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A N T H R O P O L O G I C A L  
A S S O C I A T I O N

PAPERS OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION EL DORADO  
TASK FORCE

SUBMITTED AS A FINAL REPORT TO THE EXECUTIVE BOARD OF THE  
ASSOCIATION MAY 18, 2002

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\*NOTE: The dates are original dates of posting. Revisions were made in many documents through May 1, 2002. The dates prior to May 1 help to identify documents where the original versions were part of the Working Papers posted as a preliminary report.

## PART VII: References Cited

PART VIII: Appendix: Comments regarding the Working Papers of the El Dorado Task Force, submitted by anthropologists to the AAA web site February 10, 2002-April 19, 2002.

The Task Force includes here comments by anthropologists on the Working Papers that make a substantive contribution to issues within the scope of the charge to the Task Force. These comments are included here with the permission of the authors.

These comments were submitted before the completion of the final report, "Papers of the El Dorado Task Force." In some cases, issues raised in the comments are addressed in the final report. Note that the numbered sections of the working papers have been changed in the final report, but the documents still have similar (and in some cases the same) titles.

All comments submitted, in addition to those included here, can be found on the AAA web site. The Task Force thanks all those who have participated in the web site dialogue.

Readers who read the final report on the web site should seek the comments referenced below on the site, using the "Search Comments" button and searching by the last name of the author.

Bruce Albert , 2.3 Yanomami Names: "Comments on Napoleon Chagnon's methods of identification and name collecting among the Yanomami (03/10/02)

Bruce Albert, 2.2. Informed consent and the 1968 Neel Expedition": Yanomami Rights to Informed

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Manuela Carneiro da Cunha , General Comment (04/13/02)\*

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John Frechione, 2.1. The Measles Epidemic of 1968: "Interview with Dr. Brandon S. Centerwall" (04/19/02)

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Thomas Gregor , 3. Yanomami Statements "Comments on Yanomami Interviews and 'The Case for Collective Responsibility and Reparations'" (04/19/02)

Edward Hagen, General Comment (04/19/02)

Catherine Howard, 2.6 Allegations of Inappropriate Sexual Relationships: "The Sexual Life of Savants, or Putting Hill's Argument to Bed" (03/10/02)

William Irons, 3.3. Interview with Davi Kopenawa: "Comment on Chernela's Interview with Davi Kopenawa" (03/08/02)

William Irons, 4.1. Turner Point by Point (03/13/02)

Jean Jackson, 2.5 Engagement of Anthros in Public Dialogue (03/10/02)

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Barbara Rose Johnston , 4. Essays and Reflections: "Elements of the Professional Life of James V. Neel as Reflected in the Declassified Literature on Human Radiation Experimentation" (04/12/02)

Davi Kopenawa Yanomami, 3.3. Interview with Davi Kopenawa: "Davi Kopenawa Responds to William Irons" (04/15/02)

Lêda Martins. 2.2 Informed Consent and the 1968 Neel Expedition (03/21/02)

Leslie Sponsel, 1. Introduction (03/12/02)

Leslie Sponsel, 2.7 Warriors of the Amazon (04/12/02)

Leslie Sponsel, 2.6 Allegations of Inappropriate Sexual Relationships (4/17/02)

Leslie Sponsel, General Comment (4/19/02)

Terrence Turner, 4.1, Turner Point by Point: "Turner on Turner\* on Turner , Point by Point by Point" (Parts 1 and 2) (3/21/02)

Terence Turner, 2.1. The Measles Epidemic of 1968 (4/19/02)

Juan J. R. Villariás-Robles, General Comment (02/27/02)

\*Carneira da Cunha's comment was posted during the period for comment on the Working Papers, which did not include a section on "Representations and portrayals of the Yanomami that may have had a negative impact." That section is now included in the summary statement "Some major allegations against Napoleon Chagnon." However her comment complements the remarks made there.

PAPERS OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION EL DORADO  
TASK FORCE SUBMITTED AS A FINAL REPORT TO THE EXECUTIVE BOARD OF  
THE ASSOCIATION

**A Note on the Structure of the Report**

The report includes the following sections in two volumes. In Volume I, Part I, in addition to this overview note, there are:

- 1) A statement of the charge to the El Dorado Task Force
- 2) The Task Force's interpretation of the charge
- 3) Membership and procedures of the Task Force

In Volume I, Part II, we present three introductory statements under the collective authorship of the members of the Task Force.

In Volume II, we include the following sections:

Part III offers some background materials on

- 1) The role of the American Anthropological Association in issues related to the Yanomami
- 2) Background information on the Yanomami
- 3) Yanomami Updates

In Part IV, we present a set of interviews with and statements by Yanomami, collected, transcribed, and translated by Janet Chernela.

In Part V there are 10 case studies. The case studies vary in length and represent the results of research conducted into the issues indicated by members of the Task Force. Many of the case studies are individually authored by members of the Task Force, who have undertaken the research necessary to complete the case study. Where a case study has only one or two authors, other members felt that they simply did not have the expertise to either confirm or deny the results reported in the case study.

In Part VI, there are two reports and four essays. The Task Force decided to use this section to provide opportunities for members to advance minority opinions (especially in the essays) or develop details that are outside the main charge of the Task Force, but that became part of its deliberations (see the reports).

Part VII enumerates the references cited in Parts I-V.

A preliminary report under the title "Working Papers of the AAA El Dorado Task Force" was posted on the AAA Web Site from February 10 until the date of posting of the final report on May 1, with an invitation for comments open between February 10 and April 19. We incorporate as appendices, with the permission of their authors, comments by anthropologists that bore on issues within the scope of the charge of the task force. Many of these include useful citations of reference materials. These appendices will permit readers to have immediate access to important dimensions of the remarkable dialogue that took place during the period when comments were posted. All of the comments received will continue to be accessible on the AAA web site. Members of the Task Force thank all those who submitted comments. We assume that comments and discussion will continue. This "final" report is simply one contribution to an ongoing dialogue that the AAA will facilitate.

## PART III BACKGROUND DOCUMENTS

### **3.1. The Role of the American Anthropological Association in Advocacy for the Yanomami and Debates on Yanomami Anthropology** (Jane H. Hill)

We briefly review here the actions of the American Anthropological Association over the last 30 years or so in reference to concerns and debates about the situation of the Yanomami. This section does not address any allegations made in *Darkness in El Dorado*. Space limitations prohibit attention to the involvement of the Association in the situation of other Amazonian indigenous groups during this period.

Resolutions in support of the protection of Yanomami lands, reviewed below, were introduced from time to time at the Annual Meeting over a number of years, beginning in 1970. All these resolutions were passed, and appropriate communications made to governments and international agencies over the signature of the AAA President. A major AAA effort was the establishment and funding of a temporary commission, the AAA Yanomami Commission, which functioned during 1990-91.

#### *AAA Resolutions on the Yanomami*

Major AAA resolutions for which the Task Force has been able to identify texts include the following. The Report of the Special Commission to Investigate the Situation of the Brazilian Yanomami (AAA 1991) notes a resolution in 1978. We have not been able to retrieve its text but we believe that it was similar to the 1979 resolution. In 1979, Shelton Davis, Judith Shapiro, Louisa Stark, Kenneth Taylor, Charles Wagley, and Napoleon Chagnon co-sponsored a resolution to the Annual Meeting of the Association objecting to plans by the Brazilian government to fragment Yanoama [sic] lands, and in support of an initiative developed by Brazilian colleagues, the creation of a Yanoama [sic] Park “as defined by the Committee for the Creation of the Yanoama Park (CCPY)” (ANL 21:1(4)). At the same meeting Kenneth Taylor introduced a motion against a proposal to devolve guardianship and protection of Indians to individual Brazilian states and territories, and in support of the responsibility of the Brazilian federal government for Indian affairs. Both motions were passed, and the AAA delivered them to the Brazilian government and other appropriate recipients.

In 1980-81 the AAA co-signed with the Brazilian Anthropological Association a complaint to the Organization of American States against actions of the Brazilian government in regard to Yanomami lands.

In 1982 in Washington DC, Kenneth Taylor offered another motion condemning the interdiction of Yanomami lands in Brazil. The motion passed unanimously and was communicated to the government of Brazil.

In 1987, the Minutes of the Executive Committee Meeting of May 22-24 report that a letter was sent to the President of Brazil thanking him for signing a decree creating a *Parque Indigena Yanomami*.

#### *The Carneiro da Cunha Letter*

In 1989, the Association published in its *Newsletter* a letter from Maria Manuela Carneiro da Cunha, who wrote as immediate past President of the Brazilian

Anthropological Association (ABA). The letter was published under a note from the then Editor of *Anthropology Newsletter* that stated:

“The following letter from Maria Manuela Carneiro da Cunha [President of ABA at the time of the original posting of the letter in 1988] was addressed originally to the AAA Committee on Ethics. Subsequently, the president of the Brazilian Anthropological Association (ABA), Antonio Augusto Arantes, stating that Carneiro da Cunha’s letter “expresses the (Brazilian Anthropological) Association’s point of view about Prof. Chagnon’s (Science) article”... asked that the letter be published in AN. We herein publish the exchange between Carneiro da Cunha and Napoleon Chagnon (California-Santa Barbara), which will appear concurrently in Portuguese in the ABA’s bulletin. Ordinarily, AN Correspondence submissions are not to exceed 500 words. This exchange, between one of our own distinguished members and another national anthropological association, is extraordinary and an exception to the rule.”

Carneiro da Cunha (1989) cited the use in the Brazilian press of stereotypes of the Yanomami as “violent” and suggesting that these stereotypes played into the hands of enemies of the Yanomami. The editor of the *Anthropology Newsletter* solicited a reply by Chagnon, who wrote at similar length rejecting in strong terms the accusation that he was at fault.

#### *The AAA Yanomami Commission*

In August 1990, Judith Lisansky wrote Jane Buikstra and Annette Weiner, AAA President and President-Elect, calling their attention to the great threat to the Yanomami in Brazil. Lisansky suggested that “The AAA could join with ... Brazilian and international efforts by forming a special commission or temporary committee to investigate the situation of the Yanomami and add its voice to the international outcry.” Lisansky requested immediate action rather than any delay to wait for an Annual Meeting resolution. Buikstra recommended such a commission to the Board of Directors and Executive Committee of the Association. In 1990, the Board of Directors of the Association unanimously recommended the formation of an AAA Yanomami Commission (BOD 118.14 Fall 1990). By action of the Executive Committee at its Fall 1990 meeting, the AAA established a special Commission to Investigate the Situation of the Brazilian Yanomami. Terence Turner was appointed Chair, with members Bruce Albert, Jason Clay, Alcida Ramos, Stephan Schwartzman, Anthony Seeger, and consultants Claudia Andujar, Manuela Carneiro da Cunha, and Davi Kopenawa Yanomami (AAA 1991). Part of the AAA funding for the work of the Commission was a grant of \$1500 for Chairperson Turner to go to Brazil. In February and March 1991 Turner visited Boa Vista, capital of the state of Roraima, where most Brazilian Yanomami live, and consulted widely with government officials, missionaries, members of NGOs, and Davi Kopenawa (AAA 1991; Turner notes that the work cost him considerably more than \$1500 (Turner 2001a)). Turner met again with Davi Kopenawa in April 1991. The Commission produced a 23-page, single-spaced report.

While the work of the Commission was just beginning, the President of the Association, Jane Buikstra, on November 29, 1990, wrote President George H. W. Bush a letter regarding the situation of the Yanomami.

The Commission planned a publicity campaign to coincide with a state visit to Washington DC by Brazilian President Collor de Mello June 17-19, 1991. President Bush raised the matter of Yanomami lands with Collor during the state visit. Results of the Commission's activities included a two-part series on the Yanomami in the *Washington Post*, in which Commission member Steve Schwartzmann was quoted, and an op-ed piece by Commission Chairperson Turner (1991a) which was published in the *New York Times* and the *International Harold Tribune*. In addition, coverage of the Yanomami situation just before Collor's visit appeared in *In these Times* (Moberg 1991) and *Science* (Gibbons 1991). The Voice of America broadcast an interview with Turner on its "Report to the Americas," and National Public Radio in New York City also broadcast an interview. Turner (1991:1) commented in a memorandum to Commission members that "Ironically, this was virtually the only press coverage Collor, or Brazilian affairs more generally, received during his visit." Members of the Commission believe that this campaign had an impact on subsequent actions by Collor de Mello. Turner and Schwartzmann were attacked in an editorial in *O Estado de Sao Paulo* ("A Ecomentira") that coincided with Collor's return to Brazil. On July 12, 1991 the *International Harold Tribune* reported that "Mr. Collor sacked the head of the Brazilian Indian Bureau last month following criticism from Mr. George Bush, the US president, that he had failed to demarcate the territory of the Yanomani [sic] Indians." (Johnson and Fidler 1991; Turner 1991b). By July 14, Collor had installed a new FUNAI director "with instructions to demarcate the Yanomami reserve without delay, with the 1985 boundaries", and had released funds for expulsion of miners from the Yanomami area and for an antimalaria campaign (Turner memo to President and Executive Board, AAA, and Members and Consultants of Yanomami Commission, March 14, 1991). Correspondence between the AAA and the Brazilian government continued, and on January 9, 1991, President Collor wrote to AAA President Annette Weiner stating his commitment to a positive indigenist policy and requesting her views as to whether or not his initiatives had "fulfilled the expectations manifested in your previous correspondence." (Letter Collor to Weiner Brasilia January 9, 1991). Yanomami lands were demarcated and registered during 1992, within a year of Collor's state visit to the U.S.

The minutes of the meeting of the AAA Executive Committee for Spring 1991 (EXC 13.72) unanimously accepted the report of the Commission on the Yanomami and an amended public statement. The Executive Committee thanked Terry Turner for his efforts and dedication.

### *The Commission for Human Rights*

In 1992, partly as an outgrowth of the Commission on the Yanomami, and partly as the result of independent efforts beginning several years before, the AAA established a Commission for Human Rights. In his comment on the first draft of this section, posted March 12, 2002, Leslie Sponsel observed that human rights initiatives on the part of the Association date back to at least 1947. The Commission, led by its first chairperson, Leslie Sponsel, early involved itself in threats faced by the Yanomami, especially the Haximu Massacre of Aug. 15, 1993 (AAA Human Rights Commission Meets, 1993. Anthropology Newsletter November 1993:3,4; Turner 1993). Work of the Commission at that time included letters to government officials in Brazil and the US, the UN, and the OAS. Commission for Human Rights member Terry Turner published a *New York Times* op-ed article (August 26, 1993; this piece was followed by a *New York Times* editorial on Aug.

27, 1993), and was interviewed on CNN and the Brazilian television network GLOBO. The Commission for Human Rights also requested that all anthropologists send letters of concern to officials of the Brazilian and Venezuelan governments. AAA President Annette Weiner wrote the Brazilian Ambassador to the U.S. and the Brazilian Minister of Justice expressing the “outrage” of the Association at the Haximu massacre and calling for protection of the Yanomami. The AAA Department of Government Relations also conducted an extensive letter-writing campaign. The Commission for Human Rights has since become the permanent standing Committee for Human Rights of the AAA, and has continued to involve itself in issues involving threats to the human rights of indigenous populations in Latin America and elsewhere.

### *The Continuing Debate on Chagnon’s Work*

The AAA continued to receive communications regarding the work of Napoleon Chagnon. At the 1993 Annual Meeting, pamphlets and fliers incorporating texts (many with named authors) attacking Chagnon for alleged unethical practices were distributed by an anonymous hand. While no one has been willing to publicly claim responsibility for the distribution, Salamone (1997:17) states that

... it is beyond dispute that the Salesians carried a package of materials to the 1993 American Anthropological Association meetings in Washington, DC, leaving this package on a display table with no identification as to their origin. Unfortunately, the Salesians still do not understand the anger most anthropologists feel regarding the receipt of anonymous mailings and handouts.

During 1994 the AAA was asked to defend Chagnon against attacks (Letter by James P. Hurd to President, AAA, St. Paul, MN February 17, 1994). Jack Cornman, then Executive Director of the Association, reported to Jim Peacock, President, that the Commission on Human Rights had already declined to become involved in the matter because “From the Commission’s perspective, the Chagnon dispute was not about human rights.” Cornman suggested to Peacock that the AAA lacked the resources to do more than “deplore anonymous attacks on anyone” (Cornman, Memo to Peacock, Arlington, VA 94-04-03). However, during this period the *Anthropology Newsletter* published letters in defense of Chagnon and in response to the anonymously-distributed pamphlets (e.g. Wolf *AN* March 1994:2, Fox *AN* March 1994:2). The same year the *Anthropology Newsletter* published letters and commentary in opposition to Chagnon (Cappelletti *AN* May 1994:2; Turner *AN* May 1994) and by Chagnon (Chagnon and Brewer Carias “Response to Cappelletti and Turner”, *AN* September 1994:2).

At the 1994 meeting, a major session, chaired by Frank Salamone, met to consider scholarly debate around Chagnon’s work, and included comments by Chagnon himself, by Terry Turner, and by representatives of the Salesians, including Fa. Jose Bortoli, and of the New Tribes Missions (Gregory Sanford) (Salamone 1997).

On August 14, 1996, AAA President Yolanda Moses wrote a strongly worded letter to Brazilian President Fernando Henrique Cardoso, expressing the concern of the Association “about the failure of the Brazilian government to take action against the new invasion of Yanomami reserve by over 3,000 gold miners,” and insisting that the Brazilian Government release funds for a program, OperaHao Selva Livre, which had blocked entry of miners into the Yanomami lands. The letter was copied to the Minister of Justice and the President of FUNAI (*FundaHao Nacional do Indio*).

Most recently, in 2000 and 2001, the AAA established two successive task forces to evaluate the allegations against anthropologists and the implications for anthropology of Patrick Tierney's *Darkness in El Dorado*. As part of this work, AAA officers and members of the El Dorado Task Force have met with representatives of the Brazilian Anthropological Association and with representatives of the Venezuelan Commission on the Yanomami.

### *Criticisms of AAA Involvement*

It must be pointed out that, in spite of this record of activity, colleagues, especially in Brazil, who have been active on the front lines of advocacy for the Yanomami – to the extent of placing themselves in personal danger from opponents of Yanomami land rights -- believe that the AAA has been unresponsive to their concerns. Brazilian colleagues were distressed at what they regarded as a long delay in the publication of the Carneiro da Cunha letter, written in 1988 and published in 1989. A decision by the editor of the *Anthropology Newsletter* to end the debate after the exchange between Carneiro da Cunha and Chagnon meant that a request by Bruce Albert to reply to Chagnon's attack on himself and on Alcida Ramos (in Chagnon's reply to Carneiro da Cunha) was denied (although a letter by Richard Machalek (1989), in support of Chagnon, was admitted). Brazilian anthropologists were also offended that, having denied Albert the opportunity for a communication in 1989, the *AN* published letters by Eric Wolf (one of the directors of Chagnon's 1966 University of Michigan dissertation) and Robin Fox defending Chagnon in 1994. They are particularly disturbed that the *AN* approved language in the letter from Robin Fox (1994) that characterized Brazilian concern about the impact of Chagnon's work as motivated by "confused grievances". Members of the Task Force concur that it is regrettable that this language appeared in the *AN*. The delay in the publication of Carneiro da Cunha's letter, given the urgency of the situation of the Yanomami in 1988 and 1989, is also regrettable (we note that the delay may be partly due to the fact that the letter was addressed to the Committee on Ethics, not to the *AN* itself. Terence Turner (e-mail to Coronil November 13, 2001) recalls that the Committee on Ethics was at that time inactive. Furthermore, Turner recalls internal debate about the disposition of the letter, with then-President of the AAA Roy Rappaport arguing in an *AN* publication that the ABA's complaint was not really about an ethical matter. Members of the Task Force and AAA staff have searched for this statement by Rappaport and have not been able to find it).

It must also be noted that Napoleon Chagnon disapproves of the way that the AAA has handled attacks on him. He wrote (1994) that the AAA, its staff, its officers, and its journal editors were all hopelessly "political". Chagnon has written that he believes that he was treated unfairly by Don Brenneis, then editor of the *American Ethnologist*, when he was given only a very short time to reply to an article by Jacques Lizot such that his reply could appear in the same issue with Lizot's paper (Chagnon 1994, 1995). The Task Force notes that Brenneis was under no obligation to invite a reply from Chagnon, and issued the invitation as an act of scholarly courtesy.

One reason that there is dissatisfaction with the role of the Association is that many members have hoped that the AAA would censure individuals accused of unethical conduct. Such censure is not within the power of the Association, which is not a certifying body. Even during the period before 1992, when the Committee on Ethics from time to time received charges against members, the Committee was able to function only as a mediator. The Association, as a scholarly society, has attempted to provide a forum for

open exchange about the situation of the Yanomami, and continues to take seriously that responsibility. Reflecting on the handling of communications in the *Anthropology Newsletter* in the late 1980's and early 1990's, we believe that it would have been appropriate for the *AN* editor to receive all appropriate communications from international colleagues with expertise about the situation of the Yanomami. Communications from outside the U.S. should be treated with special attention, not only because international colleagues are often in possession of key information and ideas not accessible to U.S. anthropologists, but also because it is quite difficult for them to dispute from a distance what may be regarded as arbitrary bureaucratic decisions and policies. This is, of course, easier to do in an era of universal fax and e-mail than it was in the period between 1988 and 1994. We also believe that editors of all AAA publications must be especially careful to work with contributors to eliminate ad hominem or uncivil language, regardless of its target, in letters, articles, and reviews. In addition, we believe that the American Anthropological Association must work to build better communication with our sister associations in other countries.

#### *Acknowledgement*

In developing this review we used summary minutes of meetings of the Executive Board and Board of Directors, and materials that appeared in the *Anthropology Newsletter*. We also have materials from the work of the Special Commission to Investigate the Situation of the Brazilian Yanomami, which functioned in 1990-92. We are grateful to Bill Young, Stacy Lathrop, Peggy Overbey, and Kim Guthrie of the Association's staff for retrieving the relevant documents for us.

**3.2. Background on the Yanomami.** (Janet Chernela) (Jane Hill also contributed to this section. Ray Hames provided materials for this section, but did not participate in its final revision). The Yanomami Indians are located in the *municipio* (county) of Alto Orinoco, Amazonas, in southern Venezuela, and also in north-central Brazil in the states of Roraima and Amazonas. “Yanomami” is the usual representation of the name of the tribe in Venezuela and in Brazil. There are at least five major subgroups of the Yanomami (Yanomamö, Yanomam, Ninam, Sanumá, and Aica; see Map). There are also various regional communities within the linguistic groups. The Yanomami are semi-sedentary forest dwellers, inhabiting communal longhouses, known as *shabonos*, ranging in number of inhabitants from 30 to 350. Shabonos are in turn linked by kinship, alliance, and proximity.

The population of the entire group is uncertain; recent estimates range up to 27,000. The Venezuelan population in 1992 was reported as 15,193 in 150 villages (@-venezuela web site). The Brazilian population is approximately 11,000. There is a good deal of movement by Yanomami back and forth across the international boundary.

The Yanomami practice a number of low-impact subsistence activities, including hunting, gathering, and small-scale cultivation, mainly of plantains and root crops. About 70-75% of protein is acquired by hunting, fishing, and collection. In Brazil, recent policy is that bases occupied by health care workers and employees of FUNAI (*Funda~~H~~ão Nacional do Indio*) do not distribute food to the Yanomami. Hunting is still a primary source of meat for those Yanomami who do not live in areas that have been destroyed by goldmining. Because Yanomami resource use is extensive, rather than intensive, the natural regeneration dynamics of the forest is unimpeded, although there is much evidence that the Yanomami landscape is as “anthropogenic” as any other in the tropics (Smole 1976). The dramatic exceptions are the areas in Brazil that have been devastated by goldmining operations.

The Yanomami of Venezuela have had a long history of direct and indirect contact by outsiders (although they have been less strongly affected by outsiders, especially in recent years, than the Brazilian Yanomami). The first reports we have of the Yanomami come from the Bobadilla expedition of 1789 (de Civrieux 1970). Brief descriptions of the Yanomami by later explorers are found in Schomburgk (1840), von Humboldt (1967[1859]), Koch Grünberg (1965 [1917]) and Rice (1921). Smole (1976) argues that the Yanomami were probably directly and indirectly affected by slaving and rubber tapping incursions beginning in the late 1800s and early 1900s which decimated many of the riverine dwelling native peoples along the upper Orinoco and its major affluents. There is evidence to suggest that the Yanomami were able to avoid some of this catastrophic contact because they were remote interfluvial dwellers at the time. Ethnohistorical data suggests (Chagnon, 1997) that the Yanomami have been expanding into the riverine vacuum created by initial contact over the last eighty to ninety years. There was some short-term rubber tapping in the area in the 1930s. Sustained contact by outsiders probably began in the 1950s with James Barker’s entry into various places such as Ocamo, Platanal and Mavaca on the upper Orinoco. Barker was a New Tribes Missions linguist whose goal was to learn the Yanomami language, translate the Bible into the Yanomami language, and to assist in the creation of a string of New Tribes missions in the area. Soon after Barker arrived, the Catholic Salesian Order of missionaries arrived in the area and began to compete for Yanomami souls with the New Tribes Missions, often setting up their missions on the opposite side of the river where New Tribes missions were located. In the 1950s Otto

Zerries (1955, 1964) was the first ethnographer to work among the Yanomami (it should be noted however, that James Barker published scholarly ethnographic accounts of the Yanomami in major Venezuelan anthropological journals, e.g., Barker, 1953). In the 1960s a sustained era of ethnographic research was initiated by Napoleon Chagnon and Jacques Lizot.

Sporadic government presence in the area began in the late 1950s when malaria health services workers began to visit Yanomami villages along the upper Orinoco. Government presence became more sustained following growth of missionary work in the 1960s, leading to permanent installations along the upper Orinoco (at Tamatama, La Esmeralda, Ocamo, Mavaca, and Platanal and in the Parima highlands). Commercial penetration into the area has been sporadic. In the 1950s and 1960s occasionally petty traders would work their way into the area to trade with the neighboring Ye'kwana and Yanomami villages associated with Ye'kwana villages (Arvelo Jiménez, 1971). Very little exchange occurred between the Yanomamö and traders because the Yanomamö had little to offer. Today, commerce between outsiders is largely restricted to major mission and governmental sites and it is effectively regulated by *Guardia Nacional* units at La Esmeralda and elsewhere.

The current legal status of the Venezuelan Yanomami is as follows. In 1991, following upon recommendations made by an international conference on the Yanomami held in Caracas in December 1990, President Carlos Andres Pörez issued a decree (No. 1635) establishing the Reservo de Biosfera Yanomami/Parque Nacional Parima-Tapirapeco (PNPT). The Reservo de Biosfera is established under a UNESCO program for biosphere preserves and, at over 30,000 square miles, is slightly larger than the PNPT. The PNPT encompasses all of the lands used by the Yanomami during recent history (J. Cardozo, conversation with Hill, May 25, 2001). No more than 30-40 non-Yanomami live in the region (J. Cardozo, conversation with Hill, May 25, 2001). Within the PNPT the Yanomami possess *derecho de usufructo en perpetuidad* 'use rights in perpetuity'. They are the only indigenous group in Venezuela that has this level of land rights and land protection. However, they do not hold title to the land. They cannot dispose of it, nor can they sell the land or rights in it (such as mineral or timber concessions). Furthermore, their rights to development within the PNPT are constrained: they cannot use technologies or methods of exploitation (such as new types of fish poison or dynamite) that are not part of their customary techniques of exploitation as determined by the government at the time of the establishment of the PNPT. The use of firearms is apparently permitted. Arvelo Jiménez and Cousins (1992) suggest that there are many problems with the level of land protection afforded by the RBY/PNPT. In addition to the National Park and Biosphere Reserve and the State governments, the *municipio* of Alto Orinoco is designated as an indigenous municipio with representatives from Ye'kwana and Yanomami. The current *alcalde* is Jaime Turon, who is Ye'kwana. For early developments under the new land-protection and political regimes, see Caaballero Arias and Cardozo Hernandez (1995) and Börtoli (1995).

Since the first announcement of the publication of *Darkness in El Dorado*, the Venezuelan government has closed the RBY/PNPT to all but official government visitors (November 17, 2000, "Statement by the Office of Indigenous Affairs of Venezuela (DAI) Concerning the Allegations of the Book *Darkness in El Dorado*", 99th Annual Meeting of the American Anthropological Association, November 17, 2001).

In addition to their rights as users in perpetuity of the RBY/PNPT, the Yanomami have the status of *indigenas* under Title II, Chapter VIII, articles 119-126 of the Venezuelan Constitution of 1999 (revised and corrected 2000). These articles guarantee rights to language, culture, religion, social organization, political organization, economic practice, and land adequate to develop and guarantee their forms of life, with the state charged to use resources on indigenous lands without infringement on this guarantee. In addition, as indigenous people they are guaranteed rights to health care that takes into account their specific cultural needs, and to culturally appropriate bilingual education. Under Title II, Chapter VIII, by virtue of birth on Venezuelan soil or having a father or mother born on Venezuelan soil, the Yanomami, like all indigenous people, are full citizens with all of the rights of citizens specified in Title III and other sections of the Venezuelan constitution.

Beyond participation as citizens in all levels of political process, Yanomami representatives participate in organizations of indigenous peoples, including ORPIA (*Organizaci\nde Representativos de los Pueblos Indigenas de Amazonas*) and CONIVE (*Consejo Nacional de los Indios de Venezuela*). Many Yanomami are also organized through a trade and marketing cooperative, SUYAO (*Shaponos Unidos Yanomami de Alto Orinoco*), initially established with support from the Salesian Mission but now fully independent and run by Yanomami, who may solicit advice from the missionaries. A number of Yanomami have settled at the mission stations, where health care and education is available. There is now a small cadre of Yanomami who are literate and who even have advanced training in fields such as nursing. Some Yanomami are active in local and state-level politics beyond the indigenous organizations specifically.

In spite of constitutional guarantees in support of the well-being of the Yanomami, serious problems remain (see, for instance, Colchester and Watson 1995; U. S. Department of State, Venezuela Country Report on Human Rights Practices for 1998). Pursuant to a judgement of the Interamerican Court in 1996 that Venezuela failed to protect its Yanomami citizens against incursions from Brazil that led to the murder of at least 16 Yanomami at Haximu (Hashimo-teri, in Chagnon's spelling) on August 15, 1993), the Venezuelan government has agreed to provide health care to the Yanomami by funding new health posts in isolated regions, with the goal of providing access to basic health care to 80% of the Yanomami population. This plan is still under discussion and has not been implemented (J. Cardozo, conversation with Hill, May 25, 2001). Yanomami who live near the international border often cross into Brazil to seek health care at clinics there run by NGOs discussed below. Adequate access to health care is clearly a major concern for the Yanomami (Chernela, interviews with Davi Kopenawa and Jose Seripino; see also Chernela's Human Rights Update below). We note that the Venezuelan Constitution now specifies health as "a fundamental social right and obligation of the State, which will guarantee it as a part of the right to life." (Title III, Chapter V, Article 83). However, in 1995 Colchester and Watson observed that "Provisions of health care to the indigenous people of Venezuela is minimal, falling far below the standards of service provided to other citizens. The indigenous census of 1992 revealed that 86.8% of indigenous communities lack a dispensary" (Colchester and Watson 1995:7).

The approximately 11,000 Yanomami in Brazil live primarily in indigenous zones administered by FUNAI (*FundaHao Nacional do Indio*), primarily in the *Terra Indigena Yanomami* in the states of Roraima and Amazonas. This territory, established in 1992 by

the federal government of Brazil, comprises 9,664,975 ha, guaranteed in usufruct to the Yanomami. Under the Brazilian Constitution of 1988, revised in 1999, Indians are full citizens by virtue of birth on Brazilian soil or by virtue of having either a father or mother born in Brazil. Indians have certain special constitutional rights: They are permitted to use indigenous languages in public education (Title VIII, Chapter III, Section I, Article 210, Paragraph 2). The state is assigned special responsibility for protecting indigenous cultural expression (Title VIII, Chapter III, Section II, Article 215. Title VIII, Chapter VIII, *Dos Indios*, is devoted particularly to indigenous land rights; Indians are granted “originary rights” over their traditional territories, to which they have exclusive usufruct. At present, only the National Congress can authorize hydroelectric projects or mining on these territories. A special provision permits the removal of Indians from their territories, by act of the National Congress, in an emergency (the only case mentioned is that of epidemic), with immediate return guaranteed once the period of risk is over.

The zone inhabited by the Brazilian Yanomami is of strategic and geographic import, and the legitimacy of the demarcation of Yanomami lands specified in 1992 continues to be challenged by powerful interests including representatives in the state and federal governments. Yanomami territory is the site of the water divide between two major river systems, the Orinoco system to the north in Venezuela and the Rio Branco system to the southeast in Brazil. The area was relatively isolated until invasions in the 1980's by gold miners, which continue today.

From 1910 until 1970 contact between the Yanomami and national Brazilian society was intermittent or small-scale. However, a number of permanent posts were established in the region beginning in 1940 by mission orders and the *Serviço de Proteção aos Índios* (SPI), now known as FUNAI. As foci of manufactured goods and health care, these permanent centers served to stimulate processes of sedentarization among formerly nomadic peoples.

Large government projects reached the Brazilian Yanomami in 1971 (Ramos 1995) when the Plano de Integração Nacional (PIN) was instituted to integrate the northern frontiers into the ambit of commerce and modernity that characterized the Brazilian south. One component of this program was the Perimetral Norte (northern perimeter roadway), constructed between 1973 and 1976 through the southeastern sector of Yanomami territory. Much of the PN is now abandoned. However, some remnants continue in use and constitute a principal entry way into the Yanomami area for ranchers and other invaders. By 1981 colonization projects brought into the region settlers, sawmills, and goldminers. In addition to demographic losses due to diseases, the invasions brought social disintegration and environmental destruction. Colonization projects constitute an expanding frontier that, unless curbed, threatens the integrity of Yanomami society and territory (see Saffirio and Hames (1983) and Chermela (1988) on the impact of the northern perimeter roadway; Sponsel's comment of March 12, 2002 mentions additional references).

In the latter part of the 1970's newly available public satellite imagery called the attention of mining interests to the Parima Range. Within a few years, prospecting rights and mineral concessions covering every portion of Yanomami territory were officially registered with the national Mineral Production Department (DNPM). Until the present time, active mining and exploration has been blocked by regulations prohibiting mining in indigenous areas – although recently-proposed legislation threatens to remove these legislative obstacles. Small-scale “wildcat” mining, however, was well underway by the

mid-1980's. The progressive invasion of wildcat prospectors, the *garimpeiros*, was disastrous. In 1985 President Sarney, responding to pressure from the mining lobby, issued decrees reducing the area of demarcated Yanomami territory (see Chernela 2001). By 1987 a notorious "gold rush" was underway, with approximately 40,000 wildcat miners estimated to have entered Yanomami territory between 1987 and 1992. This is four times the population of Yanomami. The invasion brought violence, disease, social chaos, deforestation, and the pollution of land and water. Miners served as dispersal agents of contagious diseases such as measles, influenza, whooping cough, and venereal disease. Morbidity and mortality rates soared among the Yanomami.

Miners were concentrated in the riparian forests of the affluents of the Rio Branco. They entered the area by means of clandestine airstrips or along the water courses. With the demarcation and registration (*homologação*) of Yanomami lands in 1992, prospectors were removed by federal forces. Over one hundred clandestine airstrips created by miners in the Yanomami area were destroyed. Yet many prospectors remained. Among them were those on the upper reaches of the Rio Mucajai near the Venezuelan border in the vicinity of Haximu. In 1993, after the official removal of miners from the area, remaining illegal miners massacred seventeen Yanomami from Haximu, including children. Survivors of the massacre at Haximu fled in several directions, with a number finding refuge with relatives in the nearby villages of Totoobi and Homoxi. Two miners were found guilty on charges of genocide and sentenced accordingly. This judgement was challenged in July 2000 but was sustained in September 2000. Haximu is in Venezuela, and the Venezuelan government sent investigating commissions to the area. Venezuelan Yanomami accused the Venezuelan government in the Interamerican Court of failure to defend them against border incursions (the Venezuelan government has one small army post in the Parima region). The court ruled against Venezuela, and the Venezuelan government has been ordered by the court to compensate the Yanomami. The form of compensation is a plan for improved health care in the region (see above), that has yet to be implemented.

In spite of laws to the contrary, miners still carry out clandestine activities on Yanomami lands in Brazil. FUNAI openly recognizes the ongoing illegal presence of miners (personal communication to Chernela, July 2001), but is constrained by resource limitations. Miners therefore remain with impunity in the most remote regions.

Military bases provide additional problems. Although conscription among the Yanomami has stopped, complaints of sexual abuse near military facilities continue. More military bases are planned by the government but are opposed by the Yanomami, the CIR (*Conselho Indígena de Roraima*, an indigenous organization representing the Yanomami of Roraima), and advocates of indigenous rights.

Several NGOs, based in Boa Vista, carry out health and educational projects in the Brazilian Yanomami territory. In Venezuela medical care is available only at mission posts, so many border-region Venezuelan Yanomami cross the border for health care.

CCPY (*Comissão Pro-Yanomami*, originally "Committee for the Creation of the Yanomami Park"), an NGO formed in defense of Yanomami land rights in the 1980's, now carries out an educational project for bilingual literacy. It reports 91 literate Yanomami. CCPY develops pedagogical booklets or readers, written by Yanomami and edited and selected by anthropologists and pedagogues. The content of the readers is thus closely related to Yanomami knowledge and concerns, in contrast to the conventional materials used in state education programs. A contact for this program is Marcos Wesley de Oliveira,

Coordenador do Programa de Educação, Rua Pres. Costa e Silva 40-Sao Pedro, 69306-030 Boa Vista RR ([ccpyeduc@technet.com.br](mailto:ccpyeduc@technet.com.br))

URIHI, based on a Yanomami term glossed as “forest”, is an NGO that emerged from CCPY. The two have overlapping boards of directors that include the anthropologists Bruce Albert and Alcida Ramos. URIHI works with the Brazilian government to bring health care to the Yanomami. In April 2001 they held the first conference on Yanomami health in Boa Vista. Since URIHI began working among the Yanomami, infant mortality has dropped dramatically and malaria has been brought under control in a number of areas. However, problems of tuberculosis and other upper respiratory infections continue. Moreover, 100% of all Brazilian Yanomami tested positive for onchocerciasis (African River Blindness), and are undergoing regular treatments.

The work of these two NGOs, especially in health care, is exemplary, and provides a model for what might be accomplished in Venezuela.

In addition to references cited above, see also Chernela 1998, 2000, 2001, and Goodwin Gomez's "General Comment" of March 7, 2002.

In Venezuela, pro-Yanomami activity (other than specifically governmental and mission initiatives) has been conducted by a number of anthropologists. Work toward the creation of a Yanomami Reserve began in the early 1980's (Arvelo-Jiménez and Cousins 1992). An International Conference on Yanomami Habitat and Culture was sponsored by FUNVENA (Fundación Venezolana de Antropología) in December 1990 (*La Iglesia en Amazonas* 53 (June 1991) and 54-55 (November 1991)). Participants in the conference drafted a letter to then-President Carlos Andres Pérez recommending the creation of a national park; in June 1991 the president decreed the creation of the Parque Nacional Parima-Tapirapeco and the Reserva de Biosfera mentioned above, the former essentially matching the lands occupied by the Yanomami at the time; the lands demarcated matched plans prepared by a government center, SADA Amazonas, charged with "eco-development" (Arvelo-Jiménez and Cousins 1992). In the early 1990's FUNVENA sponsored workshops with Tim Asch to train Yanomami to use video. In the last few years their work has included surveys on women's and children's health (Cardozo and Caballero 1994), and the delivery of adult education to the Yanomami on a number of topics requested by them (Jesus Cardozo, conversation with Hill April 10, 2002).

### 3.3 Yanomami Updates

3.3 (1) Human Rights Issues Concerning the Yanomami in 2002. (Janet Chernela ([chernela@fiu.edu](mailto:chernela@fiu.edu))) (This two-part report also appears on the web site of the AAA Committee for Human Rights)

The Yanomami of Brazil: Human Rights Update

*Janet Chernela, Chair*

*Committee for Human Rights*

*American Anthropological Association*

#### LAND RIGHTS

The Yanomami Territory, created by the Brazilian state in 1992, is under a number of threats.

1. Since 1994 the agency charged with indigenous affairs in Brazil, known by the acronym FUNAI, has presented numerous claims of land invasion on behalf of the Yanomami in regional federal courts. Among these include approximately ten that demand the removal of colonists practicing ranching or agriculture within the reserve. Recently (June 1 & 2, 2001), 143 Yanomami representatives met in the village Yawaripe to discuss removal of ranchers along the margins of Brazil Road 210, also known as Perimetral Norte. According to reports by the state indigenous association CIR, (Council of Indigenous Peoples of Roraima), Yanomami arrived in war paint and armed with bows and arrows. A "confrontation" was "narrowly avoided," according to these reports, by the timely arrival of FUNAI representative Manuel Reginaldo Tavares. One participating Yanomami, Marino Yanomami, asked this rhetorical question: "Must we present official documentation of our complaints daily [before action is taken]?" The episode illustrates the transition in Yanomami strategies from civil action to performative measures, and evidences failures in the participatory political process, guaranteed to the Yanomami and all other indigenous peoples in the 1988 Brazilian constitution.
2. The Yanomami estimate approximately 2,000 wildcat gold prospectors illegally operating within their territories. FUNAI is aware of this, and, in media interviews, acknowledges the presence of "between 400 and 1000 illegal miners operating within Yanomami territories." These intruders have long been recognized as sources of disease and social destruction. In October of 2000, the deaths of four Yanomami and one miner were linked to clashes with miners. In response to that tragedy a petition to then-FUNAI President Glenio da Costa Alvares, and signed by 78 Yanomami, demanded the immediate removal of miners. FUNAI proposed a "Permanent Monitoring Plan" (Plano de Vigilância Permanente); this plan received the backing of CCPY (*Comissao Pro-Yanomami*), an advocacy NGO that has worked with the Yanomami for 25 years. Yanomami spokespersons to the media recalled the massacre of Haximu of 1993 and the importance of avoiding such disasters. Although FUNAI is the federal agency responsible for removal of these trespassers, to do so it requires resources from the federal government, as well as participation of the Minister of Justice and federal law enforcement agents (Policia Federal).
3. A strong mining lobby would pass legislation allowing for mining in indigenous territories; the Yanomami lands in the states of Roraima and Amazonas would be among those most affected. A powerful legislative proposal (Projeto Ley 1610/96), introduced by

Senator Romero Juca of the state of Roraima where the majority of Yanomami lands are located, is still under consideration. It has been approved by the Senate and received amendments in the House of Representatives. It must receive further approvals, including the Commission of the Environment and Minorities; if approved in these it would pass to the Commission of Constitutional Justice and then to the Congress.

4. Three military bases now exist inside the reserve, and others are planned. The Yanomami have formally registered, through FUNAI, the governmental body in charge of indian affairs, sexual abuses by army recruits against Yanomami women at Surucucu, a large military base with several resident shabonos. The United Nations has stipulated that national security does not justify a failure by states to guarantee the rights of indigenous peoples.

5. The position of the military regarding the reserve is ambiguous. In March of 2001, the Minister of Defense, Geraldo Quintao, called the demarcation of the reserve a "mistake." Although this was quickly corrected, much of the Yanomami reserve falls within the zone "Calha Norte," a strip that includes all lands 60 kms from the northern borders of Brazil; these lands are under military and national security jurisdiction.

6. A number of "conservation areas" exist inside the reserve. By law, units of conservation are under the protection of the national environmental agency, IBAMA, not the national bureau of Indian affairs, FUNAI. This, and the relaxed definition of one type of reserve (the FLONA, or National Forest), which allows for economic activities of all kinds, could threaten the integrity of the reserve. It is of concern, for example, that among the most vociferous supporters of the National Forest are lumber interests. Moreover, a National Park that also overlaps with the Yanomami reserve, carries with it the greatest amount of activity restrictions.

December, 2001.

### The Yanomami of Venezuela: Human Rights Update

1. This list of concerns is based upon interviews with Yanomami and with representatives of the Venezuelan government in attendance at the National Conference of Yanomami, held in the Yanomami village Shakita (Bisaasi-teri), Upper Rio Orinoco, November 20-23, 2001. The concerns refer to wording from the 1999 Venezuelan Constitution and this National Conference of Yanomami. The meeting was attended by 300-500 Yanomami (depending upon reporters' estimates and the fluidity in attendance) with 25 representatives from the Ministries of Health, Education, Environment, Indigenous Affairs (part of Educational Ministry), as well as high-ranking members of the legislature, the National Guard and the Army.

#### 2. INDIGENOUS RIGHTS AND THE NEW CONSTITUTION

In terms of indigenous rights, the new Venezuelan constitution, adopted in 1999 and revised and corrected in 2000, may be regarded as a model. It recognizes the Venezuelan state as having a pluralism of ethnicities and polities. According to Tit. III, Art 21, "All people are equal under the law" (this differs from constitutions elsewhere in Latin America). It guarantees the inalienable rights of indigenous peoples to their lands, their lifeways, self-governance, and political participation in every phase of civil life. It considers health to be a fundamental social right of all citizens, and the obligation of the

government to provide it. Suffrage is a right of all peoples, and is not contradictory to indigenous identity or communal land rights.

### 3. HEALTH CONDITIONS AND SERVICES

According to the constitution, health is a "fundamental social right; an obligation by the state to guarantee health as part of the right to life. All people have the right to health care and sanitation" (Tit. 3, Art 83). However, medical attention in the Yanomami area is minimal. Mortality figures for Yanomami in Venezuela are far higher than those for Yanomami in Brazil. There are fewer than ten health posts for a 30,000 square mile area in which Yanomami communities are dispersed. The health posts are understaffed with poorly trained personnel and high turnover; few health workers speak Yanomami. Venezuelan Yanomami near the Brazilian border cross it with frequency to obtain health care. This is a source of concern to the Venezuelan government.

### 4. POLITICAL PARTICIPATION

The Yanomami are guaranteed the right to vote by the constitution. However, in order to vote, a citizen must have an official identity card. Most Yanomami do not. The notable exception to this generality are the Yanomami who are allies of the mayor. In the absence of a neutral mechanism to register the Yanomami as citizens, the process of registration is in the hands of politicians whose interests it is to provide identification to supporters. Although Yanomami representatives and advocates petitioned DIEX (Dirección de Identificación de Extranjería) to provide itinerant boats with registration capabilities, the petition was rejected.

### 5. LAND TENURE

All indigenous peoples are guaranteed the right to demarcate their lands by September of 2002. The process of demarcation requires mapping of resident areas, use areas, ancestral areas, sacred areas, etc. It also requires a complete census of peoples claiming the identity "Yanomami." Neither mapping nor census activities have begun. The Biosphere Reserve of the Upper Orinoco is inhabited by indigenous groups of several ethnicities. These groups could find themselves in positions of vying for portions of the reserve. The neighboring Ye'kwana (Makiritare), whose numbers are lower than the Yanomami, have begun the demarcation process; it is possible that conflicts could arise.

A National Park, the Parque Nacional Parima-Tapirapoco, was established in 1991. The environmental category "National Park" carries with it the greatest amount of regulation. In Venezuela, for example, even extractive activities such as hunting are regulated. The park coincides with the distribution of Yanomami settlements. Human rights advocates of the Yanomami perceive Yanomami land rights as having precedent over environmental regulations. This is not the position of members of the Environmental Ministry who emphasize the prior existence of the park. One possible accommodation, recommended by one interviewee, is a redefinition of a national park, that would recognize the needs of the Yanomami.

December 12, 2001

### 3.3 (2) Translation Yanomami Bulletin #25 (4/3/02)

Janet Chernela

The following is a translation from the Portuguese of *Boletim Yanomami* nº 25, sent April 3, 2002 from the Comissão Pró-Yanomami.

