

Knowledge Practices Traversing Nature/Culture Divide: Recent Themes in Social Studies¹

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This paper maps the various forms of disciplinary links that are presently evolving between the natural and social sciences. The first part reflects on the effects of disciplinary diversification on the traditionally demarcated domains—natural/social sciences—and on their conceptual foundation—nature/culture binary. It gives a partial review of recent perspectives that may be of interest to those constructing ways of strengthening disciplinary networking. The second part is an extended reflection on locating locally some of the interesting themes in constructing knowledge beyond the nature/culture divide.

If I surround an area with a fence or a line or otherwise, the purpose may be to prevent someone from getting in or out; but it may also be part of a game and the players be supposed, say, to jump over the boundary...

—Ludwig Wittgenstein (1990 [I: 499])

Anthropology and the other sciences

Coarse-grained² disciplinary categories like history, anthropology, biology, or psychology hide underneath them dynamic scientific fields and a contentious diversity of research programs.³ Knowledge practices happen under them which, in fact, are already crossing their reified boundaries. A stronger point may even be observed: sharp theoretical contradictions could occur within such demarcated disciplines with unitary names, leading sometimes to major breakups and the establishment of independent fields out of previous “subfields.” With such diversity and contradictions covered by such categories, recent observers of the disciplinary scene even think that the “disunity of science”—rather than its unity—is a

more appropriate description of what is actually going on (Galison and Stump, 1996).

“Anthropology” may be a case in point. Noting some irony, *Science* observes:

Anthropologists are trained to bridge the gaps between different cultures. But today many American anthropologists find themselves divided by one of those very gaps—and are having a tough time spanning the chasm. Their discipline has become polarized into two tribes—one oriented toward biology, the other toward culture—who seem unable and unwilling to understand one another...

... AAA [American Anthropological Association] president Annette Weiner of New York University ... is concerned that the disciplinary gap will continue to widen, with cultural anthropology becoming an “adjunct” of the highly politicized field of cultural studies, while biological anthropologists find “more supportive homes in other departments or in medical schools.

...
Anthropology has traditionally emphasized integrative training, but a number of departments have abandoned it—notably Duke, which has now two anthropology departments, and the University of California, Berkeley, where the biological anthropologists in the department are now housed in the biology building. (Holden, 1993: 1641-42)

Tim Ingold, a British social anthropologist, echoes the above observation. He shares how his early decision to shift from the traditional natural sciences to anthropology led to a “mounting despair” upon learning that “it has been torn apart by the very divisions I thought it existed to overcome.” He explains, “social and cultural anthropologists would rather read the work of historians, linguists, philosophers, and literary critics; biological or physical anthropologists prefer to talk to colleagues in other fields of biology or medicine” (2001: 255).

Ingold’s observation has varied situational analogues in different departments of knowledge in general. Without sidelining

the concerns of addressing disciplinary discords, however, one may look at these disunities in a more positive way—such can be forms of diversification bringing with them mechanisms for alternative links.

Ruptures in the sciences also create, reversibly, opportunities for new modes of links: the more the traditional disciplines are internally “splintering” into pockets of scientific centers and research programs, the more their boundaries become porous—allowing networks between disparate domains to evolve. Microunification, therefore, may also be the obverse side of the growing “disunities”: a circuitous convergence via diversification.

Is the taxonomy Natural Science-Social Science still meaningful?

Are the broad categories that organize our varieties of disciplines—natural science/social science still meaningful? If these are classical categories and defined as clear-cut sets, what elements do their members share in common? Some areas of biology such as anatomy and physiology are highly qualitative and descriptive; a part of psychology is rigidly becoming experimental; and some areas of anthropology are going into game-theoretic modeling (e.g., Boyd and Richerson, 1996), needing the “trading zone pidgin” (*sensu* Galison, 1997) of mathematical formalization for one to interact with. On the other hand, the automatic linking of quantitative-experimental may be true to many practices within the physical sciences but not in the biological sciences. Classic ethological experiments done in the tradition of Niko Tinbergen, Konrad Lorenz and Karl von Frisch do not have the quantitative bent; nonetheless, they opened the succeeding studies of organismal-ecological biology to firm directions. Ernst Mayr (1982), a founding figure in evolutionary biology, emphasizes the sustained role of qualitative-observational-comparative method throughout the long history of biological thought. More recently, Evelyn Fox Keller (2002: 80), in her epistemological history of 20th century developmental biology, cites the “cultural divide between the mathematical and biological sciences.”

