In addition to objectively documenting a psychology beyond the experimentally-induced one, their studies validated a new (or recovered) psychological state of confidence and well being among experimenters. Their technical prescriptions were taken by many psychologists as remedies for experimenters’ anxieties reported over the previous two decades.

Political Economy of the Psychology Experiment

Two other psychologists writing at the end of the decade examined the intersubjective relations of experimenter and subject. Although these two, Henry Riecken and Joan Criswell, were accomplished empirical researchers with impressive credentials, their analyses are as neglected as Orne’s and Rosenthal’s are noted. Riecken and Criswell depicted experiments’ political economy and argued that a full understanding of psychology experiments depended upon analysis of their relations of power, rewards, and institutionalized rationalizations. The

experiment, in other words, is a political system complete with the requisite economic exchanges and structures of governance (authority); it must be understood in these terms.

Riecken first presented his work at a 1958 Air Force supported Behavioral Science Conference (on decisions, values and groups) just two years after co-authoring a monograph on social psychologists' covert infiltration of an apocalyptic religious sect.⁹⁰ Riecken rejected characterizations of the experiment's internal psychology as simply technical difficulties – as “unintended variance” or “error.” What transpires in experiments, he countered, are elaborate, and often undetected “processes of negotiation.” Drawing upon Irving Goffman's newly published *Presentation of Self in Everyday Life*, he described how impression management profoundly informs these negotiations. Given that subjects want to “put their best foot forward,” he asked, “how does the subject in an experiment decide what virtues are relevant and what faults must be concealed?”⁹¹ The answer required acknowledgement of subjects' self-defensive double mission (to please and strategize) as well as the experiment's political structure. The experimental domain is totalitarian: the experimenter maintains symbolic authority of professor and psychologist, almost an “*in loco parentis* for the subject”. More importantly, the he is a “powerful figure” who among other privileges, has the “power of insight into the subject.” While considered fairly trustworthy, he nevertheless can trick the subject or worse: he can “expose the subjects pretenses, inflict humiliation and mental pain.”⁹² Crucial to sustaining this political economy are additional valences of power: the experimenter segregates the experiment from the rest of life (or does so “at least from the point of view of the experimenter”).

⁹⁰ Festinger, Riecken, et al, *When Prophecy Fails*. On Riecken's long career in psychology, see C. P. Alderfer, "Henry W. Riecken: Present at the Beginning (Many Times)- Biography of an Applied Behavioral Scientist," *Journal of Applied Behavioral Science* 35, no. 2 (1999).

⁹¹ H. W. Riecken, "A Program for Research on Experiments in Social Psychology," in *Decisions, Values, and Groups*, ed. N. F. Washburne (New York: Pergamon Press, 1962). Pp. 27-28.

⁹² *Ibid.*, p.29.

Disregarding the subject's past and future, "the experimenter usually wants to use the subject as an instance of behavior, use him just one time, and then forget everything about him except the data he has produced."⁹³ What is more, experiments comprise "one-sided distribution of information" enabling the experimenter to withhold, conceal, misrepresent, entrap, hint, or otherwise control information dissemination. Quite simply, the experimenter plays "a serious game with the subject."⁹⁴ They are unyielding authoritarians who "will not listen to any attempt on the subjects' part" to alter conditions or grant him or her any "legitimate status."

The experiment constitutes a hyper rationalized world governed by an "inflexible" leader; in fact, his "every move in an experiment has been predetermined and can be said to be "programmed."⁹⁵ Insofar as the experimenter believes that the subject believes in the experimental situation, he himself believes this rationalized reality. In these senses, the experimenter stands in contrast to his subjects who, however subjugated, still enter the experiment with ambitions and, in a Hegelian master-slave relation, can see more and more accurately. Seeking at once rewards, correct discernment of the experimenter's ultimate aims, and favorable regard, subjects engage in an "iterative procedure" to negotiate their way through the experiment. The subject's multiple aspirations can camouflage the meaning of her or his actions. Subjects, too, can conceal, withhold, lie, rely upon preconceptions to somehow "maximized the worth of his behavior".⁹⁶

The experiment's tacit political economy and iterative psychological negotiations can be better known, Riecken held, by adopting a new empirical strategy: investigate the subjects' understandings of the experiment. Yet even this putatively constructive recommendation is

⁹³ Ibid., 30.