Headlines:

Yanomami leaders and representatives of CCPY go to Cornell University, U.S., to participate in a seminar on ethics in research.

The Ministério Público investigates the issue of Yanomami blood samples. A formal request from the Attorney General's office has been sent to US researchers regarding blood collections made in 1967.

Body

Sub-head: Yanomami leaders and representatives of CCPY go to Cornell University, U.S., to participate in a seminar on ethics in research.

Yanomami leaders and representatives of CCPY go to Cornell University, U.S., to participate in a seminar on the controversy among scholars regarding ethics in research. Yanomami spokespersons Totô, from Toototobi (state of Amazonas, Brazil), Davi Kopenawa, from Demini (state of Amazonas, Brazil), José Serepino (from Mavaca, Venezuela), will make presentations. Jô Cardoso de Oliveira, Executive Secretary of CCPY (Comissão Pró-Yanomami) will also be present. The Seminar, organized by the anthropologist Terence Turner, is one more turn in the polemic generated by the denunciations of the North American journalist, Patrick Tierney, published in his book, *Darkness in El Dorado*, regarding the use of unethical research methods on the part of geneticist James Neel and anthropologist Napoleon Chagnon among the Yanomami. In 1967-68, Tierney alleges, these researchers collected innumerable blood samples in Yanomami villages in Venezuela and Brazil (including in the community belonging to the parents of Davi Kopenawa e Totô), through the distribution of large quantities of manufactured trade goods. The scandal caused by these accusations has mobilized sectors of the American academy concerned with questions of ethics in scientific research and the guarantee of the rights of indigenous peoples in the protection of their genetic patrimony. The allegations made by Tierney stimulated the formation of an inquiry into the [alleged] violations, by Neel and Chagnon, of the principles of informed consent in biomedical research that were in place beginning with the Nuremberg Code of 1947. In addition, information uncovered during this inquiry revealed that the blood samples collected by the Neel team among the Yanomami have been used recently for the extraction of genetic material (DNA) and continue to be used in new research, lacking, once again, the knowledgeable, informed consent of the Yanomami themselves. This seminar hopes to consider these themes among others. The Comissão Pró-Yanomami has previously taken opportunity to address aspects of this polemic (see *Boletim Yanomami* nº11, Documentos Yanomami nº2).

The participation of Davi, Totô, and the Comissão Pró-Yanomami is motivated by a concern for the application and current use of the blood samples collected by Neel and Chagnon. Responding to a desire by the Yanomami to take judicial measures regarding the unjust appropriation of these materials, the Comissão Pró-Yanomami located the whereabouts of at least a portion of the samples in question: these are deposited in the Departments of Anthropology of Pennsylvania State University and of the University of Michigan. The Comissão Pró-Yanomami is taking steps to bring this case to the attention of the Brazilian and American judicial systems. Sub-head: The Ministério Público investigates the issue of Yanomami blood samples. A formal request from the Attorney General's office has been sent to US researchers regarding blood collections made in 1967.

Body: In early March, the Subprocuradora-Geral da República (Assistant Attorney General), Ela Wiecko Volkmer de Castilho, sent official notice to researchers Andrew Merriwether and Kenneth Weiss, respectively, of the Universities of Michigan and Penn State, requesting informations regarding the existence of blood samples in these universities and other relevant information.

Trans., Janet Chernela, April 22, 2002

PART IV: YANOMAMI STATEMENTS (Collected, transcribed, and translated by Janet

Chernela) Note: Endnotes follow the entire section.

**4.1. Interview with Davi Kopenawa**

Interview with Davi Kopenawa, Boa Vista, June 10, 2000  
Video-recorded and translated by Janet Chernela

In June 2000 I interviewed Davi Kopenawa in conjunction with a project to restore Yanomami lands destroyed by goldminers. The interview precedes the release of Tierney's book and the creation of the Task Force. I include it here for its emphasis on health needs, including vaccinations. Items in brackets have been added by me.

DK: I am explaining [this] to you [pl.] so that you can believe it. You can understand the word of the Indian. The Indian is speaking here. I live with my people. I see that they are suffering.

I see that you [pl.] are destroying the environment.

Sickness continues killing my relatives but we receive some support from friends that provide health care. They are [doing what they can] to protect us. We want our government to notice us, to see us. The Indian is speaking, asking for help -- give us more support! Send us help -- personnel, doctors, nurses. Provide us with new, not old medicines! This is what we need.

JMC: What other needs do you have?

DK: Vaccinations. We need vaccinations to protect our blood, vaccinations against influenza. This is foremost.

JMC: Is a microscope program underway [in which you learn to identify diseases, such as malaria]?

DK: I will explain. People from URIHI [a health NGO] are working seriously. They are good friends. [Members of] URIHI are teaching Yanomami to read, to use microscopes to detect malaria. This is currently going on. I am happy. We need you to notice us, to help us more.

JMC: What took place during the meeting between Yanomami and health workers this month?

DK: We had a meeting of the Council of Yanomami Health Districts. This is important. We are learning from the whites. It is important to help us more with this. [We need] to recuperate. My people, the Yanomami, are ill. I hope this will work. I hope that we receive more support so that other villages can be included, and more young Yanomami can work with nurses as microscope technicians. This happened in a meeting.

JMC: And the agroforestry project?

DK: I think it will help. Because we are just beginning now. We didn't know or think about this before. We planted and waited to see if [a tree] bore fruit. We will wait and see. We hope to wait for help to have an expert who will teach us so that we can pass the skill on to our youth...we will teach our nephews....Because these fruit are important. Animals also eat them. Birds eat them. Monkeys. And these trees also are sources of beehives [and honey].

The Indian respects, and does not deforest the environment because the Yanomami is not an enemy of the forest. He is FOR the environment. We are the environment, of the environment. We are friends of the environment, the animals, the mountains, so we want to keep the whites from ruining our forests.

JMC: You spoke about plans for a Center of Information before...?

DK: I thought about this during my work. Napu [the white person] is civilization. Here in Boa Vista there are many people who don't know the Yanomami. They never saw a Yanomami, never saw our villages. So I was thinking [and talking this over] with anthropologists. Bruce [Albert] speaks our language. So we began there. And also, Claudia Andujar, who has worked very hard to defend our cause. So we are beginning. We want to open a house here, in Boa Vista.

JMC: In the city?

DK: Yes. The house would be for students in the city. Our children can make friendships with whites -- whites and Indians respecting one another. We would also bring our crafts to show our technical skills, such as arrows, baskets to carry firewood, and hand-held stone axes that we used to use. After we begin it will function as a museum, a museum to draw the attention of whites and their children here in Boa Vista who come to this Cultural Center. There we'll explain to the whites -- we'll speak with the whites, saying "You are the children of whites. Come to know us and our children! Look, speak with us, create friendships. You will see that an Indian is a human being, not a monkey, not an animal. Because they say the Indian is an animal. No. Indians know how to defend, protect, and to show respect. We can also demonstrate books made by our Yanomami teachers.

JMC: The readers?

DK: [No] These booklets would be for whites, to teach them to respect us. It's no longer just for the Yanomami to learn to protect ourselves. The museum would not be just for the Yanomami, but for the [neighboring indigenous groups] Makuxi and Wapixana as well. This is important.

JMC: Will you teach environmental knowledge?

DK: We would teach about the environment. If they want to see our lives, they have to see us in our villages. But here in Boa Vista we are [also] learning things, we are learning to

respect. We need a house here to teach the whites knowledge -- to know us, to respect the indigenous people of Roraima [state].

JMC: What exactly do you mean when you say "knowledge"?

DK: Knowledge is our language, our customs, traditions, curing rituals and our protective activities. They say Yanomami don't plant. But the Yanomami plant banana, sweet manioc, peach palm, sugar cane. What does the Yanomami eat, what he drinks? We'll show it all.

JMC: Does shamanism make use of plants?

DK: Shamanism uses the forces of nature. It protects people. But it's not only for the Yanomami -- it's also for the people of the city: the shaman keeps the planet from falling in on people. This is very dangerous. The danger is [literally] upon us. Only the shaman can keep this from happening. That's why we want to speak with the whites -- so they can better understand. That's why we leave our homes so we can learn more about how the white world works. How does it work? It has cars, it has medicines. There are many good things but there are also many bad things -- thieves, drunks, murderers -- people who want to kill Indians.

JMC: Will everyone benefit from the treatment of the shamans?

DK: Yes. A shaman protects everyone. He protects the villages in general. He doesn't allow diseases to come close. He obstructs any disease that comes from afar.

JMC: How does the shaman rely on the forest?

DK: The shaman uses Dekuana. It is the food of learning -- it's from a special tree. Omam created it. Omam created shamans to protect and defend people so we don't all die. When someone is sick, the shaman calls upon the forces of nature from the river, mountains sea, also the stars, moon and sun. The shaman has many forces -- thunder and lightning -- these are [some of the] many forces that the shaman has. This force is called utukala. Utukala exists to keep the sky from falling and to protect us from sickness, to keep illness away. So this is important.

JMC: Does the force come from the forest?

DK: The force of Oman. It is the power in the stone. You've seen a stone -- it has a lot of force, a spirit. So the shaman doesn't let disease kill all of us. It is important for us and for you also, you whites have to understand. We have to explain it slowly, because it's very complicated and difficult to explain certain things in Portuguese.

JMC: If you deforest, what happens?

DK: When you deforest the heat of the planet comes down. It gets very hot and it doesn't rain any more. Where there is no more forest, there is no rain. The water that falls below has to return. If you take away the forest, you get pollution... The earth is dry, it has no more water. In the treeless land people suffer. They need water. Because water is food. It is hard for you to learn but it is important for us to explain these things -- to protect the forest, the land. You have to treat it with care. You can't throw garbage everywhere! You can't spill oil all over the ground! You can't do this, no. Whew, whites are always studying; but what have they learned? Nothing! And for what? Just to destroy?! You have schools with educated teachers. We don't have schools. But we have "schooling" from the shamans. In the school of the shaman we learn to protect the environment. If it were all like this it would be wonderful. It's the shaman that is with us to keep the sky from falling on the ground, to keep it from falling on top of me and you all as well. It would fall on everyone! Many Indians have died. Many shaman have died, but some are still alive. I am worried. If all the Yanomami die, there will be a change in the weather, in the climate. There will be a huge noise --thunder, lightning, torrential rains, will come. Without Indians, the world cannot function. Without shamans, moon, stars, the earth will not function. Because the shaman keeps things working. So this is why we say -- take this information back to your authorities. Don't permit the mistreatment of the planet. Enough! You have to stop and think! Don't keep destroying, destroying, robbing, robbing, destroying, destroying! Leaving other people to take care of it -- there aren't any others that will protect this land -- just us. And, there isn't another one. The whites think that we want to take their land. No, it's the opposite. It's not true.

...Much of the land is dirty. We are sad to see the slums of Sao Paulo, many people living in hunger and squalor. I thought [government] authorities would have helped more! In these times, this world, there are no honest authorities to take care of the world, only corrupt ones -- they're selfish, taking everything for themselves, destroying merely for themselves. I feel sad.

JMC: Can the shamans help?

DK: The shamans are already helping. This is why we are alive, why we are working, we are happy. The village shaman helps. He is working out there. I am a student of a shaman of the same Omam. He is our chief, chief of all the land. Oman is called O. You whites say the world is round. Well, inside the sphere is where we live -- all of us. You, too, foreigners, Japanese, Indians, the forest, since the time of O. We are the people of Omam. He created all this. Without Omam there wouldn't be Indians. Because it is he who is protecting. My people survived many years without authorities, without a president. When the whites were far away we survived with the force of Omam. Because it is Omam that protects and makes people well when they are ill. Before, sickness was from the forest. But now it comes from the goldminers. Our shamans are burdened. So I ask you to speak to your leaders, your president...[Our politicians] want to destroy the Yanomami..to deforest the Amazon. They are allowing miners and large mining companies into Yanomami territory. I am very worried. We see it, and I am worried. I see planes.

Planes are flying over [our lands]. They say that the planes are authorized by the government. They say they are letting foreigners enter to mine here because [the president] Fernando Henrique doesn't have money to pay back the debt owed to other countries. So he is allowing mining companies to research the area in order to mine it later. He is authorizing fly-overs so that later they can mine the Yanomami area. We are opposed to this. If it [this effort] were to protect, we would be happy. They are always up to something. We are quiet, but they are always starting something. And we begin to struggle, and to die. This is my opinion.

JMC: What does the survival of the Yanomami have to do with the survival of the forest?

DK: They are interdependent. I am worried. Because the city of Boa Vista is growing, it's expanding toward the Yanomami lands -- and they are close; they are approaching the lands of the Makuxi. The congressmen, and senators don't care. There are laws but they aren't interested in them. The Yanomami want to preserve our forest, our environment, so that the indigenous people of Brazil can survive. The indigenous people with the shamans are trying to save the universe, the sky, to stop the pollution that destroys our health. Then we get weak, we get sick and die. Who keeps it going, won't [they] stop? It's the large factories that produce iron, steel, cans, plastic, these produce pollution. The politicians have the power -- they ally with them. So they need pollution because they have airplanes and motors to do anything. But this is harming our [own] defense.

JMC: In what way?

DK: The whites are always destroying our forest! The whites are always looking for wealth -- for precious stones, gold, cassiterite, and other minerals that are there. They can't stop because they are supported. They have money. They have many bosses, not just Fernando Henrique. Everyone has their boss, their chief. There's even a chief of the army, of the ranchers. So, we Indians are trying to [make him] understand. But he doesn't want to listen.

JMC: You mentioned yesterday places where the "land had died." What does that mean?

DK: Yes, it's true. I never saw [it], but I think so. Out there -- outside of our country -- there is no more forest. Only reddish grass. The land is burned. The heat of the planet is coming closer. It will happen here in Brazil; it is already happening. It will happen here, too.

The rain lives on top of us. Where rain doesn't live it doesn't rain -- because the rain has moved elsewhere. So if you plant there, nothing will grow. The land has no more force, no more fertility. No seed will grow. Water is important for any seed -- papaya, banana, cassava; it is the liquid of the earth.

Man doesn't know how to make water. I never made water. He who knows how to call the rain is the shaman. Omam orders. People ask rain to fall, it falls. Omam decides what is good for us. Water. So the world orders rain on the forest. The environment needs water. This is why it is raining. Where there is no rain, there is no forest because it is very hot.

JMC: Where you don't have forests you don't have rain?

DK: Yes. Because it is all hard, like stone. The land is all removed to make houses, bricks. You need many trees, tall stands of nut trees, to call the rain. Where there are no native trees....These native trees have force. Trees that are not native don't. There're just for shade. That's why I am trying to explain to you so that you will understand the indigenous word. You need to learn. The Indian isn't like a teacher. It's important. You need to hear the word of the Indian. The Indian isn't like a president, who promises, then lies. I am not promising. I am speaking the truth. I have knowledge: the knowledge from our ancestors. We, Yanomami, need to continue learning to protect our rights. We Yanomami cannot destroy our culture. The route of the white is theirs. That which you hear [from me] is for your friends. Friends that are good people -- that like animals, birds, sun, rain, light -- pass this information onto them. This way, sitting and speaking, calmly, exchanging ideas, this is the most important route for the people of the future. It's not just our future, it's yours, too. We all need to protect the forests. So the Yanomami needs to explain but Yanomami don't come here to the city. It's hard. This is why I don't usually come to the city. Our land is far more beautiful than is the land in the city. If I am in the city, what will I eat? Who will arrange work for me so that I can pay water? Lights? No one. I have friends, but they can't help me find a job. So I am there in my village. There I have everything. The environment is free. I just need tools to work. I like the city, but I can only stay a little while, to meet with friends, to talk, we talk about the entrance of miners, planes flying in search of gold. It makes me sad.

When they say the Yanomami are inventing Haximu, they are lying! I was there. I saw my relatives, dead. The whites killed children with machetes. He cut off his arm with the machete. The other one shot. It is serious. The authorities didn't resolve anything. These criminals are free. I think they have returned there. They aren't suffering. Who is suffering are their relatives. They are living near Haximu in Brazil. At least, the government says it's Brazil.

JMC: How many people died in Haximu?

DK: Sixteen people. Wait, twenty people. First, four Yanomami of Papiu, then sixteen of Haximu, so twenty.

JMC: How many children?

DK: Four small children. they couldn't run. The miner was working near the longhouse. [The massacre] wasn't motivated by food. The miner was near the house and the stream was full of gold so he wanted to kill all of them..where the village was. So note this, for other friends, who are not indians, friends now and in the future. Because our children will continue being your friends. We are not stone. We are frail. We live, work, and die. So this message is for those that are alive now and for those that live in the future. Our future...with you. The best route is friendship. Our children..it's that which is most important: friendship. White with Indian, respecting one another. This requires knowing, knowledge, so that friendship can grow and people don't forget.

## 4.2. Interview with Davi Kopenawa

Recorded in Demini, Parima Mountain Range, Brazil, June 7, 2001 by Janet Chernela

This interview was conducted June 7, 2001, in the Yanomami village of Demini, Parima Highlands, Brazil. It was my charge in the Task Force to contact Yanomami spokespersons. In this role, I requested a meeting with Davi Kopenawa, whom I had known, and who could be reached in his village by radio contact via CCPY intermediaries. Through these communication networks, I asked Davi whether he would be willing to grant an interview on behalf of the AAA. My visit to Demini was contingent upon Davi's acceptance of this proposal. In the course of the interview, Davi refers to and addresses the Association.

I invited Davi to participate in what I call "reciprocal" interviewing -- that is, he could interview me as I could interview him. You will see that he exercises his privilege toward the end of the interview.

Although Davi currently lives in Demini, he is from Toototobi, one of the sites where the Neel team collected samples. In the measles epidemic of 1967-8, Davi lost his mother and siblings. He and his older sister are the only remaining members of his immediate family. Although he was a child of 9 at the time, Davi recalls the collection of blood samples by the Neel research team. As you will see in the interview, Davi is not concerned with the whereabouts of his own blood, but the whereabouts of the blood of deceased relatives.

I was accompanied in this interview by Ari Weidenshadt of CCPY, who participated actively in the discussion. It may be relevant to this report that Ari is the former spouse of Lêda Martins, a contributor to the Borofsky Rounds, a close friend of Patrick Tierney, and a student of Terry Turner.

A number of anthropologists had discussed the Tierney book with Davi before my arrival. Among these were Bruce Albert, Leda Martins, and a young anthropologist whose name Davi could not recall. That anthropologist may have been Javier Carrera Rubio, a Venezuelan anthropologist who worked briefly for CCPY.

Davi and I spoke in Portuguese. The interview was recorded on audio and video-tape, and later translated from tapes into English. Paragraphs, titles, and bracketed comments were added. Since Portuguese is not first language to either of us, it is not clear that the word choices were ideal. In some cases I included Davi's choice of Portuguese term so that his intent could be reviewed with him in the future.

VIDEO: Formal Interview

Janet Interviews Davi:

Davi: An anthropologist entered Yanomami lands in Venezuela. Many people know about this. ...This book told stories about the Yanomami and it spread everywhere. So I remembered it when our friend [unnamed anthropologist] mentioned his name. When that young man spoke the name I remembered. We called him Waru. He was over there in Hasabuiteri... Shamatari...A few people -- Brazilian anthropologists -- are asking me what I think about this.

Anthropologists who enter the Yanomami area -- whether Brazil or Venezuela -- should speak with the people first to establish friendships; speak to the headman to ask for permissions; arrange money for flights. Because napë (the white) doesn't travel without money. Napë doesn't travel by land. Only by plane. It's very far. So he's very far away, this anthropologist who worked among the Shamatari. Those people are different. He arrived, like you, making conversation, taking photos, asking about what he saw. He arrived as a friend, without any fighting. But he had a secret. You can sleep in the shabono (longhouse), take photos, I'm not saying no. It's part of getting to know us.

But, later what happened was this. After one or two months he started to learn our language. Then he started to ask questions, "Where did we come from, who brought us here?" And the Yanomami answered, we are from right here! This is our land! This is where Omam placed us. This is our land. Then the anthropologist wanted to learn our language. I know a little Shamatari, but not much. So, he stayed there in the shabono, and he thought it was beautiful. He thanked the headman and he took some things with him. He brought pans, knives, machetes, axes. And so he arrived ready, ready to trick the Yanomami. This is how the story goes. I was small at the time...[pointing to a boy] like this..about nine. I remember. I remember when people from there came to our shabono. They said, "A white man is living there. He speaks our language, [he] brings presents (hammocks)." They said that he was good, he was generous. He paid people in trade when he took photos, when he made interviews, [or] wrote in Portuguese [likely Spanish], English, and Yanomami, and taperecording too. But he didn't say anything to me. [tape changes here]

An anthropologist should really help, as a friend. He shouldn't deceive. He should defend...defend him when he is sick, and defend the land as well...saying "You should not come here -- the Yanomami are sick." If a Yanomami gets a cold, he can die. But he didn't help with this. The first thing that interested him was our language. So today, we are hearing -- other Yanomami are talking about it -- people from Papiu, Piri, and here. People of Tootobi -- my brothers-in-law -- they also are talking about the American anthropologist who worked in Hasabuiteri.

He wrote a book. When people made a feast and afterward a fight happened, the anthropologist took a lot of photos and he also taped it (audio). This is how it began. The anthropologist began to lose his fear -- he became fearless. When he first arrived he was afraid. Then he developed courage. He wanted to show that he was brave. If the Yanomami could beat him, he could beat them. This is what the people in Tootobi told us. I am here in Watorei, but I am from Tootobi. I am here to help these people. So I knew him. He arrived speaking Yanomami. People thought he was Yanomami. There was also a missionary. He didn't help either. They were friends. That's how it was.

He accompanied the Yanomami in their feasts...taking [the hallucinogen] ebena, and after, at the end of the feast, the Yanomami fought. They beat on one another's chests with a stone, breaking the skin. This anthropologist took photos. And so he saved it, he "kept" the fight. So, after, when the fight was over, and the Yanomami lay down in their hammocks, in pain, the anthropologist recorded it all on paper. He noted it all on paper. He wrote what he saw, he wrote that the Yanomami fought. He thought it was war. This isn't war, no! But he wrote without asking the people in the community. You have to ask first. He should have asked, "Yanomami, why are you fighting? You are fighting, hitting your very brother." He should have helped us to stop fighting. But he didn't. He's no good. I will explain.

The napë [whites] think that every type of fighting is war. But there are three kinds of fighting [as follows].

Ha'ati kayu [titles were added later]. The chest fight to relieve anger ("briga de peito para passar raiva"). Let's say your relatives take a woman. So you get angry. The Yanomami talk and form a group to fight against the other group that took the woman. So they make a feast. They call him [the relative that took the woman.] They hold him and use this club [gesturing to indicate a length about a foot long] to hit him on the chest. This club [-striking] is not war. It's struggle ("luta"). So, let's say this guy took my woman. I become his enemy. So I hit him here [pointing to chest]. I want to cause him pain. He can hit me too. This club is not war. It's to get rid of a mess in the community. Then there's the headman. What does the headman do? He says, "OK, you have already fought. Now stop this." So they stop. This fight doesn't kill anyone.

Janet: what is this fight called?

Davi: Ha'ati kayu.

Xeyu. There's another kind of fight. Let's say I have a friend who speaks badly of me. He might say I'm a coward, or he might say I'm no good. So he has to fight my relatives, my family. I have ten brothers. So I can decide whether he's a man, whether he has courage. So we call friends from other shabonos and set a date. We go into the forest and make a small clearing for the fight, so people can see that we are angry. We take this weapon -- it's a long stick -- about 10 ms long. So everyone is there. I'm here, and the enemy is there. Everyone is ready to hit. When I hit the enemy he hits me as well. My brother hits his brother and his brother hits mine back. This is how we fight [two lines with people fighting in pairs].

J: How does it end?

D: When everyone is covered with blood -- heads bloodied, everyone beaten. So the headman says, 'OK, enough. We've already shed blood. So, it's over. This isn't war either, no.

J: What is it called?

D: Xeyu.

J: It's not war. But it includes one group lined up on one side, and another on the other -- yes?

D: Yes. One group of brothers or the members of a shabono in one line and the other brothers in another line.

D: Then there is another kind of fight with a club that's about a meter long -- Genei has one. Everyone gathers and stands in the center of the shabono. The enemy comes over. But

again the headman is there. He says, 'you can't hit here, you can't hit here [showing] -- you can only hit here -- in the middle of the head. It doesn't kill anyone.

Yaimu, Noataiyu, Nakayu, Wainakayu, Bulayu. But if you hit in the wrong place, he can die. So, if this happens, a brother will grab an arrow and go after the one who killed his brother. They will both die -- the first with club, the second with arrow. So, what happens? The relatives of the man killed with the club carry the body to the shabono. They take it there. They put it in the fire, burn it, gather the ashes and remaining bones and pound them into powder. They put the ash in a calabash bowl. His father, his mother, his brothers, all of his relatives sit there at the edge of the fire, crying. So the warrior thinks. If they have ten warriors, all angry, they are going to avenge the death. So the father may say, "Look, they killed my son with a club, not with arrow."\* He can stop the fighting right there and then. Or, he can say, "Now we will kill them with arrows." Then they would get all their relatives and friends from the shabono and nearby communities. They make a large feast, bringing everyone together. We call this Yaimu, Noataiyu, Nakayu, Wainakayu, Bulayu. Then they get beiju [manioc bread]; they offer food to everyone. Everyone is friends -- the enemies are way over there. Then they leave together. The women stay in the house, and the warriors leave to make war (os guerreros sai para guerrilhar). They cover themselves in black paint [using sorva mixed with charcoal]. This is war. This is war: Waihu, Ni'aiyu. Waihu, Ni'aiyu, Niaplayu, Niyu aiyu.

Then, at about nine or ten o'clock at night they start walking. These warriors are going to sleep at about 5 AM. In the forest they make a small lean-to of saplings. The next day they leave again. They are nearing the enemy. After tomorrow they are there. They don't arrive in the open -- they sneak up on the shabono. They move in closer about 3 or 4 in the morning. The enemies are sleeping in the shabono. The warriors arrive just as the sun is coming up. This is 'fighting with arrows' -- Waihu, Ni'aiyu, Niaplayu, Niyu aiyu. These are war -- war with arrows, to kill. He [the enemy] can be brother, cousin, uncle.

Janet: Is it vengeance?

Davi: It is vengeance.

Davi: So this Chagnon, he was there. He was accompanying. He took photographs, he recorded on tape, and he wrote on paper. He wrote down the day, the time, the name of the shabono, the name of the local descent group. He put down these names. But he didn't ask us. So we are angry. He worked. He said that the Yanomami are no good, that the Yanomami are ferocious. So this story, he made this story. He took it to the United States. He had a friend who published it. It was liked. His students thought that he was a courageous man, an honest man, with important experience.

Janet: What is the word for courageous?

Davi: Waiteri. He is waiteri because he was there. He is waiteri because he was giving orders. [INT] He ordered the Yanomami to fight among themselves. He paid with pans, machetes, knives, fishhooks.

Janet: Is this the truth or this is what is being said?

Davi: It's the truth.

Janet: He paid directly or indirectly?

Davi: No, he didn't pay directly. Only a small part. The life of the indian that dies is very expensive. But he paid little. He made them fight more to improve his work. The Yanomami didn't know his secret.

Janet: But why did he want to make the Yanomami fight?

Davi: To make his book. To make a story about fighting among the Yanomami. He shouldn't show the fights of the others. The Yanomami did not authorize this. He did it in the United States. He thought it would be important for him. He became famous. He is speaking badly about us. He is saying that the Yanomami are fierce, that they fight a lot, that they are no good. That the Yanomami fight over women.

Janet: It is not because of women.

Davi: It's not over women that we go to war.

Janet: It's not over women that one goes to war with arrows?

Davi: It's not over women that we go to war with arrows. It is because of male warriors that kill other male warriors.

Janet: to avenge the death?

Davi: to avenge.

Davi: So now I think that the Yanomami should no longer accept this. The Yanomami should not authorize every and all anthropologist who appears. Because these books already came out in public.

I ask if he has message.

Davi: I don't know the anthropologists of the United States. If they want to help, if ...you whites use the judicial process ..

Janet: Would you like to send a message to the American Anthropology Association?

Davi: I would like to speak to the young generation of anthropologists. Not to the old ones who have already studied and think in the old ways. I want to speak to the anthropologists who love nature, who like indigenous people -- who favor the planet earth and indigenous peoples. This I would like. This is new, clean, thinking. To write a new book that anyone would like, instead of speaking badly about indigenous peoples. There must be born a new anthropologist who is in favor of a new future. And the message I have for him is to work with great care. If a young anthropologist enters here in Brazil or Venezuela, he should work like a friend. Arrive here in the shabono. He should say, "I am an anthropologist; I would like to learn your language. After, I would like to teach you." Tell us something of the world of the whites. The world of the whites is not good. It is good, but it is not all good. There are good people and bad people. So, "I am an anthropologist here in the shabono, defending your rights and your land, your culture, your language, don't fight among yourselves, don't kill your own relatives."

We already have an enemy among us -- it is disease. This enemy kills indeed. It is disease that kills. We are all enemies of disease. So the anthropologist can bring good messages to the Indian. They can understand what we are doing, we can understand what they are doing. We can throw out ideas to defend the Yanomami, even by helping the Yanomami understand the ways of the whites to protect ourselves. They cannot speak bad of the Yanomami. They can say, "The Yanomami are there in the forest. Let's defend them. Let's not allow invasions. Let's not let them die of disease." But not to use the name of the Indian to gain money. The name of the Indian is more valuable than paper. The soul of the Indian that you capture in your image is more expensive than the camera with which you shoot it. You have to work calmly. You have to work the way nature works. You see how nature works. It rains a little. The rain stops. The world clears. This is how you have to work, you anthropologists of the United States.

I never studied anything. But I am a shaman, hekura. So I have a capacity to speak in Yanomami and to speak in Portuguese. But I can't remember all the Portuguese words.

Ari: You have to be clear, this is important.

Davi: To repeat, Chagnon is not a good friend of our relatives. He lived there, but he acted against other relatives. He had a lot of pans. I remember the pans. Our relatives brought them from there. They were big and they were shallow. He bought them in Venezuela. When he arrived [at the village], and called everyone together, he said, [Yanomami]... "That shabono, three or four shabonos," as if it were a ball game. "Whoever is the most courageous will earn more pans. If you kill ten more people I will pay more. If you kill only two, I will pay less." Because the pans came from there. They arrived at Wayufteri, Wayukupteri, and Tootobi. Our relatives came from Wayufteri and said, 'This Chagnon is very good. He gives us a lot of utensils.' He is giving us pans because we fight a lot.

Janet: They killed them and they died?

Davi: Yes. Because they used poison on the point of the arrow. This isn't good. This kills. Children cried; fathers, mothers, cried. Only Chagnon was happy. Because in his book he says we are fierce. We are garbage. The book says this; I saw it. I have the book. He earned a name there, Watupari. It means king vulture -- that eats decaying meat. We use this name for people who give a lot of orders. He smells the Indians and decides where he will land on the earth. He ordered the Yanomami to fight. He never spoke about what he was doing.

Davi: And, the blood. If he had been our friend he would not have helped the doctor of the United States. He would have said, you can go to the Yanomami. The Yanomami don't kill anyone -- only when you order them to. Chagnon brought the doctors there, he interpreted because the Yanomami don't speak English. When the doctor requested something he translated it. So when the doctor wanted to take blood, Chagnon translated it. But he didn't explain the secret. We didn't know either -- no one understood the purpose of giving blood; no one knew what the blood had inside it.

After, the missionaries who lived in Tootobi spoke to my uncle, my father-in-law. He said, "Look, this doctor would like to take your blood; will you permit it?" And the Yanomami said, "Yes." He agreed because he would receive pans -- pans, machetes.

Janet: But he didn't explain why?

Davi: The Yanomami was just supposed to give blood and stand around looking. He didn't talk about malaria, flu, tuberculosis, or dysentery. He said nothing about these things. But he took a lot of blood. He even took my blood. With a big bottle like this. He put the needle here [pressing the veins of his inner arm]; put it here, the rubber tube over here. He took a lot! I was about nine or ten. He arrived there in Tootobi with the doctor. Chagnon translated. The missionaries, Protestants, lived there in Tootobi. They camped there. They slept there. And they ordered us to call other relatives: there were three shabonos. They called everyone together. Husband, wife, and children, altogether. They always took the blood of one family together. They took my mother's blood. They took my uncle's blood. My father had already died. And me. And my sister. She remembers it too. It was a bottle -- a big one -- like this. He put a needle in your arm and the blood came out. He paid with matihitu -- machete, fishhooks, knives. The doctor asked him to speak for him. He translated. He would say, "Look, this doctor wants you to allow him to take your blood." And the Yanomami understood and allowed it. The missionaries who lived there hardly helped. They were mimahodi, innocents.

Janet: The law controls this now.

Davi: Nobody can do this anymore. So now we are asking about this blood that was taken from us without explanation, without saying anything, without the results. We want to know the findings. What did they find in the blood -- information regarding disease? What was good? Our relatives whose blood was taken are now dead. My mother is dead; our uncles, our relatives have died. But their blood is in the United States. But some relatives are still alive. Those survivors are wondering -- "What have the doctors that are studying our blood found? What do they think? Will they send us a message? Will they ask authorization to study and look at our blood?" I think that Yanomami blood is O positive. Is it useful in their bodies? If that's the case, and our blood is good for their bodies -- then they'll have to pay. If it helped cure a disease over there, then they should compensate us. If they don't want to pay, then they should consider returning our blood. To return our blood for our terahonomi. If he doesn't want to return anything, then lawyers will have to resolve the issue. I am trying to think of a word that whites do...sue. If he doesn't want to pay, then we should sue. If he doesn't want a suit, then he should pay. Whoever wants to use it, can use it. But they'll have to pay. It's not their blood. We're asking for our blood back. If they are going to use our blood then they have to pay us.

Janet: I don't know where it is. It may be in a university.

Davi: The blood of the Yanomami can't stay in the United States. It can't. It's not their blood.

Janet: So this is a request for those who have stored the blood?

Davi: I am speaking to them. You take this recording to them. You should explain this to them. You should ask them, "What do you napë think?" In those days no one knew anything. Even I didn't know anything. But now I am wanting to return to the issue. My mother gave blood. Now my mother is dead. Her blood is over there. Whatever is of the dead must be destroyed. Our custom is that when the Yanomami die, we destroy everything. To keep it, in a freezer, is not a good thing. He will get sick. He should return the Yanomami blood; if he doesn't, he [the doctor] and his children will become ill; they will suffer.

Janet: Were there repercussions in the area of medical services after this book came out?

Davi: No. FUNAI [Federal Brazilian Indian Agency] used to bring in vaccines. When they stopped the government health agency, FUNASA, took over. Now it's [the NGO] URIHI. They are itinerant and they bring vaccines to all the shabonos. They have ten posts in the region. Each post has an employee.

Janet: Are these services only on the Brazilian side of the border?

Davi: Only in Brazil.

Janet: Is that why Yanomami from Venezuela frequent the URIHI posts?

Davi: Yes. Here we have a chief. The president of Brazil. He is bad. But he is also good. He provides a little money for us to get medicines. He provides airplanes and nurses to bring vaccinations and treatments from Boa Vista all the way here. The Brazilian government is now helping -- somewhat. It's not very much, but it is something. We in Brazil are very concerned about our Venezuelan relatives. Because over there people are dying -- many people -- from malaria, flu.

Ari: I am referring to the epidemic of measles in 1968. I am asking Davi if this began before or after the arrival of Neel and Chagnon.

Davi: I think it began before their arrival. Many were dying. After they took blood, many died. So this missionary went to Manaus, Kitt. He went to Manaus and there his daughter

became ill with measles. She picked up measles in Manaus. At first they didn't know it was measles. They took a plane from Manaus to Boa Vista and from there to Totoobi. She arrived sick there, all three -- father, mother and child. Then they realized that it was measles. So they asked us to please stay away from them. He said, "If you get measles you will all die. Please stay far away." They had no vaccine in those days. A Yanomami entered to greet her and he ordered the Yanomami to leave. But he had already caught it. So then the missionary spoke to us all, saying, "Look, you can't come to our house because my daughter is ill with measles. Stay in your house." It didn't accomplish anything. The disease spread. It went to the shabono. Everyone began to get sick, and to die. Three [nearby] shabonos -- each of them with people ill and dying. My uncle was the first to die. Then my mother died. Another sister, uncle, cousin, nephew. Many died. I was very sick but I didn't die. I think Omam protected me to give this testimony. My sister and I remained.

Janet: Your uncle died, your nephew, your mother...

Davi: uncle, nephew, mother, relatives...So, later [when the road opened], we died also. This place was part of Catrimani. When the road [BR 210, Perimetral Norte] was open, there were MANY people here. Most died then of measles. Only a few survived [he recalls the names of the survivors] -- only ten men survived. I was here [working with FUNAI at the time], we brought vaccines for the measles epidemic then. These things happened in our land.

Ari: ...[Inaudible].

Davi: FUNAI didn't take care of us before the road opened.

Janet: What years are we discussing?

Davi: 1976, no 1975.

Ari: The road went from the Wai Wai to the mission at Catrimani.

Davi: They had roads BR 210-215.

Ari: After it was closed the forest reclaimed the road.

Janet: When was it closed?

Davi: After the invasion of the garimpeiros.

Janet: Did the garimpeiros come in this far by road?

Davi: Yes. We would try to stop them. I once got everyone together to go to the road with bows and arrows to block the entrance. I said, this isn't a place for miners. We won't allow it. I said if you want to mine, it had better be far from here, because if you stay here you will die here. Our warriors are angry. So they left. I invented all that so they would leave and they did. So they passed by. There were more than 150 -- more people than we had.

Janet: Is there a word for "guerrilhero" in Yanomami?

Davi: Yes, waiteri.

Janet: Waiteri means warrior.

Ari: ...[inaudible].

Davi: Yes; waiteri is courageous, brave. Those that aren't are horebu.

Janet: And that means..?

Davi: Scared, fearful, weak.

Janet: Do these concepts have power still today?

Davi: No. This fight isn't going on any more. But we are still waiteri. No one controls us. Here, we control ourselves. And there are some warriors. There's one over there in

Ananebu. A waiteri is there in Ananebu. In the forest. Here, at home [in THIS shabono], we are all cowards.

Davi Interviews Janet:

Davi: I want to ask you about these American anthropologists. Why are they fighting among themselves? Is it because of this book? Is this book bad? Did one anthropologist like it and another one say it's wrong?

Janet: First, in the culture of anthropologists there is a type of fighting. This fight comes out in the form of publications. One anthropologist says, 'things are like this,' the other one says, 'no, things are like this.' So, after Chagnon's book came out he received many criticisms from other anthropologists. Some said, this should not be called war. Just what you said. But Chagnon provided a definition of war and continued to use that word. This was one of the criticisms made by other anthropologists. After this there were others, and these debates went on in the publications and in conferences. In the year 1994 there was a conference in which anthropologists debated the anthropology of Chagnon and others among the Yanomami. In 1988-89, when there was a struggle over demarcation of Yanomami lands and the Brazilian government favored demarcation in island fragments, the anthropologists of Brazil criticized Chagnon's image of the Yanomami as "fierce," saying it served the interests of the military in limiting Yanomami land rights. At that time the American Anthropological Association did not have explicit ethical guidelines. At that point they formed a committee to develop guidelines for ethical fieldwork and a committee of human rights. Now, with the book by Tierney and the support of anthropologists who have had criticisms of Chagnon, the issue was brought before the Association. This raises questions about the ethical conduct of anthropologists.

Davi: But the anthropologists will resolve this problem?

Janet: They will demand that anthropologists conform to the norms of the newly revised ethics. They will explicitly clarify the obligations of the anthropologists.

Ari: In 1968 when Chagnon worked, there was no code of ethics of the Association.

Davi: What about the taking of blood?

Janet: Performing any experimentation has been controlled by the medical profession since 1971. It is now prohibited to involve people in experiments without their explicit authorization. They must be made completely aware of the advantages and disadvantages, and all purposes. They must decide whether they will agree or disagree to participate. Nowadays, this consent has to be in writing or taped.

Davi: This Yanomami blood is going to stay there? Or will they return the blood?

Janet: I don't know. It must be in a blood bank, perhaps at the University of Michigan [At the time of the interview, I had not yet corresponded with Weiss and Merriweather].

Ari: Chagnon [once] proposed an exchange between the Universidade Federal of Roraima and the University of California at Santa Barbara. He was proposing a collaboration in human genetics with a graduate student in biology. She worked with DNA. He invited her

there. Her name is Sylvana Fortes. She is now doing a doctorate at FIUCRUZ in Rio de Janeiro. Another issue in this dispute is Darwinian evolutionism. Is this the idea of the impact of the environment on man?

Davi: I don't like this, no. I don't like these anthropologists who use the name of the Yanomami on paper, in books. One doesn't like it. Another says its wrong. For us Yanomami, this isn't good. They are using our name as if we were children. The name Yanomami has to be respected. It's not like a ball to throw around, to play with, hitting from one side to another. The name Yanomami refers to the indigenous peoples of Brazil and Venezuela. It must be respected. This name is authority. It is an old name. It is an ancient name. These anthropologists are treating us like animals -- as they would fish or birds. Omam created us first. We call him Omam. He created earth, forest, trees, birds, river, this earth. We call him Omam. After him, he called us Yanomami [Yan-Omam-i?]. So it must be respected. No one uses it on paper to fight -- they have to respect it. It is our name and the name of our land. They should speak well of us. They should say, "These Yanomami were here first in Brazil and Venezuela." They should respect us! They should also say that we preserve our land. Yanomami know how to conserve, to care for their lands. Yanomami never destroyed the earth. I would like to read this. Speaking well of Omam, and of the Yanomami. This would be good. But if they are going to go on fighting like this -- I think that the head of the anthropologists has money ..

Ari: But Tierney's book, even as it criticizes Chagnon, has become a major seller. He is earning money selling his book because of the theme. ...

Janet: He is not the first to criticize.

Davi: Bruce Albert, Alcida Ramos are not Yanomami. You have to call the very Yanomami, to hear them speak. Look, Alcida speaks Sanuma. Chagnon speaks Shamatari. And Bruce speaks our language. So there are three anthropologists who can call three Yanomami to speak at this meeting. The anthropologists should ask us directly. The Yanomami can speak his own language. These anthropologists can translate. They have to hear our language. They have to hear us in our own language. What does the Yanomami think? What does the Yanomami think is beautiful? You have to ask the Yanomami themselves. These people are making money from the Yanomami name. Our name has value. They are playing with the name of an ancient people. I don't know alot about politics. But I see and hear that an anthropologist is becoming famous. Famous -- why? Some think its good. So he became famous, like a chief. So among them nothing will be resolved. One becomes famous, the other one [his critic] becomes famous, and they go on fighting among themselves and making money...

Janet: Did you know Tierney?

Davi: I met him in Boa Vista. I went to his house. He didn't say anything to me about what he was doing.

Davi: So, Chagnon made money using the name of the Yanomami. He sold his book. Lizot too.

I want to know how much they are making each month. How much does any anthropologist earn? And how much is Patrick making? Patrick must be happy. This is alot of money. They may be fighting but they are happy. They fight and this makes them happy. They make money and fight.

Janet: Yes; the anthropologists are fighting. Patrick is a journalist.

Davi: Patrick left the fight to the others! He can let the anthropologists fight with Chagnon, and he, Patrick, he's outside, he's free. He's just bringing in the money -- he must be laughing at the rest. Its like starting a fight among dogs. Then they fight, they bark and he's outside. He spoke bad of the anthropologist -- others start fighting, and he's gaining money! The name Yanomami is famous [and valuable] -- more famous than the name of any anthropologist. So he's earning money without sweating, without hurting his hands, without the heat of the sun. He's not suffering. He just sits and writes, this is great for him. He succeeded in writing a book that is bringing in money. Now he should share some of this money with the Yanomami. We Yanomami are here, suffering from malaria, flu, sick all the time. But he's there in good health -- just spending the money that he gained in the name of the Yanomami Indians.

Ari: One American had patented the name Yanomami on the internet.

Davi: She was using our name for the internet [site] or to write a book and earn 20,000 dollars. A Canadian working for CCPY discovered this. My friend explained that they are using the name of the Yanomami without requesting authorization. I said I didn't like it. So I sent her a letter. She was an American journalist. So she stopped. So I was able to salvage the name of the Yanomami. ... They have alot of names. They don't know the trunk and the roots of the Yanomami. They only know the name. But the trunk and the roots of the Yanomami, they don't know. They don't know where we were born, how we were born, who brought us here. Without knowing these things, no one can use the name.

I am speaking to the American Anthropology Association. They are trying to clean up this problem. They should bring three Yanomami to their meeting. There are three anthropologists who understand our three languages: Chagnon, Alcida, and Bruce. These anthropologists could translate. We could speak, and people could ask questions of us. I could go myself, but it would be best to have three from Venezuela, or four, perhaps one from Brazil. They need to see our faces. Alcida doesn't look like a Yanomami. Nor do Bruce or Chagnon. They don't have Yanomami faces. The Americans will believe [us] if they see us. I went to the United States during the fight against the goldminers. They believed me. For this reason, I say, it's important to go there and speak to them.

I ask for names of any advanced Yanomami students.

Davi: José Seripino is studying in the mission school at Mahikakoteri and speaks Spanish.

Davi: This is a fight between men who make money.

I ask what the appropriate form of compensation for an anthropology interview, and he says money. "That way he can buy what he wants -- pan, machete, axe, line, fishing hooks. It is good to speak to Yanomami. If you give money to the whites, they put it in their pocket. Napë loves money. It's for this reason that the nabu are fighting. Its not for him, for friends, its for money.

### 4.3. Presentation by José Seripino

Presentation by José Seripino,  
Jesus Ignacio Cardoso Hernandez  
George Washington University, Sept. 7, 2001<sup>1</sup>

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José Seripino is a Yanomami leader of Koparima village in the Upper Orinoco in Venezuela. Active in bilingual education efforts, he represents his village in SUYAO (Shabonos Unidos de los Yanomami del Alto Orinoco) and the Yanomami people in the Venezuelan National Indian Council, CONIVE. Recently he was appointed to the staff of the Governor of Amazonas state as Commissioner for the Upper Orinoco. Jesus Ignacio Cardozo Hernandez is head of the Venezuelan Commission to investigate the allegations of Darkness in El Dorado. He is also president of the Venezuelan Foundation for Anthropological Research (FUNVENA) and an adviser to SUYAO.

Sections shown in brackets were added.

Introduction by Jesus Ignacio:

Last year a book was published, *Darkness in Eldorado*. It created the biggest controversy among anthropologists and in the public in recent years. The allegations included scientists mistreating, bringing harm to the Yanomami, unparalleled in anthropology. One reaction was that Venezuela closed all indigenous territories even to Venezuelans. The Venezuelan government formed a Commission. The AAA set up a Task Force.

I am a member of the Venezuelan Commission. Its goals are 1) to establish the veracity of those allegations; 2) to advise on the current situation of the Yanomami; and 3) to make recommendations. We expect to have preliminary results by the beginning of November.

Allegations included provoking a measles epidemic, breaches of ethics by French and American anthropologists and British film crews. We have asked the Yanomami their point of view. Some of the situations are delicate. Ethical issues that are difficult to judge. What standards do we use? Were cultural traditions violated?

The Venezuelan Commission is made up of twenty people, including representatives from the foreign affairs and health ministries, as well as the Attorney General. We want to guarantee that this never happens again. I am not looking for guilt. But we think, "This should never happen again."

How? What steps to take? Here are some suggestions:

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<sup>1</sup>Presentation preceded panel, "Human Rights, Professional Ethics and Field Research on the Yanomami," Organizer L. Rabben, Discussant J. Chernela, Special Session of the LASA Task Force on Human Rights and Academic Freedom, XXIII International Congress of the Latin American Studies Association, Washington D.C., September 8, 2001.

