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Kenneth J. Gergen

Textual Considerations in the Scientific Construction of Human Character

Molding character from the culture's repositories of discourse is a precarious undertaking. For accounts of character—what it is to be a coherent and identifiable person—are first of all possessions of the populace. They are central constituents of the ordinary language conventions and, as a result, intimately intertwined in daily patterns of human relationship. Thus, when people speak of their intentions, beliefs, wants, hopes, fears, and the like, they are not only generating and solidifying agreements concerning the ontology of personal being, they are also carrying out patterns of relationship in which such terms are essential integers. (The utterance “I adore you” not only asserts a certain condition—adoration—to be a central essence of human beings, but simultaneously participates in a form of relatedness that equally determines what it is to be human.) The writer's position is thus precarious in two senses: first with respect to his/her symbiotic relationship with the existing language communities and second with respect to the life forms that such writing may either disturb or destroy.¹

It is the first of these conditions that is central to the major arguments of the present paper. The inscription of character is critical not only for novelists, biographers, and autobiographers; it is also of pivotal importance to historians, political scientists, legal theorists, philosophers of knowledge, psychologists, and many others. All are challenged with the problem of rendering in words a sense of recognition—mutuality yet difference. At the same time, in all these cases the writer is faced with a subtle but consequential problem: he or she must rely on the discursive forestructure supplied by the culture and yet perishes by its repetition. In this sense, the literary creation of personhood is inevitably intertextual (or more precisely, interdiscursive); the writer must rely on the existing argots of understanding or else ceases to be intelligible. To write of someone who “feels pickle” or who “wishes in the horizontal” fails in the cooperative achievement of making sense. At the same time, to reproduce the existing forestructure is to fail in generating moments of distinction in the ongoing hurly-burly of daily activity. If the writer does not estrange the audience from the commonplace, he or she can make no claim to voice. At worst, the writer simply expands the domain of tedium.

My particular concern in this paper is with the way in which literary considerations enter into the construction of human character in scientific psychology. How is it that the professional psychologist, as a writer, navigates

between the shoals of the banal and the absurd? The problem is interesting from several standpoints. While rhetorical analysis has traditionally centered on the writing of fiction, the fiction writer occupies a very specialized role within the culture. And, although this role does undergo historical change, it has long been defined in terms of its liberty. That is, violations of the rules of common intelligibility are anticipated—or even desired for the forms of entertainment, enlightenment, or escape which they allow. Thus, along with other rhetorical processes, analyses of character formulation in fictional writing may be misleading if generalized to other forms of literary construction. Indeed, as rhetorical consciousness has expanded in recent years, analysts have become increasingly concerned with the literary dimensions of the various human sciences. Historian Hayden White's *Tropics of Discourse*, Donald McClosky's *The Rhetoric of Economics*, Bruno Latour's *Science in Action*, and James Clifford and George Marcus's *Writing Culture*, along with sociological works by Bryan Green (*Literary Methods and Sociological Theory*) and the psychiatrically oriented writings of Donald Spence (*Narrative Truth and Historical Truth*), Richard Harvey Brown (*Society as Text*), and Patrick Mahony (*Freud as Writer*), are among the most visible works of this genre. The present analysis extends this line of endeavor to inquire, most particularly, into the scientific psychologist's construction of character.²

In light of the role played by scientific psychology within the culture, such an excursion takes on special significance. For as traditionally reasoned, the rigorous and objective study of mental processes should ultimately lend itself to an enhanced quality of cultural life. With greater knowledge of the emotions, thought processes, memory, motivation, personality dispositions, and the like, we should be able to make more informed decisions concerning educational practices, child rearing, career choice, and a host of other matters including the care and prevention of mental disorders. Even the literary critic might benefit from such knowledge, many argue, for adequacy of textual interpretation should be assessed against the standard of what we know objectively about the minds of authors. In effect, scientific accounts of mental processes are candidates for truth status, and to achieve truth is to claim superiority over (and thus to marginalize) all competing forms of discourse.