⁹⁴ Ibid., 30-31.

⁹⁵ Ibid., 33.

⁹⁶ Ibid., 36.

punctuated with doubt, leading Riecken to wonder out loud, for instance, whether studies that varied the experimenter's characteristics and performances could adequately identify and control the subtle cues perceived by subjects. Experimenter's "anxiety" and even the confederate's "tensions" and "guilt" might be difficult to eliminate. Thus, the paper closes not with confidence but resignation: methodological refinements might merely shift "the burden of communication" to another dimension of the experiment, thus creating to a seemingly unending regress of negotiations between experimenter and subjects. Just as Riecken deferred the question of the relation of "appearance" and "reality" in Goffman's model, so his conclusion defers any remedy to the undemocratic political economy of the experiment.

Criswell's paper also was presented at a military sponsored event, a 1957 Perception Symposium held at Harvard University. Her assessment of "The Psychologist as Perceiver" uses the metaphor of detective work: both good scientists and detectives compel their "informants to reveal various significant facts" and do so in ways that reveal nature and not a mirror of the scientists. Unlike Einstein and other exemplary detective-scientists, psychological scientists bungle their detective work: they are disoriented and disabled by their perceptions of "themselves, other scientists, experimental subjects, and the public in general."⁹⁷ The "orthodox psychologist" assumes his subjects to be machine like, devotes himself to prediction and control, and consequently, adopts an "authoritarian" posture. He manipulates rather than helps people, attributes creativity only to himself and not others, and confects experiments as substitutes for developing meaningful scientific constructs. Experimental research is "facilitated and rationalized by a scientific self-image which establishes as a source of prestige and as an end in

⁹⁷ J. H. Criswell, "The Psychologist as Perceiver," in *Person Perception and Interpersonal Behavior*, ed. R. & Petrullo Tagiuri, L. (Stanford: Stanford University Press, 1958). Pp. 95-96.

itself a demonstration of power over our subjects.”⁹⁸ Criswell was unrestrained in likening experimentation to authoritarian regimes, and its top down network of control and near absence of cooperation and choice bear resemblances to dystopias, Soviet propaganda, and fictional “dictator psychologists” a la the characters described by Skinner and Huxley.

This objectionable political economy makes the experimenter anxious in several ways, Criswell claimed, because he actually impresses neither the physical scientists he reveres nor the public. Moreover, he fails to attain “the desired control over his subject.” Instead, experimenters rationalize their “neurotic conflicts,” and their experimental abstractions, while exuding “a strange air of omniscience,” are a disguise that subjects readily penetrate.

The psychologist’s faulty perception coheres with the tacit political economy of the experiment in which authoritarian acts yield a dependent but not fully controlled subject. Subjects are dependent but not entirely slaves because subjects perceive far more of the experimental situation than experimenters believe they do. Unlike experimenters who act as though subjects have choices, and subjects more accurately comprehend the severe limits on their actions and choices. And subjects understand these constraints in economic terms; Criswell observed, “If the animal wants to eat or the human subject wants to be paid, there is just one thing to do.” Forewarned with “some standards regarding the proper behavior of a docile cooperative experimental subject, ”subjects perform “adequately” and are not motivated to give it their all. Like Riecken, she called the experiment a “game,” critically constrained by its political economy, which means among other things, that experimenters should be neither surprised nor horrified when subjects conform to group pressures. Rather, “they should take

⁹⁸ Ibid, 98.

some comfort in the strong possibility that these subjects were simply giving the response most likely to win them a prize in a game.”⁹⁹

