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DISCUSSION

DOES DON JUAN REALLY FLY?*

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1. Science is the measure of all things. In "Cognitive Aspects of Art and Science"¹ Ronald Hoy makes the sound point that more than one conclusion can be drawn from arguing that the net effect, if not the explicit goal, of both science and (some) art is worldview reorganization. If science is cognitive because it effects this kind of reorganization, then (1) insofar as art does likewise, it too might be regarded as cognitive. On the other hand, if art is paradigmatically aesthetic then, because it and science share the essential quality of worldview reorganization, (2) science is in important respects conceivably aesthetic. And the difference between the two notions, cognitive and aesthetic, is blurred, to no one's advantage so far as Hoy is concerned. He further notes that if we subscribe to a conventionalist view of truth while arguing that art, like science, is cognitive, we have at best gained for art a dubious victory. 'Miserable' is Hoy's word.

If, however, science is in the last analysis shown to be truth-giving, much like art is truth-giving, it may be replied that methods of establishing aesthetic quality in art illuminate methods of establishing cognitive truth in science. This can, in turn, shed light on the meaning of "truth-as-conventional." Indeed this was a cardinal aim of the paper on which Hoy is commenting, and in which Nelson Goodman is quoted approvingly: "Truth and its aesthetic counterpart amount to appropriateness under different names. If we speak of hypotheses but not of works of art as true, that is because we reserve the terms 'true' and 'false' for symbols in sentential form." Again: "... when we examine our tests for truth in science we find them far from alien to tests for quality in art" ([12], p. 264, and [13]). If this involves us in a "pragmatic" conception of truth (as Hoy contends), nevertheless it points a way toward further clarifying the pragmatic conception, now drawing upon art criticism as a model for epistemological criticism: how is quality in art determined?

But Hoy wishes to head off this move because "... instead of advancing the cause of art [it] ... undermines the status of science" ([15], p. 294). A more fruitful strategy, he says, "would be to argue that some varieties of artistic expression (those claiming to be cognitive) are really informal, nascent scientific theories ..." ([15], p. 297). The merit of this countermove is "that it does not require us to dilute our concept of factual truth" ([15], p. 297). Here we come to the nub of Hoy's concern, a solicitude not so much for factual truth itself as for a particular rendition of factual truth; namely, that supplying grounds for doing science and defined implicitly by what may be called canons of scientific method. Thus he perceives the role of the philosopher to be not "... that of a world designer, who, in actually

building and testing his world, has gone beyond mere analysis," but that of a prescient analyst who possesses "... a strong normative conception of factual truth and presumes some degree of continuity in the progress of science" ([15], p. 297).

Such epistemological esteem for conditions for doing science represents so prevalent a tendency among contemporary philosophers of science that it warrants further examination. The presumption is that our "normative conception of factual truth" needs to be pretty closely harnessed to the conception of truth operational in science; otherwise we might entertain a "strong normative conception" which is in no way affected by the presumed progressive "continuity" of science.

A trigger for writing "Art as Cognitive: Beyond Scientific Realism" was to call attention to the problematic nature of factual truth, particularly that implicit to the intellectual tradition in which Western science flourishes. My strategy was to show, in the spirit of the passages quoted from Goodman, that science's idiom for reflecting, or conventionally representing, experience or factual truth was just one of several possible idioms for doing so, and that these idioms might be, though mutually irreducible, complementary. Judging from Hoy's suggested tactic which is, rather, to reassimilate variant idioms to that of science, clearly I did not succeed.

Note

The options he allows are restricted to those between the substantive discontinuity or the methodological (and heuristic) continuity of successive scientific state descriptions. Either we may reject "... any attempt to grade empirically different theories from different frameworks on the Feyerabendian grounds that they carve up the world so differently they cannot even be formally compared, let alone be shown to be empirically consistent" ([15], p. 295), or we may urge "... that since the meaning-content of successive competing theories can partially overlap the theories can be compared and graded to see which comes closest to an ideal scientific picture of the world" ([15], p. 295). Evidently these exhaust the possibilities. But note that they do so only if we restrict the notion of factual truth to those propositions belonging to science or assimilable thereto. On this assumption it is a relatively easy matter to show that methodological continuity, as contrasted with substantive discontinuities, ensures some overlapping meaning invariance.

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This is a logical point and follows from the meaning of 'methodological continuity'. Criteria of factuality, as opposed to what constitute facts, retain some constancy throughout scientific "revolutions," and allow us to speak of the structure of scientific revolutions. How would we be able otherwise to speak of the Newtonian or Einsteinian revolution as a breakthrough in science, rather than, in, say, art or religion? What do they break through from, and into? Like its sister 'evolution', 'revolution' is a serial word; methodological rules of science, presuming an underlay of factual truth to which the breakthroughs are breakthroughs towards, progressive about, vouchsafe this.

No matter how revolutionary the breakthrough, canons of scientific method (or, in the case of artistic revolutions,² rules of aesthetic criticism—however amorphous)

* Picasso's *Les Femmes d'Alger* ... achieved a basic breakthrough in art, effectively ...

* Received April, 1973.

¹ See [15] Hoy is commenting on my "Art as Cognitive: Beyond Scientific Realism" ([11], pp. 234-250).

can be invoked to offer a measure of commensurability from one intellectual synthesis (or aesthetic experience) to the next. Schematically, that revolutionary activity can be mapped like this, where members of the series [world₁^a, world₁^b, ...] stand for successive worldviews, the Aristotelian, the Newtonian, ... for instance, and world₂ represents the putative world viewed, the factual truth which science is about and toward which it is progressive.

