Ecological Thinking as Interdisciplinary Practice

Situation, Silence, and Skepticism

LORRAINE CODE

ECOLOGICAL THINKING

My purpose here is to propose that an ecologically modelled approach to knowledge opens the way to more productive engagement with diverse kinds and objects of knowledge than the social-conceptual structures that the hegemonic social-epistemic imaginary of mastery and control make available. Ecological thinking is interdisciplinary, albeit in a troubled sense which I will address in the final section of this essay.

Ecological thinking works across and through a range of subject matters and disciplinary territories, often acting as a scavenger in its quest for viable epistemic sources and resources. It requires knowing the detail of place, population, and particularity, and thus requires reading, talking, thinking, studying widely, beyond the artificial boundaries of philosophy. It emerges from and addresses multiple interwoven, sometimes contradictory social-epistemological positionings—feminist, classist, environmental, postcolonial, racist, sexist—with the result that its detail and
implications require multi-faceted chartings. Yet ecological thinking is not simply thinking about ecology or about “the environment,” although these figure among its concerns. It is a revisioned mode of engagement with knowledge, subjectivity, politics, ethics, science, citizenship, and agency that pervades and reconfigures theory and practice at multiple levels. It does not reduce to a set of rules or methods; it may play out differently from location to location; but it is sufficiently coherent to be interpreted and enacted across widely diverse situations. As I conceive it, ecological thinking can generate responsible remappings of the epistemic and social-political terrains, animated by an attentiveness to diversity and specificity and by a commitment to ideals of citizenship and the preservation of the public trust, all of which concerns are notably absent from putatively universal, a priori theories of knowledge and action. It proposes ways of engaging with the implications of patterns, places, and interconnections of lives and events in and across the human and other-than-human world, in scientific and secular projects of inquiry where the traditional dividing line between the Naturwissenschaften (natural sciences) and Geisteswissenschaften (human sciences) is blurred, and where epistemic and ethical-political matters are reciprocally informative. To show what these rather grandiose claims involve, in this essay I read Rachel Carson’s epistemic practice as exemplary, in a quasi-literal sense, of ecological thinking at work for her manner of engaging with the detail and wider implications of situation and secular testimony in her investigations of how the once cacophonous North American spring was growing silent; and I show, metaphorically, how a specifically located health care system in Tanzania was reconstructed in ways whose success can be read as a consequence of notably ecological responsiveness to the detail of population and place.

Within this broad conceptual frame, I am interested in how doing epistemic justice to people silenced, ignored, or subjugated by received conceptions of knowledge and to places, events, or circumstances that fall outside the purview of what is readily knowable in spectator epistemologies is complicated by patterns of incredulity, ignorance, and mistrust that operate through the discourses of white Western affluent societies. A curious politics of unknowing silently contributes to how people recognize and respond to “difference”: to judgments about whose knowledge
matters or can claim a hearing, whose putative knowledge warrants or fails to claim acknowledgment in intransigent social structures of skepticism and incredulity. It produces a certain epistemic inertia, a resistance to looking beyond the instituted imaginings that hold received views in place.

Philosophically, I call my position ecological naturalism, and situate it in the vicinity of W.V.O. Quine’s epistemology naturalized and its successors. Yet I resist Quineans’ adherence to a stringently scientific conception of knowledge and methodology, and the “unnaturalness” of their conceptions of “the natural.” Quinean naturalism is inhospitable to the social-political critique of institutions of knowledge production which figures centrally in the approach I propose. Thus, working horizontally across the epistemic terrain while evaluating the knowledge-enhancing or knowledge-thwarting specificities of the terrain itself, eschewing practices of viewing evidence through top-down, superimposed theoretical frames, ecological naturalism aims to unsettle the hegemony of dislocated instrumental reason—of “the view from nowhere”—and the instituted epistemic imaginary of mastery and control from which it emerges. Indebted methodologically and ideologically to the science of ecology, to environmentalism, and to the ethical-political impetus that inspired many of the new ecological and other social movements in the second half of the twentieth century, ecological naturalism offers more “natural” accounts of human epistemic practices and their products than formal epistemological analysis or Quinean naturalism can offer: it proposes richer, less reductive possibilities for transformative, emancipatory epistemology.

