

On Going Native

Thomas Kuhn and Anthropological Method

JOHN TRESCH

Cambridge University and ENS/EHESS Paris

In this article, Thomas Kuhn's theory of incommensurable paradigms learned through exemplars is discussed as a theory of acculturation akin to those of cultural anthropology. Yet his hermeneutic approach results in a classic problem, referred to here as the paradox of objective relativism. A solution, at least for observers of contemporary cultures, is drawn from Kuhn's own writings: a fieldwork method of "going native." It is argued that Kuhn's views are as important a corrective for anthropologists studying native systems of knowledge as they have been for philosophers and sociologists of science. The epistemological and disciplinary implications of such a methodology are discussed.

What surprises most is to find that various grand generalizations of the Western world, such as time, velocity, and matter, are not essential to the construction of a consistent picture of the universe. The psychic experiences that we class under these headings are, of course, not destroyed; rather, categories derived from other kinds of experiences take over the rulership of the cosmology and seem to function just as well.

—Benjamin Lee Whorf, "Science and Knowledge" (1956, 216)

Thomas Kuhn's *The Structure of Scientific Revolutions (SSR)* (1970) raised many important issues for historians, sociologists, and philosophers of science. Despite his qualification of his work's domain of application, in this article I claim that the central aspects of Kuhn's work have significant implications for anthropologists. His theory of knowledge can be productively extended to the study of culture. Kuhn's work is not without problems, however. I will demonstrate that if we accept the aim of what Kuhn labels "the new historiography of science," that of analyzing "an older science in its own terms,"¹ we

Received 1 December 1998

Thanks to George W. Stocking Jr., Peter Lipton, Keith Hart, and Jean Bazin.

Philosophy of the Social Sciences, Vol. 31 No. 3, September 2001 302-322

© 2001 Sage Publications

302

are forced into a paradox: that of questioning "objectivity" in the name of a more "objective" description of historical practice. While this problem in significant ways is unavoidable in historical reconstructions, a potential solution is available to the sociologist of science and the anthropologist of foreign systems of knowledge, both of whom aim to understand contemporary societies in their own terms.

An important and undertheorized means of surpassing these difficulties is a methodology in which the researcher seeks to "go native" by actively taking part in the systems of knowledge being studied. This possibility takes the notion of "participant observation" beyond its usual limits. Although the concept is a necessarily fluid one, I provisionally define "going native" as crossing a line of objectivity to the extent that the researcher comes to experience the world in the same terms as the people he or she studies. In arguing for the validity and, perhaps, the necessity of such a method, I will discuss the problems it will encounter as well as the advantages it can bring to a study of contemporary systems of knowledge.

I will begin by discussing Kuhn's thesis of the plurality of phenomenal worlds,² especially for what it suggests about the role of activity in the fixing of a worldview, the nature and direction of scientific development, and the relation between "the world-in-itself" and individuals' conceptions of it. Kuhn's observations on this last point, when applied to the domain of anthropology, force a reconsidering of traditional assumptions about what it means to "understand" a foreign culture. I will then address Paul Hoyningen-Huene's (1990, 1993) criticisms of Kuhn, which center on the reflexive impasse mentioned above, the paradox of objective relativism, before discussing potential problems and advantages of "going native."

THE PLURALITY OF PHENOMENAL WORLDS

In Kuhn's work the thesis of a plurality of phenomenal worlds appears in many different forms. For example, "Two different groups, the members of which have systematically different sensations on receipt of the same stimuli, do *in some sense* live in different worlds."³ The meaning of this statement will become clearer through a brief discussion of the process of learning in science, which for Kuhn devolves around the notion of paradigms. This concept has four important implications.

First, paradigms are fundamental to the learning process. The training one receives as an initiate to a community is basic to the constitution of a "phenomenal world." Kuhn notes "that something like a paradigm is prerequisite to perception itself."⁴ A new student is presented with

a set of recurrent and quasi-standard illustrations of various theories in their conceptual, observational, and instrumental applications. These are the community's paradigms, revealed in its textbooks, lectures, and laboratory exercises. By studying them and by practicing with them, the members of the corresponding community learn their trade.⁵

These modes of learning difference and similarity relations between objects result in the constitution of a "phenomenal world" in which the set of concepts and objects forms a coherent means of understanding the area of investigation. The process is largely constitutive of the student's perception of the world.

Second, the different "phenomenal worlds" that different paradigmatic "initiations"⁶ produce are, Kuhn argues, incommensurable. In *SSR*, he justifies the claim that members of different scientific communities in some sense live in different worlds by making a distinction between the stimuli (in some undeterminable sense⁷) available in the world and the sensations they produce in an individual subject. Kuhn asserts

that very different stimuli can produce the same sensations; that the same stimulus can produce very different sensations; and, finally, that the route from stimulus to sensation is in part conditioned by education.⁸

The subject's means of understanding the world, instead of being an unproblematic causal relation between stimuli and perceptions, is theorized as a transformation of stimuli into sensations ("seeing-as") according to the similarity and difference relations shared by members of a perceptual community. Indeed, this three-termed (largely Kantian) system, which treats "world-in-itself," the individual subject, and a "conceptual scheme" (whether culture, language, or a system of logic) as individual "objects" may be less a reflection of reality than of our language. We simply *see* a swan, a table, and so on; we are not conscious of making an "interpretation" of stimuli. Over time the student learns to see new problems as similar to ones with which he or she is familiar.

The third important aspect of paradigms is that the process of learning does not take place by giving definitions of concepts or by adhering to explicit rules. While the members of a community can “agree in their *identification* of a paradigm,” this does not require their “agreeing on, or even attempting to produce, a full *interpretation* or *rationalization* of it.”⁹ The knowledge of the group, its methods, assumptions, standards, and values can be understood only as the assemblage of contexts, problem situations, exemplary solutions, and language games in which they exist.