1. Strengthen grassroots indigenous associations. Help these so that such levels of organization can ensure protections.

2. Voice of indigenous peoples must be heard directly and without intermediaries. Our work is opening channels so that their voices can be heard.

Requests to go in [to the Yanomami area] are very high. The territory is still closed; it is only opened for people on official [governmental] missions. We wanted the Yanomami to decide how and whether to open it. Ethics should be part of all research requirements in the future.

From November 7th to 10th<sup>i</sup> all Yanomami will meet. They initiated the idea -- a National Yanomami Conference. Never in the history of the Yanomami have all Yanomami met. This will be an historic event. In the census only half were reached. To bring together people from 200-300 communities is difficult. They will engage in dialogue with government representatives and NGOs and propose a model. The meeting will end with the signing of an agreement by the Yanomami, the environmental ministry, and the armed forces. The meeting will take place in Shakita, near the Mavaca Mission. Over 600 Yanomami and 150 non-Yanomami are expected including members of the Brazilian NGO, CCPY.<sup>ii</sup>

José Seripino Presentation (José speaks in Spanish, Jesus translates into English):

I greet you all. I give you a tender Yanomami greeting. I want to express something of my experience. What is your role in the US? I want to listen.

I represent the organization SUYAO (Shabonos Unidos de los Yanomami del Alto Orinoco, or United Yanomamo Shabonos of the Upper Rio Orinoco). I also work for the Governor of the State of Amazonas. I bring you the Governor's greetings.

I will speak of two issues. First, health. The Health ministry has many nurses in Yanomami villages. I am struggling for Yanomami health -- to solve the health problems of the Yanomami. What are the diseases that we have? Malaria, infant diarrhea, hepatitis, and respiratory infection. I spoke with Minister Bucaran, the Minister of Health. They are looking for ways to improve Yanomami Health.

[Jesus speaks to José (inaud)]

Now I will speak about the American anthropologist Chagnon. When they arrived we Yanomami [children] didn't know -- we didn't even understand Spanish at that time. I was in school. We didn't understand. But now we learned something and now we ask people who come to work with us.

We formed a school -- primary and secondary -- that's when we began to defend our communities. So now we know all the bad things that happened. What are the bad things that happened? Taking blood. Taking skin [gestures]. I saw this. I was only ten years old. I thought, "OK. This will help us. But what happened? We haven't seen the outcome. We were not consulted.

[Jesus' translation differs slightly: "I remember. I was 10. I remember the blood, the skin biopsies. We didn't realize why they were doing this. Now we ask. We thought they were going to help us. We thought that blood was to make medicine. But thirty years have gone by and we never learned what happened with those studies. We only know that they are here, in this country (the U.S)."]

So now there is an investigation. The missionaries didn't show us.

Jesus comments: "When he learned about the book, a friend of his invited Patrick to Venezuela and Patrick told him."

José: Then I knew. So I went to the Upper Orinoco. The founders (elders) are upset. I know a lot of people are saying it's not true but the founders of the villages -- they remember. And now that's why we don't want researchers any more. We can't. We are the owners of the land. It's up to us to decide. Regarding permits for foreign researchers -- the Office of Indigenous Affairs cannot give permits. Because although they may be the bosses in Caracas they are not the bosses of the Upper Orinoco. We are the owners of our land so we want to decide. We want them to ask us. There are many rumors. I would like you to hear from me directly.

#### Questions from the Floor

Q: The charge is that Chagnon's actions instigated the aggressive acts that he recorded -- to show what mankind was like -- part of our biology -- "the aggressive ape." But in almost every case the anthropologist turns out to have been the instigator.

Jesus: You put me in a spot. I am not able to make the findings of the Commission public. We find an imbalance of power. An anthropologist arrives with all this wealth in the context of a very vulnerable people.

To José in Spanish, "Waiterismo -- Chagnon showed the Yanomami fighting all the time? What do you want to say?"

José: It's not all the time that the Yanomami are angry.<sup>iii</sup> Sometimes not. It's not all the time. This is a lie that he invented in his book. If he treats the indian badly then the Yanomami could get angry.

Jesus translates: "It's not true that we're angry all the time. But if an anthropologist arrives and maltreats the Yanomami they could become waiteri<sup>iv</sup>."

Q: "This anthropologist leads a group to go and steal women. Do they see this anthropologist as having led these fights?"

Jesus' translates question to José: "One community has so much more and another community has nothing -- does this contribute to fighting? Did Chagnon use his own boat to bring people to war?"

José: In those days we didn't have our own motors and he came with all that material -- his research materials. The Yanomami needed these things -- we were getting them from creoles. So one community has them and another not. Then other communities will get mad.

Jesus' translation: There were so many things brought to the community and the Yanomami wanted them so much and he brought them to one village; this created tensions.

Jesus (in Spanish to José): Did Chagnon help the Yanomami fight?

José: Well, I don't remember.

Jesus (in English): Yes, he also got involved in fights. He would help one village attack another village.

José: He made people angry.

Jesus (in English): He said there was a disrespect shown to the Yanomami. He would run the Yanomami away from his house. It was mistreatment.

Q: Chagnon went back 2-5 years ago. Can you tell us about this?

José: He hasn't come to study other things. He works on how much blood is taken from indians; how much excrement taken from indians; how much urine. That's the only work that he has done...He comes without things so no one will accept him.

Jesus (in Spanish): This is from before -- he's asking about recently.

Jesus (in English): What happened was this. According to Venezuelan law, he needs local anthropologists to give him institutional support. Chagnon had support in 1968. But the welcome wore thin. Between 1974 and 1995 Chagnon was not allowed in. In 1995 he got an architect to put up a front, saying that he will write on Yanomami architecture. That was when he wrote the Science article. The School of Architecture [later] denied him the permit. He got involved with the mistress of the Venezuelan president. She made a foundation and they got together with Charles Brewer Carias, linked with Robert Friedland's Colorado River project on cyanide. So Chagnon returns with Brewer-Carias, and takes 200 Americans in. Tierney calls it "market exoticism." He wanted to create a private reserve. [The] the president was ousted. The interim president gave Chagnon permission to enter. Chagnon was ousted after 1993 when he tried to investigate the Haximu massacre. From 1993 until the present he has been unsuccessful in getting research permits. The last time was when he was involved with the mistress.

Linda Rabben, session organizer: "What do the Yanomami think Chagnon owes to them and do they want the samples? Do they want them back?"

Jesus (in Spanish): Should they destroy the blood? Burn it? Or pay? And how much? What would resolve the problem with the blood?

José: This is true. Chagnon should keep his promise. But he never kept his promise to the community. Shakita -- with the founder -- he worked with this man closely. Now -- he died three weeks ago -- he promised this person a motor and he disappeared without giving it. He never paid that debt... In communities further out -- he promised motors. I don't know when...

Jesus (Spanish): Sabelito's wife is waiting. She wonders when she will see her motor. What about the blood?

José: You can destroy it. But if you destroy it here, we won't know whether it will be all destroyed. You should send it all to us. We are talking about this.

Jesus: That blood has been given by some researchers to the human genome project. The Brazilian Yanomami are asking for their blood back. According to Yanomami culture, once someone dies, nothing of his can remain. So the idea that blood of people who died is still in use is disturbing. There are two alternatives -- either destroy it here or in Venezuela.

José: ONLY if it is impossible to send should it be destroyed here. It HAS to be destroyed! They are treating us like animals! We are human beings!

Jesus: There are new regulations and protections of indigenous peoples' rights over their body parts.

Jesus: José has met with the president of Venezuela. The book will be translated into Spanish and the Yanomami will be able to read it "for internal purposes only." Several Yanomami went to speak with Patrick. We [the Commission] have invited Tierney to return to Venezuela but he has refused.

Linda Rabben: It's wonderful to know that The Fierce People is not the only source of information on the Yanomami. Our purpose is not to hunt for Napoleon Chagnon's scalp. We are here to discuss issues of general concern.

Jesus: In September, when the galleys of the book were circulated, an unprecedented exchange of e-mails followed. I was acquainted with the information -- I was included in the galleys because I knew many of the people involved.

#### **4.4. Interview with Julio Wichato, José Antonio Kelly, and Guillermo Domingo Torres With Commentary by José Kelly**

Interview with Julio Wichato, José Antonio Kelly, and Guillermo Domínguez  
Torres

Nov. 24, 2001, Shakita, Upper Orinoco, Venezuela<sup>2</sup>

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chernela@fiu.edu

Julio Wichato is a Yanomami who has worked as a nurse with the Venezuelan health ministry for 18 years. He lives in Maikoto, vicinity of the large mission center, Platanal. I was accompanied in the interview by José Antonio Kelly, a Venezuelan anthropology student of Stephen Hugh-Jones who is completing an 18-month study of health care among the Venezuelan Yanomami. We talked about malaria tests, blood transfusions, and blood collection in Shakita because Chernela and Kelly thought that would shed light on what kinds of issues the Yanomami might have regarding the medical use of blood. Many Yanomami have also undergone blood transfusions in the hospital in Puerto Ayacucho (capital of Amazonas State) when severely anemic. Wichato's comments below seem to indicate that any aversion that could arise is at least balanced by a perceived health benefit. I sought out, first Kelly, and through him, Wichato, in order to obtain a knowledgeable opinion. I requested that Kelly introduce me to a Yanomami speaker who was unbiased, and familiar with the professional aspects of blood collection.

At the end of the interview we are joined by Guillermo Domínguez Torres, Coordinating Physician for the Orinoco District with the Ministry of Health.

The interviews were conducted in Spanish in the medical clinic at Shakita, Nov. 24, 2001. When he thought it necessary, Kelly translated or clarified a question in Yanomami. I begin with transcription in shorthand and later shift to tape.

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2

Addresses:

Julio Wichato, a/c Mission, Platanal

José Antonio Kelly (jak29@cam.ac.uk)

Transcribing with note pad (see ahead for taping):

Janet: Do you know a Yanomami who practices blood extraction [and transfusion] and who is not part of a faction who might be willing to be interviewed?

Kelly: I know two. One is Wichato, an older nurse from Platanal. [Note: Kelly (May 1, 2002) states that Yanomami health workers do not perform blood transfusions, which take place in the hospital in Puerto Ayacucho].

I ask to meet Wichato and we go to speak to him. The first part of the interview I note on paper in shorthand (it is the last evening of the meeting and all my audio tapes are used). When the interview seems important enough, I seek Fernando, who lends his video camera. It is night; we use the video camera for its audio recording capability.

From notes:

Wichato: I was young when Chagnon came. I barely remember.

Janet: What did you learn about this?

Wichato: I heard that he took all the blood.

Kelly: How much? A slide's worth?

Wichato: He used vials.

Kelly: What's the problem? You collect blood also -- do you not?

Wichato: The problem is that they studied it and didn't send us the results. If they help us it's different. Is this blood from a person or an animal?! [note similar phrasing by Kopenawa and Seripino]

Kelly: When people go to Ayacucho to get a blood transfusion what happens to the blood?

Wichato: I don't know. Maybe they save it.

Kelly: Do they send the results?

Wichato: No.

Kelly & Janet: And you don't object to that?

Wichato: No. But that is to help us.

Janet: What is your view of this case? What should be done? What do you think?

Wichato: They can never use this blood. They can never study it. They should send the results or destroy it or send it back. But they cannot study it. Never.

Janet: Did you know Patrick?

Wichato: No, but Alfredo did.

At this point I realize that the interview must be taped. Although we are out of audio tapes, we must find a way to tape the interview. We borrow a video camera from Fernando.

TAPING:

Janet: What is your name?

Wichato: Julio Wichato

Janet: And you are a nurse? From where?

Wichato: I am a nurse from Platanal.

Janet: How long have you worked as a nurse?

Wichato: Eighteen years.

Janet: Where were you born?

Wichato: I am not from there [Platanal]. I am from another community -- from Kuyuko Kayateri above Ocamo. My father liked fighting [peleando], fight, fight -- so when he got tired of fighting we settled over there when I was still young. Also, I didn't know my mother. So we went to Platanal.

Janet: When you say he got tired of "peleando" what do you mean? [The Spanish verb pelear can be used to indicate play or fight.]

Wichato: Fighting with clubs -- Xeu.

Janet: Do you remember the time when Chagnon was here?

Wichato: I was about ten or eleven.

Janet: So you never saw him?

Wichato: Yes, I saw him when I was eighteen. He contracted a plane to where he always went -- over there near the Rio Nuna in Torita. He contracted a helicopter. The pilot knew me and I had no way to get there. So he said, let's go. He took me [to the helicopter] and there was Chagnon. We got to Ocamo. He said he was tired. He took me to Siapa...we went...there was a VERY large shabono. "Let's go down here" [he said]. The helicopter was BIG -- it blew out houses within twenty meters! So people came out with bows and arrows to shoot the helicopter. Chagnon said to go back down. The pilot said no and went up again. Then Chagnon wanted to go back. ..he ruined the shabono...This is what he was like, Chagnon. He got fuel and we went again. There was Chagnon with his brother-in-law. I knon't know his name. They took me to Akirito to Platanal. They left me and went to Parima.

Janet: Did you know Patrick? Did you speak with him?

Wichato: No. But Alfredo knew him.

Janet: So you weren't there when they extracted the blood?

Wichato: No. They took blood over in Torito. Those people are here. [NOTE: Although they knew our mission, they didn't choose to speak to us.]

Kelly: Will they speak about this?

Wichato: Oh, they're angry.

Janet: How then did you learn about the taking of the blood?

Wichato: The communities from there told us -- we heard about it all the way in Platanal.

Janet: What did they say?

Wichato: That Chagnon took blood -- alot!

Kelly: Was this along time ago?

Wichato:...They say that Chagnon took blood. I heard this. The same day I think that Chagnon vaccinated these people to see if they would die. These people of Torita -- they say that Chagnon vaccinated them to see if the medicine worked or if it was poison. Then he would go. People started to die and Chagnon left. And they died -- all of them!

Janet: Alfredo says this?

Wichato: Yes.

Janet: The same Alfredo that knows Patrick?

Wichato: Yes, he knows him. This is how the story goes. This is what they say.

Kelly: The news from Torito, who told you?

Wichato: I heard all about it when Alfredo told it. Another time Chagnon arrived with the helicopter. Alfredo said you can visit the shabono, but not with the camera. Chagnon got angry. He said, "That was then; this is now." Chagnon got angry.. they arrived in Platanal [at the air strip] -- there was Chagnon with his brother-in-law. There was this old guy also. We don't want photos -- enough! If you have machetes [not quite audible??] take photos. If not, put away your camera.

Kelly: And he put his camera away?

Wichato: He put it away. He was mad.

Janet: What did the people of Torito say?

Wichato: They don't want Chagnon to return. They know him very well. If he goes back they will shoot him with arrows.

Janet: So no one knows the results [of the blood samples]. And they should? You said earlier they should have returned the results of the samples. You are a nurse. You understand these things; and for you the results are important.

Wichato: It's important that they send the results. They either return them or destroy them. We don't want them to continue studying our blood. [9:52]

Kelly: Why?

Wichato: Because they didn't send us the results. And even if they were to send the results now we would not want them to continue studying with this blood.

Janet: But now it is no longer Chagnon who is studying the blood.

Wichato: Who is it? Other whites?

Kelly: Other whites.

Wichato: Other napu took blood or Chagnon gave it? I ask you -- this blood -- how do they regard it?

Janet: They see it as a source of information about human beings and the differences between different populations -- groups of people. They are interested in investigatory questions about the health of humanity. [14:15]

Wichato: Does this blood run out or is it still frozen in freezers?

Janet: It's still frozen.

Wichato: Has it been frozen all this time?

Janet: Yes. It's in vials, with a couple of drops in each vial.

Wichato: Like slides? Hmmm.

Now Guillermo arrives. [12:12] [interruption....]

Janet: These are younger people -- the students of the first ones. The first died. Before he died he gave over his work -- all of it -- he left it to his students to continue working and studying. [12:49]

[Kelly repeats in Yanomami "to OTHER person -- NOT Chagnon"]

Kelly: Chagnon had worked for this doctor, and when the doctor died, he gave the samples to other students.

Wichato: Not to Chagnon?

Kelly: Not to Chagnon.

Wichato: So this white had the blood. And when the white died -- another white took it to study? [14:10]

Kelly: Yes, for scientific study.

Wichato: To study?

Kelly: Yes, and they keep it frozen.

Wichato: They take the blood, study it and return it to the frozen state? Do they leave it frozen?

Janet: The scientists stopped work and are waiting to hear whether they may continue working with the blood.

Wichato: No, they can't continue. We don't want it. If they still have blood, we don't want them to continue working with it. They can return it or destroy it.

Kelly: And the results?

Wichato: As I said --- it's the same -- whether they send the results or not -- they cannot study it anymore. They have to return it or destroy it. That's all! If they send the results we won't know whose blood belongs to whom anyway. [16:39]

Kelly: To whom do the results belong?

Wichato: Right. We don't want them to continue working with this blood.

Janet: You will continue working in Platanal as a nurse -- is that correct?

Wichato: Yes.

Janet: So they could be in contact with you. I thank you very much.

Guillermo: Regarding the question of the Yanomami and obtaining samples, I think it is best at this moment to only take samples when there is a specific problem to resolve. We call this "operational investigation" or "applied research." We are only [carrying out research that is related] to solving a current problem. If they will continue research and want to continue their presence it must be in order to solve problems, not to gather

knowledge about ethnicity. But there are times, as in the year 1996, when there was an epidemic and 15-20 died -- then it was necessary to draw blood to test for malaria, [inaud], and hemorrhagic viruses. This is justified. Also, in 1998 it was again justifiable to take samples. It is justifiable when it is used to solve a specific problem. When there is a special problem, they ask for help and they [the Yanomami] will give the authorization. This is different from when investigative researchers arrive with a large research project. If the Yanomami don't think it responds to a problem they have now and in the future, the Yanomami feel that they have been unjustly treated. They have been studied a lot, a lot of blood has been taken, but this hasn't resulted in improvements in their health conditions. There are books of information, registers of antibodies, genomic sequences.... But, in sum, there haven't been any direct repercussions [for them] of these studies, not in function of resolving problems. They feel that they want responses, to say epidemics -- prevention, application. I also think they want to restrict the extraction of blood to people of the Ministry of Health or others in which they have confidence. [20:50]

Janet: And if this experience were to be transformed into something positive -- what would that be? Could that happen? Let's imagine that they are not going to continue. If there is a way to transform this "flawed" experience into a good one -- what could be done? Could, for example, there be a transference of resources to assist in Yanomami health?

Guillermo: Yes. I think so. I suggest going through CAICET...because they have the most experience...and the Yanomami would be most directly affected by assistance that goes through CAICET.

#### **4.5. Presentation by Toto Yanomami**

**Toto Yanomami**  
**Leader, Yanomami community Toototobi, Brazil**  
**Presentation Cornell University, April 6, 2002**

Recorded by Janet Chernela

This presentation was made at the conference, "Tragedy in the Amazon: Yanomami Voices, Academic Controversy, and the Ethics of Research," Cornell University, April 6, 2002. It was delivered in Yanomami, then translated into Portuguese by Davi Kopenawa and into English by Gale Goodwin Gomez. This transcription represents my own translation from Mr. Kopenawa's Portuguese. Where it differs from that of Prof. Goodwin Gomez, who understands Yanomami, I indicate the alternate translation in brackets. I take full responsibility for any errors in translation. I thank the Latin American Studies Program of Cornell University for the opportunity to attend this conference. The Program should be contacted for information concerning the conference and its many important presentations between April 5 and 7, 2002.

#### **Introduction by Billie Jean Isbell, Director of Latin American Studies**

Toto Yanomami, approximately 60 years old, was born in the Toototobi region of the state of Amazonas in Brazil. He became headman of Toototobi [village] in the late 1980s and early 1990s, slowly replacing his elder father. The community under his father's leadership was one of the main sites where the research team headed by James Neel and Napoleon Chagnon collected blood. In April 2001 he acted as councilor and representative of the Yanomami communities of Toototobi, Patawaio, and Demini, at the Third Conference on Indigenous Health that took place in Boa Vista and Brasilia. Still in 2001 he was nominated Councilor to the Special Council of Yanomami Health Districts. He is regarded as an important shaman and powerful speaker. He will speak in Yanomami.

#### **Toto Yanomami**

Good morning, everyone. I am here for the first time. It was hard to get here, to this place. My own community, where I was born, is very far away. I am very pleased that you have invited us here to speak with you. You whites are our friends. We, also, are your friends.

I came to speak about our pressing concerns about what happened in our land. Whites arrived in our village and took our blood without our knowing anything. They didn't explain anything to us. This is why I am here speaking to you. I hope you will support and help the Yanomami.

This blood belonging to the Yanomami is here in this country. We met in our communal longhouse to talk about this. We thought that it had been thrown out. But it still exists. So I came here to find this blood and take it back.

You are anthropologists. You work! Some work well, others badly. You are here. I am going to ask you to explain to us -- where is our blood being kept? We want to know if it

is being kept in one place. We want you to explain where it is -- is it hidden? This blood is from Yanomami that have already died. Women and children have died. [G: The people the blood was taken from are dead now -- men, women, and children.] We are very concerned. We hope that you whites can help us resolve this situation to get this blood and take it back.

They collected these things: blood, urine [inaud], saliva, and feces. I want it to come back to the Yanomami. We Yanomami didn't know to complain. Now I am here. Now I want all that the whites took. I want all of it returned.

I am here to retrieve our customs that were taken with that blood. Our custom is different. Our language is different. In the time of [ inaud.]...Blood is important in shamanism [inaud]. All the blood of the Yanomami belongs to [the deity] Omami. So, I say to you -- speak on our behalf to retrieve this blood on this trip. We Yanomami don't forget [the dead]. Never! When Yanomami die, we cry. It is very sad. This blood is here! Those people have died! So we want to get the blood on this trip. I don't want to return empty handed. Yanomami never take blood to keep. Yanomami don't need to take blood to study and later keep in the refrigerator. It's for this reason that I am here speaking to you. The doctors have already examined this blood; they've already researched this blood. Doctors already took from this blood that which is good -- for their children, for the future. The leftover blood is kept hidden. So we want to take all of this Yanomami blood that's left over. So we can see it and later resolve to take it back with us to our land.

I am speaking here with you. I am not fighting with you -- no! I am speaking to you as a friend -- so that we are able to better understand. I am not calling you "bad." I am saying, calmly, that we want our blood back. This meeting is important for the Indian and for you as well. [G: I want to help you understand the issue and I want to understand your point of view.] These are my words.

I saw when I was young. I know the whiteman called Shaki. He spoke Yanomami. That's how he was able to trick us. He robbed our blood. When he took blood he gave us pans so that the Yanomami would keep quiet and not fight with anyone. So that's what happened. I don't want to speak overlong and bother you. [G: I am not here to get you upset and angry. But I'm here to talk about the blood problem.]

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<sup>i</sup>.These dates were later changed. The meeting was held November 22-24, 2001.

<sup>ii</sup>.In fact, Brazilian anthropologists were not invited. The only non-Venezuelans invited were Terence Turner and Janet Chernela. Chernela represented the US Anthropological Association along with Venezuelan citizen and University of Michigan anthropologist, Fernando Coronil.

<sup>iii</sup>.The Spanish term bravo, used by Seripino, glosses as angry or warlike.

<sup>iv</sup>.The Yanomami term Waiteri, much debated, may gloss as angry, warlike, fierce, brave, courageous, valiant. Waiterismo refers to the representation of the Yanomami as 'fierce.'

## PART V. CASE STUDIES

Note: Endnotes to all case studies are found after Case Study 5.10

### **5.1. The Measles Epidemic of 1968.** (Trudy Turner ([trudy@uwm.edu](mailto:trudy@uwm.edu)), Jane H. Hill ([jhill@u.arizona.edu](mailto:jhill@u.arizona.edu)))

Among the allegations made in *Darkness in El Dorado*, the one that received the most attention was Tierney's claim that research by the human geneticist James V. Neel in 1968 might have exacerbated the effects of a measles epidemic among the Yanomami. The Peacock Report and the charge from the AAA Executive Board to the El Dorado Task Force suggested that the Task Force consider these allegations.

This allegation was made only by Terence Turner and Leslie Sponsel in an e-mail message that rapidly became public (Turner<sup>v</sup> and Sponsel, Letter to Lamphere and Brenneis, August ? 2000) repeating a claim made in the galley proofs of *Darkness in El Dorado*, that Neel started the 1968 measles epidemic in order to test his hypothesis that headmen would show lower mortality than others in the Yanomami population. This claim does not appear in the published book. This allegation has also been reviewed by the American Society for Human Genetics (<http://www.journals.uchicago.edu/AJHG/journal/issues/v70n1/013452/013452.html>), posted electronically November 19, 2001 (also see *American J. Human Genetics* 70:1-10, 2002), the International Genetic Epidemiological Society ([www.genepi.org](http://www.genepi.org); Morton, 2001), the University of California, Santa Barbara ([www.anth.ucsb.edu/chagnon.html](http://www.anth.ucsb.edu/chagnon.html)), the University of Michigan ([www.umich.edu/~urel/darkness.html](http://www.umich.edu/~urel/darkness.html), local copy), The National Academy of Sciences (<http://www4.nationalacademies.org>), and the medical team of the Federal University of Rio de Janeiro (Lobo, et.al, 2000) among others. In addition, scientists involved with the development of measles vaccine, including Samuel Katz (<http://www.psych.ucsb.edu/research/cep/eldorado/katz>) have reviewed the allegation. All of these sources found that the allegation was completely without merit. The AAA El Dorado Task Force joins these other groups in finding this allegation to be without foundation.

Although this most serious allegation against Neel has been rejected, discussion of his role in the epidemic has continued since the publication of *Darkness in El Dorado*, principally through the commentary of Terence Turner. Turner has been a significant player in this issue and cannot be ignored. He and Leslie Sponsel issued the initial alert to our community of the allegations contained within *Darkness in El Dorado*. Turner has also attempted to materially evaluate Tierney's claims through research in the Neel archives housed at the American Philosophical Society, Philadelphia, PA, (and has kindly shared several manuscripts detailing the results of this work with the Task Force. These are referenced below).

Tierney's published book (2000) did maintain that the Edmonston B vaccine used by Neel was "one of the most primitive measles vaccine [sic]" (Tierney 2001:55), and was "dangerous" (Tierney 2001:56). Tierney suggested that Neel had chosen it because it "provided a model much closer to real measles than other, safer vaccines in the attempt to resolve the great genetic question of selective adaptation" (Tierney 2000:59). Turner (2001) and Stevens (2001) continued to develop this allegation that Neel's program of vaccination had an experimental as well as a humanitarian purpose: to permit Neel to document differential effects of the vaccination in an unvaccinated population. However, they believe that Neel abandoned this research goal once the vaccination program had to be

speeded up in the face of a spreading epidemic. Turner (2001) has also alleged that Neel was inappropriately committed to meeting the goals of his research program, over and above his concern for Yanomami well-being, and even considered dropping the vaccination program, which had taken up an unexpectedly large amount of time. Further, Turner believes that he gave insufficient attention to the health needs of vaccinated Yanomami, many of whom suffered flu-like reactions to the Edmondson B vaccine. Finally, Turner believes that Neel may not have been sufficiently careful with quarantine, given that his journals and autobiographical statements note that he had an upper respiratory infection while he was in the field. Turner concludes that Neel's priorities, with which he disagrees, were in a sense inherent in the kind of large-scale grant-funded scientific program represented by the 1968 expedition. We felt it necessary to address these recent allegations during our inquiry.<sup>vi</sup> (These points are also addressed in detail in the section of this report titled "Turner Point by Point" (6.1))

The major allegation made by Tierney (2000), that Edmonston B was chosen because of its experimental value, was downgraded by Turner to a claim that Neel chose this vaccine without regard for potential side effects. Terry Turner (2001b) states "Neel simply did not care enough about the more severe reactions to the Edmonston B...to forego the free donations of the vaccine from the manufacturer".

We will examine this question in addition to the following questions that remain about the conduct of the participants of the 1968 expedition:

1. The vaccination program was based on a scientific experiment and not on a humanitarian effort.
2. There was no consultation as to which vaccine to use or how to administer the vaccine
3. There was no permission from the Venezuelan government to vaccinate
4. Neel received 2000 doses of vaccine but only had 1000 in Venezuela. What happened to the other 1000 doses?
5. There was an experimental protocol to vaccinate half the inhabitants of the village
6. Neel waited in Caracas before entering the field when he knew an epidemic was in progress
7. Neel was in conflict because he was more interested in the science than in the humanitarian efforts to help the Yanomami
8. Neel had an upper respiratory infection when he entered the field, thus evidencing little concern for the health of the Yanomami.
9. Neel did not have informed consent for his collections..

1. The measles vaccination program was part of a scientific experiment and not a humanitarian effort.

.Blood samples taken during the 1966/67 field season were tested for antibodies to measles and other infectious diseases (Neel, et al., 1970). Neel begins discussing a vaccination program in 1967 in letters to missionaries. There is no mention in the correspondence, field diaries or grant proposals to the Atomic Energy Commission (Atomic Energy Commission AT(11-1)-405,1960 (Continuations 1961, 1962); AT(11-1)-942,1965; AT(11-1)-1552,1966; AT(11-1)-1552,1967; AT(11-1)-1552,1968; AT(11-1)-1552,1969; AT(11-1)-1552,1971; AT(11-1)-1552,1972; AT(11-1)-1552,1973) that there is any experimental protocol regarding the measles inoculations. The Brazilian medical team (Lobo et al. 2000) indicated in its report that an examination of the original grant proposals

would be needed to determine whether Neel had a research goal in mind when he vaccinated the Yanomami. We have examined these documents and find no mention of a research goal or protocol for the vaccination program. Indeed, it seems to be completely a humanitarian effort.

Some of the relevant documents in the Neel correspondence include the following. In March 10, 1967 Neel writes to Hawkins asking about inoculating for smallpox, tuberculosis and measles: Measles vaccination the most difficult because it must be kept frozen and the most expensive.

Neel's 15 September 1967 correspondence to Hingson is indicative of his understanding the importance of inoculating "virgin soil" populations: "We would welcome the opportunity to inoculate against [measles, smallpox, pertussis, tuberculosis] (assuming the Indians...would accept this)." He specifically addresses the notion of humanitarian concerns that are not in conflict with his scientific mission: "In addition to our scientific interests...we are impressed by the humanitarian opportunity here. As you must know, when a group such as this comes in contact with our culture, the decimation is fearful to behold."

A later letter from Neel (19 September 1967) to missionary Daniel Shaylor expresses the same concerns for the health of the Yanomami: "measles and whooping cough, not to mention smallpox and tuberculosis have not reached these Indians to any significant extent, and we are considering whether we could do some type of inoculation which would minimize the effects of these diseases when they finally do reach the Indian."

On November 21, 1967 Neel writes to Shaylor "Although our orientation is primarily research, we also are quite concerned with the humanitarian implications of extending proper medical services to the Indian, and would try very hard to lay a vaccination program onto our medical studies." Upon his return from the 1968 expedition Neel continued to solicit additional vaccine and MIG.

## 2. There was no consultation on which vaccine to administer.

As soon as Neel realized that measles was an imminent threat to the population he actively sought donations of measles vaccine. After his return from the field, he continued to try to get additional donations of vaccine. In April, 1968 Neel states that the CDC told him which companies to approach.

On April 22, 1968 Neel writes to Roche "Following receipt of your phone call, I contacted our Communicable Disease Center in Atlanta, Georgia, who suggested that I turn to Merck, Sharpe and Dohme, and to Philips Roxanne." This suggests that Neel consulted with them before the 1968 expedition about the type of vaccine to administer.

In addition, Neel attended a meeting at the CDC before he left for the field in November, 1967. Lindee (2001) indicates that he discussed vaccines and the vaccination process with them. He received gamma globulin from Parke Davis to administer with the measles vaccine to reduce side effects.

There have been numerous responses from epidemiologists and measles experts that Edmonston B was in use during the time period and was a reasonable choice (see ASHG, IGES, NAS, Katz references cited previously). Both Francis Black, an epidemiologist consulted by Neel, and Ryk Ward, a biological anthropologist on the expedition, remember discussion concerning the choice of vaccine. Edmonston B was chosen because it conferred longer-term immunity. In addition, in April of 1968, Merck -- the manufacturer

of the Schwarz vaccine -- appeared to be in a contractual agreement with the Venezuelan government and did not want to jeopardize this with a donation to Neel.

It should be noted that Neel had very little time to arrange for a large donation of vaccine. Shaylor wrote to Neel late in November about a measles outbreak. Neel was leaving for the field early in January. Also, there was no money for the purchase of the expensive measles vaccines and Neel was dependent on donations.

On November 28, 1967 Shaylor wrote to Neel: Measles has reached Guaira Indians in Brazil and are preparing for the worst.

It probably took at least a week for Neel to receive this.

On December 11, 1967 Shaylor wrote to Neel: Reports of measles coming down the Orinoco from Brazil

After receiving the information from Shaylor Neel contacted several pharmaceutical manufacturers and got 2000 donated doses (received on December 19, 1967) of Edmonston B vaccine.

3. There was no permission from the Venezuelan government to vaccinate.

On December 11, 1967 Neel wrote to Miguel Layrisse, a human geneticist at the Venezuelan Institute for Scientific Investigations (IVIC):

“I believe I can obtain about 2000 immunizing doses of vaccine free. CAN YOU OBTAIN PERMISSION FROM THE VENEZUELAN GOVERNMENT FOR US TO VACCINATE ALL THE INDIANS WE COME IN CONTACT WITH?”

There is an undated hand-written note that corresponds to this letter from Layrisse. It states in language that mimics the Neel letter:

“Agree bring 2000 immunizing doses measles vaccine”

This is not to be confused with the dated permission from Marcel Roche (another IVIC scientist) in 1968 concerning an additional donation of vaccine.

The Neel papers have frequent hand-written notes that appear to be confirmations of cables received.

4. Neel received 2000 doses of vaccine. He brought 1000 into Venezuela. What happened to the other 1000 doses

On January 11, 1968 Neel left 1000 doses in New York City and seconded Ryk Ward to carry them to Georgetown, Guyana, where Ward delivered them to the offices of the Pan American Health Organization. The PAHO transferred them to a representative of the Unevangelized Fields Missions (UFM) to be carried to Boa Vista and the Yanamomi there. This is confirmed in two places; by a letter from Napoleon Chagnon to Dan Shaylor (December 20, 1967) saying they would be dropping 1000 doses off in Georgetown and by an entry in Neel's field diary. 1000 doses were carried by Neel into Venezuela.

This is not to be confused with the April 26, 1968 correspondence (Neel to Philips Roxanne Corporation) which discusses sending another 2000 doses to Venezuela. These doses are the ones that are about to expire and the company suggests doubling the dose, thereby effectively leaving Neel with only 1000 vaccinations (April 22, 1968 Neel to Roche).

5. There was an experimental protocol to vaccinate half the villages.

This idea originates with the January 9 letter from Willard Centerwall (one of the physicians who accompanied the 1968 expedition) purportedly accompanying the 1000 doses of vaccine given to the UFM missionaries. The major points of the protocol are:

1. Avoid vaccinating infants, especially under one year of age, tuberculosis patients, acutely ill people, and persons who are old and/or infirm.
2. Vaccinate only half of the able-bodied village population at one time so the unvaccinated individuals will be able to care for the needs of the vaccinated ones.
3. Vaccinate populations which can be observed during the resting period (8-12 days post vaccination) so that any high fevers can be treated with aspirin and fluids and any bacterial complications can be treated with antibiotics or sulfa drugs.
4. Alert the people being vaccinated that they may feel a bit ill from the vaccination, but not as badly as the disease from which they are being protected.

This is not a research or experimental protocol, but a specific protocol for vaccinating in the field. There is a written addendum at the bottom of the page- if possible compare the reactions of the two makers of the vaccine-canine kidney or egg culture. This is a procedural reporting of information.

Both manufacturers of measles vaccine recommended the administration of 0.01cc/lb of body weight of measles immune globulin (MIG) to reduce the effects of the measles vaccine. The maximum dose stated is 0.5cc per individual. This dosage is based on trials with children up to a maximum weight of 50 lbs. There had been no studies of the mediating effects of MIG in adults, since adults had either been vaccinated as children or had had measles and were immune. Neel was sent 1000 doses of MIG which translated into 500cc of material. Centerwall noted in the January 10 letter to Francis Black, Associate Professor, Department of Epidemiology and Public Health, New Haven, CT, that this dosage would not be adequate to attend to the needs of adult Yanomami who weighed more than 50 lbs. His letter states:

We have been able to look up most of the references relative to this and find as you suspected no support for 0.5cc of gamma globulin being adequate for measles vaccine modification for average adults. It would appear that the 0.01 cc per pound of body weight or 0.5 cc per individual statement refers mainly to children although it is not so stated and is thus ambiguous. We plan to avoid vaccinating the very young, the old and the acutely ill and will graduate our dosages as best we can on the remainder covering half villages at a time and following with aspirin where possible and when needed.

This implies that in the days before they left for the field they realized they did not have adequate supplies of gamma globulin and decided to do the best they could.

There is no evidence in the field notes that the team followed the half village procedure. In fact, once the epidemic arrived, the field team vaccinated everyone in the villages. The field notes also indicate that the vaccine was given with gamma globulin everywhere but at Ocamo.

6. Neel waited in Caracas for two weeks before entering the field.

Neel's field notes indicate that they spent time in Caracas waiting for transport to the field. They also document his frustration with not being able to get to the field sooner. Neel divided the group into two teams initially heading to separate locations. As they left Caracas, Neel and most of the group headed to Santa Maria de Erebató in the northernmost region of the field area and started vaccinating. Chagnon and Roche went south to Esmeralda, then on to Ocamo. It should be noted that most of the vaccinations were administered before the "All Orinoco Plan." (See the "Neel Journal Database", 6.1.1.a, accompanying "Turner Point by Point" (6.1.1).

7. Neel was in conflict because he was more interested in science than in effort to give humanitarian aid to the Yanomami.

This statement can be found in Turner's recent work. Turner's position is:

"science" on the scale of the AEC Orinoco expedition, is not merely an ideal system of abstract truths nor an activity of isolated, autonomous individuals, but a complex social activity, shaped by the collective institutions and sociopolitical conditions that make scientific research possible" (Turner 2001a:59).

Within this social field,

"The relative priority Neel attached to the fulfillment of what he deemed to be the essential parts of his research program ... over the medical needs of the Yanomami ... was to a large extent a function of the institutional requirements, pressures and expectations of government-funded Big Science" (Turner 2001a:59).

Turner bases his argument for Neel's ambivalence about the priority of Yanomami medical needs in part on the following statement in Neel's field notes, especially the last three words:

Thus, I will get stools and soils while Bill does PE for three to four days-then we get blood, saliva, urine (? +dermat.), then inoculate if at all (5 February 1968 entry in field notes:80).

There are alternate readings of the phrase "if at all".

Ryk Ward has recently confirmed that when the expedition was at Patanowa-teri they were running short of vaccine. He suggests that the "if at al" may refer to a decision about the use of the vaccine on an interior population that may have been at relatively low risk for contracting the disease.

Another alternative explanation can also be derived from the field notes. It is important to note that Neel addresses the vaccinations specifically as a "a gesture of altruism and conscience" (5 February 1968 entry in field notes: 79). Likewise, he notes how frustrating this vaccination process is: "more of a headache than bargained for." However, he *never* suggests that he ever "seriously considered jettisoning the 'altruism and conscience' of the vaccination campaign and [abandon] the vaccinations altogether" (Turner, 2001b: 33); he does, however, clearly state in frustration that he would like to put the vaccinating into the "hands of the missionaries." Moreover, the context of "if at all" must account for the fact that the Indians had a history of fleeing those administering the vaccinations: "they took off in fright when they heard we were giving inoculations" (1 Feb. 1968 entry in field notes: 76). Neel's note about vaccinating "if at all," administering the

vaccinations “at the very last.” (5 February 1968 entry in field notes: 79), or placing the vaccinations into the hands of the missionaries may be addressing this problem of “flight.”

It should also be noted that this was all written before Neel was aware of the magnitude of the epidemic and before the “all-Orinoco” plan was devised. Once he was aware of the magnitude of the epidemic he immediately took steps to prevent further spread of measles. At this point, he gives preventative doses of MIG to those exposed, not yet sick, but not vaccinated. He also administers penicillin to those who are most ill. Neel clearly had a concern for the health of the Yanomami. This is documented by Salzano and Callegari-Jacques (1988) and Neel (1994) who discuss the various tests and other health measures they provided.

8. Neel had an upper respiratory infection and was not concerned with the health of the Yanomami

There is a good deal of information suggesting that Neel gave the health of the Yanomami a very high priority, quite apart from the vaccination program itself. The question of the problem of possible contagion to the Yanomami from James Neel’s upper respiratory infection, mentioned several times in his field notes as producing annoying symptoms while he was in the field in 1968, should be addressed by qualified medical experts. It should also be noted that an upper respiratory illness had been present among the population before Neel arrived. We note that the question of whether Neel’s URI represented a significant source of contagion while he was in the field, raised by Turner (2001a:33-34, 2001b:16-17), remains open. However, the general picture that has emerged from our inquiry is that Neel was careful about medical and quarantine issues.

Ernesto Migliazza, a member of the 1968 expedition, recalls that Neel never entered a new village without taking an M.D. with him and was punctilious in caring for the sick. On first arrival in a new village, medical doctors treated the sick. The doctors then helped in taking samples (blood, stool, saliva, and urine). Three doctors (in addition to Neel himself) were with the expedition, Dr. Marcel Roche <who was with the group only briefly>, Dr. Willard Centerwall, and Dr. Bill Oliver. In his written report to the task force (Migliazza 01-07-23), Migliazza states that before leaving the U.S. every member of the expedition had a complete medical workup at the University of Michigan hospital, including x-rays, stool and urine samples, and half a dozen vaccinations. Members who were not health care practitioners received training in first aid, and all members received cultural training.

James V. Neel, Jr., MD (Telephone conversation with Hill, ? May 2001) recalls that on the expedition on which he accompanied his father, Neel had sick call every morning, left the expedition group in order to attend to medical emergencies (e.g. difficult childbirth), and insisted that JVN Jr. could not join his father’s research team until he could contribute medical skills legally.

One kind of evidence for Neel’s ambivalence about the priority of Yanomami health Turner (2001a, 2001b) was that Neel’s group did not respond adequately to vaccine reactions that left Yanomami feverish and sick. The task force believes that Turner’s concerns include a contradiction. Turner believes that the team should have abandoned its research schedule to, on the one hand, vaccinate as many people as possible, and, the other hand, to remain in individual villages to treat people with severe vaccine reactions. The expedition consisted of only eight or nine members, so could not really satisfy both

concerns. It is likely that pursuing either strategy would have led to problems on the other front.

The view of the authors is that Neel and his expedition, dealing with an extraordinarily difficult situation, worked very hard to address the emergency. However, the experience of the 1968 expedition is indeed an instructive one, and requires us to reflect on its significance for anthropological practice. Can anthropologists be trained to respond more effectively to such emergencies? Should they be so trained? The AAA Committee on Ethics Draft “Guidelines for determining what constitutes a health emergency and how to respond in the course of anthropological research with human subjects” provides a very useful framework within which these questions can be discussed.

Beyond addressing health emergencies, the task force believes that anthropological procedures for work among populations with high levels of health risk require extensive discussion. Anthropologists working among such people might wish to work in teams with health practitioners or seek for themselves appropriate nursing and/or medical education and take adequate medical supplies with them to the field. However, the most practical solution is probably for anthropologists to (a) become thoroughly familiar, through sound research, with the health needs of indigenous populations so that they can give competent advice (cf. Hurtado, Hill, Kaplan and Lancaster 2001), and (b) join in vigorous advocacy for indigenous peoples before their governments. The national professional associations may wish to set up formal commissions to pursue such advocacy; K. Hill (2001) has pointed out that individual anthropologists risk the suspension of research permits or other reprisals if they “go public” as individuals with advocacy for health care in the local context. Public health and care of the sick is certainly the responsibility of governments, regardless of what type of system they develop to provide it. Both the Brazilian and Venezuelan constitutions recognize health as a basic human right. The Venezuelan Constitution also recognizes the rights of its indigenous citizens to culturally appropriate health care: Title III, Chapter VIII, Article 122 states, “The indigenous peoples have a right to an integrated health care that considers their practices and cultures. The State will recognize their traditional medicine and complementary therapies, within a framework of bioethical principles”. This is an excellent framework within which advocacy can be conducted, permitting the development of advanced health care systems while recognizing the potential of local practitioners to contribute to these.

The authors recommend that the AAA go formally on record, perhaps in a codicil to the AAA Statement on Human Rights, with a statement to the effect that people everywhere have the right to a healthy environment, to the best possible public health regime, and to a full range of medical care from basic clinical attention to specialized and advanced treatments. The AAA might wish to endorse the Venezuelan position that it is the responsibility of governments to guarantee the availability of such care. The responsibility of anthropologists would, then, be twofold. First, they should develop procedures to minimize the risk to indigenous populations caused by the presence of researchers. Anthropologists should follow rigorous quarantine regulations, ascertaining that they are free of communicable disease before entering the field, and discouraging the presence of others (tourists, film crews, etc.) who may not be subject to such rules. Second, they should strongly encourage research on health and illness in indigenous groups. Third, they should participate in advocacy for fully adequate health care for the groups with whom they work. Indigenous peoples surely feel sickness and death no less than any other human beings, and Yanomami representatives specifically have repeatedly asserted that the need for adequate health care is one of the most pressing concerns

## 5.2. Informed consent and the 1968 Neel expedition (Trudy Turner ([trudy@uwm.edu](mailto:trudy@uwm.edu))).

The Peacock Report raised the question of informed consent in connection with Tierney's allegations regarding Marcel Roche's experiments with radioactive iodine among the Yanomami beginning in 1958. The Task Force awaits material from Venezuela regarding these experiments. However, the question also arises in connection with Neel's expedition, since Neel collected biological materials among the Yanomami that remain under study. Thus it is important to evaluate whether or not these materials were collected with appropriate attention to informed consent. In discussions of the informed consent procedures that were used during Neel's 1968 expedition, it is important to recognize both the codes that were in force governing consent during that time and also to understand the way in which consent was actually obtained by researchers working with similar populations during that time period.

### *Important codes regarding informed consent in 1968*

There are several excellent reviews of the history of informed consent by ethicists, philosophers, attorneys and historians of science (Beecher, 1970; Tranoy, 1983; Engelhardt, 1986; Faden and Beauchamp, 1986; Beauchamp and Childress, 1989; Gert, Culver and Clouser, 1997; Doyle and Tobias, 2001). Discussions on the history of informed consent often distinguish between the consent practices of practitioners of clinical medicine and the consent practices of researchers using human subjects. The earliest authors of treatises on clinical medical ethics were guided by the principle of beneficence and dealt very little with the principle of autonomy. Standards for research using human subjects began as a reaction to the medical experimentation of Nazi Germany. The ethical principle of respect for persons or autonomy was of primary importance in the resulting Nuremberg Code. This principle of autonomy was then - and continues to be -- articulated as voluntary or informed consent.

The Nuremberg Code became the model for many of the governmental and professional codes formulated in the 1950s and the 1960s, even though it presents an ideal without detailing the particulars of application. Among the most important codes and laws during this time period include the 1953 National Institutes of Health (NIH) Clinical Center code, the 1962 Drug Amendment Act and the 1964 Helsinki Code. All of these codes deal with the issue of informed consent. The Helsinki Code was formulated by the World Medical Association and was used by many other agencies to develop their own guidelines. Unlike the Nuremberg Code, the Helsinki code distinguishes between therapeutic and non-therapeutic research. In 1966 the U. S. Public Health Service instituted a requirement of peer review of research, however, this was entrusted to the local institution and there was little oversight.