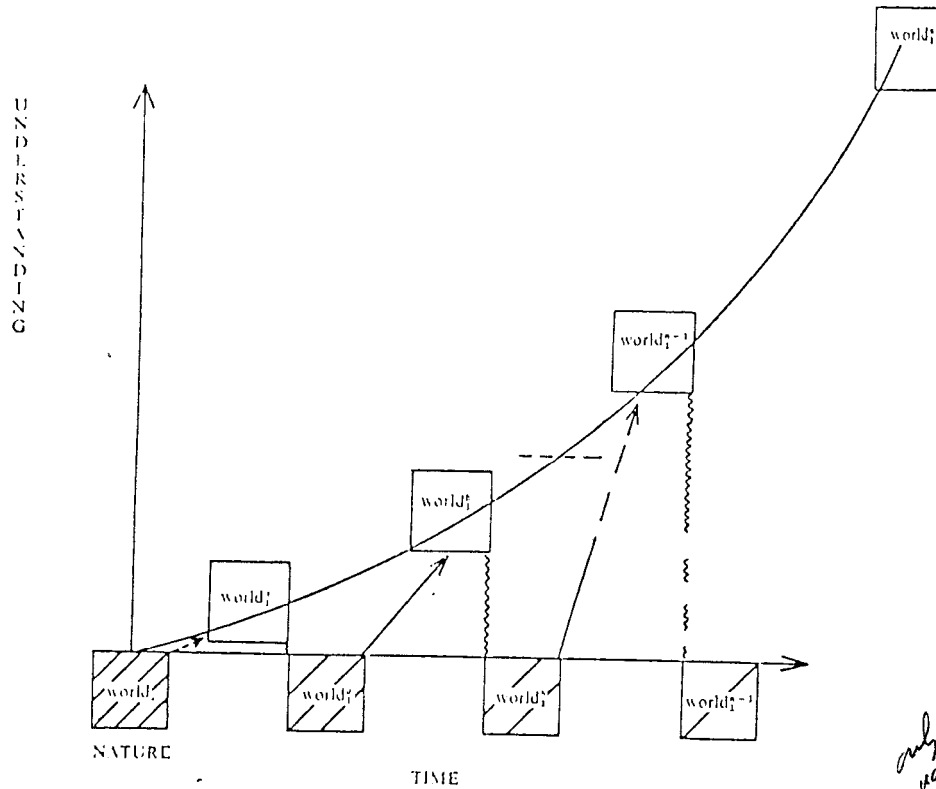


Fig. 1. "----- is the measure of all things."

2. Don't just do something, sit there. Grant that "paradigm" change takes place under the umbrella of a primacy thesis, guaranteeing methodological continuity. Contrast now an Aristotelian and Newtonian (or Einsteinian) mutually discussing space-travel possibilities with any of them discussing the same topic with, say, a Yaqui follower of don Juan;

The trouble with you is that you understand things in only one way. You don't think a man flies; and yet a *brujo* can move a thousand miles in one second to see what is going on. He can deliver a blow to his enemies long distances away. So does he or doesn't he fly? ([3], p. 131)

altogether, to look at the fragments that make up his nudes as pure forms in themselves . . . its distortions of face and figure and placement force the viewer to look everywhere at once" ([30], pp. 53, 55).

As the contrast suggests, the antienvironment postulated may alternatively be construed as one issuing from a wholly alien tradition, one with its own, alternate primacy thesis ("sorcery is the measure of all things"). Rather than contrast world₁^a with world₁^b, the contrast is now better stated as that between [world₁^a, world₁^b, ...] and [world₁^{a'}, world₁^{b'}, ...]. What a primacy thesis imposes (or reflects, at bottom, a methodological, not a substantive primacy.

With respect to one another, and insofar as they mutually vie as furnishing more or less comprehensive state descriptions, each of these contrasting series, whether science, religion, sorcery, etc. is now seen literally as a metaphorical ordering of reality, each representing a different "gloss," in Talcott Parsons' sense of a total system of perception and language, an alternative social consensus. A relatively space-time concept or its mechanistic predecessor can literally shape perception. We can be persuaded really to feel the pull of gravity on our bodies by the heat of the earth, as once we saw the sun setting; or saw the rain as the spermatazoa of gods; or as the Hopis experience space-time; or as yogis sense the relaxation of boundaries; or as brujos experience space travel. Each metaphorical ordering yields its corresponding technology ("application of knowledge"). 'Literal transfigured relativistically.

From the perspective of alternative series rather than the more customary perspective of breakthroughs within the same series, facts and abduced premises, physis and logos, are espied as living in symbiotic sin. Different traditions and different "empty categories," the postulation of different premises-whose confirmation-is-sought-after. The ability to fire-walk is only a more dramatic derivative instance of the relation between passionate commitment to a primacy thesis and the provability potential of its abducted sets of premises. Welding social consensus is seen as an event-producing activity and, over time, a reality-shaping structure, coming to depend less and less on the "stubborn and irreducible fact" on which, in the case of Western science, it is ostensibly grounded and more and more on the direction of attention and catalytic, transrational syntheses on which it flourishes. Successes are seen as self-verifying successes building a system of hypotheses that become self-sustaining. In what follows this is the scenario I wish to draw upon.

The atom did not "exist" for Democritus, or even Dalton, as it exists for us today.

A rich network of explorers had to develop correspondences to the point where inclusion of the atomic fact would be, if not observable, at least possible and maybe even necessary to the resulting framework—a framework which itself may prove to have resulted from the acceptance of the idea of atoms. The long-nourished idea may well have brought about the facts to support the idea. ([18], p. 88)

Nor is this to be confused with pulling rabbits out of a hat whether or not there are rabbits there in the first place. Rather there may be an untold number of varieties of rabbits in the hat, and the varieties we breed may be as much a function of the passion, commitment and energies of attention we put in as of which rabbit

were "in there" all the while. Thus "straight" or ordinary thinking will discover strain of rabbit, "stoned" or nonordinary thinking another.³

Of the eighty Hindu initiates who fire-walked on the holy day in Ceylon, reports L. Feinberg in ([10], pp. 73-76), only twelve failed. "Some required lengthy hospitalization and one man was burned to death. . . . Those people, Feinberg was told, simply lacked faith or proper preparation" ([18], p. 101). In this case, belief, not in Western science, but in the god Kataranga, is evidently the measure of all things. "The trick of socialization," Castaneda tells us, "is to convince us that the descriptions we agree upon define the limits of the real world" ([4], p. 95). Because suitably disposed, we are likely to prove the splitability of the atom while correspondingly unlikely to prove the ability routinely to fire-walk or project astrally, notwithstanding that Eastern mystics and yogis have for millennia reported having done so.

Perhaps in this respect a problem of Western man is that he has yet to achieve a "Critique of the Self," systematically to probe the possibility that true knowledge (*scientia*) is achieved through "becoming whole," through release from the "I-ness" of the ego-consciousness in favor of the inward (godlike) man. So thoroughgoing has been our extroversions that "technology" comes to be identified with applications only of the *askesis* of science, conceivably blinding us to ". . . perceptual solicitations of a world outside the descriptions we have learned to call reality" ([5], p. 14).⁴ "It's strange. The gulls who scorn perfection for the sake of travel go nowhere, slowly. Those who put aside travel for the sake of perfection go anywhere, instantly" ([2], p. 58). Is it possible that our beliefs restructure the way we shape our data, that the light in the clearing (intellectual light) determines what is seen in the dark beyond?