Yet, regardless of the extent and rigor of the research practices, the resulting account is a linguistic construction. The scientific text must create an intelligible sense of personhood according to existing conventions of writing. No less than the novelist, the psychologist must employ techniques of literary construction to render scientific accounts acceptable. Most importantly, to the extent that such techniques dominate the scientific account, observational practices—regardless of rigor—cease to be influential. Methods of experimentation, systematic measurement, and sophisticated statistical devices lose their power of warrant. They neither control the discursive rendering of “the subject,” nor do they justify it. Thus, to penetrate the literary devices for creating character

within the psychological literature simultaneously undermines the objectivity of such accounts and serves as a means for liberating the otherwise marginalized discourses.

The present attempt is not to assay the full range of rhetorical techniques in current use. Rather, more modestly I shall outline three sources of constraint in the writings of professional psychology and the way in which these constraints enter into the fashioning of character. I will direct attention first to issues deriving from the psychologist's membership in the culture at large, then to problems emerging within the scientific subculture, and finally to the textual requirements of laboratory practice. To echo the initial refrain, my special concern in each case is with the psychologist's attempt, within current confines of scientific discourse, to equilibrate between the opposing necessities of conventionality and originality.

CREATING CHARACTER IN CULTURAL CONTEXT

The psychologist's ultimate challenge is to present a compelling picture of human functioning to an audience whose lifelong effort has been that of functioning humanly. For the most part, people are relatively secure in their "knowledge of personal character" and will cite their everyday adequacies as proof of their discernment. Of course, professional psychologists are no less members of the culture at large, and as a result they share in the common conceptions of personhood. It is indeed just this background which enables them ultimately to meet the challenge of intelligibility. In the same way that seventeenth-century vicar Robert Burton could turn commonsense beliefs in melancholy into a 500-page treatise on the causes and cures of this affliction, psychologists of today enter the laboratory already committed to the belief that persons possess rational thought, emotion, memory, and the like. The culture's ontology of personhood is seldom brought into question, and thus the psychologist's accounts are typically congenial to the surrounding ethos.³

It is in this context that one is sensitized to the subtle shifts in the professional construction of the person occurring over the past century. As I have tried to describe elsewhere, nineteenth-century romanticism revitalized and refashioned the medieval "reality of the deep interior." That is, the literary, musical, architectural, and artistic ventures of the time conspired to define the person in terms of a deep energetic force, often equated with soul and rooted in both the spiritual and natural world. It was the expressions of the deep interior, whether in terms of inspiration, devotion, grief, or moral commitment, that gave personal being its significance. These suppositions are, of course, reflected in the character of major protagonists of romantic novels. And in psychology, it is this cultural context that served both to stimulate and to render intelligible Freud's theory of the unconscious. Without the fore-

structure of romantic discourse (see Lancelot Whyte's *The Unconscious Before Freud*), psychoanalytic theory could have neither been penned nor proliferated.⁴

Yet, in the twentieth century, as romanticism has been replaced by the *Zeitgeist* of modernity, the deep interior recedes from view. In modern psychology curricula, Freudian theory receives but scant attention (often viewed as a historic relic or relevant only to circumscribed problems of mental health). In the scientific laboratories Freudian theory is remarkable for its absence. For in the modernist culture, we find a prevalent return to Enlightenment assumptions of human functioning. Within the present century, the deep interior as the core around which character is constructed has largely been replaced by what we believe to be the more accessible processes of observation and reason. That is, persons are rendered intelligible as persons primarily by virtue of their experiences and thoughts. It is reason and observation that, in the modernist vein, lead to essential knowledge or understanding, not only in the domains of science, but also in the visual arts, architecture, music, dance, and so on. And it is on the powers of reason and observation that we can rely for continued progress and prosperity (see, for example, J. F. Lyotard's account of the modernist narrative of progress).