These codes were often difficult to apply. It was not until the 1970s that additional clarifications and standards were set. In 1971 the Department of Health, Education and Welfare issued guidelines for human subjects research. In 1974 Congress created the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. The commission was charged with developing a new set of guidelines for human subjects research. These guidelines became known as the Belmont Report. The report and the principles it represents, autonomy, beneficence and justice, have been codified into federal regulations and are routinely used by Institutional Review Boards (IRBs) in their analysis of research protocols. The National Research Council continues an on-going examination of ethics issues and prepares updated guidelines. More recently, the National

Bioethics Advisory Commission established by Executive Order in 1995 was charged with making recommendations to the National Science and Technology council regarding both clinical and human biology and behavior research.

Neel's 1968 expedition to the Yanomami took place several years before the articulation of the bioethics principles in the Belmont Report. Although there were guidelines, the ways in which researchers obtained consent and explained risks and benefits were not firmly established.

One of the first documents to discuss the relationship of an investigator to a "non-westernized" study population was a 1964 World Health Organization (WHO) report. In 1962, the WHO convened a study group of scientists to discuss the organization of studies of "long-standing, but now rapidly changing, human indigenous populations". The resulting report, "Research in Population Genetics of Primitive Groups" (*WHO Technical Report Series*, 1964), was authored by James Neel. In the report Neel discusses the relations of the research team with the population studied. The study group met again in 1968 and produced a second report, "Research on Human Population Genetics" (*WHO Technical Report Series*, 1968), again authored by Neel, reiterating, with slight modification, the principles of the first report. The report states:

- Any research team has certain ethical obligation to the population under study. The investigator should always be bound by the legal and ethical considerations governing the conduct of medical and biological research workers. It is essential that harmonious relations be maintained both during and after each research visit. From previous field experience, the following factors have been found to be especially important.
- (a) The privacy and dignity of the individual must be respected at all times and the anonymity of subjects must be maintained in publications. The comfort and individuality of subjects must be safeguarded, e.g., some people are unwilling to queue, or to have others present during examination or questioning. Care should be taken that individuals do not undergo an excessive number of examinations at any one time.
  - (b) Satisfactory reward should be provided for the subject's participation in the research and for any services provided. The nature of the recompense should receive careful consideration. The advice of local authorities may be invaluable, both on this question and in general, so as to avoid giving offence through ignorance of local customs.
  - (c) The local population should benefit from such studies by the provision of medical, dental and related services.
  - (d) The maintenance of congenial social relationships will be enhanced by methods suitable to particular areas, e.g. eating with families on occasion, exchange of information.
  - (e) All groups have learned individuals, e.g., experts on oral traditions and those with systematized knowledge and interpretations of natural phenomena. Consultation and exchange of information with such persons will often be of immediate value to ensure good relations and lead to the appreciation of the achievements of such peoples. Such information is pertinent to their cultural and therefore biological history.
  - (f) There should be the utmost regard for the cultural integrity of every group. All possible measures should be taken to prevent the activities and presence of the research team from adversely influencing the cultural continuity of the population being studied.

Issues of research involving indigenous populations were not examined in depth again until the United Nations Working Group on Indigenous Populations began meeting in the 1980s. Discussions in the United States in the 1990s on research among indigenous peoples were triggered by the 1990 Native American Graves Protection and Repatriation Act (NAGPRA) and the planning of the Human Genome Diversity Project. The National Research Council and the National Bioethics Advisory Commission both issued reports on research initiatives in the late 1990s.

#### *Practices Relating to Informed Consent*

In order to determine the practices of researchers in the late 1960s regarding informed consent, El Dorado Task Force member Trudy Turner surveyed a number of individuals who were active in the field at that time. The determination of individuals to consult was made by consulting various journals (*American Journal of Physical Anthropology*, *American Journal of Human Genetics*, etc.) to see who had published on genetics of indigenous populations in the late 1960s and early 1970s. Among the individuals responding were:

Alan Fix	William Pollitzer
Jonathan Friedlaender	Francisco Salzano
Eugene Giles	Jack Schull
Henry Harpending	Emoke Szathmary
Geoffrey Harrison	Kenneth Weiss
Newton Morton	

Individuals contacted did research in the following areas of the world and with the following listed populations and nations.

Ayamara	Solomon Islands
!Kung Bushmen	Canada
Japan	United States
Brazil	Haiti
Micronesia	Malaysia
Venezuela	Ethiopia
Paraguay	New Guinea

Each individual was asked the following three questions:

1. How did you attempt to get informed consent from individuals?
2. Did you have discussions about informed consent while you were in the planning stages of your research?
3. Did you exchange/reciprocate anything for samples?

1. How did you attempt to get informed consent?

Although there were some differences in responses about how information was conveyed to individuals, all of those surveyed stressed that voluntary consent was assumed since some individuals in the population elected not to participate. Some of the respondents indicated initially that they had approval from national or regional governments in the appropriate regions to conduct the research, while others dealt with the population or individuals. The leaders of the group under study were often consulted first and their approval was sought. If the researchers worked with medical personnel, the medical

personnel were often responsible for obtaining consent. If they were not accompanied by medical personnel, researchers told the individuals/groups that they could not provide medical assistance. In every case some explanation of what the individuals were looking at in the blood samples was provided.

2. Was there any discussion of consent in planning stages of project?

Everyone said there was no discussion in the planning stages of the project.

3. What was given in exchange/reciprocity for samples?

If medical personnel were present, medical and dental exams were given. If a doctor was present, medical help or immunizations were provided. The following items were given: tobacco, candy, small sums of money, photographs, toothbrushes, bubble gum, powdered milk, rice, machetes or a community purchase such as a film projector.

It should be noted that Neel did consult with local authorities concerning remuneration before his field work among the Yanomami. In a September 20, 1966 letter to Reverend Macon C. Hare he states:

“With respect to the matter of trade goods, I would say that it has been our custom after we have completed the work-up of each family to make its members a suitable present. Here I would repeat, as mentioned above, that we would rely on the advice of those in the field concerning what is appropriate to the present situation. We know by experience that we must do something to enlist the cooperation of the Indian, but, on the other hand, do not wish to upset whatever “economy” you have been attempting to establish”

#### *The impact of Neel's work with the WHO*

The participants in the WHO meetings on research with indigenous populations went on to conduct research around the world. Many were involved in the Human Adaptability section of the International Biological Program (IBP) (Collins and Weiner, 1977). The participants and their students worked in the Kalahari, the Andes, New Guinea, the Solomon Islands and other locations. Many of the respondents to the survey were under the IBP umbrella. The WHO document Neel authored reflects the standard of conduct for work with indigenous populations as well as the protocols for obtaining samples from populations.

#### *Informed consent procedures of the 1968 Neel expedition*

The Task Force has two primary sources of information on these procedures, provided by two members of the 1968 expedition who spoke Yanomami and who were therefore responsible for providing the information needed for informed consent. These are Ernesto Migliazza, a linguist specializing in the Yanomami language who accompanied the expedition, interviewed by Jane Hill, and Napoleon Chagnon, interviewed by Ray Hames. Migliazza and Chagnon have, as far as we know, not been in touch with each other for many years. (Others who presented potential Yanomami subjects with this information included local missionaries who spoke Yanomami.) In a telephone interview with Hill, Migliazza stated that in each village, the Yanomami were told that the project would look for diseases that were “inside”, “in the blood.” In a conversation with Hames (2001b:2), Hames reports that in a telephone conversation conducted March 18, 2001, “[Chagnon] said that for a year prior to Neel's arrival and during the collection phase he told the Yanomami in all the villages to be sampled that Neel's team wanted to examine their blood in order to

determine whether there were things that indicated whether or not they [had] certain kinds of diseases, especially *shawara* (epidemic diseases) and that this knowledge would help treat them more effectively.”

Migliazza observes that the Yanomami were accustomed to having their blood drawn, since Ye'kwana paraprofessionals visited Yanomami villages regularly and drew blood and administered medications to treat and control malaria. They were, however, amused and surprised that the Neel expedition also collected nasal mucus, sputum, urine, and feces samples.

Migliazza believes that the Yanomami found the trade goods offered by the expedition in exchange for samples to be overwhelmingly attractive. Neel had consulted with local missionaries about the type and quantity of compensation, and was following their recommendations in offering as compensation machetes, axes, cooking pots, and other goods.

We believe that the informed consent techniques used by the 1968 expedition would not measure up to contemporary standards. It seems clear that both Migliazza and Chagnon saw the statements that were offered to Yanomami as “explanations.” They did not mention that the procedure included components that would be required today, such as clear information that nobody was required to participate in the study, that any subject could withdraw from the study at any time, or an explanation of possible dangers to subjects stemming from participation. Contemporary standards also require a very careful consideration of compensation, such that the kind of compensation offered not be viewed by subjects as so attractive as to constitute a sort of coercion. It is extremely difficult to adjust this standard to a situation such as that faced by the Neel expedition, working with subjects who lived in the direst poverty and in desperate need of material goods. Another very difficult question, which probably was not solved by the Neel team and remains as a dilemma for contemporary researchers, is the problem of whether lower-ranking members in a community, such as women and children in the Yanomami villages, in fact enjoyed the type of autonomy that would permit them a free choice as to whether or not to consent to participate in the study. It seems clear that Yanomami men viewed the machetes, axes, and other goods offered as compensation by the Neel expedition as highly valuable trade goods, useful in developing male networks of alliance. These goods, while attractive as well to women (who use machetes and axes in their own work) did not have the same meaning for them as for men. It is likely that women and children experienced coercion to participate in the study from their adult male relatives, and so were not fully autonomous consenting research subjects.

Another question has been raised by the Yanomami themselves. They believe that the consent procedures, which many people remember, carried an implication that they would receive medical care based on the findings of the expedition. They believe that such medical attention has never been forthcoming. Members of the Task Force agree that the “explanations” described by Migliazza and Chagnon carried such an implication. We point out that it was based on the results of research before 1968 that Neel identified the danger of a measles epidemic, and also that Neel continued to send vaccines and other medicines to missionaries working among the Yanomami through at least 1970. Furthermore, medical treatment was provided to the Yanomami on-site by the three physicians who participated in the 1968 expedition.

Informed consent procedures today also would usually offer subjects an opportunity to be informed of the results of the study. The Yanomami believe that they should have been informed about results, and believe that they were not so informed. We are not aware

of any efforts by Neel to “follow up” with information on study results designed to be intelligible to interested Yanomami.

In summary, judged against the standards of 2002, the “informed consent” procedures used by the Neel expedition were minimal. However, judged against the standards of 1968, the use of procedures such as an explanation of the purpose of the research provided to subjects, considerable care in determining appropriate compensation, and the provision of some follow-up medical attention, were appropriate and even advanced. The Task Force observes that at this period many citizens of the U.S. and Europe were the unwitting and uninformed subjects of medical research; the Yanomami in fact received more explanation and compensation than was typical at that period.

#### *Resources on informed consent procedures*

Publications on Informed consent are available from the National Research Council of the National Academy of Science (<http://www.nationalacademies.org/nrc>) and the National Bioethics Advisory Committee (<http://www.bioethics.org>). The charter of the NBAC has expired but the papers are still available on line. In addition, the AAA Committee on Ethics Draft Briefing Paper on Informed Consent cites other sources.

#### *Acknowledgements*

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### 5.3. Collection of Bodily Samples and Informed Consent: A Discussion with Recommendations

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The El Dorado Task Force was established in November 2000 by The Executive Board of the American Anthropological Association to conduct what the Board termed an "inquiry" into the allegations about anthropological practice among the Yanomami contained in Darkness in El Dorado, by Patrick Tierney. In an attempt to evaluate whether procedures of informed consent were adequately followed in the 1968 expedition by Chagnon, Neel, and others, I met with and interviewed Yanomami spokespersons in Brazil and Venezuela. These interviews produced further allegations of abuse related to the collection of blood samples and information, not anticipated by Tierney.

The first El Dorado Task Force, headed by Jim Peacock, raised questions of informed consent in connection with Tierney's allegations regarding biological materials collected by the Neel expedition and radioactive iodine experiments conducted by others. (The Task Force awaits material from Venezuela regarding these experiments.) Since bodily materials from the Neel collecting expeditions among the Yanomami have been distributed in US laboratories and are currently in use by federally-funded researchers, it is especially important to determine whether or not these materials were collected according to adequate and appropriate procedures of informed consent.

In attempts to locate the samples we have received extensive cooperation from Ken Weiss, curator of the blood samples at Penn State University, and D. Andrew Merriwether, of the University of Michigan, currently conducting research on data sets derived from DNA extracts from the Neel bloods. We have extensive information regarding the set of 3,500 under the curation of Ken Weiss at Penn State. An aliquot (subset) of Weiss' collection is with A. Merriwether but will be returned to Weiss. At least two other sets of Yanomami blood samples may exist. In addition, there may be fecal or urine samples but so far there is no evidence of these.

The samples under Weiss' curation consist of 1cc vials kept in a frozen condition (-80 degrees or liquid nitrogen). Weiss has expressed interest in continuing to work with these samples but will not do so until he is satisfied that the conditions under which they were collected were ethical (Weiss, pers. com., Oct. 2001). Following research protocols, names of individuals have been removed to protect donors in both blood and DNA samples.

The AAA Code of Ethics states the following with regard to informed consent: "Anthropological researchers should obtain in advance the informed consent of persons being studied, providing information, owning or controlling access to material being studied, or otherwise identified as having interests which might be impacted by the research...Further, it is understood that the informed consent process is dynamic and continuous; the process should be initiated in the project design and continue through implementation by way of dialogue and negotiation with those studied. Researchers are responsible for identifying and complying with the various informed consent codes, laws and regulations affecting their project" (AAA Code of Ethics, cited in Laren Clark and Ann Kingsolver, "Briefing Paper on Informed Consent," AAA Committee on Ethics, Nov. 2001 update, italics mine).

I suggest, with Clark and Kingsolver of the AAA Committee on Ethics, that we regard Informed Consent procedures as an ongoing process, extending the application of

procedures of informed consent into the present. This makes conspicuous sense in the case in question, given that studies of these materials are continuing in a context of ongoing debate and allegations of illegitimacy by many, including the Yanomami.

The strong agreement that emerged in interviews conducted by this Task Force, as well as independent interviews conducted outside the Task Force, show that many Yanomami perceive themselves as having been misled, misinformed, manipulated and otherwise wronged by investigators. By today's standards these wrongs would constitute violations of basic rights, including the right to informed consent. Yanomami spokespersons must be regarded as credible narrators of their own histories. Moreover, the Yanomami experience of events, even as it is recalled after a substantial lapse in time, must be respected and honored.

### **Interview Process**

I met with and interviewed three Yanomami spokespersons: Davi Kopenawa (Demini village, Brazil, June 7, 2001); José Seripino, (Washington DC, October 2001; Shakita, Venezuela, Nov. 22, 2001); and Julio Wichato (Shakita, Venezuela, Nov. 22, 2001).

First, a word about the shortcomings of the interview process. The people I interviewed were chosen for their availability and communicative abilities rather than through any rigorous procedures or attempts to meet standards of representativity. As a result, the three interviewees represent bilingual Yanomami, a distinct minority.

A different concern is the construction of memory through the passage of time and the debate itself. The events in question occurred over thirty years ago. If the interviewee had participated in the vaccinations or blood sampling, he would have been a child at the time. Seripino and Kopenawa seem to have recalled the experience, although they were then children of nine or ten. Wichato appears to base his information on reported speech from relatives in Torita who had been vaccinated by the Neel team.

Moreover, the debate itself has shaped the narratives, creating a collective past through various narrative resources. Each person interviewed had been affected by the debate generated by Tierney's book and had been drawn into the dialogue before our meeting. For example, Kopenawa reports, "An anthropologist entered Yanomami lands in Venezuela. Many people know about this. ...This book told stories about the Yanomami and it spread everywhere. So I remembered it when our friend [unnamed anthropologist] mentioned his name. When that young man spoke the name I remembered. We called him Waru. He was over there in Hasabuiteri... Shamatari...A few people -- Brazilian anthropologists -- are asking me what I think about this." Both Kopenawa and Seripino recall meeting with Tierney. My choice of Wichato, the third interviewee, was based on my attempt to find a spokesperson without ties to either Tierney or Chagnon. As I later learned, Wichato's friend Alfredo was one of Tierney's pilots. (The redundancy in persons interviewed is likely to be related, again, to issues of bilingualism and availability.)

Nonetheless, these interviews, however flawed, provide a strong argument and consensual case that the blood sampling procedures of the Neel expedition of 1968, as recalled, did not meet criteria of informed consent by study participants. The following allegations, made by interviewees, call for concern. They hold that:

- 1) the collection of bodily samples was conducted without full disclosure (see below for difficulties attached to this standard);
- 2) the description of study goals contained elements of deception;
- 3) the duration of research and preservation of materials, not explained, offends Yanomami custom and respectful treatment of the deceased;

4) the Yanomami were treated in less than a humane manner; as stated by several, they were treated "as animals."

I here present excerpts of the narratives. See complete interviews in this set of postings.

## **CONSENT TO WHAT?: CONFUSION OVER GOALS**

### **Lack of Full Disclosure**

All conversations were independent; yet all speakers held that explanations that accompanied blood collection were inadequate.

Davi Kopenawa is a prominent Yanomami spokesperson. He has presented the case of the Yanomami internationally for over twenty years. Davi was raised near Toototobi, where he lost his mother to the measles epidemic and where he and his family were among those whose blood was collected by the Neel/Chagnon expedition. He first learned Portuguese through contacts with missionaries and later by working for FUNAI, the Brazilian agency charged with indigenous affairs. Kopenawa returned to the Yanomami area and trained with his father-in-law as a shaman. Davi is an effective mediator who has travelled widely on behalf of the Yanomami. For example, I have met with Davi Kopenawa 4 times, once at an international conference in New York, twice in the city of Boa Vista, and once in his village, Demini, in the Parima highlands. This is the third interview I have conducted with Davi, and the first for this Task Force.

In interview with him, recorded in Demini, June 7, 2001, Kopenawa had this to say:

Davi: "He [Chagnon] arrived, like you, making conversation, taking photos, asking about what he saw. He arrived as a friend, without any fighting. But he had a secret..." "When the doctor requested something he [Chagnon] translated it... But he didn't explain the secret. We didn't know either -- no one understood the purpose of giving blood; no one knew what the blood had inside it..."

Janet: "But he didn't explain why?"

Davi: "The Yanomami were just supposed to give blood and just stand around looking. He didn't talk about malaria, flu, tuberculosis, or dysentery. ..Husband, wife, and children went as a group. They always took the blood of one family together...It was a bottle -- a big one -- like this. He put a needle in your arm and the blood came out. He paid with mathitu -- machete, fishhooks, knives."

### **2. José Seripino**

The lack of full disclosure suggested by Kopenawa is reiterated by Seripino for the Venezuelan case. José Seripino is a Yanomami leader of Koparima village in the Upper Orinoco in Venezuela. Active in bilingual education efforts, he represents his village in SUYAO (Shabonos Unidos de los Yanomami del Alto Orinoco) and the Yanomami people in the Venezuelan National Indian Council, CONIVE. Recently he was appointed to the staff of the governor of Amazonas state in the role of Commissioner for the Upper Orinoco.

The following comments by Seripino were made in an address by him at George Washington University in conjunction with the 2001 Meetings of the Latin American Studies Association:

Seripino: "When they [the Neel team] arrived we Yanomami didn't know -- we didn't even understand Spanish at that time. I was in school. We didn't understand. But now we've learned... We began to defend our communities by educating ourselves in primary and secondary schools. So now we know all the bad things that happened. What are the bad things that went on? Taking blood. Taking skin [biopsies] [gestures]. I saw

this. I was only ten years old. I thought, 'OK. This will help us. But what happened? We haven't seen the results. We were not consulted' (transcribed, Sept. 7, 2001).

**3. Julio Wichato**, Nov. 22, 2001 [taped]

In order to obtain an opinion from a Yanomami who was familiar with health needs and the positive uses to which blood samples may be put, I interviewed Julio Wichato, a Yanomami nurse who has worked with the Ministry of Health in the Yanomami area at Platanal for 18 years.

"They say that Chagnon took blood. I heard this...I think that Chagnon vaccinated these people to see if they would die. These people of Torita -- they say that Chagnon vaccinated to see if the medicine worked or if it was poison. Then he would go. People started to die and Chagnon left. And they died -- all of them!"

**Consent to What?: Confusion over Goals**

Considered together, Kopenawa and Seripino make the case that those who participated did not understand the purpose of the sampling. Wichato's version of the vaccinations, although an obvious misunderstanding, is the most troubling because it suggests the kinds of meanings and purposes that have been attributed to the collection team over time.

These findings raise the following questions: Who is responsible for the interpretation of the researchers' explanation? Should not responsible researchers attempt to ensure that an explanation is well understood? If this is so, these interviews suggest that explanations were either insufficient or misleading. To what point in time do these responsibilities extend? Here the issue of informed consent as an ongoing process, as outlined in the Code of Ethics of the AAA, becomes relevant.

**Deception: Promises Unkept**

Yet another problem is the unanimous recollection of unkept promises of direct health benefits. The evidence is overwhelming that the Yanomami understood that results of the blood studies would contribute to their own well-being in combatting disease.

All three people expressed concern that results had not been provided to them. In the absence of reported results, the utility of the samples was, to them, questionable.

Davi: "...Now we are asking about this blood that was taken from us without explanation, without saying anything, without the results. We want to know the findings. What did they find in the blood -- information regarding disease? What was good? Our relatives whose blood was taken are now dead. My mother is dead; our uncles, our relatives have died. But their blood is in the United States. But some relatives are still alive. Those survivors are wondering -- 'What have the doctors that are studying our blood found? What do they think? Will they send us a message? Will they ask authorization to study and look at our blood?'"

That the collections were said to be related to health benefits is further substantiated in testimonies to the Task Force by two members of the 1968 field team, Ernesto Migliazza, a linguist specializing in the Yanomami language who accompanied the expedition, and Napoleon Chagnon. Both state that individuals were told that blood was taken so that they could look for disease inside the blood (Trudy Turner, p. 17; report to Task Force).

In a telephone interview with Jane Hill, Head of the Task Force, Migliazza stated that in each village, the Yanomami were told that the project would look for diseases that were "inside," "in the blood" (Hill transcript, June 12, 2001). In a telephone conversation with Napoleon Chagnon, conducted March 18, 2001, Ray Hames reports that "[Chagnon] said that for a year prior to Neel's arrival and during the collection phase he told the Yanomami in all the villages to be sampled that Neel's team wanted to examine their blood

in order to determine whether there were things that indicated whether or not they [had] certain kinds of diseases, especially shawara (epidemic diseases) and that this knowledge would help treat them more effectively."

If promises of health benefits or results were delivered, they were never kept. This is serious, since Yanomami health needs are great and medical services have been inadequate. In a different conversation I had with Davi Kopenawa in 2000, before the news of the Tierney book, he said, "We [the Yanomami] already have an enemy among us -- it is disease." The Yanomami face serious threats to their health. Among the most serious of these are the diseases malaria and river blindness, both requiring blood collection, and, as in cases of advanced malaria, transfusions. It is therefore all the more important to ensure that collection standards are met and that promises linked to health care are not abused, in turn discrediting and thereby undermining the few health care services available (see also interview with Jose Antonio Kelly).

Moreover, the possibility remains that these promises were never intended but served as instruments in motivating participation. If the Yanomami were made promises without any intent of fulfillment, this constitutes an attempt to persuade, in order to obtain samples, under false pretenses. It is a breach of ethics.

#### **Respecting Custom: "Whatever is of the Dead"**

The retention of the samples creates a potential offense to Yanomami beliefs regarding the dead and their remains.

Davi Kopenawa: "My mother gave blood. Now my mother is dead. Her blood is over there. Whatever is of the dead must be destroyed. Our custom is that when the Yanomami die, we destroy everything. To keep it, in a freezer, is not a good thing. He will get sick. He should return the Yanomami blood; if he doesn't, he [the doctor] and his children will become ill; they will suffer."

Perhaps a medical researcher cannot be expected to understand the concerns of a population not his own. This problem, however, merely underscores the importance of a participating anthropologist -- in any medical research -- whose role it is to ensure that the population has understood the goals of the procedures in which they are asked to participate. Moreover, an anthropologist, especially one who works closely with study participants over the long term, is in an opportune position to discern the concerns of participants and to address them. Indeed, I would hold that (s)he is morally compelled to do so.

#### **Longevity of Consent**

It is apparent that the Yanomami were not informed of the storage of the samples and their long-term research uses, issues that are of substantial relevance to them because of customary laws concerning death. In addition, the long-term use of samples raises questions regarding a shift in goals as explained during collection but altered over time. These concerns, again, point to the utility in approaching informed consent as a dynamic process, rather than a static procedure.

One might ask whether any investigator can anticipate the future research uses of samples? Indeed, in 1968 neither Neel nor any other collector of bodily samples could have requested and obtained consent to study DNA extracts to determine proximity of relationship or propensity for a disease. Most of the techniques currently applied to the samples were not possible at the time. The Yanomami cannot be said to have given consent in 1968 to the uses to which DNA could be put in 2002. Not, that is, unless they gave blanket consent.

#### **Treating the Yanomami as animals**

Finally, two speakers, Kopenawa and Seripino, sum up the treatment by researchers this way:

Davi Kopenawa: "These anthropologists are treating us like animals -- as they would fish or birds."

José Seripino: "It [the blood] HAS to be destroyed! They are treating us like animals! We are human beings!

These statements well illustrate the ongoing insult to the Yanomami of past acts. They call for remedial action to correct wrongs.

### **"KEEPING THE PAST"**

An important problematic that has emerged is the difference in perception of what is considered "beneficial" to a study population. When the narratives of Yanomami interviewees are compared with those collected from U.S. researchers, a fundamental misunderstanding emerges. The two groups are shown to be operating under profoundly different sets of values and assumptions.

For the researchers, the samples are important sources of information on genetic variation within Yanomami sub-populations as well as comparison with other populations around the world. The very ability to reconstruct relationships in and among populations over time is that which the researchers value, assuming it to be beneficial and advantageous universally and absolutely. These benefits extend to the Yanomami, who provided the materials.

D. Andrew Merriwether, who is currently studying DNA extracts made from the Neel bloods at the University of Michigan, discussed their importance: "These samples are an incredibly important snapshot in time. It would be a tragedy to lose them. I am hopeful the Yanomama people will be interested in maintaining this wonderful resource in some form. It is after all part of their own legacy. I am hopeful that we can discuss options that would honor the Yanomama concerns about their ancestors, without completely losing this window into the past" (correspondence D. Andrew Merriwether, 15 Oct 2001, italics mine).<sup>1</sup>

Ken Weiss, who curates the Yanomami blood samples at Penn State University, writes, "The samples have been used to understand the amount of genetic variation in Yanomami populations and how it differs among the many villages. The purpose was to see how that amount of variation compares with variation in studies of other populations around the world, including the United States. The samples were also studied for various traits related to health. Dr. Neel and his colleagues wanted to know how human genetic variation arises and how village life spreads variation around, over the generations, as people move during their lives, marry, and have children of their own." (Ken Weiss, Oct. 2001).

Again, Merriwether: "We are mostly interested in how behaviour and demographic history affect the pattern of genetic variation that we observe. Because the Yanomama have been so well studied, we know from their own oral history a great deal about how they have moved about and how villages have fissioned and joined over the past 100 years. We hope to make use of that information to inform our mathematical modeling of genetic variation to fine tune our methods. It may allow us to look back in time further than oral histories allow and let us (and the Yanomama) reconstruct much earlier times in South America. This is a direct extension of work I began with Dr. Neel in the five years preceding his death. We hope the data collected on the Yanomama may also aid in our studies of the initial peopling of South America" (correspondence, Merriwether, 16 Oct 2001).

Yanomami thinkers, however, may not assign positive value to reconstructions of their past. Davi Kopenawa described his objection to the work of Napoleon Chagnon this way:

Davi: "He arrived as a friend, without any fighting ... But, later what happened was this. After one or two months he started to learn our language. Then he started to ask questions, 'Where did we come from, who brought us here?' And the Yanomami answered, 'We are from right here! This is our land! This is where Omam placed us. This is our land...' He wrote a book. When people made a feast and afterward a fight happened, the anthropologist took a lot of photos and also taped it. This is how it began. The anthropologist began to lose his fear -- he became fearless. When he first arrived he was afraid. Then he developed courage. He wanted to show that he was brave. If the Yanomami could beat him, he could beat them. This is what the people in Toototobi told us. I am here in Watorei, but I am from Toototobi. I am here to help these people. So I knew him. He arrived speaking Yanomami. People thought he was Yanomami. He accompanied the Yanomami in their feasts...taking [the hallucinogen] ebena, and after, at the end of the feast, the Yanomami fought. They beat on one another's chests with a stone, breaking the skin. This anthropologist took photos. And so he saved it, he "kept" the fight. So, after, when the fight was over, and the Yanomami lay down in their hammocks, in pain, the anthropologist recorded it all on paper. He noted it all on paper. He wrote what he saw..."

That which the researchers value in the reading of DNA may be what the Yanomami, as suggested by Kopenawa, do not wish. DNA is a text that carries information about individuals -- their uniqueness and their relationships to other individuals. For the researcher that which is valued and assumed to be universally beneficial is the way DNA, as Merriwether puts it, provides "A window into the past." Because DNA carries the genetic code for each individual, and can be used in measuring the degree of (genetic) relatedness of individuals to one another, DNA, "keeps" the past and allows one to "read" the information it carries -- to read that past. In this sense, as a text that can be read for the meanings or information it carries about the past -- about individuals now dead, their relationships to one another as individuals and as aggregates -- DNA is analogous to the notes, books, photos, and other forms of "keeping the past" that concern Davi Kopenawa. This very conserving capability, enabling a reconstruction of past information is highly prized by the researcher. But it may be rejected by the Yanomami.

In a document (November 11 2001) intended for presentation to the Yanomami at the November meeting in Shakita village, Merriwether described his work this way:

"Over the past ten years I have worked with DNA extracted from blood samples collected from Yanomama people from Venezuela and Brazil, by Dr. James V. Neel and coworkers, and Dr. Doug Crews and coworkers. I have been interested in studying population movements and population history and evolution by looking at the patterns of genetic variation in Native American peoples. While people may only recall their history for a few generations, or even tens of generations, a person's DNA holds clues to the entire history of a person's ancestors. I have been especially interested in using genetic variation to try and infer the early histories of indigenous populations, and to use genetic variation to try and learn more about the distant pasts of these peoples. We do this by studying the populations present today, and seeing how their life-ways affect the pattern of genetic variation we find, and then use modeling and statistical approaches to see what kinds of patterns in the past could give rise to the variation we see today. Because the history of Yanomama village fissioning and mergers is well known for the past 50-100 years, and

because ethnologists and biological anthropologists have studied the Yanomama culture and history, we can see how well these genetic techniques can capture the events that we know to have happened. This detailed knowledge of population movements and village histories make the Neel collection of Yanomama bloods and DNAs unique. Further, because most of these samples were collected before much of the recent upheavals by disease and violence, they represent a critical snapshot in time of the Yanomama people. Maintenance of this genetic resource will also help ensure that this important documentation of Yanomama history will not be lost" (Merriwether, Nov. 11, 2001).<sup>2</sup>

### **The Ethics of Collection: Researchers' Viewpoints**

Both Ken Weiss and Andrew Merriwether have expressed interest in continued work with the samples. Both have said that they assume the samples were collected in accordance with ethical norms.

For example, Ken Weiss writes, "My understanding has been that these samples were obtained from Yanomami who volunteered to participate in Dr Neel's studies, and that the samples were exchanged in a fair way for various goods that were of value to the Yanomami as the blood samples were of value to Dr Neel. I also believe that his general explanation of the use of the samples was honest and reflects what has been done with the samples." In a different correspondence, Weiss writes, "I believe that my use of the samples has been completely proper, dignified, and respectful of the Yanomami" (October 2001).

Weiss has expressed opposition to the ongoing study of the bloods without adequate authorizations from the Yanomami. Weiss limited his research in ways he thought protected Yanomami rights: "These samples have been analyzed by many scientists. I have done some of that work, but I have not studied questions that I thought would not be right to study. For example, I have a student who wanted to study some of the specific genealogies (families). But my understanding is that the names of ancestors that we would use for such work were obtained in a way that may not have been proper, such as by paying enemies of a person to provide names of that person's ancestors. So I did not allow my student to use the genealogical information in his work" (Weiss Oct. 2001).

Weiss describes the conditions under which he would continue studying the Neel samples: "I would like to have the Yanomami's permission to continue to study these samples. I would not reveal the names of specific individuals (I do not know these names). If there were any way in which these samples would be of monetary value, I would either refuse to do that, or would make arrangements so that the Yanomami would receive benefits, but I do not think this is likely to happen (and as far as I know, nobody has made money from these samples)."

On another occasion, he writes, "I would like to keep [being] able to use these samples, and I think I have not done anything questionable in using them. But I also realize that the Yanomami have had a rough time and that they attribute many evil things that happened to them to the trips that were made there 25 years ago. I have no interest in offending them, nor can I defend (or assail) those who collected the samples, since I was in no way involved" (Ken Weiss 30 Sep 2001).

In addition, Weiss has offered the following statement: "I and other scientists who have these samples would like to be able to continue studying them. But if this is not the wish of the Yanomami, I would not do so. I would also be willing to return samples to the Yanomami to do the ceremonies that honor the individuals who were sampled. But these samples are mostly anonymous, and were collected so long ago (and not by me) that I might not be able to identify which samples belonged to which people. I wonder if it would

be most appropriate, and most honoring of the Yanomami whose blood made a contribution to science, to send back to the Yanomami a representative set of samples that could be honored in the name of all the individuals whose blood was taken, over so many villages and so many years. Even if I cannot identify each individual, I could for example return a sample from each of the villages that were visited. But before I could do this, we would need to work out an understanding of which samples should be returned, how they should be prepared and sent, and whether other laboratories need to participate in this symbolic gesture of tribute to the Yanomami and their contribution to world science."

Merriwether ensures participant protections. Samples were given ID numbers upon collection and again in the laboratory, making it impossible for anyone (other than Merriwether) to connect the genetic information with a specific person or family. Merriwether explains, "I keep the records in a locked office, in locked filing cabinets, that only I have the key for. The computer records do not contain any names at all. The names are only connected to the ID numbers on the original hard-copy participant sheets" (Merriwether Nov. 11). (It should be noted that the very anonymity of the sample intended to protect the individual precludes his receiving any benefits from the collection.)

Merriwether intends to return the bloods, now in his care in the department of anthropology at the University of Michigan, to Ken Weiss, at Penn State, and to continue working only with the DNA extractions. He writes, "I am, and always have been willing and eager to discuss my research and my field of research with the native peoples I study, and if this commission allows a dialogue to open up between the two groups, then this is likely to be a good thing" (Merriwether, 14 Oct 2001).

### **The Ethics of Collection: The Task Force Viewpoint**

Whether the individuals subject to allegations acted for honorable motives or not, the point remains that with the passage of time thoughtful anthropologists and the Association itself have come to view those actions (including methods of collecting information) as acts that may have wronged, intentionally or not, the Yanomami. The strong agreement that emerged in interviews conducted by this Task Force, as well as independent interviews conducted outside the Task Force, show that many Yanomami perceive themselves as having been misled, misinformed, manipulated and otherwise wronged by investigators. By today's standards these wrongs would constitute violations of basic rights, including the right to informed consent. Yanomami spokespersons must be regarded as credible narrators of their own histories. Moreover, the Yanomami experience of events, even as it is recalled after a substantial lapse in time, must be respected and honored.

In Trudy Turner's report to the AAA Task Force on El Dorado, she writes, "We believe that the informed consent techniques used by the 1968 expedition would not measure up to contemporary standards" (Turner/Task Force 2002).

Turner, who interviewed medical researchers practicing similar methodologies at the same time points out, "It was not until the 1970s that additional clarifications and standards were set [in Informed Consent Codes]." I would argue, however, that it would be wrong to condone past abuses on the basis of their commonality. I draw upon the language of the AAA Code of Ethics (Clark and Kingsolver, Nov. 2001) to reiterate that Informed Consent may be, indeed, should be, treated as an ongoing process, extending the application of procedures of informed consent into the present.

### **Discussion and Recommendations**

It should be understood that the uses to which these samples can be put is limited. Neither the blood samples nor the DNA extracts contain living cells. They cannot,

therefore, be cloned. That the individual samples have been separated from the names of the donors suggests that linking genetic with behavioral data would be difficult, if not impossible. So, for example, these samples could not be used to test a hypothesis regarding killings per person and reproductive success. While a reproductively-successful male could be identified by number it would be nearly impossible to link this finding to any behavioral, i.e., ethnographic, data. However, the samples are identified at the level of "village" or "community," and could easily be used to measure genetic relationships among groups and populations of several levels. They can also be used to compare the Yanomami, as a population, with other populations. It should also be known that no patents or profits have been made from the blood samples.

At the same time, the possibility remains that the Yanomami have not, to this day, received adequate and comprehensive information regarding the uses of their blood samples. It is here that the issue of informed consent as an ongoing process becomes relevant.

The Yanomami interviewed drew a distinction between sampling for purposes of health and sampling for purposes of investigation. They favored the first but objected to the latter. Testimonies collected from Yanomami by the Task Force are unanimous in opposing further investigative research use of the samples at this time.

For the scientists involved, the benefits of knowledge to be gained are here assumed to have universal value. The crime of the anthropologist, however, according to Davi Kopenawa, is keeping the past -- a crime of keeping unauthorized information. This presents a dilemma that affects not one researcher, but the discipline.

### **Suggestions**

Met with under separate and independent circumstances, Davi Kopenawa, of Brazil, and José Seripino and Julio Wichato, of Venezuela, all state that the samples must be returned or destroyed. All emphasized the importance of "knowing" the status of the samples.

The suggestions raised in the three interviews were (these choices are not mutually exclusive): 1) to return the blood; 2) to destroy the blood; 3) to compensate for research use.

### **Return and/or Destroy**

Julio Wichato's suggestion is that the samples be destroyed or returned: "They can never use this blood. They can never study it. They should send the results or destroy it or send it back. But they cannot study it. Never." Even with compensation, Wichato does not allow for continued research use. This is surprising, perhaps, since Wichato, of all the Yanomami interviewed, is the most accustomed to drawing and freezing blood for medical purposes.

José Seripino: "ONLY if it is impossible to send should it be destroyed here. It HAS to be destroyed! They are treating us like animals! We are human beings!"

Davi: "The blood of the Yanomami can't stay in the United States. It can't. It's not their blood. [Janet: So this is a request for those who have stored the blood?] "I am speaking to them. You take this recording to them. You should explain this to them. You should ask them, "What do you *napü* think?" In those days no one knew anything. Even I didn't know anything. But now I am wanting to return to the issue."

### **Respecting Custom: "Whatever is of the Dead"**

The retention of the samples creates a potential offense to Yanomami beliefs regarding respect for the dead and the treatment of their remains.

Janet: Is this a request for those who have stored the blood?

Davi: "I am speaking to them...My mother gave blood. Now my mother is dead. Her blood is over there. Whatever is of the dead must be destroyed. Our custom is that when the Yanomami die, we destroy everything. To keep it, in a freezer, is not a good thing. He will get sick. He should return the Yanomami blood; if he doesn't, he [the doctor] and his children will become ill; they will suffer."

The Brazilian NGO, Comissao Pro-Yanomami published this statement in its Dec. 20, 2001, Boletim Yanomami:

Regarding the Yanomami blood that is deposited in U. S. laboratories, especially Penn State, Davi Kopenawa sent this message to participants of the annual meeting of the American Anthropological Association: "I would like to speak about this book and to talk about the blood of my relatives that was carried [all the way] over there and that is today kept in freezers. I don't know what they want to do with this blood, why they are keeping it. But I don't want to go there merely to talk -- I want to decide something. I want them to return the blood to me or to bring it to Brazil and pour the blood in the river so that the spirit of the xapori (shaman) is content." (Dec. 20, 2001)

### **Compensation**

In his June 2001 interview, Davi said, "I think that Yanomami blood is O positive. Is it useful in their bodies? If that's the case, and our blood is good for their bodies -- then they'll have to pay....If it helped cure a disease over there, then they should compensate us. If they don't want to pay, then they should consider returning our blood. To return our blood for our terahonomi. If he doesn't want to return anything, then lawyers will have to resolve the issue. I am trying to think of a word that whites do...sue. If he doesn't want to pay, then we should sue. If he doesn't want a suit, then he should pay. Whoever wants to use it, can use it. But they'll have to pay. It's not their blood. We're asking for our blood back. If they are going to use our blood then they have to pay us."

José Seripino: "Chagnon ... never kept his promise to the community. Shakita -- with the founder -- he worked with this man closely. Now -- he died three weeks ago -- he promised this person a motor and he disappeared without giving it. He never paid that debt."

Weiss: "If there were any way in which these samples would be of monetary value, I would either refuse to do that, or would make arrangements so that the Yanomami would receive benefits, but I do not think this is likely to happen (and as far as I know, nobody has made money from these samples)."

### **Suggested forms of compensation**

The missionary, Mike Dawson, who served as Yanomami translator at the Shakita conference, reported that a recent meeting was held among Venezuelan Yanomami in which they elected to request compensation in the form of collective health benefits (correspondence, Jan. 2002). Dawson writes that he was asked to transmit this decision to the Association. I have asked for details on this meeting, but so far they have not been supplied.

While at the conference in Shakita, I interviewed Guillermo Domingo Torres, Coordinating Physician for the Orinoco District with the Ministry of Health. Here is our conversation (Nov. 24, 2001, Shakita, Upper Orinoco, Venezuela):

Torres: "Regarding the question of the Yanomami and obtaining samples, I think the best at this moment is to only take samples when there is a specific problem to resolve. We call this "operational investigation" or "applied research." We are only [carrying out research that is related] to solving a current problem. If they will continue research and

want to continue their presence it must be in order to solve problems, not to gather knowledge about ethnicity. But there are times, as in the year 1996, when there was an epidemic and 15-20 died it was necessary to draw blood to test for malaria, [inaud], hemorrhagic viruses. This is justified. Also, in 1998 it was also justifiable to take samples. It is justifiable when it is used to solve a specific problem. When there is a special problem, they ask for help and they [the Yanomami] will give the authorization. This is different from when investigators/researchers arrive with a large research project that they have. If the Yanomami don't think it responds to a problem they have now and in the future. The Yanomami feel that they have been unjustly treated -- they have been studied a lot, a lot of blood has been taken, but this hasn't resulted in improvements in their health conditions. There are books of information, registers of antibodies, genomic sequences.... But, in sum, there haven't been any direct repercussions [for them] of these studies. But not in function of resolving problems and they feel that they want responses, to say epidemics -- prevention, application. I also think they want to restrict the extraction of blood to people of the Ministry of Health or others in which they have confidence."

Chernela: "And if this experience were to be transformed into something positive -- what would that be? Could that happen? Let's imagine that they are not going to continue. If there is a way to transform this "flawed" (bad) experience into a good one -- what could be done? Could, for example, there be a transference of resources to assist in Yanomami health?"

Torres: "Yes. I think so. I suggest going through CAICET...because they have the most experience...and the Yanomami would be most directly affected by assistance going through CAICET."

### **Conclusions and Recommendations**

If we treat Informed Consent as a process, rather than a framed, discrete, occurrence, the negligence in the 1968 collection procedures might be remedied. This would involve extending the application of procedures of informed consent into the present. A committee might be established to look into the terms of (1) returning and destroying samples, as well as offering (2) reparations. I have outlined a case for reparations in a separate document.

I close this report with a citation from Davi Kopenawa, in which he addresses the American Anthropological Association:

#### **Davi Kopenawa Yanomami to the American Anthropological Association**

"I don't like this, no. I don't like these anthropologists who use the name of the Yanomami on paper, in books.... For us Yanomami, this isn't good. They are using our name as if we were children. The name Yanomami has to be respected. It's not like a ball to throw around, to play with, hitting from one side to another. The name Yanomami refers to the indigenous peoples of Brazil and Venezuela. It must be respected. This name is authority. It is an old name. It is an ancient name.

"Anthropologists who enter the Yanomami area -- whether Brazil or Venezuela -- should speak with the people first to establish friendships; speak to the headman to ask for permissions; arrange money for flights.

"An anthropologist should really help, as a friend. He shouldn't deceive. He should defend...defend him when he is sick, and defend the land as well...saying "You should not come here -- the Yanomami are sick." If a Yanomami gets a cold, he can die.

"So now I think that the Yanomami should no longer accept this. The Yanomami should not authorize every and all anthropologist who appears. Because these books already came out in public.

"If it helped cure a disease over there, then they should compensate us. If they don't want to pay, then they should consider returning our blood. To return our blood for our terahonomi. If he doesn't want to return anything, then lawyers will have to resolve the issue. I am trying to think of a word that whites do...sue. If he doesn't want to pay, then we should sue. If he doesn't want a suit, then he should pay. Whoever wants to use it, can use it. But they'll have to pay. It's not their blood. We're asking for our blood back. If they are going to use our blood then they have to pay us.

"The blood of the Yanomami can't stay in the United States. It can't. It's not their blood.

Janet: "Is this a request for those who have stored the blood?"

Davi: "I am speaking to them. You take this recording to them. You should explain this to them. You should ask them, 'What do you napü think?' In those days no one knew anything. Even I didn't know anything. But now I am wanting to return to the issue. My mother gave blood. Now my mother is dead. Her blood is over there. Whatever is of the dead must be destroyed. Our customs is that when the Yanomami die, we destroy everything. To keep it in a freezer, is not a good thing. He will get sick. He should return the Yanomami blood; if he doesn't, he [the doctor] and his children will become ill; they will suffer.

[I ask if he has message.]

"I don't know the anthropologists of the United States. If they want to help, if ...you whites use the judicial process .."

Janet: "Would you like to send a message to the American Anthropology Association?"

Davi: "I would like to speak to the young generation of anthropologists. Not to the old ones who have already studied and think in the old ways. I want to speak to the anthropologists who love nature, who like indigenous people -- who favor the planet earth and indigenous peoples. This I would like. This is new, clean, thinking. To write a new book that anyone would like, instead of speaking badly about indigenous peoples. There must be born a new anthropologist who is in favor of a new future. And the message I have for him is to work with great care. If a young anthropologist enters here in Brazil or Venezuela, he should work like a friend. Arrive here in the shabono (longhouse). He should say, 'I am an anthropologist; I would like to learn your language. After, I would like to teach you.' Tell us something of the world of the whites. The world of the whites is not good. It is good, but it is not all good. There are good people and bad people. So, 'I am an anthropologist here in the shabono (longhouse), defending your rights and your land, your culture, your language, don't fight among yourselves, don't kill your own relatives.

"We already have an enemy among us -- it is disease. This enemy kills indeed. It is disease that kills. We are all enemies of disease. So the anthropologist can bring good messages to the Indian. They can understand what we are doing, we can understand what they are doing. We can throw out ideas to defend the Yanomami, even by helping the Yanomami understand the ways of the whites to protect ourselves. They cannot speak bad of the Yanomami. They can say, 'The Yanomami are there in the forest. Let's defend them. Let's not allow invasions. Let's not let them die of disease.'" But not to use the name of the Indian to gain money. The name of the Indian is more valuable than paper. The soul of the Indian that you capture in your image is more expensive than the camera with which you shoot it. You have to work calmly. You have to work the way nature works. You see how nature works. It rains a little. The rain stops. The world clears. This is how you have to work, you anthropologists of the United States. "I never studied anything. But I am a

shaman, hekura. So I have a capacity to speak in Yanomami and to speak in Portuguese. But I can't remember all the Portuguese words."