Are the sets instead divided according to their objects of study?

Social/human sciences (e.g., anthropology, psychology, sociology, geography, political science, economics, and history) study human beings in their social context. On the other hand, natural/physical sciences (e.g., physics, chemistry, and biology) study all other areas of knowledge. So what about these regular fields, human ecology, human geography, human biology, environmental science, to name just a few? And where should we put the practices of some recent directions in *cognitive* archaeology, *anthrozoology*, and *neurophilosophy*? In recent areas of knowledge production, the traditional taxonomy is challenged from several fronts. Not only the proponents of evolutionary psychology (EP)—which view psychology as a branch of biology (Cosmides and Tooby, 1998; see latest developments in EP reviewed in Kennair, 2002)—are voicing disciplinal remapping. Ingold (1990: 208), for one, also argues—although from a very different theoretical point⁴—that “anthropology—including what passes as ‘social’ or ‘cultural’ in orientation—falls entirely within the domain of biology.” And lest it is interpreted one way, Haraway (1989) points that the lines of theoretical influences occur also from the social *to* the biological sciences.

Some scholars are thinking of a more “natural” division among disciplines based on their approach in analyzing their objects of study. Ernst Mayr (1982; see also Diamond, 1999) discusses the intrinsic similarities in styles of reasoning and perspectives among “historical sciences,” which include evolutionary biology, historical geology, historical linguistics, paleontology, cosmology, archaeology and history proper itself. Many productions within these fields share the same limitations and could not pass as “science” (Latin, *scientia*: knowledge) if this is narrowly defined as “replicated laboratory experiment.” The disciplinal bedfellows are, therefore, reshuffled when one adopts the taxonomy “historical/nonhistorical sciences.” In Harvard, the sciences are classified for administrative purposes as “experimental” or “historical” with evolutionary biology in the second compartment and molecular biology in the first (Hacking, 1996: 56).

Is Nature/Society binary always useful?

In a lower key, one sees that the “nature/culture” binary is what makes the “natural/social sciences” dichotomy philosophically intuitive. But this divide is also becoming distantly artifactual. Perhaps one reason why we put a big wall between “Natural” and “Artificial” is because we overvalue the role of mind/language in the actions of humans and think that nonhuman animals are not capable of improvising. Nonhuman primates also show diversity in improvisations: “Monkeys and apes do not think the way we think, but they do think” (Lee, 1995: 74). Like humans, their individual and collective actions, intentional and unintentional, have also shaped and redesigned both themselves and their environments (Bateson, 1991). Consider, for example, pieces of leaves and branches apes redesigned as nests: the act becomes “natural” or “cultural” depending on whether or not one privileges too much the posited humanly-unique intentionality (Ingold, 1994).

It is not that the binaries—nature/culture and natural/social sciences—are globally useless and that these should henceforth be banned in discourses. It is to note that the usefulness of these categories, like any other categories constructed to facilitate thinking, have limits. And if these binaries are made to prop arguments for the “essential” difference between the sciences of the “natural” and the “social”—for the “intrinsic” difference of sociology or anthropology from biology, for example—it should alert us to the abuse of the situated and limited pragmatics of dichotomies. To paraphrase Wittgenstein’s trickster remark, the boundary lines may still be drawn—as social, cultural, and natural—in present discourses: so as to have something to jump over.

Embedding minds in bodies and ecologies

It is a highly interesting disciplinary development when “culture” (a category traditionally central to anthropology), “mind,” and “self” (traditionally central categories for psychology) are theorized together with the “body.” Cognitive scientists George Lakoff (1987) and Bradd Shore (1996) are producing seminal studies integrating “culture,” “body,” “self,” and “mind” to model a richly textured

view of human-nonhuman reality. Their productions emphasize the “embodied mind” theme, in contrast to a popular brain-in-a-vat schema. In a parallel view, scholars theorizing on “distributed cognition” extend Lev Vygotsky’s “mind in society” perspective by viewing other humans, artifacts, and external symbolic systems as constitutive of any individual cognitive processes (Salomon, 1993; Donald, 1991). More than the earlier promise of sociobiology for disciplinary synthesis, present directions of brain/mind sciences point to greater microintegrations among diverse fields.