The psychological sciences have drawn from this same repository of cultural beliefs in their fashioning of the twentieth-century being. The two most central lines of research within the mainstream have explored, first, the process of learning (through observation) and, second, information processing (the character of thought). The works of J. B. Watson, Ivan Pavlov (as popularized within the United States), B. F. Skinner, and Clark Hull were canonical texts within the realm of learning. All were concerned with the processes by which individuals acquired fundamental knowledge of the world. All served to inform the reader that the individual is defined in terms of his/her capacities to know and adapt. The emphasis on learning has been replaced in recent years by concerns with information processing (termed by Howard Gardner and others "the cognitive revolution" in psychology). The enormous research literature on processes of attention, comprehension, cognitive heuristics, information storage, and memory systems signifies to the culture that the critical ingredients of human character are processes of thought.

Yet, to declare that the common suppositions about human nature are true is simply to assert that psychological accounts have been appropriately constrained by the dominant intelligibilities. The psychologist would simply murmur assent to that which everyone knows and thus fail in the task of generating new knowledge. This leaves open the question of transcendence—how the profession secures voice by moving beyond the commonplace. In my view, where successful, this end is largely accomplished through *metonymic implication*. That is, elements of the common vernacular are used as token parts of more general but unarticulated wholes. By elaborating the holistic

images or units implied by the fragments, the scientific psychologist retains the commonsense conventions, but offers what is effectively a fresh body of insights. Thus, for example, to speak commonly of persons “knowing their way around” and having a “good sense of direction” is, by implication, to suggest a more inclusive image of the individual as possessor of some form of map. Given the more general emphasis within modernist culture on processes of reasoning, the resulting theory is felicitously cast in terms of “cognitive mapping.” Thus, researchers from Charles Tolman in the 1930s to ecological psychologists of the 1980s offer to the culture a corpus of theory (and supportive research) on the nature of cognitive maps (see, for example, Ulric Neisser’s volume, *Cognition and Reality*). Such theorizing is intelligible largely because it relies, at base, on the commonsense conventions. However, in its fuller elaboration of the image implied by these conventions, it carries the sense of an original scientific contribution.

There are two features of this process worthy of special attention, the first involving psychology in the expansion of the cultural definition of personhood and the second in its constriction. In the former case, once the theorist has established the general image suggested by various fragments of sedimented discourse, its implicature may be explored by a process of *propositional unpacking*. That is, given a central image or metaphor of the human being, the task is to develop deductively an array of corollary propositions. By unpacking the implicational network, the theorist advances a new array of propositions about human nature not directly contained in the common language. For example, one of the most rhetorically powerful images in the recent psychological literature is that of the mind as computational device, or form of computer. The metaphor is invited by numerous commonsense accounts of persons who “calculate,” “carry information in their heads,” “possess memories,” and so on. However, once in place, the theorist can flesh out the picture of the human being in terms of discourse borrowed from the domain of computer technology. Current theories, for example, treat such topics as feature detection, information storage, storage capacity, working memory, information retrieval, semantic codes, sensory storage, and encoding processes—none of which were initially part of the commonsense idiom, but which may become so as the psychologist’s constructions of character gain status as knowledge.

At the same time the elaboration of the dominant images leads to fresh conceptualizations of the person, there is also a way in which the profession circumscribes the cultural construction of character. In their natural habitat, that of informal communal life, the signifiers of personal character are subject to continuous catachresis. Fragments of person description may be inserted into various and newly emerging contexts without risk of social sanction. Or, in Derridian terms, the signifiers enjoy a relatively high degree of freedom, and thus, the destiny and complexity of traces are constantly expanding. However, once the scientific psychologist has appropriated the cultural argot, sealed

it within the confines of a particular image, and disseminated the language to the culture in the form of “scientific knowledge,” the cultural signifiers are thereby constrained. Thus, for example, as the profession increasingly defines human character in terms of the computer, common terms such as “calculate,” “plan,” and “think” lose their connotative richness. To “think about it,” for example, is no longer a matter of “seeking inspiration from within” (one connotative trace for such a phrase), but of “accessing programs of propositional logic”—just as a properly programmed computer would do. Not only is linguistic flexibility lost in this definitional fixing, but as the computer metaphor is normalized, such terms as “spirit,” “passion,” “soul,” “creativity,” “mood,” and “lust” become moribund. They are inconsistent with the dominant imagery of mind as computer and thus irrelevant to understanding human character.