Criswell earnestly surveyed the undemocratic government of the laboratory, contrasting it with clinical psychologist-patient relationships, which are cooperative, developing (temporal), and rely upon feedback. Whereas clinical psychology “makes provision for the fallibility and correction of the psychologist,” experimentation “is authoritarian and requires, for its best application, the infallibility of the psychologist.”¹⁰⁰ If experimenters are unpersuaded that cooperation provides a superior method of inquiry, she advised, then they might consider how “psychological warfare” has found cooperation to be more effective than force. No technical remedies correct for the authoritarian state of experimentation. What is required is nothing less than a democratizing of the experimenter. The experimenter must give up his mythic “scientific father figure” and “heal himself, working his way out of his dilemma through a reorganization of his self-concept.” A more sophisticated, temporal, and cooperative relationship with subjects will enable the experimenter to foster experimental knowledge and “improve conditions for the subject and for himself.”¹⁰¹

Forgoing technical remediation, Criswell recommended democratization of an authoritarian situation. Her call for democratizing the laboratory corresponded with those of clinical researchers Carl Rogers and David Bakan who decried the authoritarian, impersonal nature of the experiment and experimenter. Rogers and Bakan each had criticized the experimental scientist’s stance of epistemological “loneliness and estrangement” along with his presupposition that the subject is somehow different than himself. They likewise urged a democratic politics based on

⁹⁹ Ibid., 104-105.

¹⁰⁰ Ibid., 106.

¹⁰¹ Ibid., 108.

intersubjective regard, for recognition of similarity against an epistemology of difference (while acknowledging that lies and secrets would not thereby disappear).¹⁰²

Criswell's concern with experimentation's forced compliance and tacit limits to choice also aligned with notions of democratization being discussed more broadly within psychology. Dictatorships and totalitarian governments, psychologists were claiming, radically restrain citizens, producing "unity" and "discipline" but not free and autonomous citizens. Such governments yielded negative psychological consequences for development of autonomy and self-regard. Postwar writings elaborated on the connections between politics and psychology, and encouraged efforts to foster and protect democratic conditions. This revitalized morale of democracy even entered the home: according to one psychology textbook author, "Several decades ago the father was the undisputed head of the household. He dominated the family, and his preferences received first consideration. Today, this type of family is being supplanted by one that is more democratic; the father is slipping, or has slipped, from his throne as autocrat. He is now a companion rather than a boss."¹⁰³ Securing democracy was not just a matter of international politics but also concerned domestic life and, presumably, the clinic and laboratory.

Riecken and Criswell independently portrayed psychology experiments as politics operating under the guise of science. Appearing to be science, experiments in reality constituted game-like engagements with maneuvers of power. Criswell demanded a political reformation with experimenters relinquishing power and subjects obtaining greater experimental freedom of

¹⁰² D. Bakan, "A Reconsideration of the Problem of Introspection," *Psychological Bulletin* 51, no. 2 (1954). D. Bakan, "Clinical Psychology and Logic," *American Psychologist* 2 (1956).; C. R. Rogers, "Persons or Science? A Philosophical Question," *American Psychologist* 10 (1955).

¹⁰³ Harry W. Hepner, *Psychology Applied to Life and Work*, 3rd ed. New Jersey: Prentice-Hall, Inc., p. 257. For examples of psychologists' views of the suppression of choice and autonomy in authoritarian state, see Hilgard, (1935); Heppner, (1942)Hilgard (1953). For psychology's efforts to understand and aid "democratic morale" during and after World War Two, see Herman, *Romance of Psychology*.

choice. By contrast, Riecken, although also loathing orthodox experimental relations, remained in the liminal space between the real and apparent, the authentic and merely seen, retreating to lukewarm prescriptions. His proposal to study the “negotiations” between experimenter and subject, probably borrowed from the field of (democratic) decision making, nevertheless takes subjects to be vulnerable, sometimes untrustworthy citizens of a dangerous world where democracy was ever at risk. In this world where distinguishing apparent and real posed a constant challenge, something akin to democratic social engineering seemed necessary, and the laboratory was no exception.

Ultimately neither political analysis, the revisionary nor the radical, noticeably influenced scientific practice. Instead, the technical fixes introduced by Orne and Rosenthal were favored and the scientific objects and their observers settled down to statistically manageable comportment.