“Natures-cultures” in anthropology and related fields

The evolutionary perspective Charles Darwin vitalized opened for anthropology, sociology, and history possibilities for integrating their diverse topics of concern. Concepts once confined to mainstream biology have become social science terms, if only for contention: evolutionarily-minded psychologists, sociologists, and historians have appropriated the biologically-rooted concept of “memes,” cultural units whose temporal processes are analogous to genes in their evolutionary flow (Shaw and Pomper, 1999; also, varied articles in *Journal of Memetics*; slightly sympathetic evaluation in Dennett, 1995: 335-369; and critique in, Fracchia and Lewontin, 1999).

Sperber (1996) endorses an “epidemiology of ideas” and an evolutionary approach to cognition (Sperber and Hirschfeld, 1999). Although it appears “like colonialism” to some cultural anthropologists, others recognize the potential of evolutionary framework—evolutionary concepts over “culture”—in providing a “common language” for the different subfields (Holden, 1993). In these evolutionary “trading zones,” one needs the pidgin of evolutionary theories, to transact in the production and “haggling” of knowledge.

Beyond perfunctory use of “evolution”

Adam Kuper (1994) conceptually simplified the otherwise complex diversity of anthropology’s “research projects” by locating their three foundational cores. However bushy the phylogenies

of these traditions are, they always have these generative figures in their ancestry: Boas, Durkheim, and Darwin. Historically, the first two traditions—coming from American and Western European constellations respectively—have gone through several transformations, but with persistent thematic cores. The Boasian line’s relativistic view of ‘culture’—concerned with “description and interpretation rather than explanation,” “the particular rather than with the general” (Kuper, 1994: 113)—eventually took a “radical form” in “postmodernism.” The “social anthropology” of Western Europe, on the other hand, “tends to be Durkheimian,” mixed with some Weber and Marx (*ibid.*, 114)—prompting some anthropologists to reify this mantra-like trinity: Marx-Weber-Durkheim. If the former tradition is disciplinarily close to the humanities, the latter is closely related to, if not an evolutionary branch of, sociology.

Although no anthropologist today, teaching a course in the discipline, would fail to narrate a version of the evolutionary story, Holden (1993) is right in hinting that the implicit view, if not the explicit, of many cultural anthropologists is that evolutionary dynamics are already superseded by “cultural” processes in the case of humans. Each tradition brackets out the key categories and discursive games of the other instead of seriously engaging with each other’s toolkit of concepts and styles of knowing. On this political-academic issue, Kuper (1994: 117) gives a generous perspective that is more in line with the expansive ethos of anthropology in general: the “broad enterprise” of anthropology has been shaped not by one but by “three shared abstractions”: “culture,” “social structure,” and “evolution.” They form “a set” and “every anthropological theory is in effect a hypothesis concerning their interactions.”⁵

The tradition branching out from Darwin’s “view of life” has grown sharper than the early formulations of evolutionarily-minded anthropologists (Morgan, Steward, White); two examples might suffice: the feminist anthropologist Sarah Hrdy’s (1981; see also a review-critique in Haraway, 1989) sociobiological anthropology cannot be accused of either missing out “culture” or being naïve of the political effects of knowledge-making practices in her texts;⁶ in

a more comprehensive modeling of anthropology's "set of shared abstractions," Kevin Laland, F. John Odling-Smee, and Marcus Feldman (1999, 2001; Odling-Smee, 1994) give a view of how far different anthropological theorizing on evolution and culture has gone since Morgan's time.