CHARACTER IN THE CONTEXT OF SCIENTIFIC CULTURE

Social scientists are not only members of the culture at large, but of particular guilds or “interpretive communities” within the general milieu. These communities possess histories of textual formulation, internal understandings of the nature of human character. And to the extent that the scientist is to be intelligible, he or she must construct character within the constraints of these traditions. There are a number of stories to be told about such constraints and their violation. However, there is one of special relevance to what many take to be the breakdown of the empiricist tradition in recent decades, along with the associated deterioration of boundaries between science and art (fact and fiction, reality and myth, the literal and the metaphoric). It is again a story of equilibrating between convention and counterconvention in the construction of character. Its special interest lies in the irony of outcome. For in the very attempt to transcend the consensus view, psychologists have succeeded in subverting the foundational view of empiricist scientists. In generating “pleasures of the text,” they have undermined the very warrant of the text as objective.

To begin the tale, scientific psychologists have shared with the scientific community at large a particular view of the character of the scientist. This view, largely constructed within logical empiricist philosophy, paints a heroic picture of the scientist. In dramatic terms, the scientist is one whose skills in observation and reason enable *him* (as feminist critics point out, the role is traditionally gendered) to step outside the vagaries of common opinion and political prejudice, to press beyond the frontiers of the unknown, and to fetch truth from the lands of mystery. (The similarity between this vision of the scientist-hero and Campbell’s account of the heroic monomyth is hardly accidental.) In effect, by virtue of their training in the sciences, professional

psychologists enter the research arena with a vision of the ideal character. And this intelligibility places significant constraints over the kind of portrayals that can be made of the human being within the research setting.⁵

Given the close association between the empiricist construction of scientific character and twentieth-century modernism, the previous comments regarding the centrality of learning and cognition in psychology are apposite. Scientific psychology could not, in this sense, vindicate a romanticist view of human functioning because such a view is contrary to the image of the heroic scientist. For the hero-scientist to prove through reason and observation that people's rationality and perceptions are governed by unconscious, irrational forces is to undo the very image that sustains the scientific endeavor. It was virtually incumbent upon scientific psychologists, then, to develop a picture of human functioning that celebrated reason and observation. The work of personality psychologist George Kelly nicely illustrates this attempt to harmonize the scientist's picture of himself with his accounts of human character more generally. In one passage of *A Theory of Personality*, Kelly attempts to replace the romantic view of the deeply driven being with a précis to his theory of personal cognition:

Let us then . . . have a look at *man-the-scientist*. . . . When we speak of *man-the-scientist* we are speaking of all mankind and not merely a particular class of men who have publicly attained the stature of "scientists." . . . It is customary to say that *the scientist's ultimate aim is to predict and control*. This is a summary statement that psychologists frequently like to quote in characterizing their own aspirations. Yet, curiously enough, psychologists rarely credit the human subjects in their experiments with having similar aspirations. It is as though the psychologist were saying to himself, "I, being a *psychologist*, and therefore a *scientist*, am performing this experiment in order to improve the prediction and control of certain human phenomena; but my subject, being merely a human organism, is obviously propelled by inexorable drives welling up within him." . . . Now what would happen if we were to reopen the question of human motivation and use our long-range view of man to infer just what it is that sets the course of his endeavor? Would we see his centuried progress in terms of appetites, tissue needs or sex impulses? Or might he, in this perspective, show a massive drift of quite a different sort? Might not the individual man, each in his own personal way, assume more of the stature of a scientist, ever seeking to predict and control the course of events with which he is involved? Would he not have his theories, test his hypotheses, and weigh his experimental evidence? (4-5)

Kelly goes on to build his theory of human functioning on the basis of the latter assumption.