Looking to the knowledge ecological naturalism requires, my proposal applauds the successes of modern science in explaining and producing ways of “managing” the physical universe, and to the power of empirical inquiry. But it interrogates physical science’s hegemony in the academy, the marketplace, and other institutions of knowledge production, and its trickle-down effects into people’s daily lives, where it installs monolithic and monologic norms of epistemic practice. Physical science—and technology—are neither the only nor the only reliable forms of knowledge: physics-derived models and methods offer neither definitive nor appropriate exemplars for all scientific inquiry, or for knowledge “in general.” Hence, if science-derived models or regulative instances of knowledge are

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required, ecological science provides more diversified, more “natural” exemplars than those that Quinean naturalists have employed.

Departing from the positivism of Anglo-American philosophy of science (whose traces linger in Quinean naturalism)—in which interchangeable observers leave their subjectivity and agency, interests and enthusiasms, actions and interactions, prejudices and hopes outside the laboratory door, isolating their disinterested epistemic practices from what Bruno Latour (2004) aptly calls “matters of concern”—ecological naturalism looks to the new (by comparison with physics, chemistry, geology, astronomy) science of ecology. It is politically engaged inquiry, accountable for the knowledge it produces, often explicitly and unabashedly conducting its inquiries in the service of values, commitments, agendas, and political programs that have themselves to be kept open to critical, deliberative evaluation. Ecological naturalism regards scientific and other discipline-specific knowing as continuous with modes of knowing that inform “everyday life” and are integral to developing and sustaining habitats and collectivities conducive to enabling people to live well together. It is contiguous with and makes common cause with some versions of social epistemology, and with many feminist and other postcolonial knowledge projects (see Code 2010).

Ecological naturalism looks to sciences that are operative within and contributors to ecology as they circulate literally (in their scientific modes), and metaphorically (in more secular modes), within the instituted epistemic imaginary. Refusing to separate human knowers from the knowledge they produce or knowledge production from its constitutive practices or from the social-moral-political effects of its circulation, it takes the peculiarities of subjectivity, cognitive agency, and geographical-material-historical-cultural location seriously into account, not as determining, but as often inflecting knowledge and knowing. Thus, I suggest, ecological science affords a more plausible exemplar for knowledge production than cognitive science, to which Quinean naturalists appeal. Its reliance on multiple and diverse field studies where knowers are, by definition, precisely situated as active participants in producing and testing knowledge claims makes it implausible to imagine them isolated from the knowledge they produce, even when they appeal to laboratory-derived experimental evidence for pieces of it. In these and other respects, too,
ecological thinking is continuous with and makes common cause with feminist theories of strong objectivity and situated knowledges.

As I have noted, in characterizing ecological thinking in my 2006 book, I draw on the epistemic practices I find implicit in Rachel Carson’s methods of inquiry, working back and forth as she does from field studies to scientific analyses, explanations and experiments, specifically located experiential (anecdotal) evidence, and local (or larger) histories of the sites and species she studies. Self-consciously and proudly, Carson writes both for scientists and for the “general public,” in a language that often leaves the rhetoric of “normal science” behind. In consequence, like many practitioners who refuse the confines of disciplinarity, she forfeits a certain professional stature. Yet the result, for those who are prepared to go the distance with her, is to promote a more participatory, democratic epistemology than the uncontaminated purity of the discourses of mastery can allow and to underscore the significance of remaining critically open to multiple and unexpected lines of inquiry. The place she accords to experiential—testimonial—evidence consolidates this claim, while at once exacerbating the tension that pervades her work and enhancing its productive import. I will illustrate my reasons for locating Carson’s practice as I do by appealing to an epistemology I find implicit in the case studies and methods operative in her *Silent Spring* (1962).

There, Carson displays ecological thinking at work across diverse modes of knowledge, domains of inquiry, and subject matters: bringing together scientific and experiential evidence to produce conclusions sufficiently particular to address the distinctive character of precisely individuated local phenomena; sufficiently cognizant of wider patterns in nature to generate hypotheses for knowing other, relevantly analogous phenomena; and sufficiently informed and coherent to engage with the agendas of policy makers, the doubts of disbelievers, and the bewilderment of a public caught between “expert” scientific assurances and experiential incongruities. The very complexity of each separate subject matter requires her to be multiply literate and multilingual: to speak the language of laboratory science, wildlife organizations, government agencies, chemical-producing companies, secular nature lovers, and many others; to understand the detail of scientific documents and the force of experiential reports; to work back and forth between variations on the
imagery of mastery and of ecology—sometimes, all for the sake of understanding something so very small as a beetle.