Fourth, Kuhn’s defense of the notion of incommensurability between paradigms focuses on their respective relation between the vocabularies. Incommensurability does not require that there is no way of discussing historical worldviews, or that inhabitants of two different worldviews cannot describe one another’s views or compare them. Yet this does not mean that one may make a one-to-one translation from terms in one phenomenal world to those of another:

The interrelated terms in some local part of the web of language must be learned or relearned together and then laid down on nature whole.¹⁰

This is the main sense in which Kuhn defended his thesis of incommensurability in his last writings. While the quote suggests a social constructivism in which language is “superimposed” on reality, this interpretation of Kuhn’s theory is not justified for reasons I discuss below.

THE RESISTANCE OF THINGS-IN-THEMSELVES

Some of Kuhn’s statements about scientific progress might suggest the reading that science is the mere imposition of subjective categories upon objects in the world. He does indeed explicitly reject the belief that with each revolution, the theories by which science understands the world have drawn “closer and closer to the truth.”¹¹ Instead he likens scientific progress to Darwinian evolution; there is development but “without benefit of a set goal, a permanent fixed scientific truth, of which each stage in the development of scientific knowledge is a better exemplar.”¹² What progress there is, he claims, is limited to an increase of solutions to puzzles laid out by a given paradigm.¹³ Kuhn believes that at no point will science be able to declare justifiably that it has grasped the essence of some phenomenon (though this has not

prevented it from doing so); the necessary elusiveness of things-in-themselves does not allow such certainty.

Nevertheless, critics who read Kuhn as advocating a purely “social constructivist” or subject-sided view of scientific investigation are simply wrong. As suggested by the discussion above of the deterministic aspect of stimuli, Kuhn makes clear that the “world-in-itself” has a determining role in the situation. Kuhn’s view of the relationship between objects and the symbols by which we understand them does not give priority to either side of the duality. He claims that

In much of language learning these two sorts of knowledge—knowledge of words and knowledge of nature—are acquired together, not really two sorts of knowledge at all, but *two faces of the single coinage* that a language provides.¹⁴ (emphasis added)

Our language and our knowledge of the world, Kuhn insists, are indissociably entwined. This does not mean, however, that we are free to impose whatever interpretation we desire upon it. Culturally entrenched forms of knowledge are not simply forms of mass hysteria:

To say that the members of different groups may have different perceptions when confronted with the same stimuli is not to imply that they may have just any perceptions at all It is just because so very few ways of seeing will do that the ones that have withstood the tests of groups’ use are worth transmitting from generation to generation. (1970, 195-96)

Kuhn’s stance allows for the intuition that scientific research is determined in some way by resistance given by the world to our interpretation of it. Although stimuli do not lead to transparent representations of the world-in-itself, Kuhn’s approach allows that science may indeed be a way of gaining some sense of what these resistances are.

EXPORTING KUHN TO ANTHROPOLOGY

Kuhn’s treatment of learning processes in science amounts to a theory of acculturation. Yet the implications of this stance go beyond science; his insights, I contend, are of genuine importance for attempts to understand the phenomenal worlds inhabited by members of foreign cultures. The points discussed above can serve as a useful means of orienting fieldwork of local systems of knowledge.

Kuhn himself argued that even seemingly opposed domains (such as art and science) should be viewed first of all “as ethological and sociological.”¹⁵ This reorientation toward “the obvious”—the practical, social basis of incommensurable phenomenal worlds—has had a tremendous impact on the ways that science is currently studied by historians, sociologists, and philosophers, many of whom, like Kuhn, have left behind earlier demarcation criteria such as rationality, the application of rules of method, or the attainment of a timeless certainty about the laws of nature. Many of these authors no longer consider it their task to judge the scientific status of the activities they study. We must note, however, that Kuhn continued to argue for the specificity of natural science, identifying and defending two main demarcation criteria: shared scientific values and puzzle solving. It is worth considering whether these principles prohibit the extension of his theory that I propose.

In several writings, Kuhn suggested that certain “scientific values” are the common point of all sciences.¹⁶ Yet he states that “little knowledge of history is required to suggest that both the application of these values and, more obviously, the relative weights attached to them have varied markedly with time and also with the field of application.”¹⁷ Although these general themes may recur in different paradigms, we must note that an understanding of them and their variable applications only emerges in the comparison from one paradigm to another. Furthermore, as I will discuss later, the specificity of Western scientific values could only be clearly established through comparison with another worldview; the comparison of values, their relative weight and impact, and the practices that embody them would be possible and potentially as fruitful if made from one culture to another as from one scientific paradigm to another.

Kuhn further proposed puzzle solving as a distinctively scientific undertaking. Discussing his relation to Popper, he agrees that astrology should not be called a science, although for different reasons.¹⁸ For Popper, the vague predictions of astrology and the lack of crucial tests to refute its hypotheses exclude it from the category of science. For Kuhn, however, the paramount difference between astrology and scientific astronomy is that the latter establishes a set of puzzles to solve, the solution of which provides a means (internal to the paradigm) of marking its progress.¹⁹ This criterion, like that of science-specific values, should not stop us from applying the phenomenal worlds thesis beyond science. For one, the idea that scientific puzzle solving, unlike other dimensions of Western and other cultures, allows

for a steady progress through the accumulation of solutions reintroduces in modified form an opposition between historical, progressive, modern societies and ahistorical, stagnant, traditional ones, an opposition that much recent work in and about anthropology has sought to dismantle.²⁰ Such studies urge us to look for the ways in which “the essential tension” between tradition and innovation, between stability and change, is at play even in those societies once classed as primitive; the kind of progress that puzzles provide may not be exclusive to science. Likewise, it would be difficult to provide a definition of puzzle solving that is sufficiently precise to exclude practices not given the name of “science.” It is plausible that knowledge practices taking place outside of scientific laboratories and journals similarly involve the ongoing elaboration of a set of beliefs and their implications.²¹