Related fields

"Science studies," sometimes referred to as "anthropology of science," is also a highly interesting development in these reshuffled disciplinal zones (Latour, 1987, 1999; Latour and Woolgar, 1987; Haraway, 1989, 1997, 1998). Unlike some postmodernists, science studies scholars do not reject the so-called Western science but critique its reification by constructing fine-grained descriptions and analyses of how "science" is actually produced in their socio-technical thickness. Some biologists are also theorizing the tight couplings of humans and *artifactual* nonhumans in some domains of life. A growing multitude of "artifacts" have dynamics going beyond the unilateral control of humans: polysemic texts and symbols, "memes," and, perhaps more cogent, the cyborgs of biotechnologies—entities which are, literarily and semiotically, human-nonhuman hybrids (Haraway, 1991). Haraway (1991) uses it as a concept referring to the kind of biotech reality rapidly emerging in technically-advanced societies.⁷

Consilient with these developments, Ingold (2001) is proposing for the "dissolving" of the "boundaries between social and biological anthropology, archaeology, and psychology": "Any divisions within this field of inquiry must be relative rather than absolute, depending on one's focus rather than on the a priori separation of substantive, externally bounded domains" (276).

As if illustrating Ingold's point, Barbara Noske (1989) is developing an approach for "anthropology of animals" and Arturo Escobar's (1999) "political ecology" has recently seen formal theoretical links with the "dialectical biology" of the ecologist Richard Levins and geneticist Richard Lewontin (Dusek, 2002; Levins and Lewontin, 1985; Goodman and Leatherman, 1998). I wonder if, engaging with these hard-won theoretical developments,

one can still look at mainstream Ecology with a business-as-usual frame of mind. With these recent insights, traditional “Ecological Anthropology” has certainly moved beyond “the great protein debate” of Chagnon (1983: 81) and Cultural Ecology’s notion of “adaptation” to a pregiven “natural environment.” Pursued beyond the historically canalized “representation/reality” divide—enclosing the anthropologists’ supposed “domain” within the side of *human representations* (contra “reality”) of nonhumans—the concept of the “social” is deconstructed and freed from its narrow bracketing. If simultaneously given a “semiotic-material” approach, the canalized “ethnographic method,” in whatever mutations it has now evolved, naturally coalesces with other methods, ethology for example.⁸ And the supposed gap between Anthropology, Ethology, Ecological and Evolutionary Biology is certainly narrowed, if not dissolved, in the specific praxes of these studies.

There are certainly theoretical differences among the authors cited above; the interest, at present, however, is to deduce—from the practices that are always diverse—convergences that are of comparative relevance for interdisciplinary projects.

Interesting models for theoretical and empirical studies highlighting “natures-cultures” hybrids are, in fact, growing (e.g., Braun and Castree, 1998). Although these formulations are specifically centered on the pragmatics of Western praxes, they have analogues in our context and the examples given do not exhaust the extent of variations possible and are presently enacted, if only in seminal forms (Escobar, 1999). Needless to say, with these approaches, establishing “trading zones” among disciplines are imperative—if not the reconfiguring of present taxonomies/geographies grounding the disciplines. Developing pidgins useful for disciplines meeting in “trading zones” of shared problems may be a cheap discursive strategy in interdisciplinary transactions but could also be a good-enough starting point for eventual refinements in conceptual rigor.

Nature-culture themes for area studies

In what new forms—or perhaps *old* forms theoretically invigorated—will the studies of Philippine social formation take in order to open domains that seriously cross the “Natural” and “Cultural” zones and enact novel praxes for knowledge? What happens to the core languages/practices when disciplinal intertransactions develop? Some concepts, practices, and habits of each discipline might just be dropped. Some might need broad overhauling before they become re-usable. Others might also prove to be made of hard mettle and come out robust after rigorous interdisciplinary contacts. In the interzone, each is haggling knowledge strategies with another in diverse transactions that then overflows the trading metaphor and soon resembles—in Haraway’s polytropes—love, game, and combat (1997).

What are our old taxonomies of knowledge?

If we look again at our categories relating to the “environment,” “nature,” “society” or “community”—generally, the human and nonhuman collectives—perhaps we can make use of some old ways in bypassing the binaries presently entangling the fields.