Nor does Carson conduct her research only in controlled observation conditions, although she is guided by and returns to laboratory research from the field where she studies living things in their habitat, studying the habitat itself just as systematically, in its detail and interactions with its inhabitants. In a language that Donna Haraway (1991) has made available, this is situated knowledge, elaborated to show that “situation” is not just a place from which to know, as the language of “perspectives” implies, indifferently available to anyone who chooses to stand there. Situation is itself a place to know whose intricacies have to be examined for how they “shape” knowing subjects and the objects of knowledge; how they legitimate and/or disqualify knowledge projects; how they are constituted by and constitutive of entrenched social imaginaries, together with the rhetoric that holds them in place. It is an achieved epistemic stance, knowledgeably chosen as a place that can be mapped to facilitate responsible knowing.

Thus the working back and forth in which Carson engages participates, before its time, in challenging many of the dichotomies integral to the history of Western theory and practice, which feminist and other postcolonial epistemologists have also contested. Her work is bound neither by regulative contrasts between intellectual and emotional activity nor between mental and manual labour; it evinces no separation between abstract thought and concrete, sensuous activity, nor between the ideas and practices of “everyday life” and those that derive from formal institutions of knowledge production. But neither does it descend into chaos or arbitrariness. It is no mere casual sampling, no undisciplined conglomerate. Carson’s practice exposes such entrenched dichotomies as artificial and coercive, and thus limiting, for knowledge gathering practices. Hence, she lives a pervasive yet productive tension, working back and forth between an instituted, rhetorically monitored scientific orthodoxy and an attentive respect for particularity that is subversive of many of the fundamental assumptions of scientific orthodoxy. In the public and in the scientific imagination, orthodox science is “hard” science, governed, in the going epistemic imaginary, by its allegiance to a deductive-nomological model whose purpose is to deduce monolithic, reliably predictive
laws. The working back and forth that makes Carson’s ecological practice possible, together with the contributions her craft and her training as a writer make to her work, moves the tension she lives into an ironic register, for the fact of her directing her work, throughout her life, to a general and not solely to a specialized audience, “softens” it, further unsettling the rhetoric and subverting the aura of esotericism surrounding modern science and orthodox epistemology. (Parenthetically, gesturing toward a topic that falls outside the purview of this essay, there is little doubt that the many gendered attacks on Carson’s work and on her person had their source, at least partially, in this perceived subversiveness. See, for example, Lytle 2007; Smith 2001.)

Ecological naturalism amounts neither to an a priori inquiry nor to an explicitly normative project, in the orthodox rule-following sense. It begins in and deliberates about situations and practices; its recommendations are empirically-experientially informed, and self-confessedly fallible. These recommendations evince a certain pragmatism, albeit in an eclectic, secular sense which claims no precise allegiance to any specific pragmatist philosopher(s). In its manner of working back and forth between theory and practice, according to each a constitutive yet critical place in inquiry; in its tacit yet persistent commitment to addressing and intervening in perceived social-environmental-institutional wrongs—its concern with evaluating and transforming the situations where inquiry takes place—ecological thinking claims a place alongside the praxis of some of the leading American pragmatists. Ecological thinking often works by analogy from example to example, case to case, reaffirming a wariness of reductionism and premature closure, opening new deliberative spaces for epistemic negotiation. It may appear to limit the range of justifiable, definitive knowledge claims, yet it maintains vigilance for irresponsible, careless, too-swiftknowings that fail to do justice to their objects of study. It fosters a productive ideal of responsibility, rooted neither in individualism nor in implausible voluntarism, yet attentive to the climatic conditions—both human and other-than-human—in which much scientific and other research in the twenty-first century takes place. It could more aptly be categorized as extra-disciplinary than as inter-disciplinary in not being confined within disciplinary boundaries, seeking its
sources in events, experiences, circumstances: in the media, in literature, and in everyday lives.

Some might have difficulty imagining how ecological thinking could translate into wider issues of citizenship and politics, but the answer, at once simple and profound, is that ecological thinking is about imagining, crafting, articulating, endeavouring to enact principles of optimally viable cohabitation. Because it is so finely tuned an approach, it has the potential in its micro-practices to capture detail and nuance that slip through larger, discipline-specific evidence-sifting grids and precast templates, and thus to achieve linkages from location to location that could begin to close a gap that has held theories of knowledge and action at a distance from the experiences and practices they have sought to explicate. In its macro-practices, it engages critically with the widespread implications of discourses and practices of mastery, and constructively with the transformative potential of ecological reconfigurations. Ecology, literally (as in Carson’s practice), looks to state-of-the-art ecological science for some of the substance of its deliberations; yet it assumes neither that science has a direct line to “the truth” nor that it merits uncontested licence to intervene where it pleases. Ecology, metaphorically (as in the example I will now recount), draws situated inquiries together, maps their interrelations, consonances and contrasts, their mutually sustaining or impoverishing consequences, from a commitment to generating a creatively interrogative, instituting social imaginary to denaturalize the imaginary of mastery that has represented itself as “the only natural way” of being and knowing. Thus it is not a single, hard-edged discipline, but a practice that enlists a range of disciplinary and extra-disciplinary expertise and wisdom.