Yet, if the social scientist simply feeds back to the scientific community variations of its own image, he/she will ultimately be rendered invisible. Theoretical characterizations of the person merely recycle "what all good scientists already know." The central problem for the theorist, then, is that of transcending the common intelligibility of the scientific community while simultaneously sustaining it. This problem is largely solved through the procedure of propositional unpacking described earlier. That is, scientific research is dedicated to elucidating one or more of the ancillary propositions, consistent with

the dominant metaphor, but not a direct duplicate. Thus, for example, all of the above cited topics central to the cognitive psychologist are consistent with the more general myth of the rational scientist at work. They are sufficiently fresh that they appear to carry new knowledge; at base, however, they sustain the myth of the heroic scientist.

It is at just this juncture, however, that the seeds of subversion are inadvertently sown. For as the implicature is extended and new bodies of discourse are appropriated, so do the boundaries of the dominant metaphor become fuzzy. Its initial meanings become distorted, diffused, and eventually threatened by opposing images. Or, in the Derridian sense, as the traces of the initial signified are extended, one reaches a point at which the signifier is deconstructed. It is precisely this unravelling of the prevailing metaphor that has helped to undermine the empiricist conception of the scientist (and thus the privilege of scientific discourse).

More specifically, as the metaphor of the individual as computational device has been progressively unpacked in various research settings, an increasing array of proactive attributes have been assigned to the individual. The individual has become one who actively searches for solutions, scans memory, formulates and carries out plans, processes information, and so on, all according to internal design. As it is commonly put, human beings are driven by “top down” (rationality operating *on* the world) as opposed to “bottom up” (the world determining what is rational) processes. However, as the individual qua computer becomes increasingly automaton or top-down in character, the environment is marginalized. That is, it becomes difficult to speak of the individual as sensitive to or observant of the real world because what constitutes the objective environment is determined by the internal operations of the computerlike individual. Reality within the machine is that which is allowed or determined by machine configuration. It is in this sense that Anthony Greenwald has characterized the cognitive system as “totalitarian” (63). That is, it is closed to the influence of other voices, seeking only to sustain its own position.

Yet, as should be obvious at this point, to the extent that humans are portrayed as automatonlike computers, top-down in their determination of “what is the case,” the traditional image of the scientist-hero cannot be sustained. For within the newly emerging story scientists no longer search for and reveal the nature of the unknown; rather, they can only reveal in their writings the character of their machine operations. They do not record and reflect the world as it is, but as their own systemic properties require. Thus, in the very attempt to sustain and elaborate the image of the human being as rational agent, the traditional concept of rationality—with successful adaptation to existing circumstances at its cores—is undone. The wholly rational character proves irrational.

HUMAN CHARACTER IN THE LABORATORY CONTEXT

There is a third set of constraints governing the construction of character in scientific psychology, one that emerges within the context of systematic exploration. Empirical scientists claim warrant for their words largely on the basis of methodological procedures. In particular, it is the controlled experiment that enables the "behavior of organisms" (from single cells to entire societies) to be traced to their causal sources in an objectively rigorous way. As commonly proposed, by observing behavior in systematically varying conditions, the scientist can trace the causal connections between antecedents and consequents in a precise and replicable way. In whatever way human character is constructed within scientific psychology, its contours must be congenial with this central, justificatory text.