The Cebuano category *kinaiyahan* usually “translating” the concept “Nature” does not seem to fold into a kind like the “nature/society-culture” complex seen in the history of the English dichotomy. *Kinaiyahan* (environment, nature) is used both as a general term encompassing the forests, lakes, resources, and the inmost bent of individual organisms (*kinaiya* = the inner processes, whether of humans or nonhumans). On the other hand, as *katilingban* (“society”) is *ka-ti[li]ngub-an*,⁹ emphasizing the *tingub* (whole), it could also be used to refer to nonhuman collectives. In the *Bisaya* origin myths, the presentation of “nature” is quite different from the Semitic narratives in which, “In the beginning God (or its analogues: Mind, Man, Word)...,” is usually the default value. Here is an Austronesian narrative: “In the beginning...”

there was nothing more than sky and water, and between the two,
a hawk was flying which, getting angry at finding no place to alight

or rest, turned the water against the sky, which was offended and so scattered the water with islands and then the hawk had some place to nest. And when it was on one of them along the seashore, the current threw up a piece of bamboo at its feet, which the hawk grabbed and opened by pecking, and from the two sections of the bamboo, a man came out of the one and a woman from the other. These ... married with the approval of Linog, which is the earthquake... (Scott, 1994: 87)

This is one of the many local variations of an origin myth familiar to most prehispanic Visayans. In Leyte and Samar, the first humans came out of two floating coconuts pecked open by a bird (Scott, 1994: 87). Here, one sees refreshing characteristics. Aspects of *kinaiyahan* (sky, water, hawk, bamboo or coconut) are “already there” even in the beginning and humans are continuous with these elements. There is no trace of a nature/human complex like in the Semitic narratives. And then, these natural elements are agents of their own right in redesigning the world—the sky, water, hawk, earthquake. The hawk “got angry,” the sky and water “were offended,” the current “threw up a bamboo” at the hawk’s feet. Aside from the pragmatics of “telling stories,” the presentation of the story in intentional/anthropomorphic language has the effect of recognizing the agentic roles of nonhumans.

There seems to be a period in our history when many elements now classed either in “Nature” or in “Society” are not categorized as such. When “Nature” and “Society/Culture”—and the elements of these two—are still recognized as highly entangled, the significant domains of knowledge are not cut along the binary lines outlined earlier. At least, this is a heuristic point. In a recent article, however, the columnist Bambi Harper (2001) endorses an idea that we, Filipinos, have a “basic programming” that differs from other Asiatics. It is claimed that while Indians, Chinese, and the Japanese emphasize humans’ “connectedness with the cosmos” and “link with nature,” Filipinos “focus on ‘people-to-people connectedness.’” The emphasis we place on the category *kapwa* is said to support this. But is *kapwa* a category centrally referring to humans? In a personal conversation, linguist Ricardo Ma. Nolasco, noting its *ka-*

puna construction, gives his “raw” hunch that the morpheme *puna* might be related to *puna-ng* (space). If so, as the affix *ka-* can signify “the existence of something,” then *kap(u)wa* could simply mean the existence of a common space between the speaker and the thing/person/organism the speaker refers to: so *kapwa nilalang* is possible and does not preferentially mean people, *H. sapiens sapiens*.

The Bisaya category *banwa*/*banua* (territory, community), when historically reconstructed, might also capture human-nonhuman interlocking. The importance of this category, together with conceptually related terms *Bayan*, *Ili*, *Bongto*, etc., is given central recognition in the school of *Pantayong Pananaw*. The historian/ethnologist Z. A. Salazar emphasizes the category’s importance in framing narratives on local communities in southern Philippines. Scott (1994: 113), however, lists the following as part of the category: “homeland,” “terrain,” “countryside,” “mountain,” and “climate” (the “heavens”¹⁰ and not only the earth-ground)—and translated *banwa* as “natural environment.” By doing so, this highlights the deeper “nonhuman” layers historically “inhabiting” a category now mostly construed as *human* homeland/territory. (Scott’s [1994] opening explication on the *banwa*—in the chapter, “natural science”—is then followed by discussions on heavenly bodies, seasons, direction of winds, nature and habits of different species.) But the polysemic *banwa*, of course, cannot just be translated as “natural environment,” if “natural” here hinges on the familiar “nature/culture” binary. Aside from the naturalistic terms “climate,” “heavens” and “mountain,” the category also includes “homeland” (*bayan*) in its meanings and its present usage shades into *yutang tinubuan* (“homeland”) and *katilingban* (“society”). If the category is unhinged of the “nature/culture” complex, knowledge about the *banwa* then—which might now be translated as natural-cultural territory-community—should not always be done in the rigid ways separating the “natural science” from the “social science” domains.