SITUATION, SILENCE, AND SKEPTICISM

In this section I offer a reading of a situation in which ecological thinking contributes to thinking well about circumstances under which local informants had been consigned to silence and their testimony discounted, denied acknowledgment as knowledgeable in a climate of pervasive,
stereotype-derived skepticism. (For a more complete analysis of the following example, see Code 2008.)

In the 1990s in Tanzania, for a per-capita annual cost of less than the price of a cup of coffee in North America, a Canadian IDRC (International Development Research Centre)-funded project was instrumental in turning an entire health system around, moving it from ossified methods of gathering, evaluating, and circulating knowledge and tired old administrative practices and distributions of epistemic power and authority, toward a responsive, responsible, democratic complex of social-natural epistemic interactions. The reversal that came about moves from a top-down epistemology of mastery—where knowledge also belongs to “the masters”—to what amounts to an extended enactment of ecological thinking, marked by a learned sensitivity to issues of local habitus and ethos and a redistribution of cognitive authority across a diverse geographic and epistemic terrain. Each stage required painstaking epistemic negotiations with intransigent bureaucratic administrations and efficiency-driven multinational funding agencies, en route to advocating reconfigured ways of knowing and acting, and working toward repairing lacunae in a received, intransigent, hermeneutical repertoire. Here I will sketch the project’s epistemic and moral-political trajectory.

Post-independence Tanzania from the late 1960s to the mid-1980s, under Julius Nyerere, had boasted an impressive health care system, based on a “unique social contract.” Citizens had—allegedly voluntarily—relocated to modern villages to become the beneficiaries of government programs which, for each village, provided a school, pumped water, access to a health clinic and teachers, health workers, drugs, and other medical supplies. Yet despite its striking initial successes, by the early 1990s the system was disintegrating. Among the central reasons for its disintegration, according to the World Bank’s 1993 Report, were the international debt crisis of the 1980s, the unresponsive inefficiency of the central management, and a consequent deterioration in village infrastructures. Hence, Tanzanians endured a health crisis for most of a generation even as HIV/AIDS was sweeping across the country and recurrent infectious diseases were “brutally rearrang[ing] the social landscape.” Nor did new funding, administered centrally from Dar es Salaam, succeed
in providing a solution. The IDRC’s *Fixing Health Systems* report exposes an entrenched and regulative epidemiological theory, based on statistically driven central planning and implemented from afar, as a major contributor to the health care system’s decrepit state (see de Savigny et al. 2008). The putative knowledge that informs this theory, and the epistemic injustices it produces, are the focus of my interest here.

The renewed success story that unfolds from the Tanzanian case is as epistemological as it is economic. Starting from a system in crisis, the IDRC moved to unsettle the entrenched power of conventional wisdom and its practitioners in ways that are ecological in their responsiveness to the detail of place and demography and naturalized in a quintessentially down-on-the-ground fashion. Yet the very fact of the project’s success can have the effect of masking the part played by the intricate epistemic negotiations and advocacy without which it could not have come about. Hence my aim is to make these processes visible.

Despite my contention that more money was not the solution, the reversal that came about did continue to require increased monetary investments in health care, but its astonishingly simple recommendation was that such investments should be based on evidence that would target the local “burden of disease . . . in a particular ecosystem.” (The remark recalls Rachel Carson: “It is impossible to understand man without understanding his environment and the forces that have molded him physically and environmentally.”) In short, administering aid from on high, without such ecological understanding, was a principal source of the crisis. Established epistemic practice, in its relentless quasi-automatic repetition and rarely contested hegemony, had installed a screen of unknowing and of not needing to know otherwise, between health care administrators and local practitioners, pathologies, and places. Hence, radically new ways of knowing local circumstances, sensitive to the detail of their specificity, were required. These included understanding the peculiarities of and interconnections among diseases, and learning how to hear, interpret, and act upon evidence from testimonial sources commonly not accorded authoritative voice as informants under the Western eyes of development agencies and their centralized bureaucracies. (Thus, in *Epistemic Injustice: Power and the Ethics of Knowing*, Miranda Fricker notes that testimonial injustice can be “pre-emptive” when potential
interlocutors are ignored in situations where their testimony is not solicited; hence a “speaker is silenced by the identity prejudice that undermines her credibility in advance” [2007, 130].