Even if it were possible to establish criteria, once and for all, that captured the general characteristics that all sciences share and in which they differ from all other activities—and the two principles just discussed may still be contenders in such a contest—we would not be prevented from extending the phenomenal worlds thesis to the study of other systems of knowledge. Although we might discover different values and different practices than those of science, the kind of investigation Kuhn suggests would allow us to grasp these specificities. Kuhn’s writings repeatedly underline the need for continued questioning, through careful comparison, of our assumptions about what science is. Many historians and philosophers of science writing after SSR have turned to anthropology, with its tradition of making the strange familiar and the familiar strange, for inspiration in this ongoing task.²² In return, anthropologists stand to benefit from Kuhn’s insights about the practical and sociological basis of scientific worldviews.

Kuhn’s theory already shares many features with twentieth-century anthropological thought. In acknowledging that “the sort of history that has so influenced [him] and [his] *historical* colleagues is the product of a post-Kantian European tradition,”²³ he points out a shared historical genealogy with at least American anthropology. There the key transition from the evolutionist model of human development of the late nineteenth century was made by the hermeneutically informed anthropologist Franz Boas, whose presupposition was that there is no outside scale against which to measure the development of distinct human cultures. This postulation of a plurality of “incommensurable” cultures/worldviews, none of which had

any claim to the status of “most civilized,” performed, like Kuhn’s SSR, a rewriting of a dominant historical time line in which it was believed that the West was headed for a state of perfect enlightenment.²⁴ Another important intersection between Kuhn’s theory and the Boasian program, as underlined by the epigraph from B. L. Whorf, is the claim that the same “objects” will be differently experienced from one phenomenal world to the next.²⁵ This notion of an incommensurable “web of language” or “lexicon” becomes more important when we are faced with “theoretical entities” like quarks or spirits. Terms used by local informants for which we have no exact translation may be rendered in terms familiar to us, a compromise that may mislead, obscure, or deny the terms’ actual use and meaning.

The greatest contribution Kuhn’s work presents to the study of non-Western cultures is his argument that while knowledge cannot be understood outside of the social contexts in which it is embedded, there remain nonsubjective constraints that the world places on any consistent representation of it. Unlike in Kuhn’s case, in much of traditional anthropological writing, accusations of social constructivism are actually justified, especially in its treatment of local systems of knowledge (much more likely to be labeled “belief” in ethnographies). Studies of myth, ritual, and magic have frequently treated such practices as texts—as systems of representation. What is being represented may be social relations, emotions, histories, and beliefs; in short, native forms of knowledge are viewed as mere “interpretations” superimposed on the world (the true nature of which is the province of science) by these prisoners of culture. Where such systems are analyzed as possessing “genuine knowledge,” the treatment relies on the unquestioned explanatory base of Western science.²⁶

Extending Kuhn’s claims to other cultures allows for a newly grounded symmetry.²⁷ The idea that a conceptual scheme embodied in a total “form of life” involves both human thought *and* determination by things in themselves justifies a much more radical understanding of non-Western systems of knowledge. The possibility arises that healing rituals, shamanism, voodoo, sorcery, trance, shared dream states, possession cults, prophecy, and other experiential “religious” techniques may be viewed as “paradigms.” In courses of initiation, students (i.e., apprentices, adepts, cult members, devotees) come to see problems as similar to earlier ones they have encountered; their explanations come to match those of the group; over the course of their training, their phenomenal world is transformed. Kuhn’s insight about the role of the “world-in-itself” in determining phenom-

enal worlds opens the possibility that such "systems of belief" may be incommensurable though equally valid means of discovering where the world resists. The phenomenal world of the religious practitioner becomes potentially as real as that of the scientist, as do his or her "findings."²⁸

Yet this extension of Kuhn's arguments presents new difficulties. The premises and conclusions of many of the examples I have just mentioned are not within the realm of what our phenomenal world (bounded as it is in important ways by the methods and standards of evidence of empirical science) would accept as even plausible. Furthermore, and more prohibitive methodologically, they provide little in the way of the materials necessary for ordinary anthropological, sociological, historical, or scientific data. In experiential techniques, much of the content of the research is not at the level of text, symbol, or physical artifact. Although there is probably without exception a level of the observable, as in for example the positioning of bodies in space, in many cases the actual "findings" occur in an order of experience frequently classed as "internal" or "subjective." Such bodies of knowledge are not open to the perusal of the hermeneutic interpreter.

The next section takes up a key epistemological problem of Kuhn's historiography. I will argue that a fieldwork method of "going native" offers a pragmatic solution both to the difficulties mentioned above facing the investigator of non-Western knowledges and to the paradox that threatens to undermine Kuhn's work.

THE PARADOX OF OBJECTIVE RELATIVISM

A significant problem stems from the reflexive nature of any project taking "human knowledge" as its object. Kuhn's rhetoric makes clear that he aims to depict in a realistic way the phenomenal worlds of the periods of normal and revolutionary science he studies. To accomplish this goal, he is compelled, as explained above, to take a skeptical stance toward the finality of any claims to a "true" knowledge of the world. Yet this "critical epistemological" stance fundamentally undermines any claims that his analysis is any more justified or realistic than those put forth by the scientists he is studying.