Indeed, one can trace the various ways in which this forestructure of methodological intelligibility drives the psychologist's portrayals of human nature. Thus, for example, the conception of the experiment is one in which "subjects" are exposed to "stimuli," which stimuli operate as "causal conditions." Actions of the subject in experimental conditions are viewed as "responses" caused by the stimuli. For many, the resulting characterization of the human proves morally problematic because this view of methodology virtually obliterates the discourse of voluntarism. Because "stimulus conditions cause responses," the scientist cannot conclude that subjects voluntarily choose their subsequent actions. A voluntary impulse would essentially operate as an uncaused cause and thus fall outside the ontological underpinnings of the method. It is in this respect that C. Hampton-Turner has written:

It is not that . . . investigators themselves have a savage eye, but rather that their predicting and controlling tools demand the predictable and controllable man in order to consummate the Good Experiment. And what a misery the man turns out to be. The highly respected Dr. Jekyll discovers Mr. Hyde, the beast in man uncovered by inhuman instruments. (4)

In the same vein, Gerd Gigerenzer and David Murray have demonstrated in their *Cognition as Intuitive Statistics* how prevailing concepts of statistical logic, inherent features of experimental procedure, ultimately serve as the basis for theories of human cognition. As they propose, the scientists' statistical tools, which "are considered to be indispensable and prestigious, lend themselves to transformation into metaphors of mind" (3). Methodology inscribes itself on human character.

Yet, rather than repeating further the rhythm of the preceding sections, I invite a deviation which allows the present thesis to be laminated in yet another way. For, as the initial question can be rephrased, how can the scientific psychologist render an alien language believable? If the science is to make an original contribution, which entails the novel construction of character, how is it to be credible in terms of the common idioms through which the world

is understood? I have offered a partial answer to this question above, but by focusing on methodological procedures, I will attempt to expand the horizons. These methodological procedures do provide the psychologist warrant for voice. However, they do not do so in terms of foundational rationality, rendering the scientific account superior in mimetic capacities. Rather, they do so in terms of rhetorical power.⁶ It is the text of experimental procedure that ultimately serves to vivify or render realistic the otherwise arcane argot of the theorist. Through methodological procedures, the language of the absurd is transformed into plausible understandings of human nature.

To illustrate the process by which this *ontological transformation* is accomplished, it is useful to consider a single text from the scientific annals. The text in this case is a standard research report (Bandura et al.) appearing in a recent issue of one of the most prestigious journals in psychology, the *Journal of Personality and Social Psychology*. The research was conducted at one of the nation's most outstanding psychological laboratories (Stanford University), and its funding provided by the National Institute for Mental Health and the National Science Foundation. At the outset, the title of the research report, "Perceived Self-Efficacy in Coping with Cognitive Stressors and Opioid Activation," informs the reader that its contents will reveal the secrets of an otherwise mysterious or unknown world. The terms rely very little on the commonsense vernacular, and their very impenetrability suggests that only the serious scientist will be able to appreciate their significance.

From the present perspective, it is the authors' major task to lend to the alien theoretical discourse a sense of palpable reality, that is, to secure the reader's assent that "yes, this language does describe events in the actual and commonly knowable world." The accomplishment is no small challenge in the present case, for in their abstract or decontextualized form, such theoretical terms as "perceived self-efficacy" and "cognitive stressors" are hopelessly ambiguous. "Perceived" by whom—a person, friends and acquaintances, the psychologist? And is "perception" to be understood in the sense of direct sensation, deductive categorization, interpretation, intuition, or something else? And is saying it is "perceived" to suggest that it is not truly known, as in "the perceived world" as opposed to "the actual world"? And what of the term "self-efficacy"? Is this the bodily self, the spiritual self, the unconscious self, the voluntary self, or something else? And is efficacy to be read as "achievement," "impact," "power," "result-producing," or in some other way? Similarly, the term "cognitive" suggests thinking, perceiving, remembering, intending, planning, and a variety of other possibilities: are they all intended; how are we to select among them? And are these cognitions conscious or unconscious, motivated or unmotivated, desirable or undesirable? Again the matter is ambiguous. Similarly, the term "stressor" succumbs to a variety of interpretations (physically straining, bending, shaping, rendering more flexible, and so on). And,

of course, each of these translations bears the traces of other signifiers in an ever-expanding array of undecidable signification.