In the idiom of science, this point of view finds expression by saying that since the mind's gathering of information and seeking of understanding through time is an energy-state in which the increase of understanding is creating an increase of entropy in the system observed, the system is in part a function of our energies of attention. The psychic state that creates the increase in entropy has therefore to be looked upon as a real event in the physical system. To dispose ourselves *is* to physically dispose the system, to wrest from it those truths consonant with the direction of our dispositions.

Of course members of the European intellectual tradition, all of us, are constrained to say that astral projection talk is metaphorical travel talk. To speak otherwise is to speak of violating well confirmed physical law. Exactly. Scientific game rules define 'physical' in such a way as to disallow raising questions of alternative units of "meaning" or of experience in the sense of definitions pertaining

³ "Straight thinking is . . . the kind of thinking that now predominates in most of the institutions of our society. We are so used to it that many of us do not suspect the existence of another way of interpreting our perceptions of the world around us" [29].

⁴ "Although our intellect has brought well-nigh to perfection the ability of the bird of prey to spy the tiniest mouse from the greatest height, the gravity of earth seizes him and the Sangkaras entangle him in a world of confusing pictures if he no longer looks for booty but turns at least one eye inwards to find him who seeks" (C. G. Jung, forward to [26]).

to frameworks constituted by alternative primacy theses or real glosses.⁶ One result of playing this particular game is a highly integrated, intersubjectively testable system of thought with unprecedentedly impressive technological applications. A resulting trade off is that the claim, within that system, that there are certain sorts of experiences, "altered states of consciousness" experiences as we might call them, is rendered an incomprehensible one. Attributing causality to external physical reality, however valuable heuristically, yields ontologically questionable consequences: ". . . psychosis becomes a matter of disordered biochemistry or brain function; a high is due to the presence of a drug in the body; infectious disease is caused by germs; and so on" ([29], p. 56). The problem with formulations of this sort is perhaps finally that "they fail to give us the power to describe, predict and control the phenomena of external reality," [29], the warrant usually cited for assimilating factual truth to the scientific idiom. Natural control of the autonomic nervous system is only a single instance.

The number of questions systematically disallowed or the structurally prescribed direction of solutions, raises, in a nutshell, the metaquestion of whether the generally accepted scientific picture of man in the universe may not be as incomplete as the corpuscular theory of light or, more to the point, as the sorcerer's vying picture of man in the universe.⁶ Scientific or speculative thought was commissioned to transcend experience, but only because, through hypotheses, it would strive to explain, to unify, to order this experience. Using the word "hypothesis" in its original sense, we may say that scientific thought attempts to *underpin* the chaos of experience so that it may reveal the features of a structure—order, coherence, and meaning. But a random listing of conceivably experiential items to which scientific hypotheses presumably give no order, systematic connection or "meaning" points to the residual chaos of even this approach:

- dreams as revelations
- relation between stars and man
- psychic phenomena
- the dead
- the knowledge that I has of Thou
- the universe as alive
- space as a manifold of localities with emotional color
- gods
- the way things experience us
- chimeras
- knowledge acquisition as a matter of "emptying the contents of consciousness"
- *déjà vu* experiences

⁶ "My task was to grasp the units of meaning proper to sorcery, and learn don Juan's way of describing the world" ([6], p. 25).

⁶ "(1) don Juan presented his teachings as a system of logical thought; (2) the system made sense only if examined in the light of its structural units; and (3) the system was devised to guide an apprentice to a level of conceptualization which explained the order of the phenomena he had experienced" ([3], p. 1-4).

With respect at least to some of these entries, the syntax of science, its methodology, decrees them not just false or outside its proper domain but idiomatically impermissible or linguistically ill-formed, and, when wedded to the scientific realism implicit in Hoy's recommendation, "beyond" reason, irrational.

Depending on how we regard the scope and significance of this list, it may furnish an antienvironment from which the modern emancipation of thought from myth, begun in classical Greece and today practically defining Western intellectual membership, evokes the image of successive "emancipations" along a continuum:

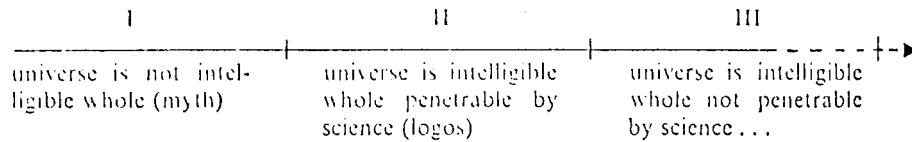


Fig. 2.

The tidy, primacy-thesis solution to the ontological problem (Figure 1) is relativistically rent:

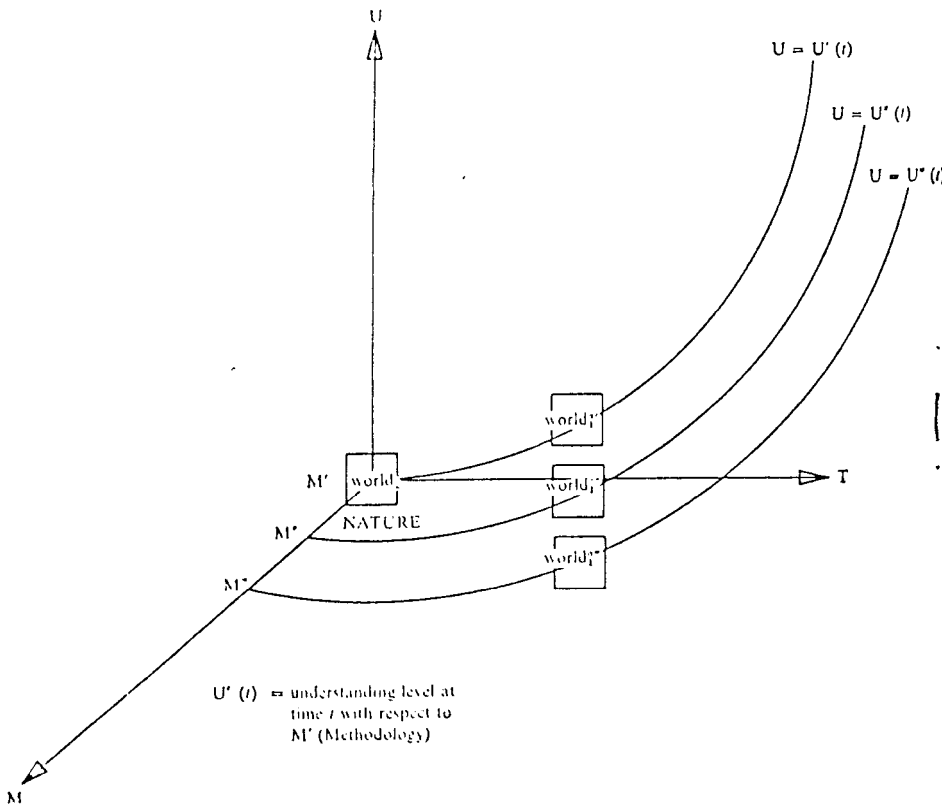


Fig. 3.