Paul Hoyningen-Huene's argument on this point is convincing.²⁹ He argues that a study of an alien phenomenal world requires basic "anthropological" assumptions about the capacities of the subjects in question: that they are capable of learning according to a model like

that described above; that they inhabit a phenomenal world; that the relation between their words, actions (such as pointing), and beliefs resemble those Kuhn hopes to apply universally.³⁰ Here the paradox arises. As Hoyningen-Huene puts it, such assumptions

are all undoubtedly propositions, gleaned from the natural standpoint, and for the time being, *realistically* interpreted, about objects of a particular phenomenal world, that of the analyst. This implies the further assumption that the world-constituting people really exist, independent of the analyst and of his or her theories about them, and have these capacities *in themselves* and not simply in their relation to the analyst. But this is to make assertions with a claim to correctly describing, at least approximately, certain objects of *the one true* reality.³¹

These are exactly the sorts of assertions that, when made by researchers in other fields, Kuhn has argued against.

Hoyningen-Huene attempts to justify Kuhn's realistic stance toward the social. His arguments are as suggestive as they are unsatisfying. He claims that our status as inhabitants of a phenomenal world, rather than critically destabilizing our attempts to study other humans, on the contrary assures us of our ability to do so.

Cultural scientists always have one case at their disposal in which their knowledge of a particular world-view as it is *in itself* can be taken as fact. This is the case of knowledge of our *own* world view, for here and only here "in itself" and "for me" coincide. And so knowledge of alien world views can be represented primarily in terms of their divergence from our own.³²

Hoyningen-Huene claims that our own experience of what a phenomenal world is like, an experience that unlike all others brings us into contact with an "in-itself," serves as a firm standpoint from which to verify the anthropological assumptions put into question above. However, the attempt to ground a realistic stance toward "phenomenal worlds" in a species of phenomenological cogito is unsatisfactory for several reasons.

First, as most philosophers not trained within a phenomenological tradition would accept, the certainty of self-knowledge is far from given. Confidence in even the claim "I think," much less its Cartesian sequitur, is open to a wide range of critiques. Second, even if we *could* claim to know through introspection "which capacities needed for the constitution of a phenomenal world humans come equipped with and which are developed over the course of interaction with the envi-

ronment,³³ there is the danger that any such realistic claims about human nature lead us into serious political, ethical, and epistemological pitfalls. The human sciences, funded by and working with states and businesses, have repeatedly allowed their insights to attain "technical applicability"³⁴ by writing such anthropological assumptions into institutional, political, and disciplinary projects; the resonance between notions of human scientific law, legislation, and social control cannot be missed.³⁵ Our anthropological assumptions may be unjustifiably limited and, once taken as "facts," restrictive.

A similar point can be made in an epistemological register. Taking our own experience of human nature and limits as the basis for a knowledge of other possible experiences may well be a case of the inductive fallacy. Such assumptions may directly impede our appreciation of phenomena not part of our set of plausible human capabilities. The effect produced by many ethnographies, that a foreign culture is essentially our own but inverted in certain ways, may reveal less about "psychic unity" than it does about the theory-ladenness of observation.

Finally, it appears that any possibility that the assumptions underlying our *own* phenomenal world may be "seen" rather than "seen through" arises only during or subsequent to our exposure to an alien understanding. This claim is supported by the fact that discussions of phenomenal worlds, worldviews, or cultures are frequently accompanied by a specific type of argument from experience. The recognition that one even has something called a "phenomenal world" is continually addressed by means of a conversion narrative, in which the storyteller describes the moment at which his or her worldview becomes suddenly objectified and open to criticism if not transformation by an encounter with a new way of seeing situations.³⁶ In addition to the wealth of such accounts in ethnographic literature,³⁷ Kuhn offers us his own argument from experience, in which his "enlightenment" is attained "one memorable (and very hot) summer day"; his "perplexities suddenly vanished" and he began to think like a seventeenth-century Aristotelian. The researches that followed had an "immediate and decisive effect . . . on [his] view of science."³⁸ The passage indicates that the presuppositions inherent in one's worldview cannot be made the explicit logically or temporally prior basis for the understanding of an alien culture; one becomes aware of them only after one becomes intimately familiar with that other culture.

Hoyningen-Huene's attempt to salvage Kuhn's realism toward the social thus fails. The anthropological assumptions we apply in

attempting to understand an alien culture cannot be taken as either the last *or* the first word on human learning and knowledge production. We are left at the impasse that any reconstruction of an alien system of knowledge will be inevitably shaped by assumptions from one's own phenomenal world.

The impasse is one that faces any project that attempts to describe realistically the socially or subjectively conditioned knowledge of human agents, historical or contemporary. When directly confronted, it has been treated in different ways. Recent anthropologists, notably Clifford Geertz and the "Writing Cultures" movement he influenced, have directly questioned the possibility of "objectivity" in fieldwork and have laid emphasis instead on subjective accounts of the ethnographic encounter and the distance between the researcher and the subjects interrogated. In perhaps the most influential text of anthropological theory of the second half of the twentieth century, Geertz (1973) moves us from a consideration of anthropological research as working with "scientifically tested and approved" hypotheses (p. 23) to the claim that "the culture of a people is an ensemble of texts, themselves ensembles, which the anthropologist strains to read over the shoulders of those to whom they properly belong" (p. 452). As suggested above, however, "interpretive anthropology" thus conceived reduces all phenomena to the status of a text or symbolic system. The basic insight of the "phenomenal world" thesis, the mutual determination of subjects and things-in-themselves (even those encountered by scientists) is missed.³⁹ In the next section, I discuss the implications of one potential solution to these difficulties, that of "going native."

ON GOING NATIVE

Kuhn, if taken seriously, points the researcher in exactly this direction:

To translate a theory or worldview into one's own language is not to make it one's own. For that one must go native, discover that one is thinking and working in, not simply translating out of, a language that was previously foreign. (1970, 204)

I propose that if we take "going native" in a more thorough sense than Kuhn's exemplar suggests, we open the possibility for a pragmatic mode of investigation that tolerates a skeptical stance toward the realist anthropological assumptions undermining Kuhn's project.