In calling the outcome a reversal, I am suggesting that it was not only about acquiring more knowledge but about working to move past an outmoded yet entrenched instituted epistemic imaginary, in which fixed ways of presuming to know relations of identity and power had created a situation in which members of the local population were unable to dissent from distorted understandings of their experiences and circumstances. One-size-fits-all aid distribution practices had been in place in Tanzania before the IDRC study began: practices that amounted to treating the population merely as a source of information, to be viewed through a Western lens, and hence failing to engage with them as informants “in their own right,” so to speak.6 Funds were paid into the central administrative structures, working from an unquestioned assumption that appropriate local allocations would follow as a matter of course. But here, precisely, was the problem. “ Appropriateness” turned out in practice to mean dispatching equal sums of money and identical packages of drugs to each district, without taking the steps necessary to respond knowledgeably to the local specificity of populations and health issues, which varied markedly across this vast country. People worked from a presumption of human sameness, and of the reliability of bureaucratic knowledge as a source of information, oblivious of any need to engage directly with people who knew their own situations and the obstacles they faced, yet who had no access to the discourse table, no status as knowledgeable testifiers.7

Practically speaking, all local clinics received precisely the same drugs, regardless of whether the district’s patterns of disease and death showed that those were the ones required there to maintain health and reduce mortality. Hence, for example, disproportionate amounts were spent “on comparably insignificant diseases, while the big killers were getting only a tiny slice of the funds” (Nolen 2005, A1, A10). (Peter Nkulila, a clinical officer on the new District Health Management Team comments: “We did things blindly.”) Thus, ignorance of the “fit” between local causes of mortality and resource allocations saw non-malarious highland areas receiving a full complement of anti-malarial drugs more suited to an endemic area. Elsewhere in the country, a 1996 IDRC study initiated before the...
AIDS crisis had begun to sweep through the country found that drugs for malaria, responsible for 30 percent of life-years lost, were receiving 5 percent of the district’s budget; and childhood diseases such as diarrhea, pneumonia, and malnutrition, responsible for 28 percent of deaths, were receiving 13 percent; but tuberculosis, at only 4 percent of the burden of disease, was being allocated 22 percent of the funds. People were sick and dying, and health care workers, who found themselves unable to offer appropriate treatment, were demoralized.

The IDRC’s innovative proposal, surprising in its simplicity, was to study separate localities in their particularity, to see whether, in this one country, epidemiological detail varied sufficiently from one district to another to tell against a one-size-fits-all epistemic approach. This ecological move toward determining the “burden of disease . . . in a particular ecosystem” selected two large and markedly contrasting rural districts as test sites: Rufiji, with a mostly dry, flat interior and a tidal delta on its coastline, and Morogoro, which is mountainous and lush. Mapping diseases as they manifest similarly and differently across these geographically diverse regions was the first step toward “correlating health spending with the burden of disease.” Yet, maintaining an impressive—and indeed rare—level of local sensitivity, and reserving judgment, the investigators’ aim was not simply to “apply” locally achieved knowledge to other localities, but to work by analogy from district to district, testing conclusions reached in one region for their adaptability to other districts, “given the appropriate local statistical inputs” (de Savigny et al. 2008, 8, 14).

Strikingly, the proposed new “mapping model” is touted as “evidence-based,” although in its implementation it diverges sharply from the evidence-based medicine (EBM) that has generated debate in the United States and elsewhere. Standard textbooks praise EBM for its positivity, for eschewing such ineluctably “subjective” practices as interpretation and narrative: the very practices on which, in my view, so much responsible knowing relies. (See, for example, Goodman 2003; Sackett et al. 2000). But Tanzania had neither the statistical tools nor the scientific approach at its disposal to do the evidence-based investigations orthodox EBM requires: nor could it rely on the random control trials (RCTs) integral to it. Moreover, even if Tanzanians had had access to such assumptions and tools, it is not clear that interpretation-free analysis could have succeeded
in filling the hermeneutical lacunae to which much of the crisis can be attributed. For a start, because 80 percent of Tanzanian deaths occur at home, they frequently fail to make their way into official documents or to appear in other reports. Thus it made no sense to rely exclusively or even primarily on clinical records to provide the evidence the new knowledge-gathering approach required in documenting the “burden of disease”; yet without that evidence the project could not achieve its goals. So there were procedural and methodological problems.

