



## Darkness in Anthropology

By Peter Van Arsdale

**An essay covering Darkness in El Dorado: How Scientists and Journalists Devastated the Amazon by Patrick Tierney. New York: W.W. Norton, 2000. 417 pp.**

**and related documents.**

### Stone Age “Other”

In March of 1974, along with five colleagues, I had the opportunity to make “first contact” with a band of some 35 Korowai hunters in the heart of the New Guinea rainforest (Van Arsdale 1987; Mitton 1983). This brief encounter made a profound impact on me, but hopefully only left a minimal impact on the men we met on banks of the Upper Eilanden River. It was St. Patrick’s Day, and with a little luck, it was our hope that we would share information and exchange gifts—but no more—with a kind of people then romantically being referred to as some of the “last representatives of the Stone Age.”

Patrick Tierney had a somewhat different motive as he trekked through the difficult terrain near the Venezuelan/Brazilian boundary. He also was in search of a “Stone Age people” (the Yanomami), but more importantly, he was in search of information that would explicate the field research of one of the world’s most famous anthropologists, Napoleon Chagnon, and one of the world’s most accomplished geneticists, James Neel. The process of explication would lead to bold revelations of possible wrong-doing. Along the way, the work of other researchers and journalists also would be critiqued. The romantic notions of “danger and adventure” would be creatively interwoven, and critiqued as well.

What emerges from research spanning more than a decade is one of the most remarkable books I have read in years. More than a work of anthropology, Darkness in El Dorado: How Scientists and Journalists Devastated the Amazon is a work on anthropology. More than a work of journalism, it is a work on journalism—and by implication, on Tierney’s own methods and investigative techniques. More than a work on genetics and tribal adaptations, it is a work on human adaptations—“ours” and “theirs,” a kind of culture clash dialectic. More than a work on human rights, it is a work on the pragmatic intersection of rights and responsibilities. As the present essay demonstrates, it also serves to fully and powerfully open—for at times painful review—the divisive issue of the impacts of

externally introduced diseases on tribal populations. Who, if anyone, is responsible? Who, if anyone, can ameliorate the situation and save the lives of those infected?

As Tierney notes, the earliest historical mention of the Yanomami came from a “multidisciplinary expedition of engineers, surveyors, naturalists, and artists” working for the Portuguese boundary commission, in 1786 (p. 19). The Yanomami began hiding from such expeditions, as well as from potential slavers, near the Orinoco River’s upper reaches—where resources as perceived by outsiders were of relatively little interest and the terrain was difficult to penetrate. Tierney ascribes genocidal tendencies to outsiders penetrating the area as early as the 18<sup>th</sup> and 19<sup>th</sup> centuries, such as Venezuelan troops massacring sleeping Yanomami in the 1820s (p. 250). American geographer Hamilton Rice reported (January, 1921) that he had had to open machine gun fire on a group of Yanomami, believing them to be marauding cannibals who ate raw flesh (p. 21). The years from 1921 to 1931 defined a period of Yanomami counterattacks and raids, driving most whites away from the Upper Orinoco. As Tierney notes, “The jungle reclaimed old towns, missions, and forts” (p. 21).

By the late 19<sup>th</sup> century, variants of what those of us who have worked in New Guinea call “tobacco Christianity” came to be. “Primitive people” were induced into joining Christian churches through gifts like tobacco, metal utensils, and clothing. As the twentieth century rolled on, the missionaries in both New Guinea and South America established what I would term a more intricate and nuanced presence. For some, gifts tied to proselytizing became less important than assisting with human service work and medical care. Some became advocates for human rights, especially as oil prospectors (in New Guinea) and miners (in Venezuela and Brazil) invaded the regions. Ironically, although he does not “homogenize them,” Tierney has little bad to say about the missionaries who have come to the Brazilian/Venezuelan region along the Orinoco River.