Processes of learning, including hermeneutic research, take one by stages along a continuum between one's familiar worldview and an alien one. I suggest that the endpoint of such a continuum, that of "going native," is the merely ideal although logically necessary point from which to understand *both* of these objects of study. Although Kuhn presents his own work as an exemplar of "going native," it is clear that he is far from this ideal point. His own analysis of how one comes to think as a member of a community of knowledge denies him the right to such a claim. He has not literally spent time among the adherents of the belief systems he studies; he has not been led systematically through the paradigmatic network of exercises and exemplars he stresses as fundamental to the constitution of a phenomenal world; he has not undergone rituals of "initiation" or been the subject of the illocutionary acts that would legitimate him as a member of the communities. The nature of the historical project and the materials available to it makes such "initiation at a distance" the most a historian can hope for.

For these reasons, I claim, the objective relativism paradox cannot be escaped in the study of history in any but the most incomplete fashion. The historian may deal with this realization by acknowledging that he or she is doomed to write an ethnocentric or present-centered study and may then proceed to write a hermeneutically informed, realist "story." Such stories have their uses and their own standards of validity.⁴⁰ Yet, the claim that any historian has entered the phenomenal world of those he or she studies is false. The network of actions required to acculturate one to such a worldview is inaccessible when the worldview examined is no longer part of any people's lived experience.

Such access *is* possible, however, to investigators of contemporary communities of knowledge. We must take a much stronger sense of going native as the goal, in which the researcher is acculturated to an alien system and comes to be as convinced of its validity as are those who initiated him or her. Collins and Pinch's *Frames of Meaning* (1982) serves as a useful exemplar. Their book is a first-person (plural) account of the phenomenal worlds of both the sociologist and the parapsychological researcher. As such, it adds to the argument-from-experience of Kuhn's conversion narrative but with the further fortification that for a time Collins and Pinch both thought and *acted* as validated members of the community (undertaking training, running experiments, and publishing papers) of parapsychological researchers. They

bracketed their reflexive concerns and “got on with the research in a pragmatic frame of mind.”⁴¹

Such a pragmatic approach is likewise required for an entrance to non-Western phenomenal worlds, yet it may pose additional challenges. While most “anthropological assumptions” about human learning and capabilities will be confirmed or not too greatly displaced by research into Western scientific projects, this is not necessarily the case in the study of, for instance, possession cults, in which access to knowledge proceeds down different avenues than common sense or scientific explanations allow. To enter such phenomenal worlds demands at once a skepticism toward one’s own anthropological assumptions and a pragmatic acceptance of those offered by one’s informants or teachers.

What could the adoption of such a research program hope to gain? If one undergoes an “initiation” by which one acquires the phenomenal world of a local knowledge, the aim of understanding an alien worldview “in its own terms” is obtained to the furthest extent possible: one becomes both informant and analyst, subject and object. As suggested above in my discussion of conversion narratives in metatheory, this state of “doubled consciousness” is crucial to a description of *either* the alien *or* the familiar phenomenal world. Thus two objects of study emerge through the same research: both the “familiar” phenomenal world to which the researcher was indoctrinated as a member of a scientific community and the “alien” phenomenal world to which one becomes progressively initiated during fieldwork. While there can be no guarantee that either could be studied “objectively,” each would appear in some sense “objectified” from the point of view of the other.⁴² The researcher who inhabited such a doubled phenomenal world could, I suggest, engage in a double-pincer phenomenology of ways of constructing reality. Researchers who have gone native may be uniquely qualified to establish a knowledge of the phenomenal world from which they converted, that is, to launch an investigation of Western logic, reason, and science from “the outside.” Multiple perspectives on the familiar phenomenal world of the Western academic, as well as on the very process of world-constitution, could be productively compared.⁴³

Such a program could unseat many of the “anthropological assumptions” that guide commonsense versions of the relation between humans and nature. If, as suggested, one field of research targeted were that of esoteric knowledges frequently dismissed a priori as delusional by the methods and standards of proof of Western

science, our “anthropological assumptions” could conceivably become vastly enlarged. Such a program could provide a means of understanding in much more symmetrical terms how one comes to experience the world in different ways. Conceivably our notions of the relation of humans to nature and other taken-for-granted assumptions about reality could be transformed.

This position of course presents significant difficulties. One of the most crucial problems is the disciplinary hostility, at least in anthropology, expressed against the researcher who has irretrievably crossed a line of “objective detachment.” In the dominant functionalism of the first half of the twentieth century, social anthropology strongly defined itself in the terms of a “detached” science, using the metaphor of the field as laboratory in which data was gathered, with a minimum of subjective involvement, to test hypotheses. While the hermeneutically informed concept of “culture” used throughout the century by American anthropologists emphasized interpretations drawn from a certain degree of participation, the reports of anthropologists who have “crossed the line” remain at best the topic of informal hallway conversations and at worst the object of moralistic dismissal.⁴⁴ A study of the accounts and reception of researchers who have undertaken such investigations could provide a series of exemplars by which the concept could be redeemed and developed, while pointing out the particular paradigmatic commitments that have given such criticisms force.⁴⁵

Another difficulty is that Kuhn’s assertion of the incommensurability between different phenomenal worlds suggests that a researcher could not be committed to two worldviews at once. This may be the case, but an aspect of scientific practice that Kuhn neglects may point to a solution. The relation between the worldview of the scientist in her lab and the worldview that justifies her religious beliefs, political commitments, and everyday practice suggests that even the most committed scientific enthusiast can be offered as evidence of the potential for “doubled consciousness.” In such cases, incommensurable cosmologies are already applied sequentially, depending on the context in which the actor finds herself. This possibility would be open to the sociologist or anthropologist as well.