Normalizing Laboratory Relations

Ten years after these four re-interpretations of the experiment, psychologist Sidney Jourard offered a fictional account. In a letter to the “E,” Jourard’s imaginary college-student “S” deplored the undemocratic, authoritarian, scheming, and profiteering atmosphere of experiments. Feeling “pressured, bulldozed, tricked” and “manipulated everywhere I turn”, S disclosed that he too, tricks and lies and proceeds to confess that he has fulfilled experimenters’ greatest fears of detection, cheating, and transmitting experimental information to others.¹⁰⁴ S proposed that he and E establish a new experimental relationship, one built upon democratic premises, including a sense of their similarities and of fair trade: “If you’ll trust me, I’ll trust you, if you’re trustworthy. I’d like you to take the time and trouble to get acquainted with me as a person,

¹⁰⁴ Sidney M. Jourard, *Disclosing Man to Himself*. Princeton, New Jersey: d. Van Nostrand Company, 1968, p. 10.

before we go through your experimental procedures. And I'd like to get to know you and what you are up to, to see if I would like to expose myself to you.”¹⁰⁵

By the time Ss letter appeared in print, however, the civil disorder of the psychology laboratory was well on the way to being quelled. The 1961 APA convention had featured a symposium “On the Social Psychology of the Psychology Experiment” whose participants included Rosenthal and Riecken. After his dissertation, Rosenthal proceeded to produce experiments to further demonstrate what he decided to call “experimenter bias,” thereby discarding his original trope of unconscious processes. Replacing the invisible, elusive unconscious forces that figured in his earlier work were notions of “the E-S dyad as a signal exchange system”; their signal editing resembled the “impression management” theorized by Goffman.¹⁰⁶ Just as the potentially duplicitous and unmanageable unconscious thus was removed from the experiment’s intersubjective dynamics, so other disturbances were quieted, transferred, or eliminated through a host of investigative controls – methodological, statistical, ethical, and most importantly, linguistic. Methods to contain the experimenter’s unscientific attributes revived the impression of self-managed Es. Their scientific objects seemed to follow suit, appearing more cooperative if not resilient.¹⁰⁷

During the 1960s, as many more researchers empirically measured the intricacies of laboratory relations and monographs were devoted to controlling one or another of its ambiguous features, notions of duplicity gave way to assorted “methodological” techniques designed to

¹⁰⁵ Ibid., pp. 10-11.

¹⁰⁶ R. Rosenthal, "On the Social Psychology of the Psychology Experiment; with Particular Reference to Demand Characteristics and Their Implications," *American Scientist* 51 (1963).

¹⁰⁷ Similarly, the development an ethical code for the conduct of research was initiated with a sense that subjects were vulnerable (to experimenters) but ultimately adopted the standpoint that subjects actually were “resilient” and, therefore, needed only a modicum of protective regulation Laura Stark, “Morality in Science: Evaluating Research in the Age of Human Subjects Regulation.”

minimize if not eradicate such “artifacts”. Likewise, the experimenter’s unconscious gave way to “bias”, and subjects’ sophistication gave way to “expectancies” and resilience. The psychology of the psychology experiment came to be understood as “error variance” and, according to a newly popularized expression, ‘one man’s error variance was another man’s social behavior’ (or “main effect”). For numerous psychologists, the psychic as well as political complexities became social behavior to study under controlled conditions. They came to understand the problems as constituting not human nature but, rather, the nature of humans under experimental scrutiny. Better control of the research situation, then, would reduce subjects’ complexity thus yielding a more compliant scientific object.¹⁰⁸ More often, the complexities received merely note, eventually stirred into a “curious mixture of acceptance and denial.”¹⁰⁹

By the late 1960s, many psychologists had reached what William McGuire calculated to be a third, and final, stage of what he called the “suspiciousness problem”. The first stage was experimenters’ unawareness, even denial of the “variables producing the artifact.” In the second, the “coping stage”, researchers recognized the problem with the result that it sometimes comes to “terrorize and divert him from his main interest.” During the final “exploitation phase” the suspiciousness problem is transformed into an “interesting independent variable in its own right.” Thus suspiciousness, in this final stage, corrects “our secretiveness compulsion” as well as our inaccurate depiction of Ss who are, contrary to suspicious thoughts that they are