Each series or "reality gloss" (M) now represents an alternative, and perhaps mutually irreducible, agreement as to the question of what constitutes factual truth of what constitutes an adequate descriptive framework for experience (world). M may be understood as either a primacy thesis, or else as the methodological postulates by which a particular primacy thesis is operationalized.

The leading stipulation for any true or meaningful state description, world₁, becomes in this scenario a structural or methodological one, provision of a total system of language and perception, a social consensus. Factual truth is not a concept intersubjectively available across primacy theses (M', M'', ...) in the way it is across members of a series determined by a single primacy thesis (world₁, world₂, ...).

3. LSD-25 and Galileo's telescope. "The unique and disconcerting thing about the western scientific world-view," say I. C. Jarvie and Joseph Agassi, is that it is progressive:

... it is more interested in the question than the answer; it puts a premium on overthrowing and improving previous answers by means of severe criticisms. Among those severe criticisms is that of irrefutability: immunity to all possible experience. ([16], p. 192)

Among criticisms understandably not taken to be crucial here are formal ones, those concerning logical procedures by which criticisms are able to be mounted in the first place (principles of identity, negation, and so forth). These principles appear to constitute grounds for the possibility of language, and in particular of the language in which any criticisms would have to be formulated. Other, nonformal criticisms seem, however, to be preempted by the practice of science. Thus the possibility that the witness of experience is a function of modalities or levels of consciousness, of a priori data of apperception, seems not to be a permissible contender to experience as witnessed "under standard (i.e. repeatable) conditions," the only "level" acknowledged to the scientific observer.

That the kind of attachment to external reality responsible for generating the scientific worldview—in contrast, say, to the yogic Pratyahara or "gathering inwards"—might itself be the product of a technique or askesis, and so represent a "level" of consciousness, appears not to be among the questions in which the western scientific worldview is, in Jarvie and Agassi's words, "more interested."

When I want to look at the world I see it the way you do. Then when I want to see it, I look at it the way I know and I perceive it in a different way. ([6], p. 181)

"The problem in sorcery is to tune and trim your body to make it a good receptor" ([4], p. 95). Perhaps the problem in science is likewise one of tuning and trimming the body to make it a good receptor, and design receiving instruments accordingly. The scientific askesis (thus the acculturation process which serves as prelude to undergraduate and graduate work) serves first of all to teach the apprentice to "see" the world as science says it is, to distinguish for instance between real (objective) and "hallucinatory" (subjective) space travel possibilities. Membership comes

when one is capable of making all the proper perceptual interpretations which, by conforming to that description, validate it. This is the social agreement.⁷

As tuning and trimming exercises vary, so too perhaps do standards of what count as good (body) reception. The problem of reception is one of ability to "read" what is received, an ability that may be cultivated, the product of a cultural *askesis*. This is the fine print in the science contract. Maybe there is scientific and sorceric reception, and either is repeatable under (different) standard conditions. A Navajo anthropologist sent to study us would ask extraordinary questions like "How many in your kinship group have been bewitched?"

That's a terribly important question in Navajo terms. And of course you'd say "I don't know," and think "What an idiotic question." Meanwhile the Navajo is thinking, "My God, what a creep! What a primitive creep!" ([7], p. 45)

Can standard conditions be described for inducing bewitchment; can instruments, the body say, be developed for reliably sending or receiving its signals? Might bewitchment be used to environmental control advantage, a conceivably useful piece of technology?⁸ Is not community membership—whether the scientific or sorceric community—determined precisely by agreement upon what constitutes good reception, good instruments of reception? This is one meaning of saying that translation between languages (M-s) requires translation between lives.

The scientific worldview does not permit, anymore than any other worldview, of a vantage point, an antienvironment, from which to survey its own immunities to criticism. There is no "stopping the scientific world."

Case: Are psychotropic drugs to the brain as lenses are to the eyes or are they as specks on the lenses?

How does the syntax of science allow us to address this question? Psychedelics bring about certain alterations of sense perception, of emotional level and tone, of identity feeling, of the interpretation of sense data, and of sensations of time and space. They induce "... subtle alterations of perception which make the nervous system aware of itself; the individual suddenly and unaccustomedly becomes conscious of the external world as a state of his own body" ([28], p. 121). In a word, they generate other levels of consciousness, other a priori data of apperception. So too, professedly, do nonchemically induced mystical and transcendent experiences, as expressed in such great world religions as Hinduism, Buddhism and Taoism. "But these too purport to be an account of 'the way things are' and therefore invite comparison with descriptions of the universe and man given by physicists and

⁷ "... everyone who comes in contact with a child is a teacher who incessantly describes the world to him, until the moment when the child is capable of perceiving the world as it is described" ([5], p. 9).

⁸ "Let's say that when everyone of us is born we bring with us a little ring of power. That ring is almost immediately put to use. ... For instance, our rings of power, yours and mine, are hooked right now to the *doing* in this room. We are making this room. ... every one of us knows the *doing* of rooms because, in one way or another, we have spent much of our lives in rooms. A man of knowledge, on the other hand, develops another ring of power. I would call it the ring of *not-doing*. With that ring, therefore, he can spin another world" ([5], p. 252).

biologists" ([28], p. 115). Who is receiving accurately, "objectively," to technological advantage?