Other difficulties are practical. The concept of “going native” is a necessarily fluid one; there are vast ranges of commitment to various beliefs among members of a given community and varying statuses and degrees of membership. Furthermore, as Kuhn points out to qual-

ify his assertion of the possibility of making a transition from one world view to another,

That transition is not, however, one that an individual may make or refrain from making by deliberation and choice, however good his reasons for wishing to do so.⁴⁶

There are factors beyond individual control that make the decision to go native unsusceptible to personal choice. For example, in cases where community identity depends on lineage or race, the possibilities for an outsider to gain full acceptance are inherently restricted. Even so, a detailed account of the difficulties encountered would produce useful observations about the relations between identity and knowledge. Another difficulty arises from an anthropological assumption, the intuitive force of which is difficult to shake, that human life has only a limited span. It is a serious methodological question whether the time that would be required to undertake initiation to both a branch of Western human science and subsequently to some other field of research with often equally stringent demands would not be prohibitive.

I argue, however, that such attempts, which take Levi-Strauss's (1963) definition of anthropology as the "*technique du dépaysement*"⁴⁷ to its conceptual limit, must be made if we are to surpass the indefensible social constructivism that claims that science, or, symmetrically, another culture's valued knowledge, is a mere imposition that the "mind" places on the world. Kuhn's metaphor of the double-sided "coinage" of language and nature (see *The Resistance of Things-in-Themselves*, above) suggests a fitting metaphorical conclusion.

To locate human knowledge exclusively at the level of language, symbols, or other forms of representation is to devalue this coinage. One then produces "translations" or interpretations of other beliefs in the form of texts that hold the place of the lived phenomenal world they describe. To make this "exchange" equitable, the double-sided coinage of one's own phenomenal world must be put at risk. The exchange of knowledge then ceases to be one of "translation" but becomes instead one of "conversion." What can be gained from such research is a first-person understanding on its own terms of a different mode of embodied subjectivity. The cost may be certain dear convictions that exclusive investment in one's own phenomenal world keeps secure.

NOTES

1. Kuhn (1970, 167).
2. In the terminology of Hoyningen-Huene (1993).
3. Kuhn (1970, 193).
4. Kuhn (1970, 113).
5. Kuhn (1970, 43).
6. Kuhn (1977, 229).
7. See Hoyningen-Huene (1993, 111):

The determinate, proprietary features of stimuli are meant to have the function of warding off the complete relativization of the concept of reality to individuals or communities, which threatens when we adopt the critical epistemological standpoint characteristic of Kuhn's theory. Although we may never determine their features, stimuli do their job of resisting the impending arbitrariness of perception and theory formation and thus prevent the onset of thoroughgoing relativism, in virtue of their *own* being and their *proprietary* determinacy.

8. Kuhn (1970, 193).
9. Kuhn (1970, 44).
10. Kuhn (1983a, 677).
11. Kuhn (1970, 170).
12. Kuhn (1970, 172-73).
13. see Kuhn (1970, 206).
14. Kuhn ([1981] 1987, 28).
15. Kuhn (1977, 351):

Many of the problems which have most vexed historians and philosophers of science and of art lose their air of paradox and become research subjects when they are viewed as ethological or sociological. That science and art are both products of human behavior is a truism, but not therefore inconsequential. The problems of both "style" [in art] and "theory" [in science] may, for example, be among the numerous prices we pay for ignoring the obvious.

16. Kuhn (1977) lists five: accuracy, consistency, scope, simplicity, and fruitfulness; Kuhn (1983b, 568) refers to "such dimensions as accuracy, beauty, predictive power, normativeness, generality and so on."

17. Kuhn (1977, 335).

18. See Kuhn (1977, 270-80), "Logic of discovery or psychology of research."

19. See previous section. The point is reiterated in Kuhn's afterword to the *festschrift*, *World Changes* (Horwich 1993, 337):

What, if not a match with external reality, is the objective of scientific research? Though I think it requires further thought and development, the answer supplied in *Structure* still seems to me to be the right one: whether or not individual practitioners are aware of it, they are trained to and rewarded for solving intricate puzzles—be they instrumental, theoretical, logical or mathematical—at the interface between their phenomenal world and their communities' belief about it.

20. See Fabian (1983, 1999), Said (1979), Latour (1993), and the discussion in Bouveresse (1982).

21. Wittgenstein's (1953, 31) comments about the concept of *games* may apply to that of *puzzles* (and, perhaps, to other general concepts like *sciences*):

What is common to them all?—Don't say "There *must* be something common, or they would not be called 'games' "—but *look and see* whether there is anything common to all.—For if you look at them you will not see something that is common to *all*, but similarities, relationships, and a whole series of them at that.

22. For example, Biagioli (1990), Bloor (1991), Galison (1997), Latour (1993), Rouse (1987, 1998), Shapin and Schaffer (1985), and several of the articles in Pickering (1992).

23. Kuhn (1977, xv).

24. See Stocking (1966). For an early source in the genealogy of this form of relativism, see von Humboldt (1967).

25. See Whorf (1956).

26. This claim and those of the previous paragraph would, to be fully supported, require a historical survey of anthropology that length constraints prohibit (for a Kuhnian outline of this history, see Stocking [1992]). One notable example is Levi-Strauss (1962, 13-22).