¹⁰⁸ R. & Rosnow Rosenthal, R. L., *Artifact in Behavioral Research* (New York: Academic Press, 1969). Rosnow and Rosenthal, *Artifacts in Behavioral Research*, p. viii. This technical solution of studying unintended events in the laboratory as undesirable artifacts confronted its own reflexivity problem when these very empirical demonstrations of artifacts were claimed by other empirical researchers to be artifacts of experimentation. See T. X. Barber, & Silver, M. J., "Fact, Fiction, and the Experimenter Bias Effect," *Psychological Bulletin Monograph Supplement* 70, no. 6 (1968).

¹⁰⁹ J. M. & Rosnow Suls, R L., *Concerns About Artifacts in Psychological Experiments*, ed. J. G. Morawski, *The Rise of Experimentation in American Psychology* (New Haven: Yale University Press, 1988).

suspicious, are really rather apathetic (witness the disinterested students in introductory psychology classes).¹¹⁰

Transforming selected features of the psychically and politically charged laboratory into measurable variables provided comfort to many, but more importantly, such transformations produced few substantive alterations of experimental procedures. Knowledge about the intersubjective melee of the experimental situation did not compel new relations (as Criswell and Jourard proposed), just as knowledge about the college sophomore, volunteerism, and sophisticated subjects problems, or the ethical caveats about deception did not notably affect the use of college sophomore volunteers or deceptive designs. Subsequent efforts to reconceptualize psychology's scientific objects continued mostly at the margins of the science, undertaken mainly by researchers allied with feminism, race politics, community psychology, and ethnomethodology. As George Miller forcefully and persuasively argued in his 1969 APA presidential address, "giving psychology away" requires not epistemic reconstruction or practical applications but, rather, renewed, heightened commitment to "pure", tough-minded research.¹¹¹

¹¹⁰ William McGuire, "Suspiciousness of Experimenter's Intent," in Rosenthal and Rosnow, *Artifact in Behavioral Research*, p. 14.

¹¹¹ G. A. Miller, "Psychology as a Means of Promoting Human Welfare," *American Psychologist* 24 (1969). See Sigmund Koch's critique. Koch, "Psychological Science Versus the Science-Humanism Antimony: Intimations of a Significant Science of Man." In an adamant deconstruction of Miller's address, Sigmund Koch argued that contrary to Miller's avowed humanitarian and democratic inclinations, he further objectified humans (make them "objects"). And while Miller refrained from promoting control of the subject (ordinary beings), he actually advocated that psychologists "control the subject's control of the subject". Pp. 299, 306-307. Koch was among a few notable psychologists who Koch was among a few "mainstream" psychologists who persisted with efforts to substantively alter the science's epistemic and theory commitments. See Jill Morawski, (Koch article). However, feminists and race psychologists continued to critically examine the dynamics of the experiment.

Conclusion

Even if psychologists never seriously considered Hull's robot or Stevens' pliant organism, even if they never actually imagined their scientific object to be a "passive responder" or naïve inhabitant of the lab, during the postwar years they recorded encounters with a dramatically changed scientific object. The scientific object witnessed in 1950s experiments blurred the divides between real and apparent as well as the authentic and enacted. The objects which psychologists observed and described challenged the view of trustworthy and conforming or otherwise obedient submissive citizens and provoked psycho-dynamic and even political reflections on the governance of the laboratory. These scientific objects were knowing, deceptively clever and guarded; they required more clever tactics on the part of experimenters. Further, these postwar scientific objects provoked more than reappraisal of their subjectivity, for they signaled as well troubles with the domestic relations of the laboratory. Recurrent, sometimes peculiar foci on race, gender, and sexuality were but symptoms of a more pervasive disquiet, which frequently implicated the experimenter – his comportment, motives, unconscious wishes, anxieties, and defenses. The psychology lab shared certain of the "hothouse" characteristics of other institutions where militarized logic was extended into other realms creating a new psychological domestication of living spaces, from playroom to the office.¹¹² This period fixed upon the epistemic (and practical) tensions between representation and simulation, authenticity and dramatic contrivance, tensions that strained the circuitry of the psychological. Cold War America exhibited, in Dolan's words, "a politics entirely given over to phantasms and simulacra but whose actors are driven by the need to reduce the interpretive