Tierney’s primary mission in his book, as I would characterize it, is to analyze the impacts of “...introduced guns, germs, and steel across a wide stretch of Yanomamiland—and on a scale never seen before” (p. 30). A related motif can be seen in the tensions between “us” and “them,” between “Westerners” and “the Other.” That he details a deadly 1960s measles epidemic, attributing certain correlative and even causative factors to Napoleon Chagnon, James Neel, and other outsiders, stands out as remarkable—but should by no means be seen as the book’s main thrust. Tierney’s secondary mission, as I would characterize it, is to critique the scientific research of Chagnon, Neel, and others such as French anthropologist Jacques Lizot. Some of Tierney’s themes, as Clifford Geertz (2001, p. 20) would dramatically characterize them, are to explicate “homosexual harems, goldfield massacres, captivity stories, soul-eating shamans, guerilla invasions, four sorts of missionaries, and the death agony of an Indian woman and her newborn infant impassively filmed by a British television crew.”

### **Napoleonic Tactics and Strategies**

As indicated above, Napoleon Chagnon is one of the most well-known anthropologists in the world. This is, almost entirely, due to his pioneering studies among the Yanomami (also referred to as Yanomamö). His book, *Yanomamö: The Fierce People*, has sold hundreds of thousands of copies since the first edition was published in 1968. Like others, I was fascinated by it when it first

was released. Chagnon's purposes *writ large* were as follows: (1) To study and film processes of human (read: tribal) adaptation to extreme environments, focusing on demographic, genetic/genealogical, and socio-political factors. (2) To explicate the role of warfare in tribal society. (3) To understand more fully the role of disease, all this through the comprehensive study of a single (albeit scattered) society.

Whereas his mentor, James Neel, was a geneticist (and possible eugenicist), Chagnon was—and is—not. But both men were interested in the socio-biological aspects of leadership and dominance. Both were interested in the ways tribal resources (including women) were accessed and used. Both sought, and obtained, extensive Yanomami blood samples for genetic testing. Both sought to be highly empirical and field-oriented, collecting large amounts of data longitudinally. Neel's interest dated to his earlier work with the Atomic Energy Commission, Chagnon's to his just-emergent fieldwork with Neel. Stated differently, Neel provided needed field entrée for Chagnon.

Central to the divisiveness that has accompanied the publication of Tierney's book is the information he provides on the devastating outbreak of measles among the Yanomami that appears to have begun in 1968. A boy named Roberto Balthasar is described as being the first documented death, on February 15<sup>th</sup>. Tierney states: "Two things made [this] death notable: his was the first clearly diagnosed case of measles among the Venezuelan Yanomami. And, according to the boy's father, Napoleon Chagnon vaccinated him" (pp. 53-54). Did Chagnon, and thus his mentor Neel, inadvertently contribute to what became a virtual pandemic which eventually saw hundreds die, in particular by using the so-called Edmonston B strain in their numerous vaccinations? Did their empirically-driven mandate blind them to the need to back off from their research and offer maximal medical assistance? While clearly attempting to help in some ways, did they do enough?

When the epidemic of measles broke out, to quote from the prominent anthropologist and critic Terence Turner, "...once in the field they kept to their previously planned research program and itinerary, which allowed insufficient time and flexibility for urgently needed medical work....When the chips were down, the Yanomami as patients took second place to the Yanomami as objects of scientific investigation" (2001, p. 69).

### **The Importance to Human Rights**

Although not explicitly presented as primary documents on human rights, Tierney's book and his accompanying article in The New Yorker (2000b) are of tremendous importance to this field. They serve as heuristic devices. Themes he covers which are of crucial importance to human rights researchers and activities, include the following:

- ◆ Outside incursions into the Yanomami region for some 200 or more years have brought the "double whammy" of killer disease and socio-political upheaval. Regarding the researchers, Tierney further asserts that, since the 1960s, Chagnon et al.'s "brokering of alliances" among otherwise non-interacting villages contributed to such systemic upheaval.
- ◆ Taboo information (especially the names of the deceased) was obtained by gifts and manipulation. While seen as Westerners as essential to the reconstruction of Yanomami genealogies, such methods were unethical and potentially disastrous sociologically.

- ◆ “Violence and sex,” Chagnon’s two earliest and most prominent “research catchwords” (at least as ascribed to him by others [cf. Geertz 2001]), can help characterize adaptive relationships and power struggles here and elsewhere. Paraphrasing Tierney, Chagnon conceived (or concocted) a neo-Darwinian framework implying survival of the fittest. The toughest man gets the women, and thus the opportunity to differentially succeed reproductively; the other men do not. Ferocity is seen as beneficial to differential survival within and among groups, and ferocity is best manifested in intra-village rivalry and inter-village combat.