The introductory section of the research report provides the initial assurance that there is indeed an objective datum (a signified) to which the theoretical terms refer. Two rhetorical processes function in this capacity, the first *social corroboration* and the second *conceptual elaboration*. The corroborative function is carried out largely through citations of other scientific reports that claim familiarity with the states in question. The most directly relevant studies are those carried out in the same laboratory, suggesting that this location is privileged in its access to the phenomenon in question. Yet to cite only the work of the single laboratory is to cast doubt on the existence of the phenomenon. A multiplicity of additional citations thus serves to assuage residual doubt. As the reader is told, for example, "Findings of different lines of research underscore the influential role of perceived control in stress reactions (Averil, 1973; Lazarus and Folkman, 1984; Miller, 1980)." And so secure is the existence of the phenomenon, according to the report, that research has also succeeded in qualifying or extending knowledge of its precise operations. As one learns, for example, "in some studies of controllability, merely the exercise of personal control over the occurrence of aversive events without curtailing their intensity reduces stress reactions (Gunnar-von-Gnechten, 1978)." Yet, in the end, these many supporting documents prove inadequate, for in the authors' terms, "The foregoing studies have relied on plausible presumptive mediation inferred from the manipulations rather than on direct assessment . . ." Or in terms of the scientist-hero metaphor, the other scientists did not really see the mysterious phenomenon; they were merely speculating from their results.⁷

In addition to garnering social corroboration through citations (a technique that has similarly served the cited authors), additional credibility is lent to the exotic language through conceptual elaboration. Primarily through paraphrasings, the authors begin to reduce the opacity of the theoretical terms. At times the paraphrasing moves toward the common language. The reader learns, for example, that "Perceived self-efficacy is concerned with beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands." The fact that a definition is given in more or less comprehensible terms has the rhetorical effect of securing the existence of the phenomenon. If we are uncertain that *X* exists, it is fortifying to learn that, in fact, *X* = a presumably existing *Y*. (The more suspicious reader might inquire further into the precise identity of *Y*—other than the equivalence of the mysterious *X*. In the above, for example, what is it to "mobilize motivation"? Is this to consume more calories, give oneself pep talks, thrust oneself into adrenalin-producing situations, or something else?) In other locations in the introductory section, the conceptual elaboration of the sacred terminology is largely removed from the domain of daily language.

For example, few outside the sacrosanct community of knowers would comprehend the definition of cognitive stress: “Psychological stress is the result of a relational condition in which perceived environmental demands strain or exceed perceived coping capabilities in domains of personal import.” The words are teeming with profundity—“stress,” “demands,” “strain,” “exceed,” “coping”—but do little to disambiguate the putative phenomenon.

Far more significant in the achievement of ontological transformation is the second section of the report, “Method.” Here scientists report on the procedures used to carry out their investigations. These reports are written in plaintalk or literal language of the kind that would enable other scientists to replicate (and thus evaluate objectively) the featured research. Most important for present purposes, investigators report in everyday language the means by which the theoretically specified phenomenon is assessed or established. These definitional linkages (typically called “operational definitions”) thus furnish a direct equation in which X (in the exotic language) = Y (in the everyday vernacular). In this way the reader is informed that the otherwise mystifying theoretical language is actually reducible to commonly known, wholly palpable matters of fact. It is thus in the present manuscript that we learn that “perceived self-efficacy” is a state established by placing college students in a “mathematical problem-solving task” for 18 minutes. “High perceived self-efficacy” occurs when the students can work at their own speed at a set of arithmetic problems; “low perceived self-efficacy” takes place when the problems are presented to students more rapidly than normally required for completion. The state is measured by a questionnaire in which the students are asked to rate their certainty in completing the problems. Similarly, “cognitive stress” is assessed by a questionnaire in which students are asked how much “stress” and how much “mental strain from time pressure” they experienced. Thus the alien discourse becomes intimate—now a constituent of the comfortably intelligible surrounds.