**5.4. Yanomamö Names and Photographic Identification** (Ray Hames was first author on the working-paper draft, which dealt only with names). Hames did not participate in the final revision, undertaken by Jane Hill with the editorial participation of other members of the Task Force at its meeting of April 12-14, 2002 and in follow-up exchanges).

We consider here Tierney's allegation that Napoleon Chagnon caused distress and heightened the likelihood of interpersonal violence among the Yanomamö by violation of their prohibitions against the public utterance of personal names. This is an allegation singled out by the Peacock Report as deserving of inquiry.

Tierney makes a number of claim in regards to the nature of Yanomamö personal names and then claims that Chagnon repeatedly violated a name taboo. Tierney's main accusations regarding breaking of the name taboo are found on page 32-33; 46-48, and 170 of *Darkness in El Dorado*. These allegations are important because they are part of a larger claim that Chagnon's fieldwork methods caused the Yanomamö a great deal of anguish and even caused conflicts between villages. In regards to the name taboo Tierney says "This was frustrating for him [Chagnon] because the Yanomami do not speak personal names out loud. And the names of the dead are the most taboo subject in their culture." (Tierney, 2000: 32). Both of these statements have elements of truth, but require consideration of the details of contexts for Yanomami naming. Among the relevant contexts for the use of Yanomami names as documented in the literature are the following. The first is that although names of the dead are subject to taboos they may be mentioned under appropriate circumstances. Second, names are used in every day conversation subject to the rules briefly described below (and in much greater detail in Chagnon's writings and those of other ethnographers who have worked with the Yanomamö). Yanomamö somehow come to have knowledge of one another's names, and deploy this knowledge for political purposes.

We found it useful to consider what other ethnographers have written about Yanomamö names and the methods they used to collect names. Bruce Albert, a French ethnographer with considerable field experience among the Yanomamö of Brazil, states:

"Traditional Yanomami names, which are nicknames and frequently pejorative to one degree or another, cannot be pronounced in front of a person or his/her close relatives—"to insult" is a synonym of "to name" in Yanomami (Albert 1985:394-404). But these nicknames circulate freely at a distance among unrelated people."  
([http://www.publicanthropology.org/Journals/Engaging-Ideas/RT\(YANO\)/Albert2.htm](http://www.publicanthropology.org/Journals/Engaging-Ideas/RT(YANO)/Albert2.htm)).

The fact that personal names can be used by individuals unrelated or distantly related to those being named is also recognized by Chagnon (1992: 29). In *Studying the Yanomamö* (Chagnon, 1974: 95) admonishes field workers that close kinsmen should never be used as sources for names.

Ramos, discussing personal names among the Sanumá, observes that some people's names do become "public" because they are used as one element of teknonyms. That is, when a person is called, for instance, "Older brother of Sopai," Sopai's name must be uttered. To use such names makes those referred to "public figures," and denies to them one of the few rights of privacy that is closely guarded by Sanuma adults (Ramos 1995:184).

In general, it is permissible to use the names of children in address or in reference. Likewise, it is permissible to address or refer to women by their personal names. However,

it is more polite to use a kinship term to address a woman to whom one is not closely related.

Ramos reports for the Sanumá slightly different rules from those prevailing among the Yanomamö. She states that the names of the dead are not the object of special taboos (1995:200), and that Sanumá name secrecy has a “playful” quality in contrast to the deep seriousness about the issue encountered by Chagnon and Albert. She attributes this to the presence among the Sanumá of unilineality; if Sanumá could not say the names of the dead, they would have to give up lineages (Ramos 1995:205).

Among the Yanomami other than the Sanumá, however, use of personal names for maturing males, mature men, or the dead regardless of sex is subject to a number of stringent regulations (Lizot, 1984: 125-136.). In a public context, it is inappropriate and insulting to address a man by his name or mention the name of a dead relative to a close kinsperson. In a private setting these rules change depending on the social relations and context that exist between speaker and listener. At one end, someone who is not related to a living or dead individual may freely utter that person’s name so long as a close relative of the named is not within earshot. At the other end, it is not permissible to utter the name of a dead person who is closely related to the listener or even to ask the listener to name a close relative. To do so is a grave insult. In fact, if the deceased’s name was a common noun (e.g., *tapir*) the village in which the deceased resided before death may find a substitute for that term so as to not come close to breaking the name taboo (Lizot, 1984: 132). This practice coincides with Yanomami belief that all remains of the dead (e.g., body and possessions) along with the name must be obliterated. Nevertheless, this last rule, under very special circumstances, can be legitimately circumvented if one establishes a prior agreement with the person being queried. Specifically, the person giving the name may not be a relative and the name should be whispered into the ear of the listener.

In summary, whether one can utter the name of an individual and the social circumstances under which it is permissible depends largely on the social status of the individual named, whether the person named is alive or dead, the degree of kinship between the speaker and the person being named, and the presence of others who might overhear the name. Chagnon has described these circumstances in a number of publications (e.g., Chagnon, 1968 [1<sup>st</sup> edition]: 12; Chagnon, 1974: 91-94; Chagnon, 1992: 23-30; Chagnon, 1997 [5<sup>th</sup> edition]: 19-21).

Aside from Chagnon, other Yanomamö ethnographers such as Jacques Lizot, Alcida Ramos, Eguillor Garcia, and Marco Ales have collected Yanomamö names (of individuals both living and dead) and published them. Albert (Albert and Gomez 1997, see quotation below) describes how he used two techniques for name collection that parallel those used by Chagnon (1992: 29; 1974: 91, 95). Albert (Comment of 03/10/02) insists that these techniques be used only in the most urgent circumstances, such as a medical emergency, and that use of these methods in less urgent situations is unethical. These methods are the use of informants from different villages and interviews with children:

If the person does not have a Portuguese nickname, one should find out his or her Yanomami name from another person who is not a relative, preferably coming from another village. The question should be made discretely, out of earshot of the person named and close relatives. Children or leaders can be of great help in identifying Yanomami names: the former, because it is a fun game, the latter because no one is going to complain about being named by them (since publicly naming people is a demonstration of courage). (Albert and Gomez 1997:182-183).

[http://www.publicanthropology.org/Journals/Engaging-Ideas/RT\(YANO\)/Albert2.htm](http://www.publicanthropology.org/Journals/Engaging-Ideas/RT(YANO)/Albert2.htm)).

Albert believes that Chagnon collected names in an unethical manner:

Here, once again, the atypical "hit-and-run" fieldwork methods used by Chagnon in his frenetic schedule of collecting genealogies and blood for the AEC must have induced him to invent ad hoc measures for getting around Yanomami name secrecy in ways that were more aggressive and less ethical. Had he used the more typical slow pace and low-profile attitude that most anthropologists use during fieldwork, he would never have found himself in situations of having to resort to bribery, trickery, or offensive behaviors to collect names. The chaotic and peripatetic nature of his AEC agenda probably did force him into such situations.

[http://www.publicanthropology.org/Journals/Engaging-Ideas/RT\(YANO\)/Albert2.htm](http://www.publicanthropology.org/Journals/Engaging-Ideas/RT(YANO)/Albert2.htm)).

It should be noted that Albert's statement above about "hit and run fieldwork" during the AEC expeditions neglects Chagnon's writings about name collection while working with geneticists (Chagnon, 1974: 93). On this point, Chagnon has written as follows:

*2. On once-only visits to a new village do not try to collect genealogies by using names...Much of my collaborative work with medical-genetics colleagues takes place in circumstances such as this. In these cases I write identification numbers on everybody and use kinship terms to discover the probable biological relationship among those who are alive (Chagnon 1974:93)*

Note that Albert (comment of 03/10/02) believes that to write identification numbers on subjects is "dehumanizing".

While Chagnon apparently did not usually collect names as part of his work on the AEC-funded expeditions, he did collect names for his own genealogical research. Here, Chagnon relied on a number of methods, including using as consultants local pariahs and children, and enemies. Of these three specific accusations it seems to us that the use of children and "bribing" of children is the most questionable. Current U.S. human-subjects regulations require special precautions on the use of children as informants. It seems reasonable to predict that if Chagnon were to submit research protocols that stated Yanomamö children were to be interviewed to collect genealogical information because adults were unwilling or hostile to such queries because of cultural taboos, his protocol would be denied. Even more problematic is Chagnon's use of the word "bribe" to induce children to reveal true names. Our standard definition of the term suggests that one uses a bribe to induce someone in a position of trust to do something he or she would not otherwise do. Nevertheless, we think it clear from Chagnon's research that children were only used during his earliest field work. They are an extremely poor source of genealogical information. But it should also be recalled that Albert (see citation above) defends the use of children as genealogical informants in emergency contexts because no one takes offense at a child uttering the name of an adult. We also note that, apart from payments to children,

that appropriate payment for information is accepted under contemporary human subjects regulations, and can be distinguished from “bribing”.

The use of "outcasts" is another procedure that Tierney considers to be problematic. Tierney states:

Finally, he invented a system, as ingenious as it was divisive, to get around the name taboo. Within groups, he sought out “informants who might be considered ‘aberrant’ or ‘abnormal,’ outcasts in their own society,” people he could bribe and isolate more easily. These pariahs resented other members of society, so they more willingly betrayed sacred secrets at others’ expense and for their own profit. He resorted to “tactics such as ‘bribing’ children when their elders were not around, or capitalizing on animosities between individuals.” (Tierney 1999:32-33).

In the passage above, Tierney is citing *Studying the Yanomamö* (Chagnon 1974).

Here is the entire statement from that text:

I knew that it would be difficult to work around the name taboo, and I knew that important gains would be made only after I identified the good informants. As happened in Bisaasi-teri, the early good breaks came from informants who might be considered “aberrant” or “abnormal,” outcasts in their own society, individuals like the twelve-year-old Karina, who guided me to Mishimishimaböwei-teri the first time (Chagnon 1974:91).

This statement is about the difficulties Chagnon had early on in his dissertation research, during the first six months. It is unclear what Chagnon means by aberrant or abnormal. In the case of Karina, however, it is clear. Chagnon, 1974: 18) describes him as someone who spent much of his life in Sibarariwä’s village (Mishimishimaböwei-teri) and returned to live in Mömariböwei-teri and was treated badly by his relatives in that village who seemed to consider him a stranger. Nevertheless, it is clear that Chagnon took advantage of aberrant or abnormal individuals to gain information about names. Use of such individuals to divulge difficult to acquire information is not uncommon in ethnographic field work and we need to carefully reconsider this issue.

Finally, Chagnon collected names of individuals by asking persons in enemy villages to name them. In the early editions of his textbook, he makes the following statement:

I began traveling to other villages to check the genealogies, picking villages that were on strained terms with the people about whom I wanted information. I would then return to my base camp and check with local informants the accuracy of the new information. If the informants became angry when I mentioned the new names I acquired from the unfriendly group, I was almost certain that the information was accurate. For this kind of checking I had to use informants whose genealogies I knew rather well: they had to be distantly enough related to the dead person that

they would not go into a rage when I mentioned the name, but not so remotely related that they would be uncertain of the accuracy of the information." (Chagnon 1977:12).

Note that by the fifth edition of the textbook, the sentence "If the informants became angry when I mentioned the new names I acquired from the unfriendly group, I was almost certain that the information was accurate" has disappeared from this paragraph (Chagnon 1997:24). This may indicate that Chagnon refined this particular technique, or that he himself came to see this technique as problematic and stopped using it.

Chagnon, both in his standard ethnography *Yanomamö* (1997, 5<sup>th</sup> edition) and in *Studying the Yanomamö* (1974) provide numerous examples of mistakes he made in the collection of names. He consistently admits he made mistakes. He admits that sometimes these mistakes made Yanomami very angry, and that he adjusted his methods to avoid such incidents. Sometimes mistakes recurred after he thought he had made proper precautions (e.g., Chagnon, 1992:30). It is our sense that many of the mistakes Chagnon made around names were honest and unintended and that he learned from these errors.

We are, however, concerned about the use of children as informants as well as the use of aberrant and abnormal individuals and at the playing off of enemies against one another, the last especially in a context where conflict is dangerous and easily precipitated. While these are "classical" anthropological field techniques of "cross-checking" information, we believe that in today's environment, of increasing concern for the dignity and autonomy of human subjects, we should open a new dialogue on such methods.

Finally, in spite of the complexities that we have insisted on above, it is clear that Chagnon's collection of names is remembered by contemporary Yanomami as having caused conflict and dissension among them. In this their memories are consistent with Chagnon's own accounts of reactions to his work with names. Their view of this matter should be respected. In any future genealogical research with the Yanomami (which may become necessary to address Yanomami needs), there should be very careful consultation with community leaders to arrive at solutions that will permit the collection of necessary materials without giving pain.

A second issue, which we address only briefly, is the use of photography. Chagnon has published many very fine photographs of Yanomami both alone and in groups, in many different contexts, and these constitute one of the most attractive features of his books to many of their readers. In his methodology text of 1974, Chagnon illustrates the assignment of subject numbers, storage of these along with names and genealogical data in a computerized data base, with all these data keyed to identification photographs. Chagnon observes "If I do not know the people well, I write identification numbers on both their arms and on the photograph (Chagnon 1974:111)." These photographs permit cross-checking of identifications with a variety of consultants. Many of these identification photographs are published in Chagnon 1974. They are quite different in aesthetic quality from Chagnon's other photographs. Chagnon continued to use this method through the early 1990's. In fieldwork in the Upper Siapa, he compiled 4400 photographs of individual Yanomami and cross-referenced these to a genealogical data base (see "Report of the Task Force Inquiry into some major allegations against Professor Chagnon"). The difficulty with this method is that the Yanomami object to being photographed. Chagnon states (1974:111, 113) that some Yanomami very much enjoy Polaroid photographs, but for many people standard photographs remain objectionable. Furthermore, he says that women, and

especially women with infants, objected to being photographed, and others have confirmed this. Nonetheless, Chagnon persisted with this method and published many pictures of women with infants. He reports that in May of 1991 a Yanomami headman threatened him with an axe because he believed that Chagnon's photographing babies caused them to die (Chagnon 1992a:280, 1997:255-56). Chagnon blames the machinations of his political enemies for this incident, but given the evidence he himself recounts of Yanomami objections to photography, the incident does not come as a surprise. Of course the situation is complex; for instance, in the case of video photography, while some Yanomami have objected to outsiders taking videos (Jesus Cardozo, personal communication), in other cases outsiders are able to take video and still pictures without encountering Yanomami objections. It would seem that the most productive way to continue the photographic documentation of Yanomami would be to put the Yanomami themselves in charge of any such project, a step begun by Tim Asch in collaboration with FUNVENA anthropologists when he offered workshops to train Yanomami videographers in the early 1990's (Jesus Cardozo, personal communication April 10, 2002).

Tierney's book raises many questions about films about the Yanomami made in association with Chagnon's work. Unfortunately, the Task Force did not have time to take up the question of the film projects undertaken by Chagnon and Asch, which have been critiqued even by Asch himself, who moved, as noted above, to a more collaborative style of filming. Sponsel in his comment submitted April 12, 2002, provides an introduction to the questions about the Chagnon films.

### 5.5. Chagnon's Involvement in Yanomami Internal Political Affairs and the Exacerbation of Violence

(Ray Hames was originally first author on this case study. In the meeting of the Task Force April 12 Chernela and Hill made revisions in the document in which he did not participate).

We discuss here the allegation in *Darkness in El Dorado* that Napoleon Chagnon put Yanomamö lives at risk in a peace-making negotiation in one instance, and by aiding a raiding party in another. The Peacock Report distinguished this as an allegation that required inquiry.

On page 112 of *Darkness in El Dorado* Tierney's account of Chagnon's role in fostering an alliance between Mishimishimaböwei-teri and Bisaasi-teri begins "He had some initial misgivings". Quoting Chagnon, Tierney continues: "This was taking risk in spades ...I was also worried that I might be a contributor to an enormous disaster." This citation from Tierney is taken from Chagnon, 1997 [5<sup>th</sup> edition]: 217. What Tierney does not tell the reader is that the "this" refers to an antecedent subject, Kaobawä, in the previous paragraph and actually indicates that Kaobawä was taking the risk (and not Chagnon) in attempting to establish peaceful relations with the enemy village of Mishimishimaböwei-teri.

In Tierney's text this extract is followed by an ellipsis, followed by a quote from Chagnon: "I was also worried that I might be contributor to an enormous disaster." (*Darkness*, 112). This quote is the start of a paragraph in Chagnon (1997:217) that is found two paragraphs below the "...risk taking in spades" paragraph. Here Chagnon debates whether he should assist Kaobawä in peace-making. He decides to assist because Kaobawä assures him that he will go ahead with or without Chagnon's help and convinces Chagnon that his presence will help him succeed, because Kaobawä believes that "...the Shamatari had accepted me and my role would be useful as a neutral intermediary and probably would contribute to the possibility of his success at making peace" (Chagnon, 1997 [5<sup>th</sup> edition] 217). It is clear from Chagnon's writing that the Yanomamö want to use Chagnon as an instrument of peace and that he obliged them at personal risk to himself.

The second allegation made by Tierney about inappropriate political involvement on Chagnon's part that might have endangered Yanomamö lives concerns Chagnon's role in helping transport a raiding party. In the second edition of *The Fierce People* (1977), Chagnon describes how he assisted a raiding party from Monou-teri, a village where he was residing and doing his research. The account begins on page 135 where he describes how "emotionally close..." he had become to the Monou-teri after watching a mortuary ceremony of a slain warrior and listening to his male relatives weep during the night. He states:

I allowed them to talk me into taking the entire raiding party up the Mavaca River in my canoe. There, they could find high ground and reach the Patanowä-teri without having to cross the numerous swamps that lay between the two villages (Chagnon 1977: 135).

He later notes "Hukoshikuwä and his raiders did not locate the Patanowä-teri on this raid, although they searched for over a week." (p. 137)

Tierney remarks (2000: 87) that this assistance had given the raiders a significant advantage (citing Ferguson, 1995: 300). This is true. However, Ferguson (1995: 300) accurately notes, unlike Tierney, that the raiders did not locate the Patanowä-teri. Therefore, the raid was a failure and did not result in fighting.

In a direct reading of Chagnon's text we find the following (1977: 134-137): The raid was going to occur with or without Chagnon's assistance; he made it easier for the raiders by providing transportation; the raid failed.

Tierney, and to some extent Ferguson, seem to suggest that the failed raid would not have occurred without Chagnon's assistance. Chagnon's text clearly states that the Yanomamö had decided to make the raid and then asked him to help. There is no indication that the raid was contingent on Chagnon's assistance. In fact, the Monou-teri and the Bisaasi-teri had jointly or singly raided Patanowä-teri six times and Monou-teri had raided the Patanowä-teri alone on at least one of those occasions (Chagnon, 1977: 134). His description of his participation was on one of those occasions in which Monou-teri had raided alone. Nevertheless, it is clearly the case that Chagnon enhanced the probability of a successful raid by transporting the Monou-teri in his canoe.

Should ethnographers assist in the pursuit of feuds and alliances? Clearly, the answer is "No." Chagnon should not have permitted the Monou-teri to "talk him into" taking them on a raid; indeed, Chagnon's language suggests that he himself regretted making that decision. We believe that ethnographers should not, with premeditation, directly or indirectly involve themselves in hostile acts

That Chagnon assisted the Bisaasi-teri in brokering a successful peace treaty with the Mishimishimaböwei-teri is clearly praiseworthy. We believe that the proper stance for anthropologists is to encourage those we study to make peace and not war, and to avoid direct or indirect facilitation of hostilities.

In his comment of March 20, 2001, Brian Ferguson points out many additional complexities around Chagnon's role in the exacerbation of Yanomami violence. Unfortunately, we are unable to further develop this question without help from Hames.

Ferguson notes that this report does not deal with the question of the role of the distribution of western goods in conflict. The Task Force work on that question is summarized in Chernela's case study 5.8, entitled "Gifting..." and is not dealt with in this brief case study. We consider that the relationship between gifts of western goods and warfare is to some degree a question of anthropological theory that should be debated in appropriate scholarly forums and is beyond the scope of the charge to the Task Force. Chernela's case study deals with specifically ethical issues. We refer readers to Ferguson's comment and to his (1995) book. Among the many reviews of the latter is Chernela (1998).

## 5.6. Engagement of anthropologists in public dialogue with members of study communities (Jane H. Hill)

The issue of Chagnon's engagement in public forums with Yanomami individuals was not one singled out by the Peacock Report. Nor does Tierney raise this issue as a specific allegation in *Darkness in El Dorado*. Instead, it appears in the book as a sort of rhetorical background. For instance, Tierney repeats twice (pp. xxiv, p. 11) that Chagnon is said to have called Davi Kopenawa, a Brazilian Yanomami who has made frequent public statements over more than a decade, a "parrot." However, reflection on this engagement and what can be learned from it is important, since this is an issue that is increasingly faced by anthropologists and that is, as far as I know, not generally raised in their training in methodological and ethical foundations. Anthropologists today all work in highly dynamic political contexts where both anthropologists and members of subject populations have access to many arenas, including international mass media, to advance their agendas.

Like most anthropologists working today, Chagnon has had to confront the emergence of new leadership styles and new forms of political discourse, some in direct opposition to his own ideas. Access to Yanomami is mediated within a very complex and often highly personalistic field of political players, within which the Yanomami themselves are, to date, usually profoundly subordinate. Nonetheless, some Yanomami do speak out. Chagnon in his publications has consistently challenged the authenticity of virtually any Yanomami person who has found a public voice (see, for instance, Chagnon 1997:236, 252-53, 256-58). I focus here on his criticisms of Davi Kopenawa Yanomami.

Of all Yanomami who have emerged as public figures, probably the most important is Davi Kopenawa Yanomami. Davi Kopenawa Yanomami has worked closely with organizations such as CCPY and Cultural Survival in the fight for the integrity of Yanomami lands in Brazil, but has also spoken out on many other issues. He has been active for 20 years, has lectured in the U.S. and in Europe as well as in Brazil, and has received many national and international awards for his work. Interviews with him examined by the Task Force include Kopenawa and Turner (Boa Vista, March 1991; in Turner and Kopenawa 1991), Albert and Kopenawa, April 8, 2001 (Albert 2001:25-29), and Kopenawa and Chernela (Demini Village, Parima Highlands, Brazil, June 7 2001; see 4.3 of this report), the last conducted in the name of the AAA El Dorado Task Force, and Kopenawa 2002 (in a comment submitted April 15, 2002 including an interview conducted by Terrence Turner).

Regarding public statements by Davi Kopenawa Yanomami, Chagnon has written as follows:

Davi Kobenawä Yanomamö was educated by the New Tribes missionaries, a mostly American Protestant group, in a village on the Demini River in Brazil. There he learned Portuguese. His non-Yanomamö supporters in Brazil, intelligent and well-intentioned advocates of the Yanomamö cause, are promoting him as a spokesman for his people. Such a role exists largely because *our* culture must deal with other cultures through their leaders – it is the only way we know how to deal with them. Everything I know about Davi Kobenawä is positive, and I am confident that he is a sincere and honest man. When I read his proclamations, I am moved – but I am also sure that someone from our culture wrote them. They have too much the voice of Rousseau's idealism and sound very non-Yanomamö. My concern is that he is being put into a difficult position, fraught with consequences for the future of the

Yanomamö. For one thing, there is currently no such thing as a pan-Yanomamö awareness, and so he cannot possibly be speaking for the Venezuelan Yanomamö ... There is also the danger that if outside parties can so easily create Yanomamö leaders, everyone who has a special interest will promote his own leader. For example, in 1990 the Brazilian mining interests introduced their own Yanomamö leader, a young man they called Marcelo Yanomami, who advocated their rights just as strongly as Davi Kopenawä advocates the policies of his mentors (fortunately, in my view, the latter are more consistent with the Yanomamö's future well-being). In an article in the Brazilian journal *Veja* in January 1990, Marcelo Yanomami, obviously reflecting his mentors' interests, argued that the Indian has the right to exploit the material riches in his territory in any manner he wishes – presumably meaning the right to turn them over to powerful Brazilian mining interests for a modest fee (Chagnon 1992:275-76; repeated in similar language in Chagnon 1997:252).

I am unable to confirm that Chagnon ever referred to Davi Kopenawa Yanomami as a “parrot”; this language is quoted by Tierney from an article by Peter Monaghan in the *Chronicle of Higher Education* (Monaghan 1994:A19) and is not there attributed to Chagnon directly. Monaghan states “ Mr. Chagnon and his supporters dismiss [Davi Kopenawa Yanomami] as a parrot of human-rights groups and say he does not speak for the tribe.” Terence Turner (in his introduction to Kopenawa's comment April 15, 2002), states that a CNN crew who spoke to Chagnon report that Chagnon called Kopenawa a “cigar store Indian.” However, the above citations are the only published writings by Chagnon on Kopenawa Yanomami that I have seen cited, or identified myself. They are carefully worded and do not use language that is offensive on its face. Nonetheless, Chagnon's remarks were very unfortunate in their context. Yanomami lands in Brazil have been under serious threat for many years (see Chernela 2001). Brazilian anthropologists and the international anthropological community (the AAA's own efforts are briefly reviewed in 3.1 of this report), including international NGO's such as Survival International, and the Yanomami themselves have been engaged in an extremely difficult and dangerous fight to protect these lands. To raise questions, in very widely-distributed publications, about the authenticity of a person who has unquestionably become a very positive symbol of the Yanomami and an important political asset in this fight, can not fail to undermine Yanomami interests. I note also that the opinion ascribed by Chagnon to Marcelo Yanomami is an opinion that a rational person might well advance, and advocates a right of full control over their lands and resources that Arvelo-Jiménez and Cousins (1992) have argued Indians should be allowed to have.

Laura Graham has written very thoughtfully on the challenge faced by indigenous spokespersons. She points out that linguistic anthropological theory, following Bakhtin, acknowledges that no one is ever fully the author of his own words. Speakers like Davi Kopenawa, if they are to engage audiences outside their own communities, must adapt to their own ideas a vocabulary and rhetorical forms that they did not originate. They are entirely aware of this issue (as Kopenawa himself has pointed out), and deploy these new forms carefully, in the hope of finding a common ground for engagement on issues that concern both indigenous people and people beyond the boundaries of indigenous communities. Graham challenges the idea of “authenticity” as a category of anthropological critique: “authenticity,” she observes, is a “colonial folk category” (Graham 2001:6). To challenge the “authenticity” of a speaker “is a political statement. It is a

challenge of boundaries and presupposes asymmetrical relations of power." (Graham 2001:27). I concur with her view.

Chagnon's point -- if pro-Indian NGO's can create puppet spokespersons, then anti-Indian exploiters can do the same -- can be turned back on his challenge to "authenticity." Anyone can mount such a challenge, for good or for evil. Thus anthropologists should avoid this rhetorical strategy. Furthermore, the challenge of inauthenticity is, fundamentally, unanthropological. It fails to recognize the contemporary contexts in which indigenous people must live, and it fails to grant indigenous speakers their claim to autonomy within these contexts. Challenges to statements indigenous spokespersons should be made in specific and dialogic terms, directly engaging the content of the speech and the voice of the speaker, rather than simply bypassing both as devoid of intentional content. And they should be made in arenas that include those where the speaker has some chance of answering.

If an anthropologist has very good information that an indigenous leader is a danger to a community, is it ever appropriate to use the privilege of access to national and international media to make this view known? Jackson (Comment submitted March 10, 2002) believes that individuals who are members of communities that are relatively powerless should always be protected, especially in print. If accusations are to be made against them, this should not be done by anthropologists. This question will no doubt continue to be debated. At the very least, we believe that any such accusation should be made on a number of fronts (including in the local contexts), in culturally appropriate ways, using the most careful language, and must include a "full disclosure" of the anthropologist's role in the political context.

Discussion of Chagnon's attacks on indigenous leaders, and of similar cases, should be a part of anthropological training. The future of anthropology will certainly increasingly involve the necessity to maneuver in complex and dynamic political fields such as that presented by the current developments among the Yanomami. Anthropologists must somehow accomplish this without harming the interests of indigenous communities.

### 5.7. The Y<sup>1</sup>nomamö Survival Fund (Jane H. Hill)

Chagnon wrote in 1992 that he intended to devote “the rest of my useful career” to advocacy for the Yanomami (cf. Chagnon 1992a:292). He has written eloquently of problems faced by the Yanomami in his books and in interviews since the late 1980’s. In a letter to AAA President Jane Buikstra in 1991, he implied that he was distressed at not having been kept informed about AAA efforts to address the situation of the Brazilian Yanomami, and offered to “be of some advisory assistance” to the AAA commission on the Yanomami” chaired by Terry Turner (Chagnon letter to Buikstra Santa Barbara, CA 91-06-24). In 1993 he attempted to participate in an investigation of the massacre at Haximu (Hashimo-teri, in his representation), as a member of a commission designated by the President of Venezuela; public objections to participation by him and by Charles Brewer Carias made such service impossible.

In the introduction to the fifth (1997) edition of his textbook, George and Louise Spindler document his advocacy career as follows:

In 1988 Chagnon founded the Y<sup>1</sup>nomamö Survival Fund, a non-profit organization dedicated to advocating the cultural survival and rights of the Y<sup>1</sup>nomamö. In 1990 he was appointed Scientific Advisor to the *Fundación Para Las Familias Campesinas e Indígenas* (FUNDAFACI), a non-profit Venezuelan organization that advocates improvements of social, educational, and health conditions among native Venezuelan peoples and peasant communities. In 1991 Chagnon participated in the founding of two additional native rights groups: the American Friends of Venezuelan Indians (AFVI) and the Native American Heritage Conservancy, a Wyoming-based group advocating cultural, economic, and educational opportunities for Plains Indians; he serves on the Board of Directors of these non-profit organizations (Spindler and Spindler 1997:vi).

Chagnon (1992a:253) gives additional information on AFVI, noting that “it was inaugurated in Washington, D.C. in July 1991. ... AFVI's board of directors consists of an equal number of Venezuelan and U.S. citizens, and as plans now stand it will collaborate with FUNDAFACI and government agencies.” None of these organizations maintains a current presence on the World Wide Web, nor are any of them listed at the website of the Foundation Center in Washington, DC. I have not been able to learn anything further about them. FUNDAFACI, of course, has been the object of considerable attention and more is known about it than about the other organizations mentioned above. We address Chagnon's involvement in FUNDAFACI elsewhere in this report (see 2.2 in Volume I).

Chagnon has solicited contributions to the Y<sup>1</sup>nomamö Survival Fund in several venues, in his books (cf. Chagnon 1992a) and in published interviews (cf. Chagnon in *Santa Barbara Magazine* 1991:71). He was listed as the founder of the Yanomami Survival Fund on his web page at UCSB in October 2001 (<http://www.anth.ucsb.edu/faculty/chagnon/> accessed 01-10-21). In 1992, Chagnon listed the members of the board of directors as Paul Bohannon, Garret Hardin, Wendy Luers, Marry Dell Pritzlaff, and Edward O. Wilson (1992a:298).

Madi (1998) cites one instance when Chagnon tried to render assistance to the Yanomami using resources partly from the Y<sup>1</sup>nomamö Survival Fund. In June 1996 communities of Yanomami living along the main rivers near the Padamo mission suffered from flooding which denied them access to gardens and hunting grounds. Following an alarm published by Mark Ritchie, Chagnon mounted an appeal for help on his web site at Santa Barbara and was offered \$70,000 worth of medicines by a Santa Barbara NGO,

“Direct Relief International,” with funds also donated by the Yanomami Survival Fund and logistics arranged through AMOCO in Caracas. Madi states that Venezuelan authorities delayed for months permission for importation of the medicine in what he regards as political game-playing on the part of a “theocracy”, which we take to be a reference to the Salesian missions. He believes that the medicines were finally released, due to unfavorable press coverage, in September and October, many months after the crisis had passed. Madi states that the delay in permission to bring the medicines into Venezuela was documented in an article in the *Los Angeles Times*; the web archive version of the cited article, by Bart Jones in the *L.A. Times* September 29, 1996, does not mention this issue. Madi also cites articles in the Venezuelan newspaper *El Nacional* from October 15, 16, and 18, written by Vanessa Davies, the last under the headline “Medicines for the Yanomami are being damaged in Maiquetía”. These articles are not available on the *El Nacional* web site. However, I have no reason to doubt Madi's story; Jesus Ignacio Cardozo (conversation with Hill April 10, 2002) reports that in 1986 he was denied permission by Venezuelan officials to bring in medical supplies for the Yanomami funded by Direct Relief International. Hames (personal communication) also reported an attempt by Venezuelan authorities to confiscate medical supplies that he had brought to the Ye'kuana. In summary, historically there have certainly been many barriers raised to Yanomami-oriented philanthropy.

While apparently Chagnon was trying to use the Yanomami Survival Fund in support of the Yanomami in 1996, as early as 1991 his efforts to establish the Fund had already encountered difficulties. In a letter of 22 March 1991 to Timothy Asch, Chagnon returns two checks for \$20.00 to Asch, stating that “My decision to create the *Yanomami Survival Fund* has led to the most astonishing and spiteful actions on the part of some of my colleagues. I have reluctantly decided to put things on the back-burner for the time being and am not accepting contributions until the air clears” (Chagnon to Asch, Santa Barbara, CA 91-04-22). By 1998, Linda Rabben found that “A 1997 letter to the Yanomami Survival Fund was “Returned to Sender: Not Deliverable.” (Rabben 1998:36). In an endnote, Rabben writes, “According to the tax records of the Yanomami Survival Fund, which are available for public inspection according to U.S. law, the Fund has been inactive since at least 1993. I found no record of either the Yanomami Survival Fund or the American Friends of Venezuelan Indians [AFVI, noted above] having supported development or relief projects for the Yanomami or other indigenous groups. A written request to Chagnon for information in mid-1977 went unanswered.” (Rabben 1998:138). Rabben, who works in Washington D.C., was kind enough to check the current status of the Yanomami Survival Fund for the task force. She writes:

“Subject: Re: Yanomami Foundation [sic; JHH had given her the wrong name]  
Date: Fri, 10 Aug 2001 20:02:33 -0400  
From: linda rabben <lrabben@igc.org>  
To: "Jane H. Hill" <jhill@azstarnet.com>

Dear Jane,

... I went into the Foundation Center's website and found the "Final [990] return" of the YSF for the 1998 tax year. At the end of the return are documents stating that the directors of YSF have

decided to "wind up and dissolve" the corporation with no assets to dispose of. On one form, Chagnon states that as president of the YSF, he has devoted 0 hours to it during 1998. The final document, dated 12/31/98, formally closing down the YSF, is unsigned by Chagnon or his wife, the only two trustees. There are no further 990 forms on file for YSF. The librarian at the Fdn Ctr told me that the lack of any recent forms indicates that the organization has indeed gone out of existence."

Rabben advised that the Task Force contact Chagnon to determine whether he had any more recent information. However, Chagnon has indicated that he will not speak to any representative of the AAA El Dorado Task Force (Chagnon e-mail to Lamphere, May 26, 2001).

In her 1998 book, Rabben is charitable about this situation, writing that "It is not unusual for non-profit organizations to fail. They often do not manage to raise sufficient funds to operate, or their projects are unviable, or they cannot obtain the cooperation of people on the ground." (Rabben 1998:35)

In fact, it is quite difficult to funnel resources to the Yanomami in Venezuela. While in Brazil there are several well-established NGO's working with the Yanomami (see Part I), the Venezuelan government does not permit NGO's to operate among indigenous groups, considering the fields of endeavor in which they specialize, such as health and education, to be the responsibility of the Venezuelan state alone (Jesus Cardozo, conversation with Hill, May 25, 2001). The two major missionary organizations, the Salesian missions and the New Tribes missions, are the only non-governmental organizations permitted to operate in the state of Amazonas, under an agreement developed in 1915.

The general lesson learned from the history of the Yanomamö Survival Fund is that, if the posture of the discipline is to be that advocacy is an essential part of anthropological practice, then young professionals need to receive training in it, including how to set up and publicize an NGO, the utility of working through existing established organizations as opposed to founding new ones, ways of using media, the use of social and political networks in advocacy, and the like.

**5.8. GIFTING:**\* A commentary, based on allegations in Tierney's Darkness in El Dorado (Janet Chernela, chernela@fiu.edu)

\*See interviews with Yanomami spokespersons in Part III.

"Chagnon could not provide ongoing medical attention or stable terms of trade... because his research...required him to collect thousands of genealogies and blood samples in a short period of time. He had to buy the Yanomami's cooperation in scores of villages across an area larger than New York State. Chagnon arrived with a boatload of machetes and axes, which he distributed within twenty-four hours; the delighted recipients of this instant wealth immediately left the village unattended and went to trade with equally delighted allies. For the steel-poor villages of the Yanomami hill country, Chagnon was a one-man treasure fleet. The remote villages of Patanowa-teri and Mishimishimabowei-teri began sending messengers begging Chagnon to come and visit, but their ambassadors were driven away by Bisaasi-teri and its closer allies, who fought to maintain their monopoly of Chagnon's steel wealth. Within three months of Chagnon's sole arrival on the scene, three different wars had broken out, all between groups who had been at peace for some time and all of whom wanted a claim on Chagnon's steel goods. 'Chagnon becomes an active political agent in the Yanomami area,' says Brian Ferguson. 'He's very much involved in the fighting and the wars. Chagnon becomes a central figure in determining battles over trade goods and machetes. His presence, with a shotgun and a canoe with an outboard motor, involves him in war parties and factionalism. What side he takes makes a big difference. Chagnon has dismissed this charge as 'the bad breath' theory of tribal warfare. Yet Chagnon brought more than breath with him into Yanomami territory. He introduced guns, germs, and steel across a wide stretch of Yanomamiland -- and on a scale never seen before. The Yanomami's desire for steel is as intense as our longing for gold. Westerner's became the Yanomami's metal mines, local El Dorados that dispensed machetes, axes, and fishhooks that instantly increased agricultural production by 1,000 percent and protein capture by huge amounts. Yanomami groups made heroic odysseys in search of a single secondhand machete. Remote groups traded their daughters for a worn machete or a blunt ax. Villages with more steel always acquired more women. The sociologist John Peters, who lived among the Brazilian Yanomami for eight years, was offered two young girls in exchange for a couple of stainless steel pots. He refused the offer." (Tierney, p. 30)

A gift is an object that moves between different possessors, or holders; as such an object becomes a gift through its transfer from one holder to another. Whereas all objects are polysemous, having layered meanings that may only be understood in the context of larger systems of meanings and relationships, the salient feature of a gift is that it is recontextualized.

The giftness of an item has value not in the object (or act) alone, but in the very movement of it from one party to another. In Arjun Appadurai's discussion of the "biography of things" (1986) he argues that the movement or path of an object becomes intrinsic to it. In other words, the history of the gift is also an attribute of it. This is not unlike Annette Weiner's (1992) notion that a gift has an "inalienable" quality that derives from the attributes of the giver, and, therefore, is never fully transferred.

Chagnon's gifts, recalled thirty years after they were given, demonstrate the way in which an object means, among other things, where it has been. In Chagnon's case a pan given by him thirty-three years before, is recalled, in 2001, this way: "Chagnon ... had alot of pans. I remember the pans. Our relatives brought them from there. They were big and they were shallow. He bought them in Venezuela." The speaker, Davi Kopenawa, was ten years old at the time, yet the pans and their history remain vivid to him. The gifts from Chagnon, or any other anthropologist, whether they be axes, machetes, fishhooks or soda crackers, carry a history so that the object stands for more than itself.

But if a history accompanies a gift, it is not one history but many, perceived differently by different recipients and donors alike. Although it may be said that the attributions of the gift include its cumulative history and contribute to its meaning (and, relatedly, its value), any such history belongs to the beholder. We cannot, therefore, speak of a single history of an object but innumerable histories of an object.

If a gift carries signification, and part of that is the identity of the giver, then, from the giver's perspective, what is being given? And what, if anything, are the assumptions understood by the transfer? As an outsider, how is an anthropologists to know the many histories attributed to an object of his/her own distribution? Where does that history begin? Does its history begin with the anthropologist, say Chagnon? Or, does it begin in the histories of colonial occupation, industrialization and unequal accumulation? What are the limits (or lack of limits) to that history?

#### **Separating the sides.**

In the case of the gift, the histories attributed to it by giver and receiver must be considered separately. The site or moment of exchange, then, is an encounter of meanings between at least two actors or clusters of actors: one the giving party, the other the receiving party. Even if a gift is given "freely," it may be read differently by recipients than intended. Accepting a gift may, to some extent, "lock in" the recipient. But to what? And how explicit are the terms of exchange?

Taking but a few of the many possible motivations for gift-giving from the anthropologist's point of view, (s)he may give a gift in order to be generous, to show gratitude, to persuade, to receive, or to be accepted. According to one normative position, all work provided or anticipated is deserving of adequate compensation. Indeed, this notion, embedded in Anglo-American assumptions, is commonly held among North American anthropologists. The issue deserves more profound reflection. If the anthropologist gives in order to receive, what is it (s)he wishes to receive? To complicate matters, the intentions of the anthropologist-giver may be confused or less than conscious, obfuscating other, more opportunistic motivations.

An anthropologist may knowingly provide gifts intended to persuade, to motivate the receiver to comply with a desired end, say, provide information. One of Tierney's principal allegations about Chagnon is that he bought cooperation in order to secure information. Tierney refers to this practice as "checkbook anthropology." Speaking of Chagnon, Tierney says, "He had to buy the Yanomami's cooperation in scores of villages across an area larger than New York State" (Tierney, p. 30).

A principal complaint of Davi Kopenawa, a Brazilian Yanomami spokesperson, is the secrecy and deception that accompanied Chagnon's gift-giving. Davi, "He brought pans, knives, machetes, axes. And so he arrived ready, ready to trick the Yanomami. This is how the story goes. I was small at the time...[pointing to a boy] like this..about nine. I remember. I remember when people from there came to our shabono (longhouse). They

said, 'A white man is living there. He speaks our language, [he] brings presents -- hammocks.' They said he was good, he was generous. He paid people in trade when he took photos, when he made interviews, [or] wrote in Portuguese [likely Spanish], English, and Yanomami, and taperecording too. But he didn't say anything to me" (Kopenawa 2001).

The anthropological enterprise requires access. Moreover, an outsider-anthropologist is often dependent upon hosts for survival. Through gift-giving, an anthropologist may hope to make of himself a friend, an insider -- to pass from being enemy to ally. This may or may not resonate with local meanings attributed to exchanges of goods. Indeed, Tierney alleges that Chagnon's gifts caused his presence and association to be coveted. He tells the reader, "... remote villages ...began sending messengers begging Chagnon to come and visit" (Tierney, p. 30). Note, too, José Seripino's causal linkage between gifting and access: "[If] he comes without things ...no one will accept him."

Anthropologists, or perhaps all givers of gifts, assume a universal signification to gifts and the way in which they are read. They mistakenly believe they understand or control the meanings that their gifts carry. Chagnon's own cultural membership in the post-war generation of 1950s America places him squarely among the modernists who believe that both science and technology were beneficial in their own right. These underlying assumptions find expression in Chagnon's field methodologies, research goals, and the utilitarian gifts he supplied. It is likely that he regarded his gifts as simultaneously improving Yanomami life, meeting Yanomami expectations, and producing himself as a local necessity.

As the sole supplier of certain items, Chagnon contributed to a developing need for new objects, as well as a primary need for himself as supplier. "Where is Chagnon?" the Yanomami still ask. "I need a motor. Where is my motor? People are still asking."

Related to the wish to be welcome is the wish to define oneself as giver and thereby powerful. In employing largesse performatively, a donor can himself accrue the attributes of magnanimity. Not only does the gift carry the attributes of the donor, in Weiner's terms, but the donor himself accrues the attributes of the gift. Tierney claims that Chagnon "introduced guns, germs, and steel across a wide stretch of Yanomamiland -- and on a scale never seen before" (Tierney, p. 30). Thus, by giving axes, machetes and other steel goods in quantity Chagnon may be said to have gained the very attributes of the gifts he bestowed: aggressive; fearless; dangerous; and waiteri (see interviews with Kopenawa, Wichato, and Toto).

But gifts carry meanings that the giver, including anthropologists, can not control. The complex layering of meanings carried by a gift and the distance between anthropologist and "informant" may be such that the giver can never know all about the gifts (s)he offers. To enumerate just some of the challenges: a giver cannot know: 1) all of the messages the gifts carry; 2) all of the impacts of the gifts they give; 3) the power carried by the gifts they give; 4) the power that accrues to the giver of the gift, or 6) to the recipient of the gift. Finally, a giver cannot know the "history-becoming" -- the future of a gift.

If Appadurai's analysis is correct, the gift should accrue power as it passes from hand to hand. The receiving group does not only receive the initial value of the gift, as it combines the identity of the anthropologist embedded in the gift itself, but also its value in a future system of exchange.

The effects of giving gifts to some, and not all, individuals or communities creates invidious distinctions and tensions. Yanomami spokesperson José Seripino: "In those days we didn't have our own motors and he came with all that material -- his research materials.

The Yanomami needed these things -- we were getting them from peasants. So one community has them and another not. Then other communities will get "fighting mad" (Spanish bravo)" (José Seripino, Sept. 7, 2001).

It is also likely that providing some communities with trade goods gives unfair advantage to groups in contact with outsiders. Tierney -- borrowing from Brian Ferguson's 1995 book -- argues that the consequence of this is the monopoly of some communities over others. According to this argument, the receiving group's monopoly on trade provides it with a special, and not prior, power over neighboring groups. Ferguson (1995) notes the leverage held by a group with steel tools over others. He, and later, Tierney, maintain that groups with steel goods had greater opportunities for alliance than have others, giving them advantage in warfare. Ferguson argues that manufactured goods attract or, pull, Yanomami toward centers of trade where they forfeit mobility and become increasingly dependent on outsiders. This, in turn, leads to increased feuding between groups vying for access to trade centers. According to Tierney, villages with more steel always acquired more women (Tierney, p. 30). Presumably this too would lead to feuding.

A balance of power, assumed to be delicate and fragile, may well be shifted by goods accumulation. Surely this is an outcome of anthropological gift-giving that deserves further consideration.

Of greatest concern is Tierney's allegation that Chagnon openly intended his gifts as rewards for fighting. Davi Kopenawa takes the same position:

Davi, "'**That shabono**, three or four **shabonos**,' as if it were a ball game. 'Whoever is the most courageous will earn more pans. If you kill ten more people I will pay more. If you kill only two, I will pay less.' Because the pans came from there. They arrived at Wayufteri and Toototobi. Our relatives came from Wayufteri and said, 'This Chagnon is very good. He gives us a lot of utensils. He is giving us pans because we fight a lot'" (Kopenawa 2001).

First, I see a difficulty in reconstructing Chagnon's motives. The fact will always remain that the motivations that underly gift-giving, as intended by donor and as perceived by recipient, may differ from one another. This is likely to be a common occurrence. And, moreover, it can proceed without any awareness by the participants of the differences in readings. Chagnon is quite frank about having erred in leading a group that ostensibly would have invaded another village. If acts of aggression were in fact rewarded or encouraged by an anthropologist it would be reprehensible indeed.

Second, in my opinion, the simple deterministic logic between unequal distribution of goods, outright rewarding of aggressive acts, and "warfare," disregards the capabilities of the Yanomami to manage their own political affairs. The analysis attributes absolute power to the westerners and passivity to the Yanomami.

It points, too, to the facile and unsubstantiated use of the term "warfare" to refer to a wide range of different forms of conflict. Dueling activity, as Kopenawa has insisted, is not warfare, but a form of ritualized combat with rules that protect players' safety. It may, under certain conditions, escalate into warfare. But those conditions are culturally and historically prescribed, and, according to all informants, infrequent.

The cultural specificity and innovation with which the Yanomami have put some steel objects to use is worth mentioning here, since it demonstrates the latitude in interpreting what might appear to an outsider as "deadly." The 1975 film by Asch and Chagnon, named The Ax Fight in order to frighten by its name, suggests greater violence than is ever manifest. Apparently (though not shown) the ax is used to fell trees to prepare new gardens. However, when used as a weapon, the Yanomami do not use it as anticipated

by Western onlookers, but rather reinvent the ax as a pounding, not a cutting tool. Yanomami use of the ax as a weapon is rule-bound so that the heavier, back end, not the cutting edge, is the point of contact.