### **What Others are Saying**

In preparing this essay, I reviewed the recent written remarks of a number of other scholars and commentators. I also spoke to a number of colleagues directly. Not surprisingly, none are taking Tierney’s book (nor his accusations) lightly. At one extreme are those offering praise, at the other extreme those offering condemnation. Several fall in between, perhaps best exemplified by Michael Shermer (2001) who is skeptical of many of Tierney’s conclusions but suggests that the Yanomami might best be described as the “erotic – fierce people.”

Clifford Geertz offers a mixture of personal views and assembled viewpoints. In a synthetic piece published in The New York Review of Books (February 8, 2001), he provides one of his typical “deep analyses” of the controversy. After laying out the way in which the anthropological community came to know of Tierney’s book, in advance of its publication, he goes on to lay out the way others worldwide have responded. He reminds us that “screaming headlines” included “Mad Dog Anthropologists” (*The Nation*), “The Wages of Anthropological Incorrectness” (*The National Review*), and “Is Anthropology Evil?” (*Slate*). Through citations gleaned from others’ work, he lends credence to the perspective that the measles vaccine utilized by Neel and his colleagues could not have been responsible for the 1960s epidemic. But he also lends credence to several of Tierney’s themes about the negative impacts of outside incursions and interventions. He asks: “What sort of place in the world does an ‘ex-primitive’ have?” (p. 22).

First-order, second-order, and even third-order impacts can be traced to the book’s publication. If first-order consist of those directly affecting the Yanomami, and second-order those affecting researchers and scholars, then third-order can be illustrated in scholars’ responses and rebuttals to other scholars’ comments. Geertz’ suggests in this article that anthropologists Terence Turner and Leslie Sponsel should have conducted more investigations of their own, before alerting leaders of the American Anthropological Association via e-mail memo about possible problems associated with the impending publication of Tierney’s book. Turner’s emphatic reply to Geertz was published in The New York Review of Books on April 26, 2001. He states that Geertz’ implication “misses the point: the memo was precisely a call for investigation by an appropriate professional association with far greater resources for the task than we possessed” (p. 69).

Anthony Brandt, in a brief review entitled “Hit and Mis-Anthropology: Studies of Cultures and Their Conquerors,” notes that Darkness in El Dorado has quickly become the subject of nasty debates within anthropology. Further, Anne Whiteside and Laura Nader (the latter the sister of Ralph Nader) stress that criticisms of Napoleon Chagnon are not new. They remind us that 25 years

ago, Shelton Davis (then at Harvard University) wrote an article “which pointed to the fallacies in Chagnon’s research and his analysis of Yanomamö violence” (2001, p. 3). Davis demonstrated that many of their villages already were in a state of crisis owing to the incursions of rubber collectors and cattle ranchers, and that metal tools and shotguns had long since been present. Whiteside and Nader reiterate Davis’ claim that Chagnon’s portrait of the Yanomamo as “fierce” rather than “harmless,” in the context of such systemically disruptive incursions, was “highly irresponsible.”

### **What Napoleon Chagnon is Saying**

I have not had the opportunity to ask Napoleon Chagnon his views and perceptions of the fury whirling about him. I would like to. Having worked in a “first contact” situation myself, I believe that a fruitful interchange would ensue. A mutual colleague, Edward Schieffelin, told me several years ago: “You and Nap must be two of the only anthropologists living today that have made genuine ‘first contact.’ ” Perhaps, but “first contact” is a two-way street, entailing mutual obligations and engendering extreme caution. From my perspective, it also mandates civil interchange among all relevant stakeholders, including scientists representing divergent perspectives.

In a widely circulated e-mail, which I received second-hand several weeks in advance of the book’s publication, Chagnon notes that he is well aware of Tierney’s about-to-be-released book. He states that he is seeking legal counsel because of it. He adds that he has “innocently” been invited by human rights specialist Barbara Johnston to participate in a panel discussion on the El Dorado controversy at the upcoming (December, 2000) meeting of the American Anthropological Association. “I find her invitation deceptive and dishonest given that she was one of the primary recipients of [the initial “anthropologists alert”] document and that she is aware that she is inviting me to a feeding frenzy in which I am the bait.”

In an interview with Kate Wong for *Scientific American* (March 2001), Chagnon states: “If you read more than two pages of the [Tierney] book, you think I’m Josef Mengele” (p. 26). He goes on to assert: “Tierney is not a scientist. No serious scientist has ever doubted my data” (p. 28).