In short, a statistically based model imported and administered from elsewhere, and a knowledge base accorded timeless, placeless credibility, but whose local pertinence was neither monitored nor contested, had been superimposed upon people and circumstances for whom/which such knowledge was, at best, minimally informative. It is not that they were simply wrong; nor is it a matter of correcting isolated errors, but rather of determining how outworn templates could be displaced to make room for ecosystem-specific evidence and ecologically responsive practices. The questions are as political and ethical as they are epistemological: the power/knowledge inequalities that structure such interactions between NGOs and their beneficiaries reinforce the “screen of unknowing” I have mentioned, preventing NGO personnel from seeing—indeed, excusing their not-seeing—what their would-be beneficiaries need, in circumstances where their voices were rarely accorded the “standing in the discourse” owed to presumptively reliable informants. In consequence, what might look like plain instrumental irrationality amounts, rather, to a stereotype-generated refusal to acknowledge the cognitive authority of the disadvantaged: to a systemic failure of uptake. Working toward a solution required engaging with local villagers and clinicians, starting from the assumption that they were credible informants. It required listening well, in sensitive, respectful evidence-gathering negotiations whose deliverances may have been less objectively “accurate” by first-world standards than statistical analysis is imagined to be yet were capable of withstanding sustained epistemic and practical-political scrutiny. The IDRC report confirms that “when communities are directly involved in identifying and solving their own problems . . . [their] members become a powerful force in programs of social improvement.”
As an exercise in naturalized-social epistemology, with the pride of place it accords to testimony, the IDRC’s new method was ingenious. After a death had occurred in a household, trained local researchers travelled by bicycle to conduct “verbal autopsies” with the survivors. A guiding principle in the endeavour was that the researchers had to be mindful of the sensitivity that interviewing bereaved families requires. Thus the autopsies might take several hours to complete and might require repeated visits with the family and other members of the community. Yet their meticulous, respectful laboriousness is the source of their capacity to avoid or erase epistemic injustice. Such thorough interviews—rich in context and detail—can minimize the likelihood of misdiagnosis. Once the autopsies were gathered, findings were reviewed by three independent physicians who produced an epidemiological picture by feeding the conclusions into a computer according to a “standardized international format.” Although the investigators admit that they rely on “fairly accurate guesses,” which is exactly what EBM aims to avoid, subsequent analysis confirms that, in aggregate, verbal autopsies provide a markedly reliable picture of disease within the general population. Increasingly, such demographic surveillance systems (DSSs) are used in Tanzania and elsewhere, not just to compile health information, but to monitor poverty levels, education, food security, and the environment.

Still, a further intransigent obstacle in the power/knowledge complex these reversals and consequent “successes” encountered was an entrenched reliance on stereotypes embedded in the Western colonial-and postcolonial–instituted social imaginary—stereotypes notoriously resistant to counter-evidence, through which administrators and other outsiders had presumed to know local populations. Negotiating past such resilient “webs of belief,” with their thinly veiled racist-colonialist tenor, was challenging. Before the DSS was established, “planning was being driven by . . . donor agencies’ agendas, bureaucratic inertia, and simple guesswork, not as a response to the burden of disease or with respect for . . . reasons behind sufferers’ decisions.” It was informed and shaped with tacit adherence to conventional (outsider) wisdom according to which death rates in Rufiji and Morogoro attested to Tanzanians’ “stubborn preference for traditional healers over modern health care,” although there can be no doubt that “stubborn” is neither a morally nor a politically neutral term or
that it is, at the very least, epistemically suspect. This assumption was reinforced by a further piece of conventional (= administrative) wisdom according to which even more “enlightened” Tanzanians, who seek modern care for fever and malaria, persisted in associating the convulsions of late-stage, life-threatening malarial fever—known as degedege—with evil spirits and/or changes in weather, but not with malaria itself. To counter what they were thus casting as naïve innocence, administrators expended untold efforts, imperialistically and insensitively, in working to undermine local faith in traditional care, thereby compounding an already-virulent mix of epistemic injustice, animated by colonial contempt, at work in the established policy. Yet such injustice derived from practices of observing the local population from a distance, as standard spectator epistemologies tend to do (= treating them in aggregate as a source of information), and drawing conclusions from actions arbitrarily selected to confirm a prejudice-infused hypothesis established and kept alive by a long colonial history of attributing naïve innocence or irrationality to indigenous, putatively pre-scientific people. It combines with the injustices enacted in established practices of failing to—deeming it unnecessary to—work with, consult with, listen to, or engage with the indigenous population in their potential capacity as reliable informants. The epistemological reversal I have named gradually began to turn many of these practices and assumptions around.