Steel goods and other manufactured goods always coincide with the presence of outsiders who may be missionaries, health practitioners, or anthropologists. In both Brazil and Venezuela, the centers established by these outsiders (medical, administrative, or health posts) characteristically have higher population densities both within individual communities and in total number of resident communities. Ferguson's data suggest that the presence of a post, by drawing populations to it, may result in increased instability. This suggests that the bearer of gifts creates distribution centers with consequences for the balances of power.

Yet a different charge by Tierney is that Chagnon distributed too many gifts, accusing him of being "a one-man treasure fleet" (p. 30). Tierney sees Chagnon's gift-giving as extravagant, inflationary. In contrast, Yanomami interviewers accuse Chagnon of supplying goods in insufficient amounts. Kopenawa makes a comparison between the values of Chagnon's gifts and the expected returns and finds that the gifts fall short: "The life of the indian that dies is very expensive. But he [Chagnon] paid little" (Kopenawa, 2001). (It is worth noting, in this regard, that missionaries and health workers among the Yanomami in Brazil recently adopted a strict policy prohibiting food-giving and other forms of giving at their posts.)

The interpretations of Yanomami spokespersons have been sadly neglected in favor of in-fighting within the academy. I suggest reversing the scholarly gaze to give space to Yanomami speakers to interpret and analyze the actions and meanings of anthropologists, journalists, and writers of all kind.

I present here but one example, derived from an interview with Yanomami spokesperson Davi Kopenawa (see interviews).

Davi opens his analysis of Chagnon's behavior with the assertion that Chagnon considered himself to be waiteri, or fierce:

Davi: He is waiteri because he was there. He is waiteri because he was giving orders. He ordered the Yanomami to fight among themselves. He paid with pans, machetes, knives, fishhooks.

Janet: Is this the truth or this is what is being said?

Davi: It's the truth.

Janet: He paid directly or indirectly?

Davi: He made them fight more to improve his work. The Yanomami didn't know his secret.

Janet: But why did he want to make the Yanomami fight?

Davi: To make his book. To make a story about fighting among the Yanomami. He shouldn't show the fights of the others. The Yanomami did not authorize this. He did it in the United States. He thought it would be important for him. He became famous."

Davi, whose description is based upon childhood recollection, reports from relatives, and conversations with other researchers, judges Chagnon's motives: he gave gifts to encourage fighting. The entire enterprise was driven by desire for achievement and recognition, characteristic of the academy.

One can judge Davi's statement as one would judge any other ethnological insight. That is, how does he "know"? On what basis was this claim made? Is it substantiated by other sources? Is it convincing?

When he includes Tierney and Lizot in his analysis and finds commonality among the three, Davi's insights go beyond the individual to what may be called a "culture of writing":

Davi: I see and hear that an anthropologist is becoming famous. Famous -- why? Some think its good. So he became famous, like a chief. So among them nothing will be resolved. One becomes famous, the other one [his critic] becomes famous, and they go on fighting among themselves and making money...

Janet: Did you know Tierney?

Davi: I met him in Boa Vista. I went to his house. He didn't say anything to me about what he was doing.

Davi: So, Chagnon made money using the name of the Yanomami. He sold his book. Lizot too. I want to know how much they are making each month. How much does any anthropologist earn? And how much is Patrick making? Patrick must be happy. This is alot of money. They may be fighting but they are happy. They fight and this makes them happy. They make money and fight.

Janet: Yes; the anthropologists are fighting. Patrick is a journalist.

Davi: Patrick left the fight to the others! He can let the anthropologists fight with Chagnon, and he, Patrick, he's outside, he's free. He's just bringing in the money -- he must be laughing at the rest. Its like starting a fight among dogs. Then they fight, they bark and he's outside. He spoke bad of the anthropologist -- others start fighting, and he's gaining money! The name Yanomami is famous [and valuable] -- more famous than the name of any anthropologist. So he's earning money without sweating, without hurting his hands, without the heat of the sun. He's not suffering. He just sits and writes, this is great for him. He succeeded in writing a book that is bringing in money. Now he should share some of this money with the Yanomami. We Yanomami are here, suffering from malaria, flu, sick all the time. But he's there in good health -- just spending the money that he gained in the name of the Yanomami Indians....

Davi continues: I am speaking to the American Anthropology Association. They are trying to clean up this problem. They should bring three Yanomami to their meeting. There are three anthropologists who understand our three languages: Chagnon, Alcida, and Bruce. These anthropologists could translate. We could speak, and people could ask questions of us. I could go myself, but it would be best to have three from Venezuela, or four, perhaps one from Brazil. They need to see our faces. Alcida doesn't look like a Yanomami. Nor do Bruce or Chagnon. They don't have Yanomami faces. The Americans will believe [us] if they see us. I went to the United States during the fight against the goldminers. They believed me. For this reason, I say, it's important to go there and speak to them.

**5.9. Allegations of inappropriate sexual relationships with Yanomami by anthropologists.** (Jane H. Hill ([jhill@u.arizona.edu](mailto:jhill@u.arizona.edu))). (Ray Hames contributed to this case study but did not participate in its final revision).

We take up here the allegations made in *Darkness in El Dorado* about inappropriate sexual contact with Yanomami boys and young men, in exchange for gifts, by the French anthropologist Jacques Lizot. Lizot has had much to say about the sexual life of the Yanomami themselves, but, as Tierney quite correctly observes, has implied that his involvement in this life was entirely that of a neutral observer. The El Dorado Task Force believes that the allegations about Lizot's activities among the Yanomami made in *Darkness in El Dorado* are well-founded. These activities continued over many years. We have confirmation independent of Tierney's book that many people knew about them, beginning in the late 1960's. One of Lizot's habits that aroused suspicion was his use of teenage boys as guides. Contrary to Tierney's statement (2000:127) that many anthropologists preferred hiring young boys as guides, in fact most anthropologists when they could find them preferred mature men who knew the territory better, had many allies, and were competent hunters. One of our sources states that he saw Lizot inviting young boys to his hammock in his village. A number of Tierney's sources reported that Lizot attracted and rewarded boys with gifts of the type that would usually be made only to senior and influential persons.

We have also found support for Tierney's allegation that the kinds of sexual behavior that Lizot encouraged were not acceptable to Yanomami. Lizot's sexual exploitation of adolescent boys was greatly resented, very repugnant, and totally unacceptable to the Yanomami, and left them suspicious of anthropologists in general, whom they fear may share Lizot's sexual proclivities. Hames (personal communication) informed the Task Force that he spoke in 1998 to an elected Yanomamö leader, Fermín (from the village of Cejal), who was a deputy to the *municipio* established for the Ye'kwana and Yanomami in Venezuela. This leader officially stated that he had personally spoken to three or four Yanomami boys who had had relations with Lizot and strongly objected to Lizot's prostitution of boys and young men.

We believe, however, that it is unfortunate that Tierney focussed so extensively, and exclusively, on Lizot's case. While we share Tierney's view that Lizot's behavior was unacceptable, and are baffled that Venezuelan authorities permitted it to continue over a very long period of time, we must point out that sexual exploitation of the Yanomami that is far more dangerous to them than anything undertaken by Lizot is reported by those who have observed the behavior of soldiers around Brazilian army posts, where young Yanomami women (and probably boys as well) are prostituted in a context that includes epidemic levels of venereal disease including AIDS (Peters 1998:247). The Yanomami have requested that the posts be withdrawn from their territory. Gold miners, who remain illegally in Yanomami territory, have also been responsible for massive prostitution of Yanomami women (this point is made by Howard in her comment of March 10, 2002, citing Ramos 1995).

In reflecting on the Lizot case, we observe that anthropologists, like other human beings, are sexual creatures. Inevitably, sexual attraction and sexual relationships will from time to time develop between anthropologists and those they encounter during field work. The likelihood of such relationships is increased by the intensity of interaction between anthropologists and consultants functioning as key informants, which can easily yield transference-like effects with their characteristic obsessive quality for both parties (Newton 1993 is a particularly eloquent essay on this point; Newton's relationship remained

platonic, however). Every anthropologist is familiar with successful long-term partnerships that began in such relationships, and every anthropologist is equally familiar with cases where such partnerships failed, or where relationships seemed from the beginning to be ill-advised and exploitative.

Sexual exploitation is not always imposed by the anthropologist on a member of the study population; there are cases in the literature of the opposite type, including violent rape (Moreno 1995). There are also cases where members of study populations cynically exploit the attractions they hold for an anthropologist to gain access to perceived wealth or privilege. Nonetheless, in most field situations, most of the power in a relationship with a member of the study population will reside with the anthropologist. Given this problem, we believe that sexual relationships with members of study populations should be undertaken only after the most careful reflection on this point, and with full attention to the dignity and autonomy of the potential partner. Certainly, the contemplation of sexual contact with children or young adolescents should not survive such reflection and attention. Indeed, we note that the United Nations Declaration of the Rights of the Child (<http://www.unhchr.ch/map.htm>) specifically protects children against "exploitation." Furthermore, entering into sexual relationships in a responsible way requires special attention to ethnographic considerations: What material and emotional responsibilities is the anthropologist assuming, not only to the object of his or her desire, but perhaps to a wide network of that person's kin and friends? Is the anthropologist prepared to take on these responsibilities? What is expected in the way of duration of sexual relationships? Will the anthropologist be able to manage in an ethical way the consequences of the dissolution of a relationship that is shorter than an expected duration, especially where children may be involved? Very few anthropologists will be prepared to think seriously about such questions until many months or even years of fieldwork have passed. To spell it out clearly, what the language of this paragraph means is that undertaking a sexual relationship in the field community is almost always ill-advised.

There is a considerable debate about the place of sexuality, or, as Kulick (1995) puts it, "erotic subjectivity" in the working lives of anthropologists. A few anthropologists have argued that in certain contexts sexual relations can have an appropriate place in participant observation. Others have taken the position, parallel to that generally held in other professions, that sexual involvement should never be a part of fieldwork. Some take up a middle ground, that sexual involvement during fieldwork is appropriate, since fieldwork is a part of life, but that it should not be undertaken for the purposes of collecting data (Bolton 1995). Still others have pointed out that in some situations, such as work in bathhouses that are sites of transitory sexual liaisons, not to participate in sexual contact would be to adopt a perhaps even more dubious sexual role as voyeur.

One solution is obviously to carefully observe not only international but local laws, against, for instance, sexual involvement with legal minors. However, anthropologists are familiar with situations where local laws are profoundly unjust, as in regimes where miscegenation, homosexuality, prostitution, or adultery are felonies or even capital crimes. In some cases, a larger responsibility strongly militates in favor of work with populations among whom such illegal sexual practices occur, for instance, a study of the behavior of prostitutes and their clients in a community at serious risk of the spread of sexually-transmitted disease. In such cases it is difficult to prescribe absolutes about behavior. We recommend again very careful reflection on the possible consequences of sexual involvement in the field. For instance, if the forms of sexuality in which the anthropologist will be involved are illegal, the anthropologist will probably be putting the partner at

considerably more risk than is faced by the anthropologist him- or herself. Anthropologists may be relatively conspicuous presences in a community, and thus draw attention to the illegal sexual activities of partners. The penalty faced by the anthropologist might be deportation, but the partner may face very serious consequences including ostracism or even execution. Anthropologists should not only be thoroughly familiar with local law, but should be able to answer the most probing ethnographic questions about the possible consequences for a partner of an illegal or even of a legal liaison. It is unlikely that an anthropologist will be able to answer such questions after a short period of fieldwork. Again, to be absolutely clear, the language of this paragraph means that undertaking a sexual relationship in the field community is almost always a very bad idea.

We believe that anthropologists contemplating sexual liaisons of any type should reflect also on their responsibility to the discipline. From the time of Boas, we have recognized that behavior by any anthropologist reflects on all anthropologists. An image and reality of probity and responsibility benefits the discipline as a whole, while an image, or, worse, a reality of sexual libertinage or irresponsibility restricts the ability of every future anthropologist to develop research at the field site that has been thus compromised. Indeed, such compromise may put a future anthropologist at genuine risk, for instance of rape if it is believed locally that all anthropologists are sexually loose. From this point of view, one of the early goals of ethnographic involvement perhaps should be to determine the sexual behavior appropriate to a person with a high reputation, unlikely to be the object of gossip, in the local community (which may ramify into regional and even national contexts), with the goal of adopting that sort of behavior. Anthropologists will inevitably be the objects of gossip and thus may have to hold themselves to a slightly higher standard than would a local person. However, as we have noted above, some have argued that exceptions can be advanced, where participation, or the appearance of participation, in sexual contexts that may be locally regarded as illicit would be evidence of adherence to a higher ethic of addressing significant human problems.

Finally, we urge that the issue of sexuality as it may affect their field work be addressed in the training of anthropologists, so future generations are not blindsided by the kinds of difficult experiences that can be collected in frank conversations with almost any senior scholar in the discipline. Discussion of the sort of case-study literature presented in recent volumes such as (Kulick & Willson 1995, Lewin & Leap 1996, Whitehead & Conoway 1986) should be a standard component of methodological training, and development of this literature should be recognized as a legitimate contribution to anthropological practice and theory. The Committee on Ethics has drafted a "Briefing Paper for Consideration of the Ethical Implications of Sexual Relationships between Anthropologists and Members of a Study Population" (COE November 2001), and has presented also a draft "Plan of Action for Developing Dialogue on the Ethical Implications of Sexual Relationships between Anthropologists and Members of a Study Population." We urge that the briefing paper be widely read and that the plan be carried out.

Two extensive comments on the material above, which influenced its final revision but were submitted prior to this revision, were contributed by Catherine Howard (March 10, 2002, revised) and Leslie Sponsel (April 17, 2002), and should also be consulted.

**5.10. Warriors of the Amazon.** (Jane H. Hill, with the concurrence of Janet Chernela and Fernando Coronil, who also viewed the film. Ray Hames contributed to this essay but did not participate in its final revision).

The Peacock Report noted that one allegation requiring inquiry by the El Dorado Task force was a report that “a film crew allegedly watched a woman and child die during a NOVA documentary filmed with the assistance of [Jacques] Lizot.” This film is currently entitled “Warriors of the Amazon,” and is distributed by NOVA/WGBH. The date on the current edition of the videocassette version is 1996, and Jacques Lizot is listed as ethnographic advisor to the film. Several versions of the film seem to exist. Tierney observes that a BBC version, entitled “Survivors of the Amazon,” also dated 1996, “showed more of the film crew’s impact on Karohi-teri (Tierney 2000:219-20). (We note that the NOVA version does include a sequence of a headman mentioning that goods received from the film crew will be used for trade during the feast, and that these include “machetes, axes, hammocks, cotton for fixing arrow feathers, and money.”)

A third version of the film was listed as shown at a Margaret Mead Film Festival at USC in 1995, with the following information:

Spirits of the Rainforest - (Venezuela)

Andy Jillings, Jacques Lizot. 1993. 50 minutes.

The Yanomami of Venezuela invite their enemies to settle old scores and feast. When sickness and sudden death threaten the preparations shamans call upon healing powers from the spirit world, but their traditional defense offers no protection against new diseases carried by gold prospectors.

<http://www.usc.edu/dept/elab/mead/mead95/desc95.html>

Members of the Task Force have viewed only the NOVA/WGBH “Warriors of the Amazon” and in this preliminary report will remark only on that film. The author of the narration for the film is Melanie Wallace, who produced several films in the *Odyssey* series (Trailer, “Warriors of the Amazon”). A transcript of the narration of the film as it was aired on PBS September 2, 1997 can be found at <http://www.pbs.org/wgbh/nova/transcripts/2309warr.html>.

Sponsel (1998:99) states that “Among the several dozen films and videos on the Yanomami, in my opinion by far the most balanced and humanistic is *Warriors of the Amazon*, which Lizot made in collaboration with the television science series *Nova*.” This is the film that was viewed by Task Force members. Sponsel insists that his view of the film is more complex than is indicated in this quote; see his comment submitted April 12, 2002.

The film unquestionably has some very compelling footage, and has as well the redeeming feature of giving at least brief voice to a Yanomami woman about her decision to run away from her village. However, the Task Force concurs with Tierney that the film is profoundly problematic. It is particularly problematic given that NOVA/WGBH is obviously marketing it to schoolteachers; the NOVA web site (see above) includes a selection of lesson ideas and supplementary materials to accompany the film (it can be purchased for \$19.95 from amazon.com).

First, the film, made in the 1990’s, is obviously staged (Tierney enumerates a number of pieces of evidence for this (Tierney 2000:216-217). The film is incongruous in that while it shows many trade goods, the Yanomami wear almost no western clothes (one or two men in shorts are shown). Task Force member Hames states that one of the most

striking incongruities of the film for him is the sight of so many shotguns and the sound of so much firing, since most Yanomami communities have few shotguns and are careful of ammunition. In spite of the fact that one of the film's themes is diseases brought by contact, the narration of the film's introductory trailer states that the film will bring "a rare and intimate glimpse of an isolated tribe. Explore the unique culture of the Yanomami, from the role of powerful hallucinogenics to the ritualistic consumption of their dead, witness the human drama of a people on the brink of extinction. Can they make peace with their enemies before it's too late? Warriors of the Amazon." The film builds to a climax with the funeral of a woman and the statement that four people died while the film was being made. This narration reiterates themes of primordiality, isolation, cannibalism, and extinction that have endured for hundreds of years in representations of the indigenous peoples of the Americas.

The narration continues stating that the Yanomami world is "marked by aggression and revenge", and that the Yanomami "live in ways similar to their ancestors of two thousand years ago, following age old traditions...". As noted above, the filmed scenes accompanying this essentializing narration support it in every detail. Interestingly, the narration, which follows a plot line where a Yanomami village reconciles with enemies, has the headman stating that the fight started over an adultery, with the narrator reiterating this point: "Instances of adultery are common, but when it takes place among members of different groups, what begins as a personal affront can quickly escalate into a conflict among villages. And here, vengeance is not easily satisfied."

One of several narrative threads in the film is the sickness and death of a very young woman, who had recently given birth, and her baby. Tierney characterizes these sequences as "memorable, beautiful, marketable, ... inevitable ... images of [an] Amazon Madonna." He argues that the representation of this death was one of the many metaphoric and literal references in the film to "Indians as losers in the Darwinian struggle" (Tierney 2000:222). We concur.

The images of the dying young mother and her baby are problematic in at least two more ways. Before proceeding, we note that Tierney leaves the impression that the filming of the death is long and voyeuristic; in fact the shots are very short in the context of the film's pacing. This may very well be due to the fact that taking pictures of a dying person, even more of a dying infant, and even more especially of a dead person, must have enormously upset the Yanomami. Task Force member Hames believes that it must have taken an enormous amount of trade goods to overcome their objections and permit the film makers to quickly grab a few shots.

The second way in which the death is immensely problematic is that it is filmed as a moment in "nature." Tierney states that the film was made only an hour by motorboat from the infirmary at the Mavaca mission (Tierney 2000:221). Hames states that this is an exaggeration; the distance might be as much as 3 1/2 hours, depending on conditions and mode of transportation. Nonetheless it would have been easy to take the woman, who is quite young, perhaps even still a teenager, to the hospital. Tierney reports that a government doctor visited the woman, but did not have proper equipment to treat her. This scene, which would have interrupted the film's vision of wilderness isolation, is not shown. Nor is the film crew shown as intervening in any way; Tierney quotes an American missionary, Mike Dawson, as saying, "Let's be real. They're giving them machetes, cooking pots, but they can't give a dying woman aspirin to bring her fever down?" (Tierney 2000:217).

One member of the Task Force reacted initially by proposing that the AAA request that the film be withdrawn from circulation. The Task Force decided not to make such a proposal, but we remain faced with the problem of reflecting on how the film might possibly be made meaningful. Perhaps its most important lesson is not about the Yanomami at all, but about exactly the power of a representation in which the Yanomami are more part of “nature” than of “culture”; we are reminded of Charles Briggs’ work on the cholera epidemic in the early 1990’s among the Warao, where Briggs (1997:447) interviewed a Venezuelan health official who stated that “The Indians – they’re people who accept death as a normal, natural event in their lives. And when an Indian dies, it’s not anything transcendent: an Indian dies and nothing happens. Or, let’s say, there isn’t, there isn’t this, uh, fondness for life, or anything like that”. This representation is sufficiently constitutive of the affective state of the film crew that they are apparently able to maintain complete non-interventionist detachment, taking much the same position of fatalism as if they had observed the death of a mother and infant baboon on the African savannah. Had they filmed the same sort of footage in, say, Glasgow, San Diego, or Osaka, we believe that the tone of the film would be one of intense attention to finding help for the sick woman. There is a grim lesson here for us all: decent ordinary people, in the grip of a racializing representation that the film reproduces in almost every dimension, can behave in ways that deeply shocked members of the Task Force as well as Tierney and his informants and that must have been a dehumanizing experience for the Yanomami.

We are concerned, unfortunately, that it will be difficult to use the film in classes in such a way as to bring students to confront this issue. Since every shot and almost every narrative moment in it powerfully reproduces a racializing and dehumanizing representation, it seems likely that extensive preparation and deep teaching and discussion at an almost psychotherapeutic level would be required to overcome its power with many of our students. Certainly nothing in the NOVA material for teachers (which include cheery lesson plans about “the rain forest”) even remotely engages what we see as the film’s most fundamental lesson. Tierney’s chapter might be one teaching tool that could be used with the film; his analysis is clear and revealing.

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<sup>v</sup>Notes to 5.1.

<sup>v</sup> Throughout this document “Turner” will refer to Terence S. Turner. The less frequent references to Trudy R. Turner, member of the AAA El Dorado Task Force, will include her first name.

<sup>vi</sup> We thank Terence Turner for providing us with copies of his most recent manuscript (Turner 2001a) and the manuscript of Stevens (2001).

Notes to 5.3.

1. Merriwether has used the DNAs in NSF-funded research relating to the molecular evolution of the Yanomami (Merriwether, correspondence, Oct 16, 2001). One paper on these findings has been published (Merriwether et al. 2000) and others are underway. One graduate student is writing a dissertation on the findings.

2. The organizers of the Shakita conference requested no public discussion of collection of blood samples, fearing it would endanger their own health efforts.

## PART VI: REPORTS AND ESSAYS

### 6.1. REPORTS

#### 6.1.1. Turner Point by Point (Trudy R. Turner, Jeffrey D. Nelson (December 20, 2001))

“Ethically, one is obliged to speak out when one possesses relevant knowledge that an act or statement is an abuse or a misuse of the truth...regardless of the effect one’s speech may have” (Terence Turner, 2001)

In an e-mail message sent in early September, 2000, Turner and Sponsel warn the President of the AAA that a major crisis is about to erupt in the anthropological community. They discuss the upcoming publication of *Darkness in El Dorado* by Patrick Tierney. The major issue is that Tierney accuses James Neel of deliberately starting a measles epidemic to test his hypotheses about the genetics of chiefdom. In inflammatory language, they warn of Mengele-like experimentation and warn that the revelations will shake anthropology. These accusations were quickly dismissed by numerous scholars and the book appeared without the accusation. In fact, the only place the accusation appears is in the Turner and Sponsel email. Since that time, Turner has taken upon himself the obligation of reviewing the Neel material. He has moved far from his original claim and now (Turner, 2001) has other issues that he feels need to be raised. The principle issue is the tension between science and humanitarian goals. Turner asserts that this tension led Neel not to do his utmost to help with the 1968 measles epidemic.<sup>1</sup>

Turner asserts that he is able to add new information to the discussion of Neel since he went through the Neel archival material from the 1968 expedition. This review, he feels, supports the validity of his current allegations. We have also reviewed the Neel archival material. In addition, we have obtained the AEC grant proposals, we have contacted the New Tribe Mission in Venezuela and we have reviewed much of the Neel published work on the expedition. Our conclusions about James Neel differ substantially from those of Turner. We believe that James Neel did the best that he could under very difficult conditions. In addition, Neel had a history of concern for the populations he studied. In this review we will document our assertions. We also invite other scholars to read the original material and not just the annotated bibliography produced by Turner and Stevens (Turner and Stevens, 2001).

Turner (2001; 9) discusses three major issues of concern about the 1968 expedition. Only one of this issues will concern us in this review: the actions and motives of Neel and the 1968 Orinoco expeditions revealed in Neel’s own journal and correspondence and the critical review of evidence on the 1968 measles epidemic by the Brazilian medical team. Turner feels that his review has highlighted two implications- the priority of research over medical responsibilities and the lack of informed consent. We will begin by reviewing each of Turner’s specific allegations. We will address the major allegations at the end of the review of the specific points.

#### The Turner allegations

##### Research and disease as an agent of selective pressure

Turner discusses Neel’s interest in disease as a natural stressor and his “theoretical hypothesis of the uniformity of genetic capacity for resistance to disease across all human populations regardless of racial differences”.

Neel was interested in disease as a stressor for human populations precisely because it was and continues to be a stressor on human populations and it is responsible as a selective agent in genetic variation. (See for example the following classic writings and modern discussions in the field of evolutionary biology - Cummings, 1997, Futuyma, 1986, Vogel and Motulsky, 1997, Durham, 1991, Dobzhansky, 1970, Cavalli-Sforza, Menozzi and Piazza, 1994, Cavalli-Sforza and Bodmer, 1971 and Bodmer and Cavalli-Sforza, 1976 and Mayr, 1963)

Neel discusses in the virgin-soil article (1970) and in his autobiography (1994) that the belief of most people in the 1960s was that there was a constitutional difference between populations as to susceptibility to epidemic diseases. There was some limited opposition to this view from individuals who lived with indigenous populations undergoing epidemics during the 19<sup>th</sup> century. Neel was actually working against the view that different populations or races have genetically different levels of susceptibility. He felt instead that survival depended on collateral support from other individuals in the group.

Present data suggest that given a comparable previous disease experience, comparable care when ill, and a less resigned attitude to the prospect of death, the death rate from measles in a previously unexposed Indian population would not be much if any greater than in a group of virgin-soil civilized Caucasians whose ancestors had been repeatedly exposed to the experience of measles. (Neel, et al, 1970)

In Neel's autobiography he further explains his position that a view of Indians as more susceptible would allow westernized populations to do less to help those afflicted with the disease:

It is a medical dogma that the isolated tribal populations of the world, who when first contacted some 500 years ago proved so susceptible to the epidemic diseases of civilization-measles, whooping cough, smallpox, tuberculosis and syphilis-have a special inborn susceptibility to these diseases. *This belief, even in recent years, has salved society's conscience as these populations have continued to exhibit higher death rates from these diseases than long-civilized populations.* As a result of our experience I challenge this view as overly simplistic. In this connection, I point out that rarely if ever before has a medical team like ours been in a position to record an unfolding epidemic such as this one.

When prior to the advent of an effective vaccine, a measles epidemic swept through a civilized population, only those not exposed during the last epidemic became ill. These were usually children, with immune parents to care for them. By contrast, when an epidemic hits a "virgin soil" population everyone goes down at the same time. The febrile phase of measles...is prostrating for adults as well as children...A group of Indians, all but a few simultaneously ill with measles, is paralyzed...the standard Indian response is to retire to a hammock to die; the jackknife position assumed in the

hammock invites the collection of secretions in the base of the lungs, followed by bronchopneumonia

...Our impression was that the Indian was just about as sick in the primary phase as your standard Caucasian--no more, no less...On the other hand, we saw a great deal of bronchopneumonia... With respect to the secondary response to measles, our records are clear. A year after the epidemic, we found both the vaccinated and those who had been ill with the disease to have developed protective antibody titers just as big as in Caucasian.

We are not the first to feel that it is what we term the secondary aspects of such an epidemic that is responsible for so much of the mortality. (163-165) (italics added)

Neel often uses the term 'disease pressure' without discussing 'racial differences' in populations. He may say that the Yanomami give a picture of how disease may have affected human populations in the past. Neel clearly demonstrates that he was anxious to combat "racial" understanding of disease susceptibility.

Here (and elsewhere throughout the document) Turner cites references that are not applicable to the point he is making. For example:  
COR 7 acknowledge measles vaccine, says nothing about racial differences

## II *Use of Vaccinations as Research Tool*

### A. *Neel's long-term interest in the use of vaccination for research.*

Turner disagrees with Lindee (2000) that Neel was vaccinating because of humanitarian concerns. He states that

Lindee does not, however, take account of the relevant historical context of Neel's long-standing research interest in the formation of antibodies to newly introduced disease in isolated populations (U.S. Atomic Energy Commission 1951) She does not question the reason for Neel's initial blood testing in 1966-7 that revealed the Yanomami' lack of measles antibodies. She assumes, without regard to context, that Neel's motives, like those of the vaccinations that followed, were purely humanitarian and apparently on this basis seems to exclude the possibility that he might have had a research purpose to the vaccinations. This does not follow logically and is historically inaccurate.

Turner bases this statement on a letter from Robert Conrad, head of the AEC Navy Medical Team, Marshall Islands project to "Chuck" dated September 25, 1957. Contrary to Turner's assertion, Neel is not mentioned in connection with the pertussis vaccine. Neel's work on congenital abnormalities is discussed as follows:

Dr. J. Neel suggests that data on congenital defects in offspring of consanguineous marriages would be valuable in connection with their study along this line in the Japanese. (This study is aside from radiation effects.)

An examination of all the AEC material is beyond the scope of this report; however, we have found no reference to experimental vaccination in any of the AEC grant proposals from 1960 through 1973.

On the other hand, there is no question that Neel is interested in disease and disease pressure. He states in his 1965 AEC grant proposal:

What new disease patterns will emerge as these primitive groups make the transition from a near-Stone Age to an Atomic age existence, and to what extent is there provided an opportunity to study in an intensified and telescoped from the genetic adjustments which presumably occurred as other groups, including our own ancestors, made this transition?

Also, in another 1967 AEC proposal Neel states:

The USPHS Communicable Disease Center at Atlanta, Georgia has very kindly undertaken an extensive series of immunological studies on the blood sera collected in 1966. This battery includes, thus far, tests for antibodies to ...coccidiomycosis, streptococcus, diphtheria, varoola, varicolla, ...mumps, respiratory syncytial, virus, parainfluenza 1, parainfluenza 2, influenza 1 and influenza 2. In addition, ...of the Venezuelan Institute has done very extensive studies on the antibodies against the arbovirus. These studies serve a dual purpose, in indicating to what extent some of the disease of civilization may have reached the Indian,... and in providing some insight into the kind of disease pressures that might have served as selective agents at this cultural level.

#### *B. Other attempts to vaccinate*

Turner (2001) states that the:

Neel papers show that he envisioned vaccination campaigns for TB, Whooping cough, smallpox chicken pox, German measles and mumps in addition to measles. A letter to Dr. Robert Hingson of Case Western Reserve dated 15 September 1967 requests help for immunization campaigns against all of these diseases except mumps. This was over two months before he learned of the actual outbreak of the measles epidemic among the Yanomami of Brazil. Plans for these other vaccination campaigns appear to have been dropped following the 1968 disaster...

Turner views this as indicative of a planned research effort; however, the following correspondence addresses Neel's continuing interest in vaccination as a humanitarian effort. The correspondence begins months before there is any indication that measles has entered the area.

March 10, 1967 Neel to Hawkins (missionary, Boa Vista) asking about inoculating for smallpox, tuberculosis and measles. Measles vaccination is the most difficult because it must be kept frozen and the most expensive.

With respect to the infectious, I believe very strongly that an ounce of prevention is worth a pound of cure. Of the various diseases against which they might be immunized, three stand out because of their importance and the simplicity of the immunization. ...All three of these require just a single inoculation. The vaccinations I refer to would be against smallpox, tuberculosis and measles...With respect to measles this is more difficult and more expensive than the other two

Neel's 15 September 1967 correspondence to Hingson (medical doctor) is indicative of his understanding the importance of inoculating "virgin soil" populations: "We would welcome the opportunity to inoculate against [measles, smallpox, pertussis, tuberculosis] (assuming the Indians...would accept this)." He specifically addresses the notion of humanitarian concerns that are not in conflict with his scientific mission: "In addition to our scientific interests...we are impressed by the humanitarian opportunity here. As you must know, when a group such as this comes in contact with our culture, the decimation is fearful to behold."

Later correspondence (19 September 1967) to missionary Daniel Shaylor (missionary) expresses the same concerns for the health of the Yanomami:

measles and whooping cough, not to mention smallpox and tuberculosis have not reached these Indians to any significant extent, and we are considering whether we could do some type of inoculation which would minimize the effects of these diseases when they finally do reach the Indian.

November 21 Neel to Robert Shaylor (missionary, Daniel Shaylor's father)

Although our orientation is primarily research, we also are quite concerned with the humanitarian implications of extending proper medical services to the Indian, and would try very hard to lay a vaccination program onto our medical studies.

What Turner fails to note, although the documents are included in his index of the Neel material, is that upon Neel's return from the 1968 Orinoco expedition, he continued to obtain measles vaccine for the Yanomami.

April 22, 1968 Neel to Roche “Following receipt of your phone call, I contacted our Communicable Disease Center in Atlanta, Georgia, who suggested that I turn to Merck, Sharpe and Dohme, and to Philips Roxanne.”

April 26, 1968 correspondence (Neel to Philips Roxanne) are about to expire and the company suggests doubling the dose, thereby effectively having 1000 vaccinations (April 22, 1968 Neel to Roche).

### *C. The Dow protocol*

In 1970 Neel and representatives of the Dow company were in consultation concerning a field test of a triple vaccine, which included a vaccine against rubella. Turner regards this as additional evidence that Neel viewed the entire vaccination process as an experiment. We regard it as a continuation of Neel’s desire to provide aid to this population. In addition, Turner states that the representative of the Dow company felt that Neel could not complete the follow-up blood sampling and that Dow called a halt to the protocol.

On Dec.23, 1970, Joseph E. Jackson, the Director of Biological Clinical Research at Dow wrote a four page single-spaced letter to Neel to discuss the protocol for a rubella vaccine field study. On December 30, 1970 Neel responds to Jackson and states:

As we have come to grips with the requirements of your protocol and the realities our field situation, it has become clear that this is probably not the best population on which to field test your vaccine. ....the Indian villages are small and scattered; our contacts with them will be fleeting....this is certainly the largest problem, we are very dubious of our ability to obtain repeat specimens some six weeks after vaccination....I am sorry to take this position

This letter shows that contrary to Turner’s assertion, it was Neel, not Jackson, who called a halt to the trial.

Dow had been reluctant to give Neel 200 doses of the vaccine without the trial; however in a letter dated January 6, 1971 Jackson responds:

One of the original objectives, namely, to provide measles protection to Yanomami villages that may still be susceptible, can still be met. I have arranged for 200 doses of our commercial measles vaccine to be shipped to you for this purpose.

Turner also suggests that Jackson was concerned that the vaccine might cause infectious cases of the disease. Jackson, however, had a different concern. Jackson discusses at length the fact that the vaccine should not be given to pregnant women because of its teratogenic effects. One of the concerns of the early users of the vaccine was that the vaccine virus might spread from a child to the mother. This was shown not to be the case in the United States; however, Jackson states there have been no studies on rubella susceptible mothers. There were also two studies that indicated that vaccinated women do not transmit vaccine virus via breast milk. Jackson wondered if vaccinated babies might transmit the vaccine virus to the mother through the breast.

It would be very unlikely that the lactating breast could serve as a portal of entry for this virus ...It is essentially a question of what kind of physical contact susceptible women of childbearing age may have with rubella vaccines for it is already well known that rubella virus does not transmit efficiently as a respiratory agent in the tropical environment. The reason for this is unknown; but may be related to the sensitivity to U.V. light. This may all be a moot point since the meager amount of evidence available to date tends to suggest that the vaccine strains of rubella virus may have lost their teratogenic potential during the attenuation process.

The Dow company was not worried about cases of measles. Dow was concerned about the teratogenic effects of rubella and rubella vaccine for the fetus in utero. This is a realistic concern and Jackson addressed it. Measles (rubeola) can be very serious, while rubella is usually not a serious disease. However, rubella can cause serious birth defects. Even today, women who have not had rubella and are not immunized are encouraged to get a rubella vaccine several months before becoming pregnant (Merck, web page).

The Dow company decided instead to evaluate the vaccine on children in the U.S.

Question-when did the Venezuelan government take over vaccinating?

### *III Trips to Centers of Disease Control [sic] (CDC) in November, 1967*

Turner states that the trip to the CDC was for the purpose of discussing aspects of disease research and not for consulting about the properties of the Edmonston B vaccine. However, Helen Casey at the CDC attended the meeting and she was the Chief of the Viral Immunoserology Unit. She was an expert on measles. She also gave him the measles titers and told him what villages had been exposed to measles previously (letter sent Special Delivery, Jan. 8, 1968) (COR 25)

Some of the correspondence Turner cites (26, 28) as proof of his statement discuss only the dates Neel would go to the CDC. However, we would like to note that after his return in April, 1968 Neel states that the CDC suggested the names of manufacturers he should contact about obtaining additional measles vaccine.

April 22, 1968 Neel to Roche: "Following receipt of your phone call, I contacted our Communicable Disease Center in Atlanta, Georgia, who suggested that I turn to Merck, Sharpe and Dohme, and to Philips Roxanne."

Please note that later in his discussion (see point VIII, B below) Turner states that Neel must have discussed measles vaccine with members of the CDC during this visit.

In a recent report on the Tierney book, a committee of the American Society of Human Genetics, reviews Neel's consultations regarding choice of vaccine. Members of the ASHG committee contacted Professor F. Black, a noted viral epidemiologist. Prof. Black stated that he had consulted with Neel about the choice of vaccine. He stated that according to information available in 1968, Edmonston B provided longer lasting immunity than Schwarz and was the vaccine of choice for indigenous populations (ASHG, 2001). In a recent telephone conversation (April 29, 2002) with Jane Hill, Professor Ryk Ward, a noted biological anthropologist and a member of the 1968 field team, acknowledged that in a planning meeting the members of the field team discussed the use of Edmonston B for the original plan, a public-health project involving prophylactic vaccination around the periphery of the Yanomami range, in those communities most likely to be exposed to epidemics. He remembers that it was chosen because it would provide a longer-lasting immunity.

#### *IV Selection of Vaccine*

Turner states that Neel was unconcerned about the properties of Edmonston B and took it only because he could get it for free, not because of its reactive properties. This statement is contradicted by the statements of Black and Ward (see above). Additionally, there was no money in the grants for the purchase of vaccine. None of the grants even mentions vaccinating. In a letter dated March 10, 1967, Neel to Hawkins (COR 57), Neel states that the measles vaccine is the most expensive.

It should be noted that Neel had very little time to get vaccine. He found out about the measles threat in a letter from Shaylor in early December. He received the vaccine on December 19, 1967 and was leaving for the field early in January, 1968.

Additionally, in April, Neel contacted Merck (the manufacturers of Schwarz) at the suggestion of the CDC. They declined to donate vaccine since they had a contractual agreement with the government of Venezuela.

It is noteworthy that the field diary lists three locations where Neel also vaccinated with Schwarz (a total of 65 doses). Where did this vaccine come from? We have indicated that Neel contacted the manufacturers of Schwarz and they declined because of a contractual arrangement with the Venezuelan government. This was true as of April, 1968. However, some must have been available earlier to the missions. The missions apparently had Schwarz by January, 1968. Neel used them and made no notation in the field diary as to which individuals got which vaccine.

In terms of documentary evidence, Turner cites numerous references that do not address the selection of the vaccine. These include:

COR 6 – Centerwell protocol for immunizing

COR 11- written after return from field, Neel to Wilcox, Michigan Public Health Dept.

Acknowledge receipt of gamma globulin

COR 40 Chagnon to Shaylor. They will vaccinate, nothing about choice of vaccine

COR 48 Ottati (Cyanamid) from DeSilva (PAHO) request for measles vaccine

#### V. Planning and following the expedition's itinerary

Turner suggests that the epidemic did not alter the expedition's original plans. Turner says

Neel's journal entry for 20 Jan (his last night in Caracas before going into the field) reports that he was informed at a party by the head of Venezuelan Indian Agency that measles had erupted in the Upper and Middle Ventuari (the next major river system to the west of the Orinoco) This, coupled with Neel's information that the epidemic had started in the Brazilian Serra Parima to the east of the Orinoco, and was at that moment working its way down the Orinoco towards his planned research area, should have told him that measles was rapidly becoming established in the whole area, if indeed it had not already done so. There was plainly no time to loose if medically effective preventative measures, such as vaccinations and quarantines were to be taken. Nevertheless, Neel did not alter his research schedule or his plan for the movements of the expedition, or attempt to take any special measures against the epidemic until a month later, when he got the first news of the outbreaks of measles at Ocama and Mavaca (Turner, 2001: 18-19)

Turner also states:

He [Neel] did not take the implied offer of Venezuelan help from the Chief of the National Indian agency with whom he had spoken at a party at Caracas the night before the expedition left for the field, presumably because he was worried that bringing a group of alien personnel would interfere with his research objectives (Turner, 2001: 48)

This is what Neel's journal says – January 20, 1968

...threw a party at Anthropologia, celebrating a new monograph by Dr. Wagner. Saw the T...- T... artifacts which may be the oldest yet from South America. And a genuine invitation for a quickie to the Wararo. But, more important, Eddie Romero, "Commissioner" for Indian Affairs was present and news of measles in the lower Ventuari and Yanamamo and Maks on the Upper V, and what could we do about it. **Discussion: invite them in also.** We will be swarming with Indians if all this comes to pass and the problem is now not to over-commit our troops at any point. Plans and replans. (Bold added)

There are two important points – First, contrary to Turner's assertion, Neel seems to have been in favor of accepting aid. Second, the only clear message that measles was in any specific area at a specific time came from the Commissioner for Indian Affairs during this conversation. This is the area where Neel was first planning on going. Consequently, there was no need to alter his itinerary.

A careful review of the expeditions itinerary documented in the Neel field journal indicates that two groups left Caracas on January 20. One plane with Chagnon, Asch, Roche and 12 others went to Mavaca. Neel and 12 other members of the field team went to Santa Maria de Erbato near the Upper Ventuari (Neel, p.50). The two teams were approximately 160 miles apart. Neel did not fly to join Chagnon and Asch until February 6. In the meantime the Roche team began vaccinating at Ocama near Mavaca. The Neel team vaccinated in the area around Santa Maria de Erbato and, in fact, Neel states in his field notes “status of Upper Ventuari group unclear. We could send a messenger for all unvaccinated to come. Padre to give BCG, we to give measles” (Neel, p.62).

We have produced a data base of the itinerary of the Neel field journal (Appendix A). We have also produced a map of the field sites based on the field journal, in particular the map that Neel drew on page 69. (Appendix B)

On January 21, Neel and the rest of his team flew to Santa Maria de Erbato on the Upper Caura, just east of the Upper Ventuari. They immediately received permission to work and vaccinate in the area. Neel vaccinated about 60 people. It should be noted that in this area only children under 5 were vaccinated. Measles had been through the area in 1962. Neel knew this because of previous blood collection along the Upper Ventuari. An additional 101 vaccinations were administered at the Seeley and Eddings Missions in this area. Neel did not arrive at Ocama until February 6. Between Feb 6 and Feb. 17 when the all Orinoco plan was devised his team vaccinated nearly 300 people. An additional 243 vaccines were being given by missionaries in the Padamo and surrounding areas on the Orinoco River (Neel field notes, pp. 99 [point 4 all Orinoco plan])

Numbers of vaccinations	Upper Ventuari	Upper Orinoco before 2/6	Upper Orinoco before 2/16	Upper Orinoco after 2/16	Upper Orinoco Date unspecified
1033	157	40	536	227	73

## *VI Outbreak of the epidemic*

Turner suggests that Neel should have known about the measles epidemic from conversations in Caracas. He should have also moved more quickly to vaccinate before he had confirmed information about the measles outbreak in the area he was about to enter. Turner states:

The All-Orinoco plan, in sum, was a hasty stop-gap measure concocted on the spur of the moment, and was a dead letter virtually from the time of its conception.

It is important to note that Neel received 2000 doses of vaccine in the United States. One thousand doses were sent in December with missionaries to Brazil where he knew the epidemic was already advancing.

Neel’s journal documents the process by which he became aware that an epidemic had reached the area where he was located.

On 16 Feb 1968 (p97 of field diary) Neel writes of the measles story—put together with the French group. This is based on what has happened at Ocamo. Roche's team detail all the information they have seen since arriving in the field and the vaccinations they gave.

23 January Brazilian Child 1 with high fever and atypical rash  
diagnosis measles, 30 vaccinations

5 February Brazilian – Male age 21, friend of first, with high fever and atypical rash  
diagnosis not thought to be measles Also seen on 7 February still with infection and pneumonia and given antibiotic

13 February Later brought 1 year old-Brazilian boy- with high fever, conjunctival infection no rash with signs of pneumonia. Given antibiotic  
Died 15 February

During the first month in the field he sees three cases of measles, all in Brazilians. He has a log of vaccinations. He did vaccinated during that time period. (Field journal pages 110-111), but adjacent to the Upper Ventuari. Roche's team was vaccinating at Ocamo. (See appendix A for a log of measles vaccinations)

Until February 15, the cases of measles they saw had been among Brazilians. Neel (February 18) states in his journal (p.103)

But the climax at 9:00 when a group from LeChosa, who had stayed at the priests village' turned up here also in flight and brought with them one with measles at the 99% level. So, it's here! A race between vaccine and the real McCoy. A trip across the river to get the priest mobilized, packing, and soon we leave for Platanal where we will immunize and spend the night, and then on the Pats.

Before the All-Orinoco plan was developed Neel, his team or the missionaries vaccinated about 700 people, after the plan was developed, Neel vaccinated over 300 people.

### *VII Spread of the epidemic*

Turner claims that Missionary letters did not indicate that Neel had averted a tragedy.

Notes from the Missionary news indicate that Neel did save many lives. It was very flattering about Neel. In addition, Neel continued to get vaccine to send to the Venezuela after he returned.

### *VIII Neel's correspondence with Marcel Roche*

#### *A. Responsibility for the epidemic*

Turner asserts that Neel was worried that the expedition was responsible for the outbreak of measles. Turner suggests that the presence of the index case--the Brazilian boy – was important to Neel because it would relieve Neel of responsibility for causing the epidemic. There is no indication that Neel ever thought this.

Turner cites DOC 5, 6 and 7 as indicating Neel's concern. We have reviewed the documents and do not find any indication of this.

DOC 5 Western Union telegram saying measles vaccine acceptable

DOC 6 Neel to Roche asking for assurance that the donation is acceptable  
DOC 7 Cable Roche to Neel – 1000 doses of vaccine and globulin are being shipped  
COR 50 Neel to Roche – more vaccine on way. Neel contacted CDC for information about vaccine.  
COR 181 Roche to Neel – Vaccine has arrived. Ministry got vaccine from Sharpe. Ministry will use vaccines Neel sent as soon as possible because of near expiration date.  
The important point is that the Ministry of Health agreed to use the vaccines, not that they would only use Schwarz.

Only in COR 16 does Neel ask for a clinical impression of the Brazilian boy from Roche Talks about collapse of amenities and how this affected survival

In none of these letters or documents do Neel or Roche ever suggest that the expedition was responsible for the epidemic. They discuss only the arrival and use of various vaccine donations.

### *B. Permission to Vaccinate*

Turner is responding to an assertion made by Lindee that Roche had cabled Neel with permission from the government to vaccinate. Lindee later recognized that this cable referred to the donations made in April, 1968, not January, 1968. Turner is, however, persuaded that Neel must have had permission by Lindee's indirect evidence. We would like to add the following:

On December 11, 1967 Neel wrote to Layrisse

“I believe I can obtain about 2000 immunizing doses of vaccine free.CAN YOU OBTAIN PERMISSION FROM THE VENEZUELAN GOVERNMENT FOR US TO VACCINATE ALL THE INDIANS WE COME IN CONTACT WITH?”