"In Hindu culture, when someone says 'I have just found out that I am God' they say, 'Congratulations! You at last got the point'" ([28], p. 118). Has he really

... the inside and outside do not exclude one another and are not actually separate. They go together; they imply one another. ... As the poles of a magnet are the extremities of a single body, it appears that the inside and the outside, the subject and the object, the self and the world, the voluntary and the involuntary, are the poles of a single process which is my real and hitherto unknown self. This new self has no location. ... To ask *where* it is, is like asking where the universe is. ([28], p. 120)

Conditions for the possibility of nonstraight ("stoned") thinking, whether or not induced by chemicals, may stipulate different truth conditions. Not only one world, but one's self concept, reputedly, can be other than it is. And with a change in ego boundaries goes a change in one's relation to what is. Hence space travel becomes thought travel; movement in interior life is "external" movement (because the distinction between them is no longer recognized). "Perfect speed ... being there" ([2], p. 55). Implicit in one's world picture is a self picture; alter one and the other is necessarily affected. And how is one's self picture (or that underpinning one's intellectual tradition) validated?⁹

Earlier it was suggested that it is not so much what the practice or syntax of science allows us to say as what it disallows, leaves programatically unsaid, that should prompt us to spurn as terminally normative its proposal of factual truth. Despite the short term gain in expressive economy, it may not after all be to our tactical or survival advantage to "sacramentalize" this offer and so close the door to other suitors with possibly greater or complementary life-giving potentials. Nor is this to take lightly the psychological emptiness of remaining ever a bridesmaid conceivably rendering us as fey as once were our ecclesiastical counterparts in the presence of Galileo's telescope: If your instrument (*askesis*), said the priest reveals other possibilities (e.g. space travel) it is demonic ("hallucinogenic"); if it does not, we have nothing to learn from it. In either case, we have no use for it.¹⁰

4. "... a hitherto unknown kind of insanity." Granting that we cannot determine whether or not don Juan flies by *decreeing* that he doesn't, how do we know we can understand even what he means by 'flies' in order to render a verdict? There is a tempting way to cut through this tangle: Either 'flies' has a wholly different meaning

⁹ "The development of Western philosophy ... has succeeded in isolating the mind ... an severing it from its ... oneness with the universe. ... We have no intellectual means of ascertaining whether this attitude is right or wrong ... it is just as possible that our mind is nothing but a perceptible manifestation of a Universal Mind" (Carl G. Jung, commentary to [9], pp. xxix, xxx).

¹⁰ "When in the late Sixties the government stamped out virtually all human LSD research except for Catonsville and a small research enclave in Topeka, Kansas, it appeared, like the thirteenth-century Church forbidding the dissection of bodies by early anatomists, to be denying an expansion of consciousness beyond the borders certified by the dominant culture" ([1], p. 64).

from the standard one and hence it doesn't matter how we answer, because we wouldn't know what we were saying anyhow; or 'flies' means something like what we mean by the term, in which case the answer can be determined by standard (that is ordinary or scientific) truth conditions. This "easy chair" move gains bouyancy only by assuming the standard conditions premise, just the one in question. The fact that the peculiar scientific assumption of factual truth has enabled us dramatically to recast the environment (more than the assumption common to, say, sorcerers or fire-walkers) may measure only the political, economic and intellectual pervasiveness, not necessarily the ontological inevitability of this assumption. Indeed the question of ontological soundness may need to be pegged differently. A given state description (M') whether scientific, religious, sorceric, or whatever, stands, within the Figure 3 scenario, for any viable instrument for the interpretation of experience. The cardinal stipulation for viability is the structural or methodological one of supplying a near total system of language and perception, a social consensus or "form of life."

Nor need this consign us to the species solipsism permeating the *Philosophical Investigations*. To the question which of our worlds will then be *the* world, Wittgenstein answered that there was no answer. "For the answer would have to be given in a language and a language would have to be rooted in some collection of forms of life, and every particular form of life could be other than it is" (see [17], p. 16). The last clause seems to license a Figure 3 schematization. However, Wittgenstein appears of two minds here. Certain networks of language and activity "... are natural—inescapable, in fact—and are woven into forms of life which are so clearly at the bottom of our nature that we lack the means to get beneath them" (see [17], p. 16). Radically different world descriptions lodging in different forms of life seem to function, for Wittgenstein, much as *Ding an sich* for Kant: they exist (every form of life could be other than it is) but there is no access to them ("we lack the means to get beneath them"). For the most part we cannot help seeing and regarding the world as we do. Still it is not the only possible way.

If anyone believes that certain concepts are absolutely the correct ones, and that having different ones would mean not realizing something that we realize—then let him imagine certain very general facts of nature to be different from what we are used to, and the formation of concepts different from the usual ones will become intelligible to him. ([31], II, p. 230)

The distinction is not transparent between imagining "certain very general facts of nature to be different from what we are used to" and the "formation of concepts" suited to these differences. It conjures too Platonic a picture of facts and concepts; one appears "out there" waiting to be discovered by the mind's eye, a view elsewhere discouraged in the *Investigations*. A more telling difficulty lodges in the unspecified character of the phrase "certain very general facts of nature." Trying to steer between what he felt to be the Scylla of Platonism (that of Frege and the early Russell) and the Charybdis of conventionalism, Wittgenstein wished to allow for the possibility of someone (or some community of beings) replying "like a rational person and yet not playing our [language] game" ([32], I, p. 115). By

virtue of our playing *our* game, engaging in *our* life form, we cannot finally understand an alien game; while it may be a rational game, it is not a human game. Playing a game means, at bottom, engaging in a form of life, accepting an interlocking set of commitments and their implications: "To imagine a language is to imagine a form of life" ([31], I, p. 19).

One human being can be a complete enigma to another. We learn this when we come into a strange country with entirely strange traditions; and, what is more even given a mastery of the country's language. We do not *understand* the people. (And not because of not knowing what they are saying to themselves. We cannot find our feet with them. ([31], II, p. 223)

Literally, in the German this comes to, "We cannot find ourselves in them. Rooted in one form of life, there is a level at which we cannot uproot ourselves without recourse to concepts of psychoanalysis; compare the distortion of grammar characteristic of psychotic behavior.

What we are supplying are really remarks on the natural history of man; no curiosities however, but rather observations on facts which no-one has doubted, and which have only gone unremarked because they are always before our eyes. ([32], I, p. 141)

(A) If these facts "on which no-one has doubted" are intended to comprise the full panoply of activities peculiar to being human, in truth the "natural history of man," then, by implication, we cannot understand alternative sorts of facts. The point of understanding a fact is to see it in its lived context, as the point of understanding an expression's "grammar" is, in contrast to having "a picture before one's inner eye," to see the form of life of its employment. At term, it is actually to partake of this form of life. By saying "an 'inner process' stands in need of outward criteria" ([31], I, p. 580; for 'inner', read 'unshared', for 'outward' read 'shared' or 'public'), Wittgenstein has "socialized" meaning theory. A question is the scope of this public; are there certain activities which, just by virtue of being members of the human race, and not of a certain culture or civilization, we cannot but share? How are the limits of this scope determined?