The DSS presents a different portrait of the burden of disease. Studying all known deaths—in households, health facilities, and elsewhere—yields results that contest the intelligibility and highlight the epistemic and moral presumptuousness of these egregious and largely unwarranted assaults on traditional healing. Testimonial evidence shows that Tanzanians who sought modern health care before death in fact greatly outnumbered those who did not; thus, it vindicates the skepticism many of the researchers had voiced about placing epistemic reliance only on clinical attendance and government-compiled cause-of-death statistics as the knowledge base of health planning. When researchers begin to learn from local informants that patterns of death point more frequently to problems of access to health care facilities and (often unavoidable) delay in responding to requests for treatment, or from the sheer inability of modern facilities to prevent some patients from dying, the emphasis shifts to trying to understand local circumstances and practices in and
where they are, and to work toward providing accessible medical care, responsive to local ecosystem specificity.

Centralized distribution practices whose knowledge base and governing demographic assumptions derived from a distanced approach had relied on “applying” information from above indiscriminately, without thinking to determine its relevance to the specificities of population and place. They had also—and this is a separate, if connected, point—sought to improve population health by treating diseases individually, separately, one at a time. From a Western medical point of view, both practices tend to count as perfectly normal: hence their intransigence to contestation and innovation. Yet the IDRC team also contested the viability of these ways of approaching the situation, which were regaining momentum as money again began to flow into international disease-control programs. Standard practice in Tanzanian clinics had been to see children in “factory line” processes where quick diagnostic assessment and rapid prescription of drugs were often based on a (not unreasonable) guess, perhaps that the problem was diarrhea. Yet a radically different proposal, derived from the IDRC’s research, suggests that symptoms may well be caused by several diseases at once, or that one condition may masquerade as another. Based on these hypotheses, an integrated “syndromic” approach was initiated that would address the whole child, identifying and treating a range of possible common illnesses rather than focusing on diseases singly and separately. The results have been impressive. Again, my point is not that people working from the old approach had insufficient knowledge, but that their regulative assumptions about how a place and its inhabitants should be known, how diseases should be known, derive from belief-habits that subtly perpetuate stereotypes and epistemic injustices, which are more and other than mere failures to know. Under these sedimented assumptions, epistemic inertia had prompted practitioners to resist undertaking the down-on-the-ground investigations that began to expose injustices enacted on the basis of fixed assumptions, and to prepare the way for a reversal. The case, as I read it, offers an exemplary illustration of ecological thinking at work.
I have suggested that ecological thinking is interdisciplinary, if in a troubled sense. I am referring both to practices of thinking and working ecologically, and to interdisciplinarity as such, if it can be characterized as a single or singular practice. In the Tanzanian example and in my discussion of Carson’s knowledge-gathering practices, I have shown that multiple lines of inquiry and sources of knowledge work together to yield such conclusions as these disparate endeavours can permit. Both of these knowledge projects thus require reading across and through multiple disciplinary lines and reading away from established disciplinary territoriality to acknowledge the epistemic significance of secular testimony and of other experiential evidence, across a range of—often unorthodox—sources, situations, and subjectivities. Both require listening past and away from established practices in institutional inquiry and established sites of credibility and accreditiation. Both, at their best, are characterized by a mix of circumspection, thoughtful practice, and commitment to epistemic responsibility (see Code 1987) and by resistance to premature closure. Both eschew the model of the monolithic, self-sufficient knower whose monologic, spectator-derived assertions are the stuff of which traditional knowledge claims are made. Thus both transgress the boundaries of traditional epistemic orthodoxy, much as Carson transgresses and subverts the boundaries of orthodox scientific inquiry. But the question is, does this characterization amount to a declaration of interdisciplinarity?

My own work over the past twenty or more years in feminist epistemology and the ethics-politics of knowledge has been marked by a realization that the graduate seminar I teach can no longer legitimately be called “Feminist Critiques of Epistemology,” for feminism itself has evolved into a thoroughly mixed category that cannot stand apart from other forms of oppression, exclusion, and counter-hegemonic discourse, practices, and inquiries; nor does feminist inquiry count as a “discipline” except perhaps in Ian Hacking’s sense of requiring discipline for its enactment. Hence, I now call the course “Feminist and Post-Colonial Critiques of Epistemology,” and the “post-colonial” label in the title remains an intentionally contested term. Feminist scholarship and practice now incorporates and addresses multiple modalities of marginalization, both together.