There is an undated hand-written note (probably written by Neel) with Layrisse's name at the bottom. It states in language that mimics the Neel letter:

“Agree bring 2000 immunizing doses measles vaccine”

We do not know exactly what this is, although it might be a written account of a cable received by telephone. Elsewhere in the Neel documents there are handwritten instances of Neel either writing out the text for cables he sending or writing the confirmation of a phone message.

### *C. Roche is concerned about the use of Edmonston B*

In a letter dated May 2, Roche informs Neel that the Venezuelans will not use the Edmonston B that Neel had shipped .

Turner states:

The “studies” on the Schwarz to which Roche refers may well have involved Dr. Helen Casey and other associated with the CDC during the preceding year. These studies must in any case have been known to Neel, or at least have been made known to him when he visited Casey and others at the CDC a couple of months before leaving for Venezuela.

This is directly contradictory to Turner's earlier assertion (Point III) that Neel did not discuss the vaccines with scientists at the CDC when he was there.

...that Neel's trip there shortly before leaving for Venezuela was for purposes of discussing aspects of disease research, but not for consulting on the properties of Edmonston B vaccine

#### *IX Vaccinations: Where and how many carried out; use of gamma globulin*

#### *X Centerwall's protocol and the half village policy*

Turner states that the use of gamma globulin demonstrated "the relative indifference and low priority that seems to have attended other dealings with the vaccine.

Both manufacturers of measles vaccine recommended the administration of 0.01cc/lb of body weight of measles immune globulin (MIG) to reduce the effects of the measles vaccine. The maximum dose stated is 0.5cc per individual. This dosage is based on trials with children up to a maximum weight of 50 lbs. There had been no studies of the mediating effects of MIG in adults, since adults had either been vaccinated as children or had had measles and were immune. Neel was sent 1000 doses of MIG which corresponded to 500cc of material. Centerwall noted in the January 10 letter to Black, Associate Professor, Department of Epidemiology and Public Health, New Haven, CT, that this dosage would not be adequate to attend to the needs of adult Yanomami who weighed more than 50 lbs. His letter states:

We have been able to look up most of the references relative to this and find as you suspected no support for 0.5cc of gamma globulin being adequate for measles vaccine modification for average adults. It would appear that the 0.01 cc per pound of body weight or 0.5 cc per individual statement refers mainly to children although it is not so stated and is thus ambiguous. We plan to avoid vaccinating the very young, the old and the acutely ill and will graduate our dosages as best we can on the remainder covering half villages at a time and following with aspirin where possible and when needed.

This implies that in the days before they left for the field they realized they did not have adequate supplies of gamma globulin and decided to do the best they could by the use of the Centerwall protocol.

The half village protocol might have worked if there had not been an epidemic in progress and the field team had not felt that they had to vaccinate or treat everyone they encountered.

#### *XI Neel's low priority for vaccinations as compared to research*

Turner discusses at length his contention that Neel's humanitarian aims were always secondary to his research goals. This contention is based in part on the following statement from Neel's journal (p.80):

At Patanowa-tedi we will also make our principle collections of biologicals, and I will concentrate on this while Bill does PEs. Thus, I will get stools and soils while Bill does PEs for 3-4 days—then we get blood, saliva, and urine (? And dermats), then inoculate if at all.

Turner finds the "if at all" statement in Neel's journal important for his argument. However, there are alternative interpretations of the "if at all" statement. Professor Ryk Ward remembers that the expedition was running short of vaccine. Only a small number of doses were brought to the Patanowa-teri

and the team was trying to allocate the vaccine where it would do the most good. Patanowa-teri was an interior village (as opposed to a village along a main river course) and thus less likely to be exposed. The "if at all" statement might refer to a decision about whether this group was the highest priority for receiving vaccine.

Another interpretation and an alternate reading of the material is also possible:

"if at all"—(p. 48). It is important to note that Neel addresses the vaccinations specifically as a "a gesture of altruism and conscience" .” [5 February 1968 entry in field notes: 79]. Likewise, he notes how frustrating this vaccination process is: "more of a headache than bargained for." However, he *never* suggests that he ever "seriously considered jettisoning the 'altruism and conscience' of the vaccination campaign and [abandon] the vaccinations altogether" [Turner, 2001: 32]; he does, however, clearly state in frustration that he would like to put the vaccinating into the "hands of the missionaries." Moreover, the context of "if at all" must account for the fact that the Indians had a history of fleeing those administering the vaccinations: "they took off in fright when they heard we were giving inoculations" [1 Feb. 1968 entry in field notes: 76]. Vaccinating "if at all," administering the vaccinations "at the very last." [5 February 1968 entry in field notes: 79], or placing the vaccinations into the hands of the missionaries may be indicative of this "flight" problem alone.

It should also be noted that this was all written before Neel was aware of the magnitude of the epidemic and before the all-Orinoco plan was devised. Once he was aware of the magnitude of the epidemic he immediately took steps to prevent further spread of measles. At this point, he gave preventative doses of MIG to those exposed, but who were not yet sick, but not vaccinated. He also administered penicillin to those who were the most ill. It must be remembered that no matter what Neel felt, he did vaccinate.

### *XII Neel's upper respiratory infection*

Neel did have an upper respiratory infection. Two months previously there had been upper respiratory infections among the Yanomami

### *XIII Neel's search for the genetic basis of male dominance*

Turner states that Neel's views on headmanship were eugenic and that Neel himself was a genetic reductionist. More to the point, he feels that Neel influenced the way in which Chagnon described the Yanomami. It should be noted that during this time period Hamilton (1964) and Wilson (1975) were formulated their hypotheses about sociobiology. Neel was not the only person thinking about genetics and behavior.

#### *A. Genetics and Chiefdom*

Neel discusses his views on chiefdom in the 1966 grant proposal

One of the chief findings to date is the greater variance of male than of female reproduction, a result of polygyny. Since it is the chiefs and subchiefs, who earn these positions on the basis of ability, who are most polygynous, here is an opportunity to attempt to study the action of natural selection.

From the 1968 grant proposal:

Possible problems in the future

- c. What measurable attributes distinguish the (more polygamous) chief from his (less polygamous) fellow villagers/ This is the most difficult of the questions we should like to

approach. From the observation on each individual, we can readily compare chief and non-chief with reference to bodily dimensions, blood pressure, uric acid, gamma globulin levels, etc. More important would be a comparison on the basis of psychological characteristics. Hopefully during the third year of this extension we will have an anthropologically oriented psychologist in the field working on this question.

One of the main ways Neel wanted to study differences through cranial and other morphological measures. These were the exact measures that he jettisoned when he needed to direct his attention to the vaccination process.

### *B. Neel and Eugenics*

From Neel's autobiography:

What I see as the larger responsibilities of the human geneticists have received relatively little attention in recent years. It is a great paradox that the human geneticists (read: eugenicists) of 70 years ago, short on specific knowledge concerning the basis of human inheritance, were long on concern for the future, whereas the human geneticists of today, increasingly long on specific knowledge, fearing the opprobrium of a eugenic label, appear, to have retreated from that concern for the future. In a world where some difficult decision must soon be made, if only by default, it is incumbent upon the genetic-minded to come forward with a more holistic approach to the genetic aspects of the present human dilemma than is now evident.

Unfortunately, without some reordering of genetic research priorities at the national level, a continuing emphasis on the prospects for gene therapy will undoubtedly dominate research on the "service" aspects of human genetics for the next decade...

Neel goes on to discuss prenatal diagnosis which is where he locates his beliefs about genetics and society

It is likely that a program that so espouses prenatal diagnosis followed by abortion as that I have presented will encounter ethical/religious concern and even opposition. The issue is increasingly whether sanctity of life takes precedent over meaningful life. To those who argue that the continuing presence of the seriously genetically defective among us would be a humbling reminder of the need to offer thanksgiving and compassion, I suggest that. Despite all we can do in the way of eliminating genetic disease, there will still be no lack of human tragedies to test that compassion.

### *C. Neel's Humanitarian Concerns*

At the same time there is ample evidence of Neel's humanitarian goals. From the time of finding out that the Yanomami were susceptible, Neel continued to state his desire to vaccinate. He did his utmost to obtain vaccine. He continued to do so after his return from the field.

As an example of Neel's belief about the relationship between science and humanitarian efforts we quote from a talk he gave at the PAHO meeting of the IBP.

From the 1968 grant proposal—difficult to read—Given at the PAHO, IBP meeting.

Some moral issues

It seems appropriate in this presentation to an audience of scientists to stress research opportunities. But as in the ... recognize the issues...scientific inquiry for..and humanitarian consideration, it also seems....briefly what these studies and especially...section, might mean to the Indian. We have no accurate...of relatively pure Indians left in the Americas nor of ...of persons of mixed but "substantial" Indian ancestry. Estimations on the order of 16,000,000 (17,20,24 have been made for the former...latter is easily several times that figure. We are talking about large numbers of people.

Who among us can read the history of the relations between the early settlers of his country and the Indian without deep shame for the barbarism heaped upon a people who were driven to defend the land they occupied. The world is watching my country as it agonizes over the Negro problem—it might equally well be watching the Americas for signs of a bleated, moral resurgence with respect to the Indians. How satisfied are any of us with the official programs of our governments for the health, economic advancement and education of the Indian? How can we translate the results of our scientific investigation into concrete ...programs which...other governmental measures. It is a ...among the Indian without parallel economic measures to ensure food for the extra mouths. Nor does it seem likely that the accident proneness of the Indian (refs in..) so easy to ...of violence and lack of familiarity with our gadgets, will yield to education until the frustrations which lead to accident proneness are relieved.

In a world which seems groping for perspective, the Indian provides a reference point from which to view the fantastic disruptions which modern man, intrinsically still an Indian, has brought about. There are those who will take umbrage at my characterization of we representatives of western Culture as “intrinsically still Indian”...of the so-called intelligence tests which purport to show the inferior intellectual qualities of the American Indian, just as I am aware of similar results...to the American Negro. These results can and have been used for less than equal schooling. But in both instances it is a matter of a culturally deprived and alienated group, perhaps also subjected to early nutritional deficiencies, whose role in ...intellectual performance we are just beginning to recognize, being judged by tests designed and standardized on a very different group (see also 4). But these remarks I do not mean to dismiss the possibility of intellectual differences between ethnic groups, but only to insist that to date, the data are grossly inadequate, and we who call ourselves scientists must adhere to the null hypothesis, the more so since its various alternatives can be conveniently misused by those who would evade their social responsibilities.

culture shock as I realize how greatly in a short period of time we have contrived to d... Be this last digression as it may...I return from the field there is a period of disruption.. our...profound ignorance of the long range results of this dis...Now in...of greatly intensified concern over these problems, studies in depth of the Indian, within or without the framework of IBP will surely contribute not only to his well-being but also to our own perspective and, eventually, the necessary adjustments towards which we are evolving.

This statement, read to a group of scientists, indicates that Neel was clearly not a racist with eugenic goals. It also indicates a long-standing interest in the well being of the Indians, a perspective very advanced for the time.

#### Ethical issues raised by the Neel papers

Much of what Turner says in this part of the paper is based on conjecture. He uses his interpretations of the material as fact. His major complaint is that Neel gave his first priority to research and the second to the humanitarian effort. A basis for this accusation is that the measles vaccination program was a research effort. There is no evidence for this in the Neel papers. There is no mention of anything like this in the grant proposals. Neel is interested in the effects of disease on Indian populations; however, he never states anywhere that he would vaccinate to mimic a disease nor that he is vaccinating to test the effect of the vaccine on the population.

We note that if it had been part of a research protocol, Neel would have been better prepared. It would have been discussed in the grant proposals. There would have been funds requested in the proposals for vaccine. He would not have scrambled to get vaccine as a donation at the last minute before he entered the field. And in addition, he certainly would have remained with the villagers or returned to

them in a few days or weeks to get additional titers after they were vaccinated. We know he did not do this, and in effect, this is one of the other major allegations against him. In addition, Neel gave the Schwarz vaccine when it was available. If he were working on an experimental protocol, he would not have given different vaccines and not recorded individual differences.

The Brazilian team suggests (Lobo, 2001) based on the 1970 Dow proposal that the 1968 vaccination program was designed to test the efficacy of the vaccine and the Indians response to it. It should be noted that Edmonston B had been in use for a long time. The Dow triple vaccine was new and was to have been field tested. The reason the Dow protocol was curtailed was because Neel stated that he could not get (based on his 1968 experience) adequate information to test titers to the vaccine. This is the most important part of checking an immune response. Instead, Dow field tested the vaccine on American children. The Brazilian team also suggests that the selective use of gamma globulin may have been experimental. We note (see above) that gamma globulin was in short supply as a result of children's dosage amount. Neel was supplied with this dose because in the United States and Europe adults were not inoculated because of immunization or immunity by childhood exposure. The situation was different among the Yanomami.

Turner suggests that Neel should have expected and planned for a serious reaction to Edmonston B. The manufacturer's protocol gives indications, contra-indications and side effects of the vaccine. The field team knew that high fevers were a possibility as was a mild cough and conjunctivitis. These were reduced by gamma globulin. They brought with gamma globulin as well as aspirin to treat the fevers. Pneumonia is not a complication of the vaccine, but of the disease in this population.

In terms of informed consent, please see the section of the AAA report on informed consent in 1968 (Section 5.2). It is important to note that Neel was the author of the WHO reports (1964, 1968) on sampling indigenous populations that has a section entitled Relations of the Research Team with the Population Studied. In it he discusses the respect for persons. This is the first of the later Belmont Report ethical principles. Respect for persons is also discussed as autonomy. Informed consent is the outcome of the application of this principle. While the term informed consent is not used in the WHO document that is not surprising, since it was not in common usage at the time. But the principle is clearly articulated. In addition, Jane Hill, Chair of the El Dorado task force talked to two members of the field team about informed consent during the 1968 expedition. They both state that individuals were told that blood was taken so that they could look for disease inside the blood. In addition, we have surveyed 15 other researchers on human population biology during this time period as to their methods for obtaining consent. They all seem to have followed the same procedures the Neel team followed. A further discussion of this can be found in the AAA El Dorado Task Force Report Section 5.2.

1. We thank Terence Turner for providing his manuscripts and the Turner and Stevens (2001) guide to the Neel archives to the Task Force.

**6.1.2. Tierney's use of the Asch sound out-take tapes as evidence** (Jane H. Hill, [jhill@u.arizona.edu](mailto:jhill@u.arizona.edu)). Submitted February 13, 2002.

Conversations on sound out-take tapes made by Timothy Asch in 1968 are for Tierney an important – indeed, a “priceless” (Tierney 2000:71)-- source of evidence that James Neel's purpose in administering measles vaccinations to the Yanomami during the 1968 expedition was other than humanitarian. These tapes are stored in the Timothy Asch Collection of the Human Studies Film Archives/National Anthropological Archives, housed in the National Museum of Natural History of the Smithsonian Institution. Tierney visited the archives in 1997 and listened to the tapes and prepared transcripts of them; excerpts from the conversations appear in several chapters of Tierney (2000).

I had not intended to listen to the tapes until the appearance of a report from the American Society for Human Genetics (<http://www.journals.uchicago.edu/AJHG/journal/issues/v70n1/013452/013452.html>) , posted electronically November 19, 2001 (also see *American J. Human Genetics* 70:1-10, 2002 ). The report states that Tierney's characterization (Tierney 2000:95) of a conversation between Neel and Timothy Asch, from Sound Tape 9, was “a complete fabrication”. Given that I have extensive experience in the transcription of audiotaped conversation (I have taught discourse transcription and have authored publications using such transcripts, cf. Hill 1995), I felt that it was important that I listen to the tapes and test the characterization made by the ASHG team. In addition to listening to the contested material on Sound Tape 9, I also listened to tapes 2, 3, 4, 5, and 6 (there are a total of 25 tape sides). I prepared a rough overview of material on each tape, and more detailed transcripts of the major conversations on tapes 2, 3, 4, and 9. These are rough transcripts by the standards of conversation analysis, but they will provide a word-for-word transcript of what is on these tapes that can be compared with Tierney's own quotations from them. I present below for several conversations on the tapes my own transcription, Tierney's quotations and surrounding material, and a brief discussion. I also summarize the labels made by Asch on the original reel-to-reel tape boxes; photocopies of these were made by Mark White of the Film Archive and made available to Tierney and to me, and turn out to be important.

Unfortunately, I had only one day free in Washington to listen to the tapes (February 7, 2002). I listened to the tapes on a Sanyo transcription machine provided by the Film Archive. The foot pedal did not work on this machine so I had to reverse and advance the tapes manually (the broken foot pedal also meant that I did not have access to the automatic replay feature of the machine). I would judge the fidelity of the machine to be merely average and in one important case I could not make out a sentence that Tierney was apparently able to hear. In some cases, two or more conversations were under way simultaneously (for instance, in the case where a radio conversation in Spanish was under way in the background of face-to-face conversations in both Spanish and English, on Tape 2). In this case I transcribed only the “foreground” conversation. There is a good deal of Yanomami spoken on the tapes and of course I do not know this language. It may be that my rendition of some of the Yanomami place and personal names used in the English or Spanish conversations is incorrect. The tapes include long stretches of background noise—outboard motors, bird calls, and the like – where no conversation is audible. Finally, I did not have a stopwatch, and so was able to develop only a rough timing of the placement on the tapes using a wristwatch. Based on my rough timing I find that the times indicated in the ASHG report are accurate. In the transcripts I indicate also the numbers on the counter on the transcription machine. These numbers provide only a very rough guide, since every machine counts a bit differently. Mainly they are useful for finding the material again when one is going back and forth on a single tape with a single machine.

I prepared for listening to the tapes by going through the ASHG report and Tierney's book, making notes of the major conversations that were discussed, and the tapes on which they appeared. I did not try to internalize the wording of the conversations as reported by Tierney because I wanted to hear them “fresh”, although of course I was familiar with his overall characterization of most of them. In the transcripts below, I am assuming that Tierney was correct about who was speaking; I did not have time to reliably learn the voices of all participants in the conversations.

To summarize my conclusions, I transcribed seven conversations that are important for Tierney's argument that Neel and his co-workers believed that their vaccines might be causing measles, and yet continued to vaccinate. In every case I argue that very different understandings of the conversations from those proposed by Tierney are entirely possible or even highly probable. In several cases I believe that Tierney was only able to support his understanding by altering the content and order of the materials. In order to support his own readings, Tierney deleted parts of conversations, moved sentences around, and, in the case of the Neel-Asch conversation on Tape 9, took sound material (coughing) from other parts of the tape that cannot be heard in that conversation. The ways that Tierney has used the sound-tape materials make for lively reading, but certainly cannot be characterized as rigorous or fair in their reflection of what is actually on the tapes. If the tapes are to be used as primary data in evaluating the goals and purposes of the 1968 expedition, a qualified and neutral person will have to return to the archives and prepare a complete transcript. It would be especially useful to have someone transcribe the Yanomami language sections, since one can hardly accuse the Yanomami of having any particular agenda about their future reputations.

I thank Daisy Njoku and Mark White for their very kind assistance in giving me access to the tapes and supplementary materials, and a quiet place to work in their crowded quarters deep in the bowels of the NMNH.

### **The Tapes**

For each tape, I give first the content of the tape label. I don't give all the detail (for instance, there are numbers next to the sound-tape section numbers that seem to be keying the sound tape to the film reel numbers, and I leave those out). I then give an "overview" of the tape, consisting of brief notes. Times are the times on my wristwatch; numbers in parentheses are from the tape counter on the Sanyo transcriber, set to (000) at the beginning of each tape. Snippets of English or Spanish talk are given in case I wanted to return to a conversation. The beginnings of conversations transcribed in detail are bolded; the roman numerals cross-reference detailed transcriptions. The "overviews" permit the reader to get a general idea of what is on the tapes and to cross-reference the talk to the tape labels. The sound tapes seem to have been stopped and started frequently (sometimes it sounded as if the recorder might have been turned to a "voice-activated" function which makes the beginnings of utterances sound slightly chopped off). Finally, I give detailed transcriptions for the main conversations on each tape that figure in Tierney's discussion, and compare these with Tierney's own treatment.

Sound Tape 2: Tape label reads: 29 Jan 1968. 1. Trading at Hayabobari-teri 8 Am-10 AM Feb. 1968  
2. Mavaca measles epidemic.  
3. Radio Conference

Tape 2 Overview (here, assume that the material indicated is continuous, with no silence. There are clicks as if the tape was stopped and started but it is difficult to tell for how long this happened, especially when the talk recorded is in Yanomami).

10:05: Many people speaking Yanomami.  
10:06: Many people speaking Yanomami  
10:07: Many people speaking Yanomami, coughing  
10:08 A woman speaking Yanomami in the distance  
10:08 (24) Tim, this guy-..."  
    Child crying, Yanomami  
10:09 Many people speaking Yanomami  
    (39) Get this guy – don't film that ...

10:10 Many people speaking Yanomami  
(38) tape stops  
10:10 + (44) Yanomami spoken  
10:11 (47) That's it, that's on one?  
10:11+ Yanomami (Wayamo trade chant, coughing, children and women talking in background)  
10:12 Yanomami  
10:13 (60) sighing, grunting sounds – at (68) tape speed slows way down  
10:14 (74) Raise this a little ...  
(76) Let me tell ya...

**I. 10:15 Neel describes as Asch films**

**(88) OK, now anything further you want me to do...**

**(99) Is he an effective transmitter?**

10:16 (100) Yanomami  
(101) Chagnon speaking Yanomami – *shawara ... medicina*  
10:17 Chagnon speaking Yanomami

**II. (115) I told them that ...**

(122-23) Chagnon speaking Yanomami

(124) “as close...”

10:19+ (125) outboard motor, water sloshing  
(133) unintelligible English ...sand bar like you normally would... highest... on the river

10:21 (140) outboard motor, water

(145) outboard motor slows

(150) Spanish on radio

**III. (153) En este momento acaba de ...**

(attempts to communicate with Layrisse on radio re medicine, measles situation)

**10:23 (161) y necesitan dosis...**

(169) Mas vacuna ... tenemos bastante vacuna

(175) We brought one thousand by our estimate ... allocated about 750 ... these we want to use to get ...  
Platanal and catch it on up Orinoco

(184) Actually Ocamo... We can't be sure ... it would be excellent insurance to have 2 more physicians

(190) Well another thing- Well we can move them up and down river

10:25 Acaba en este momento ... y vienen ya infectados ... Tenemos necesidad, Dr. Layrisse ... la situación se está poniendo mas grave <Just at this moment ... and they come already infected ... We need, Dr. Layrisse ... The situation is becoming worse>

10:26 (203) (CBC) que vengan para Ocamo y Mavaca dos médicos <That two doctors should come for Ocamo and Mavaca>

(208) un cambio a ver si me han copiado <Over, let's see if you copied me>

10:27 El Dr. Layrisse dice que la situacion se está poniendo peor <Dr. Layrisse says that the situation is getting worse>

(220) (JN) They got Layrisse on the phone?

(228) (JN) This is Dr. Layrisse?

Yes, we may be moving out about 1 to get to Platanal .. river's low

(CBC) River's very bad

10:29 (236) radio

(240) (JN) Charles, under these circumstances maybe we can borrow boats ...

(246) (NC) one or two little boats

(NC) No we had Danny's big boat)

(250) (CBC) a un cuarto para la una... <at a quarter to one>

(259) cambio ... entendido <Over ... understood>

10:31 (265) end of tape

Detailed Transcriptions, Sound Tape 2 (When speaker is not known, I have a (?) at beginning of line. (xxx) means “unintelligible”)

Note: Transcription conventions

Capital letter on vowel: Strongly stressed or loud syllable

= = “latching” ; the second part follows immediately after the first part

<*italics...italics*>: the description in the angle brackets characterizes the utterances thus enclosed

(xxx): unintelligible material

[ : the beginning of a second utterance with initial bracket overlaps with a first from the point indicated by the bracket in the first utterance

[ ] : The material in brackets overlaps with another utterance.

(.), (..), (...) noticeable pauses (of increasing length, none longer than about 1.5 seconds except as indicated). Note that . period not followed by a capital letter is a very brief pause, not a sentence-final falling intonation contour.

JN: James Neel

NC: Napoleon Chagnon

TA: Tim Asch

CBC: Charles Brewer Carias

EM: Ernesto Migliazza

WC: Willard Centerwall

2.I. Neel and Asch (and Chagnon)

(?) Okay

(75) For instance, now you're recording, now you should be recording my voice, but it's kind of low, so we'll raise this a little bit and see what you get=

JN: =okay

(77) JN: next thirty seconds –

TA: Okay

JN: So let me tell you what we wantta get? I will-

TA: (xxx)

JN: <very slow, deliberate extremely severe morbilliform rash. This is what we would consider .. [a fairly mild case of measles]

[Yanomami...]

JN: What he shows ... is an extreme (3.0 secs) suffusion of his conjunctiva *slow, deliberate* <normal speed> Can you get this? Can you: come in on this? *normal speed* =>

TA: =Yeah

JN: <*slow, deliberate* Both eyes .. He has the typical ... morbilliform rash .. on both cheeks , there is a little rash .. on his chest .., but the rest of his body .. is essentially without rash .. Now ... this would be considered a moderately severe .. case of measles ... such as we might expect to see, um, in an adult, in the United States, or in Europe ... *slow, deliberate*> (100) <*normal speed* Okay, now anything further you want to do ... to get a close-up –

jumped, jump to the [next major group]

TA: [Yeah, mhm]

JN: And the thing I want to make sure we record –

You'll see, I, I hope not, but I'm afraid you're gonna see some severe cases of measles.  
And you will also see some cases –  
Get it back maybe-  
because.

you will also see some cases .. that are .. do not have as much rash as this man, so it, we're gonna be able to document the whole gamut of measles, [in this group].

NC:[His nose] doesn't seem to be running .. as much as the ones at Ocamo

JN: No, but the c-, the coryza comes .., the coryza comes early, that's the first thing .., the runny eyes and the runny nose, and the rash comes later.

NC: Is he an effective transmitter right now?

JN: I'm afraid he's a .. in a very effective transmitter right now. They're most, uh, as far as we know they're most contagious, I believe, when the eyes and nose are running, but he's still a very effective transmitter

(coughing, by measles patient?)

JN: <louder Now you may have to clean me up, remember I'm no pediatrician, I'm no measles [specialist], and a lot of this we may have to put=

TA: [Oh, don't worry, don't worry]

TA: =You don't have to worry about a thing, I, I know what I'm doing on my end and I'll,

JN: Okay

TA: if I need something I'll tell=

JN: =Well I'd have to, if this-

TAPE STOPS

Tierney (2000:71-72): "The action began with Neel excitedly giving Asch directions on how to film the measles outbreak. "Let me tell you what we want to get – extremely severe morbilliform rash. Can you get this? Can you come in on this?"

"Yeah."

"Both eyes. He has the typical morbilliform rash on both cheeks. There is a little rash on his chest, but the rest of his body is essentially without rash. Now, this would be considered a moderately severe case of measles, such as we might expect to see in an adult in the United States or Europe. Okay. Now, anything further you want to do to get a close-up and jump to the next major group. And the thing I want to make sure we record – you'll see, I hope not, but I'm afraid you're going to, some severe cases of measles. And you will also see some cases – get it back maybe – because you'll also see some cases that are, do not have as much rash as this man. So we're going to be able to document the whole gamut of measles in this group."

Chagnon observed, "His nose doesn't seem to be running as much as the ones at Ocamo."

"No," Neel agreed, "but the coryza [runny nose] comes early – that's the first thing; the runny eyes and the runny nose and the rash comes later."

Is he an effective transmitter right now?" Chagnon asked.

"I'm afraid he's a very effective transmitter right now. The most, as far as we know, they're most contagious I believe when the eyes and nose are running. But he's still a very effective transmitter. Now you may have to clean me up. Remember, I'm no pediatrician. I'm no measles specialist."

"Don't worry," said Asch. "Don't worry."

"A lot of this we may have to put in later," said Neel.

"You don't have to worry about a thing, all right?" Ash repeated. I know what I'm doing on my end."

Neel's excitement was understandable. Witnessing measles as it infected an aboriginal group was a once-in-a-lifetime event..

Discussion: The biggest problem here is Tierney's characterization of Neel as "excited." It is possible that he was excited, but this doesn't come across on the tape. One way that Tierney makes the conversation seem "excited" is to move Neel's "Can you get this? Can you come in on this?" from its actual position in the conversation, after "suffusion of the conjunctiva", up to the beginning of the conversation after "extremely severe morbilliform rash." The beginning of the sentence that contains the latter expression is cut off and obscured by some noise; Asch makes an unintelligible sound. Note that Neel began another sentence, "I will..." at the point when the unintelligible stretch starts, so "extremely severe morbilliform rash" is not linked to "Let me tell you what we want to get" in the way suggested by Tierney's transcription.

Rather than sounding excited, during the parts that are bracketed above as <slow, deliberate> Neel is using what I would call a "Grand Rounds" voice, as if he were lecturing to medical students. A very striking feature of this speech are the very long and frequent pauses – I timed one pause at three seconds. This is presumably where imaginary medical students would lean in to get a good look at the patient's symptoms. At at least one other point in the tapes Neel also slows down a good deal from his normal speech speed as he does a "retake" for Asch. When Neel is not doing the clinical description of the patient, that is, when he turns and addresses Asch directly, his speed of speech increases to what I would consider a "normal" conversational speed for him. But it doesn't sound "excited."

## 2, II. Chagnon

(101) Chagnon is speaking Yanomami. A rooster crows. You can hear the Yanomami replying briefly to his remarks. The words *shawara* "epidemic disease" and *medicina* appear. Chagnon finishes his exchange with the Yanomami and immediately says the following in English:

(114)

NC: I told them that .. the Widokaiya-teris have brought, have been exposed to measles already, .. they've, they've come up here, and have exposed them to measles, and I'm afraid that if I bring them . into Patanowa-teri with us, they're gonna expose the whole group to measles, and we don't have enough .. gamma globulin to inoculate . everybody against the exposure. I told them we'd also stop at Mahekodo-teri to pick up a guide from there who knows the trail and take us into the village .. After they've reacted to the vaccination we've given them, we'll come back and get them, and then they can: come back to the village, and then perhaps at that time they can show us where the Ashitowa-teri live. And then when they do that we can invite the Ashitowa-teris out to collect their blood?

(Yanomami)

You wanta get that?

Tierney (2000: 97, 345-6).

On p. 97, Tierney writes, "Even as Neel and Chagnon at least feared their vaccine reaction might turn into an uncontrolled epidemic, they tried to attract hundreds more Yanomami to their blood-collecting station at Patanowa-teri (100).

Endnote (100), on p. 345-6, reads as follows:

"After they've reacted to the vaccination we've given them, we'll come back and get them [Bisaasi-teri] and they can come back to the village [Patanowa-teri] and perhaps at that time they can show us where the Ashitowa-teri live. And when they do that we can invite the Ashitowa-teris all to collect their blood samples." Sound Roll 3, Mavaca, Feb. 18, 1968, Timothy Asch Collection, NAA.

Tierney's endnote attributes this remark to Tape 3; in fact it is on Tape 2. But the main problem here is that, by selecting only the second half of Chagnon's remark, Tierney suggests that Chagnon urged a careless exposure of the Ashitowa-teri to measles. In fact, when we read the first half of the remark, we can see that what Chagnon has actually done is explain to the Bisaasi-teri who want to serve as guides that they can't go to Patanowa-teri, because they have been exposed to measles and they might expose the

Patanowa-teri in turn. They will only be permitted to resume their role as guides once they have full immunity. That is, Tierney turns the force of Chagnon's remark into its exact opposite: From concern about potential exposure of inland villages to measles, to lack of concern. This seems to be a deliberate and harmful misrepresentation of Chagnon's (and the expedition's) intent.

2, III. This is a long section with many participants, where there are simultaneous foreground and background conversations, some on a noisy radio. I am focussing on the most obvious "foreground" voices and indicate only in summary what seems to be going on in the background, which is getting radio contact with Layrisse in Caracas. I place in bold sections that are used by Tierney. Translations from Spanish are in angle brackets following the utterance.

(148)

CBC: Cambio, a ver si me copió?= <Over, do you copy me?>

(?): Dos cientos doces cambio <Two hundred twelve over>

(?) Ay, se rompió mi tape recorder) <Yikes, my tape recorder broke>

CBC: En este momento acaba de llegar el Dr. Neel y Chagnon acá al radio, y me traen otra noticia, eh, yo quiero que Ud. le pase y confirme si el Dr. Layrisse ha recibido esta primera parte del mensaje, para entonces .. transmitir la segunda parte del mismo, y gracias monseñor, cambio <At this time Dr. Neel and Chagnon have just arrived here at the radio, and they bring me more news, eh, I want you to pass it on and confirm whether Dr. Layrisse has received this first part of the message, in order to then transmit the second part, and thank you Monseigneur, Over>

(?) (reply on radio) con (xxx) díle que (xxx) penicilina para combatir los efectos secundarios de sarampión, y la, la, la penicilina se llama bicilin, como Boston, Italia, Canada, Italia, Londres, Londres, y (xxx) bicilin, de los laboratorios que (xxx) Washington

(xxx) y necesitan 200 dosis- <With (xxx) tell him that (xxx) penicillin to combat the secondary effects of the measles, and the, the, the penicillin is called Bicillin, (spells this out), Bicillin, from the laboratories that (xxx) Washington>

(Here there are multiple conversations, very difficult to follow. Could be untangled with plenty of time)

(?) **mas grave, necesitamos mas-** <worse, we need more>

(166)(?): **mas vacuna?** <more vaccine?>

**NC: No, no no mas, tenemos bastante vacuna, pero es seguro que ahora existe sarampión aquí también, y Mavaca, Ocamo, y no sé cuando, no sé donde** <no, no, no more, we have enough vaccine, but it's certain that there is now measles here also, and at Mavaca, Ocamo, and I don't know when, I don't know where>

CBC: Ah, un momento por favor, u-erre-equis, u-erre-equis? Aquí yo España-México-Ruso-eh (Ah, one moment, please, U-R-X, U-R-X? Here I am E-M-R..>

(Radio conversation continues in the background)

NC: Bueno, si es posible, podremos mandar de Puerto Ayacucho o de Sanidad médicos aqui para ayudar a los misioneros (xxx) Cuantos va a curemos(XXX) <OK, if it's possible, we might send from Puerto Ayacucho or the Health Department doctors to here to help the missionaries> We have put or we know (xxx)

CBC: How many did we?=>

JN: We brought ... one thousand (.) by our estimate, at the moment, .. we have (177) allocated about seven hundred and fifty, so we have only about two hundred fifty left.

(?): Uhhuh

(NC?): These we want to use for the more remote-

JN: These we want to use to catch, get Platanal, and maybe . catch it on the upper Orinoco, and then, the Patanowa-teri, who are the principal inland village we might get to.

(?): How many physicians do we need-

(?): If they can spare two, that would be good, one for Ocamo, and one for here

(?): And will we be spreading up or down?

(A background radio conversation in Spanish takes place throughout JN-NC exchange here)

JN: Actually Ocamo, you see, we ... we can't be sure what's gonna happen next, but it would be excellent insurance to have two physicians. Ocamo will be pretty well over in another three or four days, we'd like to have one standing by here, and one that can be allocated to help the missionaries if the inland villages come down

(NC?): Well, another thing is, it may be necessary to leave one at Ocamo in the event that those three visitors from Iyawei-teri that went to Sibarawiwa-teri have in fact infected the Sibarawiwa-teri. Also-

JN: Well we can move them up and down the river the way we need them

(xxx)

**CBC: La segunda parte de la mensaje es la siguiente. Acaba en este momento de entrar en Mavaca unos Waikas veniendo de un pueblo entre Ocamo y Mavaca y vienen ya infectados. Tenemos necesidad, Dr. Layrisse, de que el gobierno .. tome parte en este programa porque aparentemente la situación se está poniendo mas grave cada vez, y en este momento no podemos predecir cuál será el curso en que seguirá este epidemia o esta ah ataque de sarampión que hay en la zona, necesitamos, y el Dr. Neel uh, solicita, que vengan, para Ocamo y Mavaca, dos médicos de manera de que .. ayuden a los misioneros acá con los enfermos que se están presentando acá en cada momento. Un cambio, a ver si me han copiado (206).**

<The second part of the message is the following. Some Waikas have just at this moment come into Mavaca from a town between Ocamo and Mavaca and they're coming already infected. We need, Dr. Layrisse, for the government ... to take part in this program because apparently the situation is becoming worse by the moment, and at this time we cannot predict what will be the course followed by this epidemic or uh this attack of measles that is in the region, we need, and Dr. Neel, uh, requests, that there should come, for Ocamo and Mavaca, two doctors such that they might help the missionaries here with the sick people that are presenting themselves here at every moment. Over, let's see whether you have copied me.>

(?) Bueno- El Dr. Layrisse dice, que la situación ... <OK, Dr. Layrisse says, that the situation ...>(radio operator in Caracas repeats a summary of the message)

(219) JN: They got Layrisse on the phone?

NC: Yeah

JN: This is Dr. Layrisse?

NC Yes, yes

(XXX – unintelligible background conversation)

JN: Yes, we, we may be moving out, about 1 o'clock to get to Platanal, Platanal, with the river this low must be, what

CBC: Oh, it's a mess, they told me right now, that these people who were up there, the river's very bad, right now

JN: Y'know, we don't have much choice

(background radio conversation, Layrisse, mostly unintelligible without great care... que el Dr. Layrisse copió todo)

JN: Charles, under these circumstances maybe .. we can draw on the boats of the Malariología, instead of going up in two heavy bongos, we can go up in:: four or five lighter boats

(?): Okay

JN: There's plenty of people to get us across the sand bars, right?

(Background radio conversation continues)

NC: One or two little boats, in addition to the ones that we have, it should be alright. Cause look (xxx), we're travelling fairly lightly, we're not bringing any heavy trade goods in with us

JN: Well, we were travelling fairly lightly two years ago=

NC:No, we had, we had Danny's bIg boat two years ago=

JN: All right. I'd still, if you aren't gonna take guides, I'd still feel happier if we had a few extra people to .. push)

(Background radio conversation, Layrisse in Spanish)

CBC (in Spanish, summary: We'll call you before we leave if we have more news and to see if there is anything new in Caracas)

Reply in Spanish

Tierney (2000:78):

Chagnon whispered to Brewer, "Now the situation is more complicated, more critical. We need as soon as possible ..."

"More vaccine?"

"No. Not more vaccine. We have enough vaccine. But it's certain that now we have measles at Mavaca and Ocamo and I don't know where else it is, and I don't know when it arrived."

Chagnon's admission – that he didn't know where measles had come from or when – contradicted his later accounts...

As can be seen above, these are the crucial sentences. I did not untangle the "more complicated, more crucial", etc. part of the conversation but Tierney's rendition seems fine. The problem is his treatment of Chagnon's brief remark:

**(?) mas grave, necesitamos mas-**

**(166)(?): mas vacuna?**

**NC: No, no no mas, tenemos bastante vacuna, pero es seguro que ahora existe sarampión aquí también, y Mavaca, Ocamo, y no sé cuando, no sé donde**

"No, no, no more, we have enough vaccine, but it's certain that now there is measles here also, and at Mavaca, Ocamo, and I don't know when, I don't know where."

Chagnon has not said "I don't know where else it is, and I don't know when it arrived." I believe there is a somewhat different reading of his much more telegraphic statement, **y no sé cuando, no sé donde** – in a fast-moving epidemic, he does not know where else measles might show up, or when it might get there. That is, a reading that this telegraphic remark "contradicts his later accounts" seems at best an exaggeration of the specificity of what was actually said.

Tierney (2000:78) also suggests that Brewer Carías was "hesitant" about how to describe the situation in his radio conversation with the bishop. The overall tone of the radio conversation, which I did not have time to transcribe in detail, is not hesitancy at all. It is one of precision in trying to be sure the message is understood – Brewer Carías speaks fairly slowly and carefully -- and considerable urgency. Brewer passes on word from Neel to Layrisse in Caracas that two more physicians and additional antibiotics and other medications are urgently needed on the Orinoco. It seems a stretch to characterize Brewer's statement: **este epidemia o esta ah ataque de sarampión** "this epidemic or this ah attack of measles" as "hesitancy." Brewer's remarks throughout exhibit, to my ears, no more than normal conversational disfluency of the type that I have analyzed elsewhere (cf. Hill 1995) as an effort to take full responsibility for precise reference and characterization of the situation.

Sound Tape 3. Tape label reads: Measles epidemic. 18 Feb. 1968. 3. Radio conference. 4. Priest conference (in another hand – didn't transfer).

19 Feb. 68 1. Loading boat, Platanal. 2. Canoe on river. 3. Bends-River. 4. River & mountain. 5. Pushing boat.

Tape 3 Overview. Time from my wristwatch (PM), numbers in parentheses are tape counter numbers from Sanyo transcription machine.

1:14 (00) This is film four, film roll four, a continuation of roll four which was part of the 7241, roll 4 is ...

(4) le explico... ya saben allá..

(7) You might tell him we have asked Puerto Ayacucho

**I. La vacuna da un efecto casi igual..**

**(11) Now is time before rash...**

**if anyone breaks out...**

**the vaccination occasionally...**

1:15 (21) (CBC) The vaccination doesn't give pimples...

Tape stops

1:17 (21) Announcing

JN: We can't pack the rest of the boats...

(31) sounds of boats bumping, water

CB (32): My equipment with me in the boat

(40) present for you...

(42) Did you fill the tanks up, Nap?

Put his tripod right where you are

1:20 Jim will you pass this back to Nap

(52) Y...

(53) Cuando viene la doctora? Estaba allí en Esmeralda...

(59-114) outboard motor noises, water sloshing, some unintelligible calling, bird noises

1:30 (156) Hey look at that

(177) still motor and water noises, fast forwarding reveals nothing more of interest

Detailed transcription, sound tape 3:

(Radio conversation in Spanish in background)

TA: This is film roll . four, film roll four, a continuation . of uh the last roll, the last roll, a continuation .. of roll four that was part of the seven two four one roll that was split up, that was roll three. Roll four is still in the camera and we'll continue for 125 feet on this roll of tape.

(Radio conversation continues: (4) Le explico, tie (xxx) dos médicos

Ya saben allá..

Ya copiaron, okay?

A la una (xxx)

JN: Now you might tell him that we have asked at Puerto Ayacucho for two doctors,[200 doses of bicillin (radio conv) [lo mismo que siguen (xxx)

todo, todo] <the same thing that follows (xxx) everything, everything>

(?): Ahora si vienen brote <Now if an outbreak comes>

NC: Bueno, la vacuna da un efecto casi i- igual como el- <OK, the vaccine gives an effect almost like the-

(?): [igual, no? <the same, no?>

Si hay brote verdad si no hay aquí el médico (xxx) hay <If there is an outbreak, right, if there's no doctor here, there's>

(Tape stops?.)

JN: The man in your front hall, now is the time before the rash when he might show the Koplik's spots of measles, go back and check that.

NC: Okay, can you explain to him, that if anyone breaks out with these runny eyes and, and a rash, he should do-

Does the vaccination give runny eyes?

JN: The vaccination occasionally- =

NC: =I just explained to him that a few people out of the vaccinated group will get a clinical case-

JN: Right, but now you see [we have-

NC: [but, he's, he's trying to interpret All of them to, to mEA:n that it's a reaction to the vaccination, which I don't think is .. a wise thing to do

JN?: Right

NC: and think that it's even-

JN: This, I hOpe it's right, but uh, we, the vaccination with gamma globulin, gives sometimes a little fever,

NC: Right

JN: a little runny eyes, but if he sees somebody

NC: with, right

JN: with rEAl rash (loud noise)

NC: Get him out.

JN: Well..., get him out where?

NC: Out here

JN: From where?

NC: Get him away from the group, he's gonna go every day to visit Patariwa's group

JN: <low Okay, Okay low>, by that time, by the time he sees somebody like that, that person will have contaminated the entire group. That is how contagious measles is.

NC: Well, the point is-

JN: He can get him back here for care

NC: Yeah..

JN: You see what I'm trying to say, measles goes- =

CBC: =Are we right in telling him (xxx) the vaccination doesn't give pimples-

JN: Yes

CB: Has anyone with pimples been here? La vacuna (xxx) no da- <The vaccination doesn't give->

TAPE STOPS

Tierney (2000:72-74) devotes several pages to this conversation, which he takes to begin with a conversation between Rousseau, the radio operator at Mavaca, and Chagnon (I don't know if the unknown Spanish speaker that I introduce as (?): is Rousseau but I have no reason to doubt it). He interprets it to mean that it has dawned on Chagnon that the vaccine is causing measles, and that Chagnon is "trying to nudge his mentor [Neel] into taking quarantine precautions." Further, he suggests that Chagnon is "moving toward a coverup" when he says that he doesn't think it is wise for Rousseau to assume that all of the symptoms he is seeing are vaccine reactions. Again, I think that Tierney has advanced the most suspicious possible reading of this conversation, supporting his reading by breaking the conversation up into a lot of little parts with a certain amount of dramatic embellishment (Tierney's treatment is too long to quote here). An alternative reading is as follows: Chagnon is checking with Neel to be absolutely sure that he is telling Rousseau exactly the right information, since Rousseau may end up all alone at Mavaca with no doctor, or tell Caracas that all the illness he sees is vaccine reaction (thus cancelling out the expedition's urgent request for doctors and medicines). He doesn't think it's wise for Rousseau to think all symptoms are vaccine reactions, not because he is afraid the expedition will be blamed for causing illness, but because he wants Rousseau to be able to distinguish real measles and isolate anybody who shows up with those symptoms. Neel points out that by the time the rash – a symptom not caused by the vaccine – shows up, the damage will already have been done so there is no point in isolating such people. Tierney also suggests that in this conversation Neel "sounds like he's at the end of his rope" (from an

“adrenaline high” a moment before when Neel asks Chagnon to see if the man in the front hall is showing Koplik’s Spots). I hear neither the “end of the rope” nor the “high”. What Tierney hears as “being at the end of his rope” is Neel’s remark, “I hOpe it’s right.” This seems like normal caution. Neel has earlier (tape 2) said that he was “no measles expert.” Certainly if Neel is “at the end of his rope” he moves quickly to being rather impatient with Chagnon for suggesting that it would be helpful to isolate patients only after they show a fully-developed measles rash.

Sound Tape 4. Tape label reads: 19th Feb 68 1. Going up Pat Creek.

21st Feb. 68 1. Arriving w/ equipment. 2. Napoleon making up. 3. Measles vaccination. 1. On trail. 2. Arriving at village-Chag. 3. Measles vax.

Roll 9 Vaccination whole village

1:59 (1) Outboard motor noise to (19-21), boat stops, thumping noises

2:00(22-24) I think that’ll sound pretty good

water, outboard

(35) Charley, come down to the end...

Un poco mas allá...

(39) water noises, conversation hard to hear

(42) Do you have the sound on???

(47) February twenty-first, february twentyfirst, february, february, february twentyfirst, eleven-thirty, arriving at Patanowa-teri

(49) Yanomami talk, laughter

2:05 (62) loud water, birds/insects/frogs?

(64) Conversation in Yanomami

Is that any good?

2:06 (70) Conversation in Yanomami, laughter

(75) Make sure you...

(84) Can you get the...

2:08 (90) Ryk, you’re holding it in the air ...

(92) NC in Yanomami..., conversing with Yanomami, laughter

2:10 (102) Come on, come on, come all at once...

(Yanomami talking, walking)

(108) OK, come on, quick...

(109) Cheering, yelling, dogs barking, singing, chanting, to (125)

2:12 (125) Loud Yanomami conversation

(130) Ready, you think it’s ready, yeah, it’s been about an hour – Yanomami yelling, dogs barking

2:13 (136) Yanomami conversation

2:14 (144) kid crying, Yanomami conversation

You’d think it was a hotcake or something

(150)(JN: He has me sitting in the sun and I can’t take it ...