To understand alternative sorts of facts is, at some level, to experience alternative forms of life, forms not rooted in man's natural history. Wittgenstein speaks of the illusions produced by our employing words to describe putative facts in the absence of any language game furnishing their comprehensible employment. Playing our particular game is "part of our natural history," he says, and, as Stanley Cavell observes, "until one is an initiate of this human form of activity, the human gesture of 'citing a rule' can mean nothing" ([8], p. 157). Conversely, until a human is, *per impossible*, an initiate of a nonhuman or extrahuman form of activity (playing another game), the nonhuman gesture corresponding to our citing a rule can mean nothing. "If a lion could speak, we could not understand him" ([31], II, p. 223).

(B) On the other hand, if these "facts which no-one has doubted" represent only a selected and parochial range of human activities, then Wittgenstein would be not

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obscure

so much supplying remarks on the natural history of man as on particular subsets of man, remarking on cultural traits, perhaps, not specifically human traits, on users of particular languages, not users of language as such. But this is a supposition foreign to the "transcendental" texture of the *Investigations*.

What Wittgenstein wishes us to grant him are two premises. (1) Because our form of life could be other than it is ("imagine certain very general facts of nature to be different"), there can be other forms of life (we could be different sorts of beings): against the Platonist, our form of life is contingent. (2) In the last analysis we cannot understand these other forms of life; while affirming that there can be others, against the conventionalist we cannot specify what they would be like. Because inhabitants of earth might have engaged in practices of calculating, counting, inferring, and so forth, in accordance with rules different from those we actually follow, it is in this sense a contingent fact that they are carried out in the ways that they are,

... just as it is a contingent fact that there is such a thing as calculating or inferring at all. But we can understand and acknowledge the contingency of this fact, and hence the possibility of different ways of calculating, and so forth, without understanding what those different ways might have been. ([25], p. 489)

In trying to understand an alien society which continues the series "+2" as: "... 998, 1000, 1004, 1008, . . . , following an illustration from the *Investigations*, Stroud concedes a "progressive decrease in intelligibility." He tells us that, "The more successful we are in projecting ourselves into such a world, the less we will have left in terms of which we can find it intelligible" ([25], p. 489). Yet what this gradual evaporation of understanding seems to come to is that as we begin to grasp the implications of these "different games" we notice that they involve contravention of logical laws like those of Identity and Inference, laws which serve, at least in our conceptual framework, as conditions for the possibility of understanding at all. In other words, to employ the series "+2" in this way comes, on further examination, to be seen as not just bizarre but as ultimately incomprehensible, like denying our use of $[p \rightarrow q, p; \therefore q]$. "The only sense that has been given to the claim that 'somebody may reply like a rational person and yet not be playing our game' is that there might have been different sorts of beings from us, that the inhabitants of the earth might have come to think and behave in ways different from their actual ones" ([25], p. 489). If this means there might have been a community of beings whose language game involved "rules" contravening what we take as conditions for the possibility of language, this is a very hard saying.

If it means that there could be a community of language users whose language game involves rules which, while not contravening what we take as *a priori* grounds for language itself, yet contravene what we may call commonsensical or physical, not logical, laws, then this raises a different sort of question.

Case: "I fly instantaneously through space, I project astrally."

Although not patently involved in self-contradiction, are we nevertheless here involved in the language of self-delusion or superstition?

Though not congruent with, this is probably closer to what Wittgenstein has in mind in speaking of illusions produced by our employing words in the absence of any language game which furnishes their comprehensible employment. Because we can point to no corresponding form of life, the expression 'I feel the visual image two inches behind the bridge of my nose' ". . . combines well-known words by combining them in a way we don't yet understand. The grammar of [such phrases] has yet to be explained to us" ([33], p. 10). Until it is, until we can point to a community of beings mutually engaging in a form of life harboring this expression, we have no warrant for understanding it. But when we examine Wittgenstein's imagined language games, his invented "fictitious natural histories" ([31], II p. 230), we note it is because they are imagined, not purported anthropological finds, that he can point to no corresponding life form which roots them.

Since by 'grammar' Wittgenstein means "the 'possibilities' of phenomena," a living context within which organisms meaningfully interact ("form of life"), Cavell can identify it with the "whirl of organism": this includes "sharing routes of interest and feeling, modes of response, senses of humor and of significance and fulfillment, of what is outrageous, of what is similar to what else. . . ." ([8], p. 160). Through spinning out of his head alternate games, or the matrix for them, plainly Wittgenstein cannot point to commensurate life forms within which these games achieve significance, acquire a "grammar" in his sense. It is as if he would need to invent a new species or at least a new community, "spin other worlds" as don Juan would say.¹¹ This is the significance of Wittgenstein's remark about not understanding the "speaking" lion.

But imagine, as a working anthropologist, that Wittgenstein were to come upon a singular form of life: a genuinely novel "whirl of organism," apparently with a different sense of what is outrageous, one in which many activities resemble our some do not, many uses of speech seem compatible, others do not—one in which 'I became a crow, flying in beautiful skies with other beautiful crows' ([3], p. 131), regarded as perfectly straightforward. Is this possibly a case where the expression "grammar," unlike that of the isolated expression about the visual image, can be explained to us? Through apprenticing, might even the stranger, here the anthropologist, come to *understand* the people, "find his feet with them"? Because of some vagueness in the notion of a form of life we need to avoid the temptation of facile reply: if the stranger could find his feet with them, it was not a suitably enigmatic country; if he could not, it may well have been.

This is where the phrase 'certain very general facts of nature' shows itself, at least for present purposes, as unhelpfully general. Does don Juan believe certain general facts of nature to be different from what we, members of the Western intellectual tradition, "are used to"? How encompassing is the use of 'we' at a time through whose tradition are these general facts to be filtered?¹² In three books

¹¹ ". . . your friend Wittgenstein tied the noose too tight around his neck so he can't get anywhere," said don Juan to Castaneda, upon hearing some of Wittgenstein's philosophy reported to him" ([4], p. 95).

¹² Consider the interesting case of the recently documented Ik society of Uganda. Anthropologist Colin M. Turnbull, in [27], summarizes his findings in this way: "Those values which we cherish so highly may indeed be basic to human society but not to humanity. . . ."

date ([5], [6]), the anthropologist Carlos Castaneda purports to have given a description not just of an alternative language game, as in the examples from the *Investigations* (see [31], I, pp. 2, 48, 122; II, p. 230), but of an alternative life form, assuming the concept to have a discernible application. Don Juan and don Genaro do provide modes of behavior (a form of life?) accompanying their otherwise seemingly outrageous employment of words. Or so Castaneda reports. Furthermore, as a result of actually having undergone a variant *askesis*, one with different *a priori* data of apperception, the author claims to have acquired the ability to slip back and forth from one life form to the other, to "slip between the descriptions." Thus he speaks sensibly of, seems to provide a grammar for, "not-doing," acquiring "allies," developing a "ring of power," a "gait of power," and other life-form activities.