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and separately. Nor, once epistemology is socialized and naturalized, as much feminist epistemology is (and mine included), can epistemology “itself” proceed as a unified or an a priori normative theory, committed to setting out formal conditions for making and adjudicating knowledge claims in abstraction from particular events, disciplines, subject matters, and ethical-political urgencies. Unlike orthodox analytic epistemologists, feminist epistemologists rarely work with speculative analyses of “possible worlds,” nor do they concentrate on developing strategies for countering the skeptic or deriving formal, necessary and sufficient conditions for the existence of “knowledge in general.” The very idea of “knowledge in general” carries little meaning in feminist analyses, for such knowledge, if it were a meaningful concept, would have to transcend all specific conditions and subjectivities to yield the “view from nowhere” most feminists eschew as an illusory goal. Feminist inquiry, and thus feminist epistemology, often works down on the ground in the messier regions where knowledge claims are derived, negotiated, contested, and lived; and guidelines develop and redevelop in practice and in communal deliberative projects. There, an analogue of Aristotelian virtue ethics and epistemology often plays a regulative part; there, it may be easier to determine what kinds of knowing will not contribute well to achieving a just measure of intelligibility than what the universally right ones are. From this point of view, neither ecological thinking nor the questions I raise in my other books remain within the confines of disciplinary orthodoxy. But are these inquiries interdisciplinary? The answer, I think, is to some extent yes, and to some extent no.

On the yes side, these inquiries are interdisciplinary in the sense that they challenge the disciplinary self-presentation of philosophy in its aloofness from the specificities of human lives and situations, to study those specificities in situ, in diverse locations and in ways that draw on empirical observation and patterns of analysis more fitting to disciplines as diverse as literary analysis, anthropology, social science, and so-called “natural” science. In that sense, and thinking also of “subversive” charges levelled against Rachel Carson, these inquiries cross the artificial boundaries of fixed modes of inquiry both in the academy and in the “real” world. My earlier reference to the range of and variety of knowledge Carson requires, even for the sake of understanding something so small as a beetle, affirms
this point. Indeed, the very fact of such borrowings across artificial disciplinary boundaries underscores the extent to which such boundaries are themselves arbitrary, conventional, and porous. So although they are often zealously guarded and indeed policed—as in insistent challenges to the effect that the work feminist or anti-racist philosophers are doing “is not really philosophy”—such challenges also, if haltingly, may destabilize the boundaries to the extend that closed disciplinary structures begin to shift, in the process.

On the no side, I see this work less as explicitly interdisciplinary than as a mode of research and thinking that enlists the resources of a philosophical training that spans the so-called “analytic/continental” divide. It thereby enables me to turn my attention, sometimes analytically, sometimes phenomenologically, sometimes drawing eclectically on other extra-philosophical resources, to a range of problems and puzzles about knowledge, subjectivity, intelligibility, and the politics of epistemic location, as these play out in specific lives and circumstances, and illumine other analogous questions and issues.

NOTES

1 In the first sections of this essay I draw extensively on arguments set forth in greater detail in Code 2006.

2 See, for example, W.V.O. Quine, “Epistemology Naturalized” and “Natural Kinds,” in Quine 1969. Both essays are reprinted in Kornblith 1994.

3 Latour asks: “When will we be able not to reduce matters of concern . . . to matters of fact?” (2004, 51).

4 Quoted in Lear 1977, 219. The comment is from a speech Carson delivered at the National Book Award ceremonies, 29 January 1952 (Rachel Carson Papers, Yale University Collection of American Literature, Beinecke Rare Book and Manuscript Library, Yale University, New Haven, CT).

5 As Dr. Harun Machibya, the Morogoro District medical officer, recalled: “Before TEHIP [Tanzania Essential Health Interventions Project] we did not identify and prioritize our interventions. Rather, we implemented plans worked out centrally. Even in budgeting, the tendency was to add some percentages to previous years’ planned and budgeted activities” (de Savigny et al. 2008).

6 In making this distinction, I am drawing on Edward Craig’s Knowledge and the State of Nature (1990).
7 I am borrowing here from Goldensohn 2006, 35.
8 Thanks to Elizabeth Anderson (personal communication) for this way of putting it.

WORKS CITED