Yet ontological transformation is not yet complete, for if the theoretical language remained tied to mundane operations, it could easily be rendered superfluous. Why, one might ask, is the theoretical language essential if all is intelligible in the common language? The third section of the manuscript, carrying the results of the investigation, serves as a hedge against such queries. For in this section the operational or everyday language of the preceding section is progressively abandoned or suppressed. Increasingly the researchers slip back into the uncommon or exotic vernacular. We learn, for example, that “Perceived self-inefficacious subjects showed a heightened heart rate, whereas the perceived self-efficacious ones displayed a marked decline in heart rate.” In the plaintalk idiom it might be said that the hearts of those faced with solving problems at a rapid rate pounded faster than those working at their own speed. However, this form of account never appears. However, through a definitional

borrowing from the plaintalk account, the exotic language becomes increasingly real.

The present research study is exceptional in its objectification of the mental terminology, for it goes on to demonstrate a causal link between the mental and the material world. Because the material world is commonly accepted as *objective* within modernist culture and the ontological status of psychological terminologies is suspect, then to demonstrate that psychological states *act on* physical states is to solidify the existence of psychological states. The possibly subjective (and thereby discreditable) becomes objective. This “causal connection” is established in the present instance by demonstrating that depending on their perceptions of self-efficacy, a psychological state, subjects are more or less susceptible to a chemical, naloxone, that blocks opiate (pain-reducing) receptors (a physical state). This account treats perceived self-efficacy as an independent reality, not at this point reducible to work on mathematical tasks.

In the final section of the paper, the “Discussion,” the ontological transformation is made complete. For here the commonplace intelligibilities are virtually forgotten. The reader has previously learned that the alien language refers to palpable events, reducible to the commonly known. Now that the linkage is established, it is possible to speak almost wholly within the novel ontology. The reader is confidently told, for example, that “The results of the present experiment provide evidence that perceived self-efficacy in coping with cognitive stressors activates endogenous opioid systems.” The reality of the new ontology is further extended by relating it to other exotic but scientifically acceptable accounts. And finally, to inject the newly created reality with everyday significance, its implications for personal health are outlined: “A growing body of evidence reveals that the stress of coping inefficacy . . . impairs cellular components of the immune system.” The newly molded character, replete with perceptions of self-efficacy, is now readied by the laboratory literature to venture forth and cope with cognitive stressors of the world.

To conclude, the scientist no less than the writer of fiction is engaged in the literary process of rendering human character both interesting and intelligible. By focusing on the character of these problems and the means by which they are solved within the human sciences, the traditional privilege of mimesis accorded to the scientist is threatened. If it is to be retained, the distinction between “factual” and “fictional” accounts of human character must be lodged in other discursive criteria (e.g., political, ideological, historical). Further, various forms of literary criticism that derive their warrant or justification from scientific accounts of human character (or quasi-scientific, as in the case of psychoanalytic theory) thereby lose their justificatory base. For the warrant in such cases proves to be little more than another form of text. Whether the present analysis relies as well on unarticulated conceptions of human character remains open to further assessment.

Notes

¹ For critical assessments of the effects of psychological discourse on cultural life, see, for example, the work of Edward Sampson, Henderikus Stam, and Julian Henriques and his colleagues.

² The present paper thus extends my earlier incursions into the uses of narrative and metaphor in constructing the identity of persons.

³ For a more extended account of current assumptions of personhood and their historical origins, see Amelie Rorty's *Mind in Action* (1988).

⁴ In this sense one may view the present-day attempt to interpret literature or other cultural symbols in terms of unconscious process—for example, Kaja Silverman's *The Subject of Semiotics* (1983)—as a twentieth-century recapitulation of a nineteenth-century conception of the person.

⁵ As Weston and Knapp (93) point out, this view has also been incorporated into the way in which literary criticism represents the scientist and thus limits, as well, the way scientific thinking is presented in fictional texts.

⁶ The previously cited works of White, McClosky, Clifford and Marcus, and Latour are all consistent with this contention. However, as Paisley Livingston's *Literary Knowledge* makes clear, the contention is controversial.

⁷ See also Latour's discussion of the function of citations in creating the sense of objectivity.

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