27. The term *symmetry* used in this sense derives from Bloor (1991).

28. This formulation of symmetry, although indebted to Bruno Latour's (1988) work, must be distinguished from it. Latour's emphasis on "materials" and categorical denial of "consciousness" as even an analytic term is insufficient when faced with practices, like those just mentioned, in which "consciousness" is both the target and an "actor" in experiments. See, however, Latour's (1999) elaborations of the concept of "factishes" to deal with phenomena such as spirit possession or visions of the Virgin Mary.

29. See Hoyningen-Huene (1993, 123-28) and in a more condensed form (1990).

30. These factors are addressed explicitly in Davidson (1984).

31. Hoyningen-Huene (1993, 124).

32. Hoyningen-Huene (1993, 128).

33. Hoyningen-Huene (1993, 130).

34. See Hoyningen-Huene (1993, 126, footnote), where "technical applicability" is a criterion of demarcation between the natural and the human sciences.

35. One way of reading the work of Michel Foucault is as an investigation of the ways that such "realistic" anthropological premises in various disciplines have been applied throughout Western institutions; he criticizes such self-fulfilling prophecies as entwined with restrictive and pathogenic processes. See especially *The Order of Things: "The Anthropological Sleep"* (1970, 340-43).

36. Note the overlap between such a narratological or mythic structure and Kuhn's paradigmatic exemplars.

37. Whorf (1956, 139) is just one example. See also the lectures on "Conversion" in James (1958).

38. Kuhn (1977, xi-xiii).

39. As shown in a recent work in which Geertz discusses the aims and methods of anthropology in relation to Wittgenstein, Kuhn and other philosophers (Geertz 2000), this extreme interpretation of *Interpretation* applies less to Geertz himself than to those who, under his influence and that of structuralism, have sought to analyze cultures as formal systems of symbols in abstraction from practical situations.

40. See Nietzsche ([1874] 1983). In Nietzsche's opinion, the weaknesses inherent to historiographical practice (i.e., the inevitability of a reconstruction's being shaped by concerns of the present) are, if acknowledged and applied with contemporary aims in mind, reevaluated as strengths.

41. Collins and Pinch (1982, 10). In the history of science, recent researchers have taken seriously the action-centered version of hermeneutics implied by the notion of "tacit knowledge"—a term coined first by Polanyi ([1966] 1983), sketched in the later Wittgenstein, taken up by Kuhn, and strongly advanced with the notion of "intervention" in Hacking (1983)—by reconstructing the apparatus for historically significant experiments and attempting, with great difficulty, to conduct them again in the present. See Sibum (1995) and Stauber (1998).

42. See Wagner (1981, 1986) for a compelling argument on the ways in which anthropologists and other actors engage in processes of "objectification" through the dialectical opposition of different cultures or different domains within a single culture.

43. Such is a plausible reading of the metatheoretical intent of B. L. Whorf's (1956) linguistics.

44. See Geertz (1973, 20):

To the degree that [the notion of "participant observation"] has led the anthropologist to block from his view the very special, culturally bracketed nature of his own role and to imagine himself something more than an interested (in both senses of that word) sojourner, it has been our most powerful source of bad faith."

See also Clifford (1988, 90), in a discussion of Marcel Griaule's "initiatory paradigm": "To say that ethnography is *like* initiation is not to recommend that the researcher actually undergo the processes by which a native attains the wisdom of the group. Griaule has little use for such a *comédie*."

45. Key points in such a history would include Frank Hamilton Cushing's work among the Zuni (see Hinsley 1989); the tragically neglected Chicago sociologist James Sydney Slotkin's membership in and advocacy on behalf of the Native American Church, whose use of peyote as a sacrament led to court cases in the 1950s (Slotkin 1952, 1956); the hugely influential but effectively blacklisted Don Juan series of Carlos Castaneda (which has, arguably, served as the crypto-paradigm of much American anthropology of the past three decades: see Castaneda 1972); Michael Harner's (1972) work on shamanistic practices of the Jivaro; Stoller and Oakes's *In Sorcery's Shadow* (1987) and Jeanne Favret-Saada's (1977) *Les Mots, la mort, les sorts*, in which the authors are involved in practices of sorcery among, respectively, the Songhay and French villagers; and Edith Turner's (1982) accounts of *Experiencing Ritual* among the Ndembu, as well as her ritual and shamanistic workshops. See also the discussions of "anthropological atheism" and "the reality of spirits" in Ewing (1994) and Turner (1983).

46. Kuhn (1970, 204).

47. Levi-Strauss (1963, 117). *Dépaysement* connotes "homelessness," "marginality," or "uprooting."

REFERENCES

- Biagioli, M. 1990. The anthropology of incommensurability. *Studies in History and Philosophy of Science* 21 (2): 183-209.