From a reading of the books it is therefore at least arguable that the author's protagonist, don Juan, is replying "like a rational person and yet not . . . playing our game," that he is exhibiting "a hitherto unknown kind of insanity." Yet the examples in the *Investigations* do not appear to offer any precedent for such insanity. Unlike the "visual image" illustration, a grammar *is*, in this case, being pointed towards; and, unlike the illustration of a different form of calculating, fundamental logical laws do *not* seem to be contravened, just certain "very general facts of nature." The lion can speak, and—through undergoing the appropriate apprenticeship—we can come to understand him! This is the author's claim.

Of course the reader (you and I) are entitled to our counterclaim. But the interesting question is whether grounds for the counterclaim are of a descriptive-metaphysical or transcendental sort (as the *Investigations* suggests) or of an empirical sort, or, better, of a sort calling for rational discernment, like "Is there a life after death?" Can we, on *a priori* grounds, deny the possibility that don Juan does what he says he does or, what comes to the same, ascribe epithets like 'subjective', 'figurative', 'hallucinatory' to his presumed experiences? Can we (or should we), in short, deny that he is playing another game *and* is a member of our species? Given the "natural history of man" and prevailing "very general facts of nature," how do we locate the map tracing all possible human forms of life? Does don Juan really fly?

5. The indeterminacy of metaphysics. The question nevertheless persists whether we would know what we were talking about in giving an answer. Recently the question has surfaced (especially in Quine's works—see References) as the principle of indeterminacy of translation; a principle which seems to imply that relative to the totality of speech dispositions no one univocal answer can be given. Consider first whether the translator (anthropologist) could meaningfully answer in the affirmative. Surely in one important respect he could not. Since the discipline of anthropology shares the general world description on which the natural sciences rest, partakes of their interpretation of the "very general facts of nature," its methodological precepts help predetermine the answer. That is, concepts available to describe the experiences don Juan lays claim to, experiences violating certain of these culturally accepted general facts, can only render those experiences cate-

gorically unreal; these concepts include "delusive mechanism," "dissociation," "loss of ego structure," "abnormal perception of body image," and the like. 2

Nor is the situation altered if the anthropologist takes the appropriate drugs, that is, undergoes the required apprenticeship, and himself "flies." As anthropologist, how does he report back that now he (as well as don Juan) flies? Is what he reports an interesting fact or a bad translation: a bad translation of what don Juan says and a bad interpretation of what he (the anthropologist) experiences? By thus slipping back and forth "between the descriptions," doesn't his interior dialogue now simply mirror his former exterior dialogue:

Carlos tried to elicit from don Juan a description of what he, Carlos, looked like to don Juan when he, Carlos, was to himself a crow, flying in beautiful skies with other beautiful crows.

Don Juan insisted he *had* been a crow.

Carlos asked, though, about his *body*: it had not changed had it?; surely it was the same body as it ordinarily was?

Don Juan said of course it was not the same body at all.

Carlos countered that surely only his *mind* had been a crow; surely his *body* had not flown?

Of course your body flew, was don Juan's retort, that's what the devil's weed is *for*.

So Carlos asked whether, if friends of his had been there to see him, they would have seen him as a crow.

That, don Juan answered, depended on his friends. If they understood about the *devil's weed* they would certainly have done so.

Finally, Carlos asked don Juan what would happen, say, if he tied himself to a large rock by a heavy chain before flying?

Don Juan looked at him incredulously and replied that he would certainly have to fly holding the rock with its heavy chain. (Adapted from [3], pp. 131–132)

Here is one interesting sense in which the differing translations (or interpretations) of what really happened are "indeterminate in principle relative to the totality of speech dispositions" ([19], p. 221). We need only project judiciously our "analytical hypothesis," whose ultimate justification is just that the implied observation sentences match up.¹³ Thus Carlos can hypothesize that don Juan was drugged and what he (Carlos) saw was what really took place; the rest don Juan imagined (thought he saw). Don Juan, to the contrary, can hypothesize that because Carlos was himself drugged (by his tradition), what he (don Juan) saw was what really took place. The rest Carlos failed to see; having eyes he saw not. Systematically different analytical hypotheses determine that each shares different *a priori* data of apperception, different levels of consciousness in whose context observation sentences are reported, as the Figure 3 scenarist might put it.

Compare scientist and nonscientist observing the same results from a linear

¹³ Development of the concept of analytical hypotheses (roughly matching the concept of M in Figure 2) and observation sentences is found in ([19], chapter 2; see also [20], pp. 85–89).

accelerator (or inclined plane) experiment. One has taken the devil's weed (undergone the appropriate *askesis*), the other has not. Or compare the believer and non-believer witnessing the results of the fire-walking experiment. Just as the scientist can offer an interesting explanation of the experimental results—one precluded to the nonscientist—on the basis both of his analytical hypotheses (unspoken) and his scientific hypotheses, so the believer—and not the nonbeliever, whether scientist or not—can offer an interesting explanation of the results of the fire-walk experiment, viz. belief, on the basis of his different analytical hypotheses. Given the indeterminacy principle, all that we can therefore conclude is that either don Juan does or does not really fly, not a very helpful conclusion.

When we say that Neil Armstrong really did fly through space and don Juan did not, in effect we are saying that there is much to be gained in the way of efficient and interesting human intercourse in doing so, and little, if any, loss in not doing so. Other items we take as factual readily fall into place. The aggregate picture has predictive, explanatory and descriptive power, plus expressive economy. This is at any rate the basis for Quine's anti-Cartesian materialism. The reason for accepting the primacy of the scientific idiom is not that the factual data, all possible observation sentences, are not conceivably compatible with an alternative idiom. Rather it is that when only the claims of natural science are considered (for Quine, behavioristic psychology is the physics of people) they form the kind of coherent whole that is capable of accounting for what needs accounting for. The austere idiom of natural science certainly accounts, and indirectly is responsible, for Colonel Armstrong's 1969 walk on the moon; just as certainly it does not account for the Hindu, Mohotty's 1966 walk in Ceylon on fiery coals registering 1328° Fahrenheit [14]. We return to our earlier dilemma: buried in the notion of what needs accounting for is a primacy thesis.

As regards the matter of whether don Juan flies, the indeterminacy principle allows us to remain neutral. Given sufficient ingenuity in projecting analytical hypotheses, and because "our statements about the external world face the tribunal of sense experience not individually but only as a corporate body," ([21], p. 47), evidentially we are permitted to say either that don Juan does and Neil Armstrong doesn't fly; or vice versa; or both do; or neither do.