¹¹² B. Colomina, Brennan, A., & Kim, J., ed., *Cold War Hothouses: Inventing Postwar Culture, from Cockpit to Playboy* (New York: Princeton Architectural Press, 2004). Colomina, Cold war hotcouses2004.

ambiguity of their world to the reassuring forms of a metaphysical allegory.”¹¹³ For a few psychologists, the strained circuits, laboratory phantasms, and glaring contradictions demanded a new realism, one that entailed either outing the real world politics of the laboratory or championing the transparent self of the humanist imagination.

Experimenters’ apprehension of their postwar scientific objects was facilitated by the ambient intellectual culture as well as a militarized psychology of the Cold War. Researchers’ reflexive moves to endow the subjects of their theory with the flexibility, creativity, and capacious reasoning that was generally ascribed to scientists (moves which historian Jamie Cohen-Cole has linked to the ascendancy of cognitive psychology), undoubtedly influenced experimenters’ vision of their objects.¹¹⁴ As cognitive psychologists promoted a new model of mental life, their laboratory subjects may well have been ascribed cognitive capacities, although these gains ultimately were far less than one might predict. Similarly, the contacts between clinicians and experimenters made during the war, and the necessary commingling of their perspectives, motivated not a few researchers to incorporate experimental and clinical perspectives. Among the fruits of this incorporation was more frequent and confident utilization of psychoanalytic ideas -- the possibilities of laboratory defenses, anxieties, repressions, and denials.¹¹⁵ Yet, these new analytic insights into human experimenters eventually were sidelined. Finally, experimenter’s unease about their subjects and, ultimately, about the power relations between experimenter and subjects, parallels social scientists’ preoccupation with the binaries of

¹¹³ Dolan, *Allegories of America: Narratives, Metaphysics, Politics*. Dolan, p. 2.

¹¹⁴ Jamie Cohen-Cole (dissertation; 2005 article).

¹¹⁵ Even philosophers of science were drawn to psychoanalytic understandings of science. See H. Feigl, "Philosophical Embarrassments of Psychology," *American Psychologist* 14 (1959).

individual and social, individualism and conformity, and inner and outer persons. (Once again, theoretic innovation was short-lived.)¹¹⁶

Psychology's brief period of epistemological dizziness disrupted a core laboratory assumption that elaborate experimental procedures would adequately isolate elements of a real human nature. Even when psychologists perceived the problem as residing in their objects and not themselves, or when they viewed the problem as merely technical and not theoretic or epistemic, they vigilantly watched over their scientific objects and the observers. These scientists momentarily displayed what Michael McMylor has called "experiential liminality," modern intellectuals' practice of "reading experiences" as an iterative, ongoing re-ascription of selves, others, and human conduct generally.¹¹⁷ Their reconstructions of experimental events and actors, although varied in the particulars, fixed on uncertainties of the nature of the real, authenticity, and meaningful political life. Confronting matters of the real prompted seeing the nominal – the "as if" world of dramaturgy; the established mechanical objectivity of psychology pushed against personal investments in the laboratory; and the standardized, rationalized work of professional science rubbed against the autonomous, responsible individual of liberal democracy. These scientists earnestly if momentarily commenced to perform the "epistemopathic surgery" advocated by Sigmund Koch who was, at the time, arguably psychology's most ardent yet revered critic.¹¹⁸ With exception of a few, notably those who would most benefit from a more radically reconstructed science, the risks of such reappraisal to this borderline science – a science affirmed almost exclusively through its experimental methods – were too high.

¹¹⁷ McNaylor *History of the Human Sciences*, 2005.

¹¹⁸ Sigmund Koch (find ref in Koch appreciation paper).

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