### **Scientific Debate and Systems Analysis**

In fact, a number of serious scientists have doubted his data sets, as well as doubted the ways in which he seemingly manipulated tribesmen and tribeswomen to obtain them. Rancorous exchanges sometimes have ensued. One example is seen in the work of Bruce Albert. Following findings published in his 1985 doctoral dissertation, he criticized (1989) certain of Chagnon’s data interpretations in a leading anthropological journal, *Current Anthropology*. Chagnon’s rebuttal was published in 1990. I consider it to be a slightly hyperbolic but well-written and thoughtful article, where he clarifies (again) how he had collected data on both Yanomami killers and victims. An important empirical point is made by Chagnon: “I do not intend my publications on the Yanomamö to be taken as representing the ‘standard’ or ‘typical’ characteristics of all Yanomamö, and I am very careful to specify the groups to which my reports refer” (1990, p. 51).

Hinted at by Tierney (e.g., Chapter 18, 2000a) are the systems implications of conducting research of this sort. Systemic disruption causes systemic (yet often non-systematic) responses. As Robert Jervis (1997) notes in his synthetic work on systems analysis, societal interconnectedness

results in many effects that are indirect, mediated, and delayed. This does not so much mean that such effects cannot be predicted, but rather that a panoply of options can emerge; multi-causality reigns. Those of us who have worked with tribal peoples in New Guinea and elsewhere would ask the following questions: Were the Yanomami Chagnon primarily studied (many of whom were relatively recent migrants to the banks of the Orinoco River) representative of the Yanomami as a whole? He claims not. Did a “Yanomami whole” ever exist? I would claim not, based on work conducted elsewhere. Did Chagnon and other outsiders exacerbate already-introduced disruptive influences? I would suggest yes, definitely.

Indirect and delayed systems effects can include intra-tribal movements, village factionalization, alterations in local eco-systems, and socio-political upheaval. These occurred in New Guinea among the Asmat people I worked with, and they occurred in the Venezuelan/Brazilian corridor, among the Yanomami with whom Chagnon and Neel worked.

## **Conclusions**

At the February, 2001, meeting of the Executive Board of the American Anthropological Association, a motion was passed to establish a task force “to conduct an inquiry on the allegations contained in *Darkness in El Dorado* by Patrick Tierney....The Task Force inquiry is intended to contribute to the [AAA] Committee on Ethics’ efforts to extend guidelines and create materials concerning field research conducted wherever anthropologists work.” Building on the findings of an earlier, preliminary task force chaired by eminent anthropologist James Peacock, where indeed the allegations made by Tierney were judged to have serious implications for anthropologists, I believe the broader mission of enhancing research ethics for fieldworkers is on-target. In constituting the new task force, the AAA’s long-term goal “is that anthropological practice be more likely, not only to produce valuable new knowledge, but to facilitate the improvement of the lives of those who, like the Yanomami, have graciously shared their knowledge and ways of life with us.” As the Executive Board suggests, the future of anthropology—and possibly other social sciences—is at stake (American Anthropological Association, 2001).

Questions not being addressed by this task force remain. Journalistically, how do we balance Darwinian and romantic notions (including those of “danger – adventure”), not to mention “pure science,” in some sort of textual mix that is accurate? How do the dramatically different elements of a tribal people’s lifeway come to be presented, and represented, to outsiders in book and video form? Biologically, how do we come to better understand patterns of human genetic variation—yet do so in ways that truly respect the privacy and rights of all individuals (see Olson, 2001)?

There is darkness in anthropology, but also light filtering through the rainforest. I had the privilege of witnessing a bit of this light, still blurred, among a small band of Korowai hunters in 1974. Patrick Tierney’s book serves notice that we all must be tremendously careful as we engage in field research, that human rights should never be violated, and that ethical considerations must remain paramount as research is planned and executed. To see his book as primarily an exposé of issues surrounding a measles epidemic would be to miss what I consider to be its main point. Similarly, to see it as primarily an exposé of the flaws and foibles of Napoleon Chagnon and James Neel also would be to miss its main point. This is a book about systems—human systems—and the

ways in which they act and react to externally induced (but internally reinforced) change. It also is a book about “the Other,” and in this case, “the Other” is us.

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