The point about indeterminacy of translation is that it withstands even all this truth, the whole truth about nature. This is what I mean by saying that, when indeterminacy of translation applies, there is no question of right choice; there is no fact of the matter even to *within* the acknowledged under-determination of a theory of nature. ([22], p. 275)

Though all possible observations be fixed, says Quine elsewhere, theory can still vary. "Physical theories can be at odds with each other and yet compatible with all possible data even in the broadest sense. In a word, they can be logically incompatible and empirically equivalent."¹⁴ Such is the megapower of analytical hypotheses.

¹⁴ "For my own part, I think the empirical slack in physics extends to ordinary traits of ordinary bodies and hence that the indeterminacy of translation likewise affects that level of discourse" ([23], p. 181).

By implication, the notion of physical in "physical theory" is restrictive as to the sorts of claims which can properly be called physically theoretic, but, as we have seen, this is implicit to Quine's scientific realism whereupon only claims of natural science are to form our world picture, not to the indeterminacy principle. It is with epistemological immunity that the Figure 3 scenarist can therefore conclude that the argument for the empirical indeterminateness pertaining to logically incompatible and empirically equivalent physical theories A and B likewise applies to world pictures M' and M", saving only the differential sense of "empirical" in the two scenarios. Something went wrong with our standard of reality, observes Quine:

Having noted that man has no evidence for the existence of bodies beyond the fact that their assumption helps him organize experience, we should have done well, instead of disclaiming evidence for the existence of bodies, to conclude: such, then, at bottom, is what evidence is, both for ordinary bodies and for molecules. ([24], p. 238)

And for "allies," "rings of power," "not-doing"? The two scenarists need differ only on the spectrum of experience or factual truth they take to be problematic and on the aggregate organizational success the "objective-tending" scientific method has to date purchased. What they need not differ over is the importance of a "normative conception of factual truth" (in Hoy's phrase), nor, for that matter, on the "degree of continuity in the progress of science" (Hoy).

Nor is it the case that assimilating variant idioms to that of science enables us to withstand dilution of "our concept of factual truth" ([15], p. 297). If anything, the "strangelovian" overtones of such a recommendation should incline us to investigate alternatives. As to the question furnishing the title for this paper, the basis for an answer is at hand. Though unexciting, it places the question in perspective, allows the respondent to wear his metaphysics on his sleeve, publicly to choose his own opiate. For the one scenarist, don Juan surely does not fly; for the other, he may indeed. And neither scenario reflects any higher standards of "what is to count as cognitive," only different standards.

REFERENCES

- [1] Avorn, J. "Beyond Dying." *Harper's Magazine* March, 1973.
- [2] Bach, R. *Johnathan Livingstone Seagull*. New York: Macmillan, 1970.
- [3] Castaneda, C. *The Teachings of Don Juan*. New York: Ballantine Books, 1969.
- [4] Castaneda, C. "Sorcerer's Apprentice." *Psychology Today* December, 1972.
- [5] Castaneda, C. *Journey to Ixtlan*. New York: Simon & Schuster, 1972.
- [6] Castaneda, C. *A Separate Reality*. New York: Simon & Schuster, 1971.
- [7] Castaneda, C. "Don Juan and the Sorcerer's Apprentice." *Time* March, 1973.
- [8] Cavell, S. "The Availability of Wittgenstein's Later Philosophy." In *Wittgenstein: The Philosophical Investigations*. Edited by G. Pitcher. New York: Doubleday, 1966.
- [9] Evans-Wentz, W. Y. (ed.). *The Tibetan Book of the Great Liberation*. Oxford: Oxford University Press, 1969.
- [10] Feinberg, L. "Firewalking in Ceylon." *Atlantic Monthly* May, 1959.
- [11] Foss, L. "Art as Cognitive: Beyond Scientific Realism." *Philosophy of Science* 38 (1971) 234-250.
- [12] Goodman, N. *Languages of Art*. New York: Bobbs-Merrill, 1968.
- [13] Goodman, N. "Some Notes on *Languages of Art*." *Journal of Philosophy* 67 (1970).

- [14] Grosvenor, D. and Grosvenor, G. "Ceylon." *The National Geographic Magazine* April, 1966.
- [15] Hoy, R. "Cognitive Aspects of Art and Science." *Philosophy of Science* 40 (1973): 294-297.
- [16] Jarvic, I. C. and Aggasi, J. "The Problem of the Rationality of Magic." In *Rationality*. Edited by B. Wilson. New York: Harper & Row, 1970.
- [17] Nagel, T. "Wittgenstein: The Only Genius of the Century." *The Village Voice* February, 1971.
- [18] Pearce, J. C. *The Crack in the Cosmic Egg*. New York: Simon & Schuster, 1971.
- [19] Quine, W. V. *Word and Object*. Cambridge, Massachusetts: M.I.T. Press, 1960.
- [20] Quine, W. V. *Ontological Relativity and Other Essays*. New York: Columbia University Press, 1969.
- [21] Quine, W. V. "Two Dogmas of Empiricism." In *From a Logical Point of View*. Cambridge, Massachusetts: Harvard University Press, 1953.
- [22] Quine, W. V. "Replies." *Synthese* 19 (1968).
- [23] Quine, W. V. "On the Reasons for Indeterminacy of Translation." *Journal of Philosophy* 67 (1970).
- [24] Quine, W. V. "Posits and Reality." In *The Ways of Paradox*. New York: Random House, 1966.
- [25] Stroud, B. "Wittgenstein and Logical Necessity." In *Wittgenstein: The Philosophical Investigations*. Edited by G. Pitcher. New York: Doubleday, 1966.
- [26] Suzuki, D. T. *An Introduction to Zen Buddhism*. New York: Grove Press, 1964.
- [27] Turnbull, C. M. *The Mountain People*. New York: Simon & Schuster, 1972.
- [28] Watts, A. "A Psychedelic Experience: Fact or Fancy?" In *LSD: The Consciousness Expanding Drug*. Edited by D. Solomon. New York: Putnam & Sons, 1964.
- [29] Weil, A. *The Natural Mind*. Boston: Houghton Mifflin, 1972.
- [30] Wertenbaker, L. *The World of Picasso*. New York: Time, 1957.
- [31] Wittgenstein, L. *Philosophical Investigations*. New York: Macmillan, 1953.
- [32] Wittgenstein, L. *Remarks on the Foundations of Mathematics*. New York: Barnes & Noble, 1956.
- [33] Wittgenstein, L. *The Blue and Brown Books*. New York: Harper & Row, 1958.