Communities of humans and nonhumans

“*Banwa* studies,” then, are area studies attentive to complex, contingent, *yet* patterned entanglements not only of “bodies, blood,

sweat and genes” of human groups but also of animals, artifacts, symbols, rocks, trees, narratives, and discourses. Local community studies should knit together plural entities in every defined space in their material-semiotic density. The “things” in a *banwa* are seen in all their varying *relational* ontologies (cf. Stump, 1996). On what modes of existence, for example, should we imagine the *kapre*, *engkanto*, *aswang* (all elements of the “underworld”), *mga-dili-ingon-nato* (“nonhumans,” literally, “those who are not like us”), *gabum* (“power,” amulets) that people the narratives and *lived* world of a small *barrio* or even a “modernizing” city? One notes that, in their discursive manifestation, these “entities” simultaneously circulate in the physical worlds of trees,¹¹ stones, mounds, metals, bodies, and landscapes. Their ontologies, therefore, should be located in the discursive pragmatics of situated humans *in relation to* those physical things: their modes of existence are pragmatic, relational, and *emergent* products of congealed interactions. In this sense, they are still functionally similar to many of our “respectable” conceptual tools—if with unequal efficiencies, given different contexts and purposes.

These entities, humans and nonhumans, are promiscuously knotting, tying durations and spaces, and, to borrow Latour’s biotope, forming a network with “fibrous, stringy, capillary character.” These interesting entwining of active agencies open domains for investigation that should look like the as-yet-awkward-formulation “natures-cultures” rather than the rigid Nature/Culture—like the above bet/reconstruction of *banwa* as “natural-cultural territory-community.”

The following are some interesting themes that a *banwa* perspective—exapting¹² themes surveyed above—might further invigorate:

1. Studies on the variations of human-animal relations in specific communities and the diverse forms they take
2. Studies on the variations of human-plant relations—for example, cultures of “domestication” and the ways local communities modify plants, as a result of collective, continuing practices
3. Studies on variations in modifying—intended or unintended—the

human body due to culture-specific practices of individuals and groups

4. Studies on the variations in human-tool/gadget relations
5. Studies on individual cognition in its socio-technical developmental context
6. Studies on the local practices of science—the socio-political/socio-technical mechanisms that facilitate scientific practices in different institutions
7. Studies on the integration of “nature” into the politics of human communities, like in the case of biotechnology and the politics of bio-reserves

The above is only a partial list of the many that are possible. Varied models and methods for doing these are indicatively seen in the works surveyed above—approaching them, however, in the *banwa* label emphasizes our local community/region as the entry point of the study—even as its treatment is interwoven with wider politico-cultural imperatives. When such are attempted and produced, disciplinal trading zones are always mobilized—whether undertaken individually or collectively. From this perspective, the constructed narrative on any defined “social” space will then be populated by co-active, if *unequal*, human *and* nonhuman agents.

The differential values of the interacting entities—varying in every context—are what make this inter-*species/population*, *multirelational* approach interesting. Multivariable interactions do not make the study too complex to handle: one must only distinguish the highly relevant interactions from the less relevant ones given one’s specific concern. Relationality and interaction, however, should be the primitive worldview and basic concern of the enterprise and the atomistic focusing and practical imperatives the derived delimitation, not the reverse. This dialectical approach formalized by Levins and Lewontin (1985) is echoed by Ingold (2001) and the DST scholars (Griffiths and Gray, 2001).¹³ In the words of Levins and Lewontin (1985a):

The problem for the ecologist is not to divide up the world of organisms once and for all into communities, but to look for groups of species within which there are strong interactions and between which there are weak relations in particular circumstances. (272-273, underscoring added)

Hope in the margins

Why should we care? Perhaps a better question is: why should we *not* care when greater realism in our understanding of communities and opportunities for navigating constricting realities and constructing alternative ones are at stake? In its theoretical side, a number of social science's key formulations—structure and agency, the social system, empowerment, representation—might be recasted in other terms or nested in wider senses. In a more hopeful tone, reconfigured boundaries also open “possible livable worlds” wherein one can “envision a different and less hostile order of relationships among people, animals, technologies, and land” (Haraway, 1989: 15).