- Bloor, D. 1991. *Knowledge and social imagery*. 2d ed. Chicago: University of Chicago Press.
- Bouveresse, J. 1982. L'animal cérémoniel. In *Remarques sur le rameau d'or de Frazer*, by L. Wittgenstein. Paris: L'Age d'Homme.
- Castaneda, C. 1972. *Journey to Ixtlan: The lessons of Don Juan*. New York: Pocket Books.
- Clifford, James. 1988. *The predicament of culture: Twentieth-century ethnography, literature, and art*. Cambridge, MA: Harvard University Press.
- Collins, H. M., and T. J. Pinch. 1982. *Frames of meaning: The social construction of extraordinary science*. London: Routledge & Kegan Paul.
- Davidson, D. 1984. *Inquiries into truth and interpretation*. Oxford, UK: Clarendon.
- Ewing, K. 1994. Dreams from a saint: Anthropological atheism and the temptation to believe. *American Anthropologist* 96 (3): 571-83.
- Fabian, J. 1983. *Time and the other: How anthropology makes its object*. New York: Columbia University Press.
- . 1999. Remembering the other: Knowledge and recognition in the exploration of Central Africa. *Critical Inquiry* 26 (1): 49-69.
- Favret-Saada, J. 1977. *Les mots, la mort, les sorts*. Paris: Gallimard.
- Foucault, M. 1970. *The order of things: An archaeology of the human sciences*. London: Tavistock.
- Galison, P. 1997. *Image and logic: A material culture of microphysics*. Chicago: University of Chicago Press.
- Geertz, C. 1973. *The interpretation of cultures*. New York: Basic Books.
- . 2000. *Available light: Anthropological reflections on philosophical topics*. Princeton, NJ: Princeton University Press.
- Hacking, I. 1983. *Representing and intervening: Introductory topics in the philosophy of natural science*. Cambridge: Cambridge University Press.
- Harner, M. 1972. *The Jivaro: People of the sacred waterfall*. New York: Doubleday.
- Hinsley, C. M. 1989. Zunis and Brahmins: Cultural ambivalence in the Gilded Age. In *Romantic motives: Essays on anthropological sensibility, History of anthropology*. Vol. 6, edited by G. W. Stocking, Jr. Madison: University of Wisconsin Press.
- Horwich P., ed. 1993. *World changes: Thomas Kuhn and the nature of science*. Cambridge, MA: MIT Press.
- Hoyningen-Huene, P. 1990. Kuhn's conception of incommensurability. *Studies in the History and Philosophy of Science* 21:481-92.
- . 1993. *Reconstructing scientific revolutions: Thomas S. Kuhn's philosophy of science*. Translated by A. T. Levine. Chicago: University of Chicago Press. (Foreword by T. S. Kuhn)
- James, W. 1958. *The varieties of religious experience*. New York: Mentor.
- Kuhn, T. S. 1970. *The structure of scientific revolutions*. 2d ed. Chicago: University of Chicago Press.
- . 1977. *The essential tension: Selected studies in scientific tradition and change*. Chicago: University of Chicago Press.
- . 1983a. Commensurability, comparability, communicability. *PSA* 1982, 1983: 669-88.
- . 1983b. Rationality and theory choice. *Journal of Philosophy* 80:563-70.
- . [1981] 1987. What are scientific revolutions? In *The probabilistic revolution*, edited by L. Krüger, L. J. Daston, and M. Heidelberger. Cambridge, MA: MIT Press.
- Latour, B. 1988. *The pasteurization of France*. Cambridge, MA: Harvard University Press.
- . 1993. *We have never been modern*. Cambridge, MA: Harvard University Press.
- . 1999. *Pandora's hope: Essays on the reality of science studies*. Cambridge, MA: Harvard University Press.

- Levi-Strauss, C. 1962. *The savage mind*. Chicago: University of Chicago Press.
- . 1963. *Structural anthropology*. New York: Basic Books.
- Nietzsche, F. [1874] 1983. On the uses and disadvantages of history for life. In *Untimely meditations*. Translated by R. J. Hollingdale. Cambridge: Cambridge University Press.
- Pickering, Andrew, ed. 1992. *Science as practice and culture*. Chicago: University of Chicago Press.
- Polanyi, Michael. [1966] 1983. *The tacit dimension*. Gloucester, MA: Peter Smith.
- Rouse, J. 1987. *Knowledge and power: Toward a political philosophy of science*. Ithaca, NY: Cornell University Press.
- . 1998. New philosophies of science in North America—Twenty years later. *Journal for the General Philosophy of Science* 29 (1): 71-122.
- Said, E. 1979. *Orientalism*. New York: Random House.
- Shapin, S., and S. Schaffer. 1985. *Leviathan and the air pump: Hobbes, Boyle and the experimental life*. Princeton, NJ: Princeton University Press.
- Sibum, H. O. 1995. Reworking the mechanical value of heat: Instruments of precision and gestures of accuracy in early Victorian England. In *Studies in the History and Philosophy of Science* 26 (1): 73-106.
- Slotkin, J. S. 1952. *Menomini peyotism: A study of individual variation in a primary group with a homogeneous culture* (Transactions of the American Philosophical Society). Philadelphia: American Philosophical Society.
- . 1956. *The peyote religion: A study of Indian-white relations*. Glencoe, IL: Free Press.
- Staubermann, K. 1998. *Controlling vision: The photometry of Karl Friedrich Zoellner*. Ph.D. diss., Department of History and Philosophy of Science, Cambridge University.
- Stocking, G. W. Jr. 1966. Franz Boas and the culture concept in historical perspective. *American Anthropologist* 68 (4): 867-82.
- . 1992. Paradigmatic traditions in the history of anthropology. In *The ethnographer's magic and other essays in the history of anthropology*. Madison: University of Wisconsin Press.
- Stoller, P., and C. Olkes. 1987. *In sorcery's shadow: A memoir of apprenticeship among the Songhay of Niger*. Chicago: University of Chicago Press.
- Turner, E. (with W. Blodgett, S. Kahona, and F. Benwa). 1992. *Experiencing ritual: A new interpretation of African healing*. Philadelphia: University of Pennsylvania Press.
- . 1993. The reality of spirits: A tabooed or permitted field of study? *Society for the Anthropology of Consciousness* 4 (1): 9-12.
- von Humboldt, W. 1967. On the historian's task. *History and theory* 6:57-71.
- Wagner, R. [1974] 1981. *The invention of culture*. Chicago: University of Chicago Press.
- . 1986. *Symbols that stand for themselves*. Chicago: University of Chicago Press.
- Whorf, B. L. 1956. *Language, thought and reality: Selected writings of B.L. Whorf*. Cambridge, MA: MIT Press.
- Wittgenstein, L. 1953. *Philosophical investigations*. London: Blackwell.

John Tresch is a Ph.D. student in history and philosophy of science (Cambridge University) and sociology (ENS/EHESS Paris).