Instead of being hardly structured, disciplines, like their objects of gaze¹⁴ and study, are variably and dynamically engaging in divergent and convergent practices at their boundaries—and, sometimes, even at their very cores. It seems that the almost-intuitive problem of connecting the broad “continental blocs” of “natural” and “social” domains are no more than representational artifacts that could—with varying degrees of efforts—be dissolved by robustly engaging in knowledge practices at the disciplinary margins. In the border zones, the disciplines are directly entwined: the problem is how to refine the conceptual integrations and strengthen interactions in local research practices. It is a matter of continuing the “border engagements” and constructing better conceptual-communicational “pidgins” to facilitate them.

Notes

1. This is a revised version of the paper read in the UP-Mindanao University Lecture Series, 31 August 2001, Terraza Hall, U. P. Mindanao School of Management. With some changes, this also

forms the last chapter of my masteral study (Anthropology, UP-Diliman, 2003), “Macaques (*Macaca fascicularis philippinensis*) and the Moncadistas: Patterns and dynamics in macaque behavior and macaque-human interactions in Mt. Apo Natural Park.”

2. The photographic-grains metaphor (fine-grained resolution, coarse-grained resolution) in characterizing the level of detail by which a system is described is borrowed from Gell-Mann (1994: 23-41).
3. Just this past decade or so, new areas have been opened: Evolutionary psychology (Barkow, 1992; Cosmides and Tooby, 1998), cognitive archaeology (Mithen, 1996), psychological anthropology (Shore, 1996), cognitive social science (Turner, 2000), anthrozoology (Swabe, 1996), neurophilosophy (Churchland and Grush, 1999), cognitive psycholinguistics (Pinker, 1997), to name some of the hybrids. Are these just approaches, research programs of certain disciplines, well-defined subdisciplines, or incipient disciplines? Is cognitive archaeology closer to cognitive science or to traditional archaeology? On what is psycholinguistics a proper subfield of, psychology or linguistics? Is psycholinguistics just an approach in cognitive psychology or is it an incipient discipline? What is anthrozoology a subpart of: zoology, anthropology or sociology? These are rhetorical questions. The point in asking them is to highlight the fuzzy boundaries of disciplines, the growing diversification, and the simultaneous convergences.
4. The perspective that Tim Ingold (2001) has been developing—unlike Cosmides and Tooby’s—concurs with the developments within biology that go beyond ultra-Darwinist framing. The “domain of biology” he is thinking, wherein to nest anthropology (and even psychology), is the kind articulated in the works of Brian Goodwin (1994), Susan Oyama (Oyama, Griffiths and Gray, 2001), Richard Lewontin (Levins and Lewontin, 1985), and Mae-Wan Ho (1996, 1998), to mention some indicative names in biological theorizing lying outside the hardened “neo-Darwinian orthodoxy.” Some important features of this kind of Biology are: the importance of “self-organizing systems,” “developmental systems,” coevolutionary processes, and the

- emphasis on organismal and ecological levels. These are mostly sidelined in present ultra-Darwinian construal of evolutionary processes giving population genetics (its concepts and ways of construing) central privilege.
5. Parenthetically, if anthropology is to seriously engage evolutionary theory (with the recent conceptual clarifications in “adaptation,” “units of selection,” “development and evolution,” “function,” and “evolution of altruistic behavior” [Hull and Rose], 1998), a formal course in this area should be relevant in advancing the students’ grasp of multilevel dynamics, beyond the usual evolutionary storytelling, which sometimes cheapen the reason for evolutionary theorizing: not simply to tell an edifying story but also to explain present ecological interactions in local communities and appreciate the full range of diversity in life-phenomena (Futuyma, 1998).
 6. Haraway (1989: 349-367, for a full-chapter assessment of Hrdy’s contribution to primatological-anthropological theorizing), though critical of sociobiology, cannot but recognize that, employing “the craft of constrained story-telling intrinsic to biological sciences,” Hrdy’s stories cannot be accused, like other sociobiological accounts, of simply “reifying gender outside of history in another ethnophilosophical naturalizing narrative” (366); as a careful Darwinian, Hrdy never invokes the explanatory role of selection in the phenomenon being considered without providing specific tests and without a fair treatment of other competing explanations.
 7. One of the very first thinkers appreciating Darwin, and creatively advancing his views, Samuel Butler (1835-1902) forecasts the intensifying hybridization between humans and machines in an SF, *Darwin among the Machines* (1863). This piece was then made part of the famous utopian novel *Erewhon* as a kind of book-within-a-book (Butler, 1968).
 8. In their most basic style, ethology and ethnography are methodologically related to “natural history”—*historia*, in Greek, being simply “an inquiry into what is remarkable” and

presented in a direct reporting style, with the “assumption of impartiality”—be they about distant peoples, exotic plants, or intriguing animal behaviors. In a scholarly study on the ancient “histories of nature,” like the *Historia Naturalis* of the Roman Pliny, French (1994) mentions *Historia*’s emphasis on “traveling” to conduct observations and interviews—the Greek “naturalists” “looked down their noses at those who confined themselves to libraries” (2). Even at present these two now-differentiated methods still reflect the similar attitude: the need “to go to the field,” i.e., “distant places” and “to observe organisms in their natural setting” (Sparks, 1982). Given these affinities, it is not totally surprising to hear some two-way traffic calls for linking ethology and ethnography. On the one side are the proposals to integrate ethological approaches into the study of human cultures (see, for example, Borgerhoff Mulder and Caro, 1985). On the other side are suggestions to use “ethnographic approach” in field biology (Rendell and Whitehead, 2001). These last cited authors actually did field biology on cetacean behavior following the proposal they outlined. Their method should be both interesting for biologists and social scientists.

9. Much of the lexical analysis presented here benefited a lot from the explications given by Ricardo Ma. Nolasco in many personal conversations regarding Cebuano words and categories.
10. It is interesting to note here a quite dramatic suggestion for “the heavens” as connected with the category *banua*. The tree *Polyscias nodosa* (Blume) Seem is *tukod-banua* in Kapampangan but becomes *tukod-langit* in Tagalog (Madulid, 2001 [vol. 2]: 247). The tree is widespread, and might be endemic, from Indo-Malaysian archipelago (Java, Sulawesi, Moluccas) up to the Solomon Islands in the Pacific, and found in open thickets and rainforests in the Philippines (Rojo, 1999: 33).
11. The *kapre*, for example, is always associated with the *balete* tree (*Ficus balete*)—this tree being almost generally linked to “underworld” entities. Interestingly, the *Ficus* spp. are recognized as “keystone species” playing important roles in tropical rain

- forest ecology: monkeys and large birds rely on them as food sources during times of forest famine. (Whitmore, 1998: 72)
12. Gould and Vrba (1998) develop the concept of “exaptation,” “exapted” here, in the context of evolutionary biology: it refers to a process wherein a character, previously evolved for other usage, is co-opted for a different use in another context.
 13. Wittgenstein’s *Philosophical Investigations* (1953: I:67) can be seen as an extended reflection on the necessarily playful, shifting boundary lines in any knowledge investigations: “Something runs through the whole thread—namely the continuous overlapping of those fibres.”
 14. As primates with strong leaning on the visual sense, “gazing,” simultaneous with “moving,” might be the more primitive and basic way of relating with our objectified phenomena (our knowledge-relation with the world) than the predominantly mentalistic “studying” and the anthropocentric “talking.” Unlike the derived and formalized “study” (“application of the mind to the acquisition of knowledge, as by reading, investigation, or reflection,” *Webster’s Encyclopedic Unabridged Dictionary*), mostly dealing with hardened categories, “gazing” reopens the youthful phase of a science: “to look steadily and intently, as with great curiosity, interest, pleasure, or wonder” (*ibid.*).

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