(153) Y como

(154) sniffing child

(156) Now is she next? Napoleon, who’s next?

one-twenty and the child’s about twenty

2:15 (160) kids crying

2:16 (168) very loud child crying, tantrum

(177) No, he’s not thirty, he’s about fifty, forty pounds

(178) loud child crying

It's OK, OK

2:16 (186) Yanomami talk

(187) You getting it?

**I. Uh, let's put it this way, I think this is the lesser of two evils**

**(190) I'll just give her 3 cc's of gamma globulin and if she does get it it'll be mild let's do that with the pregnant gals**

(197) NC explaining *vacuna* in Yanomami

(203) This kind of measles...

One hundred ten pounds ...

**II. He is THE big man**

**(206) That's a standard size shot...**

**Ax vs. poison-tip arrow**

**He's the one that's the main head...**

2:20 (213) Yanomami

Look ahead, over there, waiting to be eaten

(217) let's do one more

How much does he weigh? (kid crying) All right, thirty pounds

Okay

(226) Birds? Cheering, barking

(228) Okay

2:22 (238) kids screaming (being vaccinated?)

(243) laughter

2:24 (251) End of tape

Detailed transcript, Sound Tape 4:

(184) Kids screaming, talk in Yanomami

(186) (?): You getting it?

(Talk in Yanomami)

(WC?) **Uh, let's put it this way, I think this is the lesser of two .. of two evils=**

**(?):= to give her the vaccination.=**

**(WC?):= I think so.**

**I'll just give her two, I'll give her three cc's of gamma globulin which means that if measles does hit her it'll be mild.**

**(?) : All right, go ahead.**

**(WC?) Cause we got to do, we got enough to do that with anyhow, let's do that with the pregnant gals.**

(195-6) NC speaking Yanomami, the word *vacuna* appears

(tape stops?)

(200) (? WC?): If this kind of measles, and especially the vaccine is very unlikely to cause [any trouble]= [Yanomami]

[? one hundred ten pounds] (\*Note: My notes don't have position of overlap clearly indicated)

(?): =Okay.

(?): He's THE big man. That's a standard-size shot.

(204)(?): Big man with an ordinary shot, hun?

(Noise, Yanomami voices)

(?) He got clobbered with an axe on his shoulder here, didn't he?

(297)NC: That's a poison-tip arrow in his shoulder, that's not an ax wound.

(?): I see, it's a pretty bad-looking scar)

NC: ... village up the Orinoco River, the last one we could possibly get to this trip, that's the one that shot him.

(?): (?):He's the one that's the main leader

(Yanomami)

(?) (?):Look ahead, over there, waiting to be eaten. Well we had to discover it for ourselves.

(215) (?):Let's do one more.

(218) (?): How much does he weigh? Put him for a weight. (Kid crying throughout)

(?) All right, thirty pounds

(?) OK

(223) (?) That was good (kid continues screaming)

Tierney 2000 (98). I believe that Tierney changes a word in Centerwall's remarks. Instead of "if measles does hit her it'll be mild," Tierney writes "if measles does hit her it'll be moderate." I was not able to return to the tapes and double-check this point but as can be seen above I heard "mild" both when taking rough notes and when doing the more detailed transcription.

Sound Tape 5. Tape Label reads: 22-2-68. 1. Linguistics (ruined). 2. Pregnancy. 1. Pregnancy. 2. urin & shit analysis 3. Radio contact.

Tape 5 overview (Note: For tape 5 I only jotted notes; I didn't return to any specific conversation for a detailed transcription. The reader familiar with Tierney's book will note several places where Tierney has used snatches from these conversations))

2:44 (2) Yanomami)

JN: What you want to watch for, Tim, see she had a relaxed abdomen and I could get my fingers up underneath her costal margin, which is important, it's good technique ... Some women tense up but this was a good examination

(8) Yanomami talking, laughing

This is the woman

(woman laughing)

(14) NC: She's from Monou-teri

That's why I don't have her on this list

(30)C0254

NC chatting in Yanomami with woman, laughing

JN: When she's laughing I can't feel a darn thing

NC: I'm just catching up on the latest gossip

JN: Well, can you hold yourself back for a minute or two? Well, this is interesting, I can't feel the fundus, but she's gotta be pregnant.

(Yanomami, laughing)

(32)NC: When she left her village ... her new husband is over there...

(33) OK let's go eat our rice

(36) TA: You just check that mike a little, get it high

(39)(?): Are you gonna film it

(40) (?): There's the light...

(Yanomami talk, kids)

(49) That's gonna be all for a minute)

(51) OK, pick it up

You'll have to do it again  
Can you put that into a clean vial? Have you got a clean vial?  
(Yanomami)  
(59) OK, I'll get it right here, here you are, A90 coming up here  
That's the one for that  
OK  
Hm!  
OK, that's it?  
How many more do you think we have?  
Ryk, as you can see, you're covering...  
(69) Is Ryk gonna pick up a big one?  
How many more we got, Ryk?  
About 10  
Hey, it's got a fly in it  
Here's another one.  
(76) Well-preserved)  
(81) Twelve left – looks like we got some extra protein in this one, D186, D oh-one-eight-six .. all yours  
(90) Perfect  
(91) Yanomami talk)  
(95) You know, it's remarkable how much fiber there is in these stools – hardly any odor – quite different  
(101) Bring that cord down in my direction  
I'm taking not only four or five pieces but mostly within the stool where the chances of ova of parasites  
better ...  
You know the Indians think we're absolutely crazy to be working with their stools  
(111) Dr. Neel? You coming back?  
EM: That's enaro – made from  
(118) Practically odorless and it doesn't seem to attract the flies ... different intestinal flora  
(CBC) but odorless  
(127) also unusual ... all well-formed, few loose .. I suspect amoebiasis is not too common ... very few  
refined foods  
(138) JN talks and then repeats, slower, for camera:  
You know, these urine specimens really are a terrific spectrum of yellows and ambers, and they indicate  
really that these women have fairly concentrated urines ... men went to river with them when went for  
water ...  
(159) Come here to my rescue  
I can't take any more of these beetles, my bottles are all full  
(EM, NC try to explain to the Y women)  
Tell her to hold this one for me and I'll give her payment  
Say again  
Lookit, Nap  
What am I gonna do with all these beetles  
All I'm doing Bill is translating for you – you said you'd give 'em candy –  
(173)no way of stopping the flow once you ask for it (women talking in Yanomami in background  
throughout)  
(177) Radio conversation: Exposed to measles ... if they come back to Mavaca hold 'em as long as you  
can  
Danny – get bloods, go to Padamo, try to see Danny on the Tamatama  
at 6:30  
(193) Monday, coming up

(198) Bloods into IVIC on Monday airplane. We'll be standing by here pendiente, inquire if trade goods for Indians came to Esmeralda. Can Layrisse make plane come? We need to know.

(231) Bob we were inquiring about Danny only to find out what his health was

(235) NC: Medical progress? **We have inoculated the Patanowa-teri as far as our inoculations went**  
We'll have to try and isolate them as best we can

(257) JN: Talks about Danny

3:08 end of tape

Tierney 2000(98): Tierney characterizes Chagnon's remark, "We have inoculated the Patanowa-teri as far as our inoculations went" to constitute "admitting that they had been unable to finish the job." Tierney quotes him as saying "Meanwhile, we've gone ahead and vaccinated all the rest of the Patanowa-teri that we had vaccine for." The actual sentence is "as far as our inoculations went" (assuming that Tierney and I intend the same sentence, but this was the only sentence of this type on any of the tapes that I listened to). We can see on Tape 4 that Centerwall thought they had enough gamma globulin to give to all pregnant women. Ryk Ward (conversation with Hill April 29, 2002) recalls that the expedition ran out of vaccine in Patanowa-teri. Ward stated that they were prioritizing the most vulnerable villages and assessed the Patanowa-teri, an inland group, as possibly protected (of course this turned out not to be true). According to Ward, on the way to Patanowa-teri, the expedition went to Mahekoda-teri, a vulnerable village near the mission station at Platanal, intending to vaccinate there. The Mahekoda-teri had left the village, however. Ward's recollection is that the team may have sent some doses back to Bisaasi-teri, and taken only a few last remaining doses into Patanowa-teri. Of course we know now that measles did reach Patanowa-teri, causing many deaths.

Sound Tape 6. Tape label reads: 2-21-68. Radio contact; Drawing blood; Blood, teeth

Tape 6 overview (Note: For tape 6 I only jotted notes; I didn't return to any specific conversation for a detailed transcription. The reader will note several places where Tierney has used snatches from these conversations))

3:10 (Radio conversation) We understand about the measles vaccine there that you have been able to get in...

Of course the measles have broken out here and we're pendiente to see ...

Just trust...

Treatment you would suggest re Danny over taking tetracycline

JN: Bob can you give me dosage on capsules?

NC: What kind of tetracycline did you give Danny?

JN: One four times a day for ...

Just exactly what kind of meds coming ... If possible gamma globulin will take the edge off measles but need good supply of antibiotics – tell us ASAP what's coming in so we can plan

Conversation about plane schedule

NC: One message to Jim Barker – can he cross river to tell Rousseau to send message to IVIC, we'll wait for answer

OK I'll go over right away (fade out)

3:15 (39) Won't hurt just to sit in the sun

(Yanomami talk)

I'm putting green

OK, aquí

(51) Nap, I'm putting a green spot behind the right ear. They can't mimic that, I don't think they have green dye

(Yanomami talk, noise, kids crying)  
(61) B 170, 170  
Do you wanta get this little kid behind the ear?  
(69) OK, I think I've got the system  
I've got a special deal where I don't mess up your drops  
Make sure you get a shot of this guy's head  
(75) OK, the teeth, going right on to teeth  
(78) JN: That sound track  
(80) This is the chief here, fine specimen, he's a brave man, he's a waiteri, A-95  
(81) See if he can stand a little blood-letting in the arm as well as the head  
(87) He's a waiteri all right, not a flicker...  
(91) 35 cc's of blood counting the 2 tubes (a 15 cc and a 20 cc tube)  
blood clots, serum, extra work at IVIC  
You want me to get the little baby?  
3:22(100) Hold the child down?  
(103) Gonna make a scientist out of you?  
All right, waiteri.  
The number if this little boy is C 205.  
(?): How can he be C205 when his father ...  
NC: I just went down the line ---  
(Yanomami talk)  
(116) I want the teeth moving over  
(Yanomami talk)  
(126) You're a pretty stalwart little man too, Examine very carefully his upper teeth with your mirror  
3:25 (135) K19, rihth?  
(149) (CBC) I think that some new element has been introduced lately – under 8-6 years see cavities  
Sugar cane date?  
(158) NC: Let's shoot that scene over with me in it, my Yanomami is a little rusty  
JN: That was nasty – If your Yanomami is rusty now you oughtta be ashamed ...  
(163) line 'em up  
(166) Gentlemen, I wish I knew the secret of my success  
3:29 (166) The sweat bees, flies  
kids crying  
(172) Come on, siddown  
You know, I detect at least 3 species of these sweat bees  
(178) You got the number, B 133  
B 133  
(186) B 137)  
(189) B 171  
OK, let's finish the B's and start the C's  
That's right, she wouldn't spit  
(196) counting – male one year old, male 2 year old  
(297) Ward and ? talk  
3:32 (210) Kid crying  
(216) You're running out – you got a can of big reds?  
(218) Tim, you got this?  
(222) A-20 Jim, A 20  
(228) No, seriously, is the reel going around?  
3:35 (235) end of tape

Sound Tape 9. Tape Label reads: 2- 23-68. 1. Charles comes back + eating (previous film take). 2. Throat swabbing. 3. Bill sick call. 4. Children fighting. 3a. Pict. of boy making wax figures. 1. Charley's teeth.

Tape 9 Overview:

12:03 Bill, do you have these?

JN: Yes, please get the sounds of my molars clicking together. [If you listen carefully you'll hear my] [Burning my knees! Burning my knees! Ay ay ay!]  
masseters tensing up as I grind my teeth in rage.

JN: At this point [ah] there's only one function of the expedition that hasn't been filmed, and I expect that to come next

(?): Oh no, no, no

Joking

Charlie the great hunter

CBC: I am not to blame, these people just cheat me

I got something for you, Shak, and I brought a thing for Bill also, cycad

What in the world is this, Charles?

(15) The Indians eat those

12:05 Charlie hunting – roll 13

OK, what sound number's on that box?

Eight, nine

(21) TA: Hello, test

(Yanomami talking)

**I. (23) New born monkey**

**(24) Sick human down here**

All over my clean

(27) laughing

12:06 (Yanomami talk)

Now, let's get

I was gonna change ...

I need to see the ...

(34) laughter

(36) 107, B 107, the guy right next to me

(39) coughing, Yanomami talk, coughing, laughing, Yanomami talk

(44) It's like taking snuff, isn't it, it tickles

(47) Coughing, Yanomami talk

12:09 Coughing, Yanomami in background

(55) A 136?

B 136.

12:10 Quiet – B 136, OBC

(61) Coughing, spitting, chuckling, laughter

(64) Did you get that? I hope you got that. I got it.

12:11 Little kids calling

(68) knocking sound

(69) Yanomami talk, little kid laughing

Tape stop

(71) All

Let me fill the box

This is

TUm it off

(74) Say when, say when, say when

(76) Point it in any direction

Point it down

(77) Are you taking it now?

(Yanomami talk)

12:12 Crying, laughing, Yanomami talk

(82) Well you

**II. (85) What's left to be done? I'm doing Charles, I'm doing Charles**

**(85) Not the picture of the physician ministering to his flock**

**12:13 What percent of film?**

**(91) I don't want any of this**

**(94) Right, but this is not, you're here to study**

Yanomami and NC talking in Yanomami

12:15 (153) Charley, where's Charley? Oh you're looking for him

12:16 (122) (CBC) OK, freeze that, I have one guy here very interesting

(131) Just keep the sound in

(139) I would like a girl like that

12:20 Yanomami talk

Look, Ernie, when you see fast –

I can't work that

Would you like girl –

12:20 (154) Yanomami

He doesn't want you to take the picture

Let's take the picture of the girl, of the other boy now

(162) In about less than a minute we'll have no light, can you tell him to open his mouth?

(164) EM: I told hm, he doesn't want it, he's afraid

(175) OK, let's uh-

(178) Please, perfect teeth with a little bit of abrasion, no decay

(187) TA: I have no light and this is slow film

(187) TA: I want YOU to go back

(203) You know, I have been on for 5 minutes

12:25 CBC talks about molars

TA: Discussion

EM: Still recording

12:26 (227-232) Yanomami talking

(241) EM: They say they get the answer

12:28 (253) Make it short, I don't have much film yet

CBC talks about teeth

TA: Ernie you have the sound on?

12:29 End of tape

Tape 9, Detailed Transcription

Bill, do you have these?

JN: Yes, please get the sounds of my molars clicking together. [If you listen carefully you'll hear my]

[Burning my knees! Burning my knees! Ay ay ay!]

masseters tensing up as I grind my teeth in rage.

JN: At this point [ah] there's only one function of the expedition that hasn't been filmed, and I expect that to come next

(?): Oh no, no, no

EM: (xxx) Charley going –

JN: Charley, come in, bringing us the [meat

(?): [thank you-

The hunter, the great hunter returns

(?): SUPper! Ho ho.

CBC: Before, uh, apologizing about this, I didn't, I didn't have, I am not to blame this, you [know, [you aren't?]

these people just cheat me, they took me for ... for half an hour, and I have a lot here, I think they were good

I got something, I got something for you, Chag, this is a thing that tastes like lemon, and I brought a thing to for Bill also, cycad, here Bill

(WC?): What in the world is this, Charles?

(Behind youxxx)

CBC: Oh that's good, you see how, we haven't (xxx) food

(WC?): You're nuts, I'm not gonna eat this

(?): Oh come on, look at that, that's very nice

(?): Don't the Indians eat this?

NC: Yeah the Indians eat those

TAPE STOP (15)

(19) TA: So, your light's way up, hello hello hello, test, hello test

EM: Yeah, (xxx)

TA: Good, turn it off now)

TAPE STOP

(20) Some background noise

(22) (WC?) : New-born monkey, it just won't live unless it gets its milk ... the mother apparently was shot .. by the hunters, and eaten for food

(?) Hm

(?) **Hey Bill, there's a sick human being down here**

(WC?): Okay

(?): See you

TAPE STOP

A long scene begins, presumably "throat swabbing) (see tape label), with lots of coughing, laughing, scattered comments in English that I can't assign to particular speakers

(24) Coughing

(?) Got diphtheria (xxx) stuff is all over my clean cloth

(Yanomami talk, laughter

(28) Now, let's get a hold of those

(29) I was gonna change –

(30) coughing, Yanomami talk

(31) TA: I need to see the vial, when you put it in the vial, show me the vial

(32) laughter, Yanomami talk)

(35) (?) What are we doing, Nap?

NC: 107, B 107, the guy right next to me

(39) coughing, gagging, chuckling

(43) (?) It's like taking snuff, isn't it. It tickles  
(44) Yanomami talk  
(45) Tell him to take his tobacco out.  
(EM speaks in Y)  
(47) coughing, laughter, Yanomami  
(54) (?): B 136?  
(Yanomami talk)  
(57) (?): B 136.  
(?): OBC?  
(Yanomami, coughing, spitting, chuckling, gagging, Yanomami hilarity)  
(64)(?) Did you get that? I hope you got that.  
(TA?): I got it, ha ha ha  
(64) (?): Okay.  
67-68: Knocking noise, kids laughing  
Tape stops  
(72) TA: Uh, let me film the box ...  
EM: Oh, this is still going on  
TA: OK, just turn it off  
(tape stops)  
**(73) TA: Say when, say when, say when. Go. Point it in any direction and tell me if I (xxx) white line, point it down in any direction, I dunno**  
**(76) Are you taking it now?**  
**(Yanomami conversation, baby crying loudly) along with you.**  
**(81) well you (xxx)**  
**(83) JN: We're not putting thIs together on the film**  
**TA: OK, all right, well then what's left to be done ...**  
**JN: Well, you better save [(xxxx)] if you're out of film (xxx)**  
**TA: [I'm doing Charles], I'm doing Charles, right?**  
**JN: I hope so, (xxx)**  
**TA: I've shot uh – I'll have shot if I do Charles and their leaving the village=**  
**JN: =<angry Not the picture of the physician ministering to his flock (xxx) angry>**  
**TA: Well you said, you said, what percentage did you say?**  
**JN: <angry I said nOne of this, from the beginning angry>**  
**TA: Well, but what percentage of film did you wAnt. You said eighty-twenty or seventy-thirty?**  
**JN: <angry I dOn't want Any of this.**  
**TA: Oh, I've shot twenty, I will have shot, if I do Charles and your leaving the village, twenty-five percent ... of medical-**  
**JN: <angry Right, but this is not, you're here to dOcument the kInd of a study**  
**TA: Okay**  
**JN: we're trying to make**  
**TA: Okay**  
**JN: Anybody can walk into a village and .. trEAAt people. THis is nOt what we're here to do. Now I don't know how I can be more definite .. [but it**  
**TA: [Okay, we'll I'll just do Charles [[ ...]] and-**  
**JN: [[thAt is part of the study]] angry>**

Tierney (2000:95) gives this conversation between Neel and Asch considerable importance in illustrating Neel's attitudes about the place in his expedition of medical treatment for sick Yanomami. It is his

treatment of this conversation that the American Society for Human Genetics report called “a complete fabrication”. The problem is this: Tierney juxtaposes the call to Centerwall to treat “a sick human being”, with the coughing that is on the tapes from the “throat swabbing” sequence, with Neel’s indubitably angry attack on Asch about filming “Bill [Centerwall], sick call” (the label on the tape). Tierney’s treatment is as follows:

“Four days after Neel’s team arrived at Patanowa-teri, a loud coughing could be heard from a Yanomami man. Chagnon called to a doctor, Willard Centerwall, “Hey, Bill, there’s a sick human being down here.”

As Centerwall responded, Asch moved closer, picking up severe coughing and retching. He tried to film the scene, but Neel rushed over, enraged.

“Not the picture of the physician ministering to his flock. This is very d---al [static] to the expedition.”

“You said,” Ash was caught off guard. “What percentage did you say?”

“I said none of this, from the beginning.”

“Well, what percentage of film did you want. You said eighty-twenty, or seventy-thirty?”

“I don’t want any of this,” Neel repeated. “You’re here to document the kind of a study we’re trying to make. Anybody can walk into a village and treat people. This is not what we’re here to do. Now, I don’t know how I can be more definite about it.”

Asch was understandably confused. Just five days earlier, at Mavaca, Neel had been equally adamant about capturing “the whole gamut of measles.” Now he didn’t want any of this. Neel had decided that showing sick Yanomami was very detrimental to the expedition. He also did not want to waste any time treating the mundane health problems of the Yanomami. The contempt in Neel’s voice was thick.”

In this conversation, I concur with Tierney’s characterization of Neel’s tone of voice; it is exasperated, perhaps even contemptuous. I could not hear Neel when he said “This is very d...l [static] to the expedition.” That does not mean he did not say it, but the tape is hard to hear at that point. Asch keeps his temper throughout, replying mildly to Neel’s attack. The problem is that during this conversation, there is no “severe coughing and retching” at all. One can hear only the conversation, a few unidentifiable static-like noises, and, at the beginning, a baby crying. The “severe coughing and retching” is from the preceding “throat swabbing” out-take, where in fact there is a lot of gagging and coughing (and other Yanomami laughing at the discomfiture of their relatives), which has nothing to do with the “Bill, sick call” out-take. Furthermore, the call to Centerwall to come treat “a sick human being” is, as the ASHG points out, at least 5 minutes earlier on the tape (and perhaps hours earlier in real life) and is part of quite a different out-take that occurred before the “throat swabbing” scene. Furthermore, it is absolutely a fiction that “Neel rushed over enraged.” It is clear from my transcript that Neel and Asch have already exchanged several sentences before the “Not the picture of the physician ministering to his flock” outburst where Neel’s voice begins to sound angry. In fact, a possible reading of Neel’s exasperation is that he’s afraid that Asch will run out of film; note his remark to this effect. I do think that a version of Tierney’s understanding of this conversation is correct. It is not that Neel does not want to treat sick Yanomami – he does want to do this and is punctilious about it, never entering a new village without a doctor, holding daily sick calls, and leaving the expedition to handle emergencies. This conversation indubitably suggests, however, that he does not consider this humanitarian effort “part of the expedition” in the sense that he wants a record of it on film. There is a sharp separation made between the science, which Neel does want on film, and “the physician ministering to his flock,” which he considers not to be part of the expedition in the same way. In the most benign reading of this exchange, we might say of Neel that he took the humanitarian component of his work absolutely for granted and saw no reason that it should be documented, whereas for him the “scientific” work of the multidisciplinary team was something new and exciting that deserved the expenditure of heavy and expensive cannisters of film.

In trying to decide whether Tierney's artistic license with this conversation verged on fraud or represented mere carelessness, I listened carefully to see whether there was any material in between the call to Centerwall "Hey Bill there's a sick human being down here" and Neel's exasperated outburst, that might have interested Tierney (remarks about measles, for instance). There is not. However, it is really difficult to see how Tierney could have ignored the tape label about what the coughing is all about. Perhaps he fast-forwarded through all the coughing and laughter to get to the Neel-Asch conversation, noting only "coughing". If he didn't keep a copy of the tape label, or make a note of it, his notes might have read "Bill, there's a sick human being down here", "Coughing" and then the Neel-Asch exchange. This still doesn't explain where he got the supposed "angry rush" by Neel, which requires him to ignore the first few sentences of the Neel-Asch conversation.

It is curious that Tierney was so careless with this material. Many contemporary anthropologists, and certainly Tierney, would argue that the humanitarian effort and the "science" are ineluctably integrated – part of doing science should be "giving back." The conversation could have been used exactly as it occurred, with no angry rushing about, and no fictitious coughing, to demonstrate that Neel did not hold this view and was rather cranky when Asch seemed to give "Bill, Sick Call" the same importance as "Throat swabbing". However, by his extremely careless treatment of the material on Tape 9, Tierney undermines the credibility of his entire critical edifice.

## 6.2. ESSAYS

### 6.2.1. The Case for Collective Responsibility and Reparations\* (Janet Chernela, [chernela@fiu.edu](mailto:chernela@fiu.edu))

\* Presented October 25, 2001 and turned down by Task Force.

**"We believe that the informed consent techniques used by the 1968 expedition would not measure up to contemporary standards"** (Turner/Task Force 2002).

The El Dorado Task Force was established by the Executive Board of the American Anthropological Association to conduct what the Board termed an "inquiry" into the allegations about anthropological practice among the Yanomami contained in Darkness in El Dorado, by Patrick Tierney.

Whether the individuals subject to allegations acted for honorable motives or not, the point remains that with the passage of time thoughtful anthropologists and the Association itself have come to view those actions (including methods of collecting information and samples) as reprehensible and unjustifiable -- acts that may have wronged, intentionally or not, the Yanomami.

The strong agreement that emerged in interviews conducted by this Task Force, as well as independent interviews conducted outside the Task Force, show that many Yanomami perceive themselves as having been misled, misinformed, manipulated and otherwise wronged by investigators. By today's standards these wrongs would constitute violations of basic rights, including the right to informed consent.

A number of Yanomami spokespersons have voiced complaints regarding the lack of adequate informed consent and deliberate deception in the collection of information and bodily samples in 1968 (See Part IV of the present report, and *Boletim Yanomami* 2001 (3.3.2 of present report)). Yanomami spokespersons must be regarded as credible narrators of their own histories. The Yanomami experience of events, even as it is recalled after a substantial lapse in time, must be respected and honored.

The Task Force has agreed that "the informed consent techniques used by the 1968 expedition would not measure up to contemporary standards" (See 2.1, 5.2 in the present report).

If the allegations and needs of contemporary Yanomami are disregarded, this could contribute to a persistent institutional pattern of negligence by the AAA, constituting a further disregard for Yanomami rights by the Association.

It could be argued, for example, that had the AAA vigorously and promptly acted to protect the rights of the Yanomami when called to do so by the Association of Brazilian Anthropologists (ABA), the legacy of accusation would be considerably reduced. That the legacy still persists, may be due to neglect, intentional or not, by the AAA in effectively addressing these matters. This was likely the case when, in 1989, Association President Rappaport congratulated Brazilian president Sarney for what had become a reduced and divided Yanomami territory. When President Rappaport belatedly offered congratulations to the Brazilian government for its creation of a Yanomami reserve, the allotted land had been partitioned into 19 separate parcels, leaving 23 Yanomami communities outside the area and two conservation units inside it (Albert 1991:45). The congratulated president had reduced Yanomami lands by 30%.

I therefore make a case for collective reparations to the Yanomami. The argument is based on findings from interviews with Yanomami in Brazil and Venezuela, suggesting that the Yanomami were subject to scientific investigation in which they were treated in less than a humane manner. The position favoring reparations is grounded in a basic moral postulate that wrongs experienced by the Yanomami should be remedied. As these are not merely the sum of many individual actions, but are the collective acts of a professional association, I suggest that they be treated collectively.

Moreover, it is in keeping with the decision of this Task Force to regard the Tierney book as an opportunity to reflect on the discipline in order to learn. I quote from Hill et al., Working Papers of the El Dorado Task Force Submitted as a Preliminary Report, Jan. 2002:

"We have ... undertaken a reflexive exercise, on the implications not simply of some specific moments of anthropological practice among the Yanomami, but on anthropological practice more generally, and its location in those relatively enduring regimes of knowledge and power which we can refer to in shorthand as the confrontation of Western elites with "others" whose presence requires classification, explanation, and incorporation into the systems of knowledge through which that power is in part constituted. These regimes do **more than merely shape anthropological practice; they make it possible**. However, at the same time, they make possible the use of anthropology to interrupt these very regimes, to expose their contradictions, and to open within them spaces within which new forms of knowledge can be uttered and new voices can be heard. By locating the work of our Task Force partly in the space of reflection, we hope to accomplish such an interruption. But at the very minimum we hope to inspire a movement in anthropological exchange beyond the relatively narrow zones in which debate over the meaning of Darkness in El Dorado has too often been

restricted: Beyond a spurious distinction between value-free "science" and value-involved "humanities," and, especially, beyond individuals and personalities. All anthropological practice is implicated in what went wrong in "El Dorado" -- and we believe that things did go wrong. Some of the things that went wrong involved styles of anthropological investigation that are taken for granted or even explicitly advocated by many colleagues."

To these allegations of wrongful acts I would add the errors of omission and negligence. The present status of Yanomami human rights, land demarcation, and health in Venezuela was virtually unknown to the American anthropological community until several months ago, despite decades of research by American anthropologists among them (see [www.aaanet.org/committees/cfhr/index.html](http://www.aaanet.org/committees/cfhr/index.html) or [www.aaanet.or/eldoradoupdate.pdf](http://www.aaanet.or/eldoradoupdate.pdf)). In contrast, the legal and health status of Brazilian Yanomami has been consistently called to the attention of the Association and has not always been handled with concern. In the case of the Yanomami, individual accusation among researchers has superceded concerns for the Yanomami themselves. Placing scholarly debate and individual accusation above the well-being of Yanomami, constitutes a failure, I believe, to meet ethical standards.

### **What is Collective Responsibility?**

Let me explain. I believe that personal responsibilities and liabilities are not appropriate issues for this Task Force. The more important matter is collective or corporate responsibility.

I argue that both the AAA and the Yanomami can be treated as collectivities. A horizontal connection can be argued for the "perpetrator" group. As anthropologists with shared stakes, we have benefited as a body from past relationships with small-scale societies. We have benefited from these materials in class enrollments, and as "owners of specialized knowledge" that we have collected in these and similar contexts. Moreover, a number of criticisms are directly related to commonplace anthropological practices that deserve reflection. The entire debate raises questions regarding the process of gathering information and constructing representation. We therefore continue to share the costs of any wrongdoings or oversights by our members.

If the association is understood to be a collectivity or corporate entity, the "wrongdoing" of the association does not distribute to each of its members. The burden of the Association's wrongdoings reflects professional roles rather than anything inherent in its members as persons. Several models for collective reparations exist. For example, in the case of reparations to Japanese American citizens who suffered internment between 1942-5, it was not necessary to demonstrate some benefit accrued by Americans from the internment (Fullinwider 2000).

### **Collective complaint**

The Yanomami can be treated as a group because they were treated that way by the researchers, particularly in the way their bodily materials have been processed; and because they present their claims that way.

In making the case for reparations, it is a mistake to look for personal or individual wrongdoing. An individual model for reparations is not practical; it generates unnecessary problems because of the difficulties entailed in identifying individual responsibilities as well as entitlements. We cannot responsibly identify who should get what in compensation for events that may have occurred over thirty years ago. For example: To whom should reparations be paid? How do we trace or measure damage? How do we match reparations to losses?

Opponents of reparations might argue that identifying wrongdoers is necessary in order to extract compensation, or, complementarily, paying reparations requires identifying specific victims and the exact degree of their victimization. However, the results of this "radical individualism" would mean not compensating anyone at all. Therefore, we must abandon individualist models of reparations and replace them with group concepts.

Moreover, I argue, a relation of moral causality obtains between the two groups. While basing reparations on individual acts is likely to complicate matters and further controversy, basing reparations on collective responsibility could provide the healing that is called for and the return of dignity to a people who appear to have been subject to wrongdoing.

A collective act would represent an official apology from the body and a step toward making whole the damages, harm, and losses that may have been incurred by Yanomami. Recognition of damages engendered by past wrongs is likely to bring the Yanomami together politically, producing a horizontal unity -- an imagined community-- created by a commonality of experience appropriate to a discourse of reparations. An act of reparations recognizes and validates Yanomami complaints. It invites the debate to take place on Yanomami terms and could serve as a vehicle to political autonomy through discourse and decision-making.

Reparations, even at this late date, would not be gratuitous. There is real work they can perform. A properly structured reparations program enacted by the AAA could return or destroy blood samples as well as funnel resources to health or other service programs. It is hoped that such a program, continued over time, would repair damages both perceived and occasioned by anthropologists and other researchers in the spirit of an ongoing and dynamic process of informed consent, explanation and reparation, as outlined in the AAA Code of Ethics.

### **6.2.2. Re: Chernela's "The Case for Collective Responsibility and Reparations" (Joe Watkins)**

I agree in large part with the basic premises of Chernela's call for collective responsibility, but stop short of her call for "reparations". Such a word is loaded with implications of an action (or actions) undertaken with the purposeful intent to drastically limit the basic human rights and liberties of another. Perhaps a more appropriate word, in the sense of this situation, would be "atonement".

Chernela mentions that many Yanomami perceive themselves as having been misled, misinformed, manipulated and otherwise wronged by investigators. If the three individuals she interviewed may be construed to be an adequate sample, it is likely the Yanomami believe it so. However, to try to judge the actions of those researchers "by today's standards" in order to conclude that "... these wrongs would constitute violations of basic rights, including the right of informed consent" is to unfairly judge the actions of those researchers for not having precognition of the direction the discipline would choose to go. We must not judge them too harshly for their scientific imperialism. Even though we are moving toward a more involved and open anthropology, and, while we may congratulate ourselves for trying to be more humane, open, and involved with the populations we study, scientific imperialism is still rampant throughout our discipline.

I have no argument that the Yanomami complaints regarding the lack of informed consent and deliberate deceits in the collection of information and bodily samples in 1968 must be honored, but would fall short of accepting their accounts as the only credible perception of the events that transpired in their villages at that time. It is important to understand that the cultural milieu of the late 1960s precluded the involvement of many citizens, even here in the United States. My own memories of events that transpired when I was 10 years old serve as adequate examples. At no time was I aware of any issues regarding consent nor was I considered an equal partner in any relationships with adults of power. Even as a relatively cosmopolitan child growing up in central Oklahoma, doctors did not consult me for permission but rather asked the appropriate adult. In 1969 I suffered a broken jaw that required surgery to realign it. Even though I was 18 at the time, I was not a part of the decision process nor was I given a voice in the pre-surgery planning, pre-hospital arrangements, or any other aspect of the medical treatment. Would it be proper to allege that informed consent procedures were not followed or were improper, or should I trust that my mother made the proper decisions on my behalf? Today, nearly 35 years later, I cannot presume to know what went on in that doctor's office when the risks associated with the operation, anesthesia, and post-operative care were (or weren't) explained. I find it as difficult to believe that, in the Amazon in 1968, the young were more involved in consent procedures than I was here in America.

I say this not to trivialize the feelings and thoughts of the Yanomami. As an American Indian practicing and participating in anthropology for more than 30 years, I certainly have witnessed first hand the frustration that minority individuals or unempowered groups develop in trying to establish better, more equitable working relationships with anthropologists. I also feel it important that we not try to bear an overwhelming or unearned guilt of our predecessors' sins.

I agree with Chernela that the Yanomami likely were subjected to scientific investigations in which they were treated in a less than humane manner. But that is not the sin merely of the anthropologist. Look at the treatment of the average American patient by the average Health Maintenance Organization here in America. More often complaints raised against managed health care revolves around the treatment of the patient as a number or a policy rather than as a living human person. Again, I argue that the power differential between groups creates an atmosphere that results in the dehumanization of the individual at the lower level of power, and that individuals (or organizations) at the upper echelons of power must actively work to prevent any overt dehumanization from occurring.

However, I do not agree with Chernela that the American Anthropological Association can (or should) "share the costs of any wrong doings or oversights by our members". There is nothing within the membership processes or charter of the AAA that requires members to abide by any explicit or implicit codes of ethics. The codes are voluntary, and the AAA has no authority to enforce these rules or to sanction their members who choose to disregard them. "Mores the pity", but that, too is the nature of the beast. Until such time that the AAA chooses to enforce some concrete set of standards or requires licensing of its membership, voluntary compliance with the ideals embodied within the Code of Ethics must suffice.

Finally, I disagree with Chernela that the AAA should issue an official apology and initiate a "properly structured reparations program with the Yanomami", at least, not as a first step. I feel that to do so is inopportune and inexcusable at this time. Such an action would be unconscionable given the course of the relationship between the American Anthropological Association and American Indians over the last 100 years. I do not wish to take anything away from the plight of the Yanomami, but I would fail to live up to my own expectations if we were to focus solely on the Yanomami in Brazil and Venezuela. Much though I like the idea of "collective responsibility", I feel it unwise to allow this opportunity for collective reflection to lose sight of the institutional treatment of all non-Western populations (especially the American Indian) by anthropology. I argue that for the American Anthropological Association to issue an official apology to the Yanomami based on these allegations and the actions of a (comparatively) minuscule number of anthropologists grossly overstates the importance of these events and equally understates the overall debt owed to all indigenous populations. I am, of course, heavily biased by my kin and culture in my belief that, should any apology by the American Anthropological Association be forthcoming, it should be to American Indians first, other groups second, and to any other group of people subjected to study lastly.

While the wrongs suffered by the Yanomami are indeed worthy of our concern, these actions pale in comparison to the sorts of actions carried about against American Indian groups even today. Anthropologists routinely "consult" with Native groups concerning anthropological studies, but rarely do they return to the communities to present the results of their studies. I argue that, rather than issuing a formal apology to indigenous populations for real (or perceived) past wrongs, the AAA and all national organizations of any countries must establish and develop a covenant outlining beneficial programs to be entered into between those organizations and the unempowered peoples throughout the world that they study. We cannot let this opportunity slip too easily away from us. We've been called to center stage by the Darkness in El Dorado controversy, and we should not -- no, we cannot

-- slink to the wings without taking the opportunity to speak our true views on the issue. We must acknowledge the very real debt we owe to those groups that we as professional anthropologists and as the anthropological profession have studied. To do so is to waste our chance to show those we study that we truly believe they are people, and not just data to be recorded, manipulated, and then discarded.

### **6.2.3. Freedom and Comprehension: Deciphering Ethical, Genetic, and Linguistic Codes (A Minority Opinion, submitted 4/3/02) (Janet Chernela, chernela@fiu.edu)**

#### **Biomedical Codes in Place in 1966-1968**

Interviews conducted with Yanomami in 2000 and 2001, intended to gather information regarding the vaccination process of 1968, pointed to serious and unforeseen concerns by the Yanomami involving the collection and ongoing research on blood samples collected from them during the same and other expeditions. Although few in number, these testimonies must be treated as serious allegations. This discussion refers to the process of gathering of bodily samples, therefore, not the administration of measles vaccines that the Task Force set out to consider. The vaccination process is regarded by the Task Force as having been primarily therapeutic rather than experimental. The collections of bodily materials, on the other hand, including sputum, urine, feces, but particularly, blood, has raised questions and important concerns not anticipated at the outset of the Task Force or the interviews conducted on its behalf.

This discussion, therefore, considers the methods and purpose of the blood collection of Neel and others in 1966-1968 and measures it against the international biomedical codes in place at the time of the expedition. These include the sets of principles assembled at Nuremberg in 1947 and the World Medical Association's Declaration of Helsinki in 1964. The Nuremberg Code of 1947, written to redress the wrongs of medical experimentation by German doctors during World War II, enunciates the requirement of voluntary, informed consent of human subjects. What, specifically, constitutes voluntary, informed consent? And, to what standards may these concepts be held?

#### **Knowledge, Choice, and Consent**

The Nuremberg Code states that a subject "should have sufficient knowledge and the comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject...there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted...."

The Nuremberg standards therefore constitute a contract in which the subject has the right to know the methods, goals, and duration of experimentation to which (s)he or her/his bodily materials will be put. It states explicitly that participants must have the capacity to give consent and that they be "situated so as to be able to exercise free power of choice...without the intervention of any element of force, fraud, or deceit, or other ulterior form of constraint or coercion."

Thus, the capacity to give consent is a necessary condition to any state that may be recognized as "informed." Presented in its past tense, the term "informed" suggests the successful and completed transfer of information from researchers to subjects and the abilities of the latter to understand and assess that which they have been asked to provide or do.

But can this be assumed? In the United States, according to a study conducted at the University of Pennsylvania Cancer Center, 40 percent of patients and subjects did not understand the purpose or nature of a procedure they had undergone. A higher percentage -- 45 percent -- did not know what it was that they had agreed to; they were unable to cite a single risk that might result from the procedure (Rothman 2000). In the case of the

Yanomami, where effective communication cannot be guaranteed, consent can hardly be assumed to be "informed."

### **"Science, Standards and "Protagonists"**

All Declarations agree that that the well-being of the subjects must always take precedence over the needs of science or the interests of society. The Helsinki Declaration of 1964 is unambiguous in its phrasing that, "Concern for the interests of the subject must always prevail over the interests of science and society" (D.H., I.5). It goes on to say that "The right of the research subject to safeguard his or her integrity must always be respected. Every precaution should be taken to respect the privacy of the subject and to minimize the impact of the study on the subject's physical and mental integrity" (D. H., I.6).

Both codes speak to the justifications of scientists in conducting human subjects research. The Nuremberg Code notes that the "protagonists" [of procedures and research] justify their views on the basis that the resulting yields are for the "good of society [and] ... are unprocurable by other methods or means of study."

The relevance of these codes to the Neel collections among the Yanomami rests on two contested points: 1) the field of meanings and usages given the term "experiment", and, 2) whether the protocols that are clearly applied to persons as coherent entities also apply to bodily material supplied by them.

### **Medical Benefits**

Referring to biomedical research, the Helsinki Declaration introduces a further priority of biomedical research: "It is the mission of the physician to safeguard the health of the people. His or her knowledge and conscience are dedicated to the fulfillment of this mission....The purpose of biomedical research involving human subjects must be to improve diagnostic, therapeutic and prophylactic procedures and the understanding of the aetiology and pathogenesis of disease." Some readers find in this the implication that physician-investigators should be required to provide health benefits as compensation for participation in any research endeavor. These interpreters argue that the health conditions of subjects of biomedical research -- especially as these subjects are often lacking adequate health care -- should be improved by the visiting medical researchers in one form or another (Rothman 2000:63). This proposal is especially pertinent in the Yanomami case since we know from accounts of Yanomami and expeditioners alike that pledges were made for medical care related to the collections themselves. That which made the Yanomami valuable subjects of biomedical research -- the very remoteness of the population -- also accounts (in part) for the lack of health facilities in the region.

It is clear that the Yanomami read a pledge of medical assistance or health benefits in the collection. That the collections were said to be related to health benefits has been further substantiated in testimonies to the Task Force by two members of the field team, Ernesto Migliazza, a linguist specializing in the Yanomami language who accompanied the expedition, and the anthropologist Napoleon Chagnon. Both Migliazza and Chagnon translated for the medical team. In a telephone interview with Jane Hill, Head of the Task Force, Migliazza recounted that in each village, the Yanomami were told that the project would look for diseases that were "inside," "in the blood" (Hill transcript, June 12, 2001). In a telephone conversation with Napoleon Chagnon, conducted March 18, 2001, Ray Hames reports that "[Chagnon] said that for a year prior to Neel's arrival and during the collection phase he told the Yanomami in all the villages to be sampled that Neel's team wanted to examine their blood in order to determine whether there were things that

indicated whether or not they [had] certain kinds of diseases, especially shawara (epidemic diseases) and that this knowledge would help treat them more effectively".

If promises of health benefits or results were delivered, they were never kept. This is serious, since Yanomami health needs are great and medical services have been inadequate.

In a different conversation I had with Davi Kopenawa in 2000, before the news of the Tierney book, he said, "We [the Yanomami] already have an enemy among us -- it is disease." The Yanomami face serious threats to their health. Among the most serious of these are the diseases malaria and river blindness, both requiring blood collection, and, as in cases of advanced malaria, transfusions. It is therefore all the more important to ensure that collection standards are met and that promises linked to health care are not abused, in turn discrediting and thereby undermining the few health care services available.

Although Neel and Chagnon did supply the Yanomami with medicines, the promises further obliged the collectors of the blood to provide results and/or related information of direct health benefit to the sample donors.

The lack of commitment to the pledges suggests several possible interpretations:

1. The pledges were motivational only -- without intent of fulfillment. The possibility remains that these promises were never intended to be kept but rather served as instruments in motivating participation. If this is the case it constitutes an attempt to persuade, in order to obtain samples, under false pretenses. It would then constitute deception, a breach of ethics under the codes in existence at the time the collections were made.

2. The medical team regarded the transaction as immediate, final and closed, while the Yanomami regarded it as open and outstanding. Yanomami statements reiterate that a pledge was made, and suggest that, in spite of the passage of time, a tally has been kept. If the latter is the case, the opportunity to meet the terms of the contract and obtain voluntary informed consent should be revisited, in accordance with the position of the AAA Ethics Committee that Informed Consent is an ongoing process.

### **Indebtedness and Obligation: Dangers in the Pledge**

There are constraints of engagement on the makers of pledges, who become debtors by virtue of their unfulfilled promises. In the case of the collection expeditions both parties -- collectors and sample providers -- were givers and takers. But so long as a pledge made is not honored by its makers (the collectors), the providers of samples lose more than they bargained for according to the agreed upon terms of the transaction. Until the conditions of the agreement are fulfilled, the collectors may be considered debtors who have absconded with a gift. If this is the case, should not the recipients of the pledge have the right to pursue their fulfillment as promised?

(For a measure of the value of this gift, read the efforts researchers have gone to to publish the data -- even in the face of formal complaints registered by the Yanomami, protests from some members of the scientific community -- and the willingness of granting agencies to spend tens of thousands of dollars (or more) to support use of these samples.)

The value of the samples is further increased by their potential association with ethnographic data collected in the field through participant-observation and interview.

Although this has been posed by Yanomami spokesperson Davi Kopenawa as a breach of privacy (see interview), the publication of Williams et al. (2002) presents it as a factor contributing to the value of the published product. In this exercise the fundamental, elementary principle of anonymity of donors is potentially compromised.

Where pledges have been unmet, it may be due, in part, to misunderstanding by researchers regarding Yanomami concerns and priorities for health-related outcomes. On the basis of

both general principles of biomedical ethics and on the basis of explicit promises made, it would seem that health care promised to the Yanomami ought to be provided to them. Until the terms of the contract have been fulfilled, the obligatory force of the bond, constituted by the acceptance of the offer, gives the subject the right to revoke consent. But for how long?

### **Duration of experiment**

In its reference to duration, the Nuremberg Code assumes well-defined boundaries to biomedical investigation. However, the framing of a research project, its methods and goals, may not be possible to define with precision since they may transform over time. This is a particular problem with respect to ongoing research utilizing bodily samples that transcends the lives of researchers and ongoing technological advancements. The Declaration of Helsinki (1964) appears to address the issue of duration when it specifies that a subject is "free to withdraw his or her consent at any time." Here another question arises: does this right pertain to the original donors or may it be extended to their heirs or representatives?

### **Responsibility.**

In reviewing testimonies, there is not sufficient reason to believe that the Yanomami of 1967, 1968 or 2002 were then or have ever been adequately informed about the purposes of the research. Indeed, reviewing these codes in light of interviews made since 2000 suggests that the standards in place were not entirely met.

The ritual of biomedical collections among the Yanomami by the Neel team in between 1966 and 1970 appears, according to allegations, to have been characterized by: 1) dehumanization of subjects by collectors as expressed by the Yanomami as "being treated as animals" (see Interviews with Kopenawa, Seripino, and Wichato in Chernela 2002); and 2) disregard for promises made, leading to a climate of distrust that has not disappeared in over thirty years and has been recently reawakened.

The Helsinki Declaration leaves no doubt that "Physicians should cease any investigation if the hazards are found to outweigh the potential benefits" (DH I, 7). Elsewhere it states, "The investigator or the investigating team should discontinue the research if in his/her or their judgment it may, if continued, be harmful to the individual" (D.H., III.3).

The Yanomami who have addressed the public through recorded interviews (see "interview and presentations") have supplied substantial data to call for a moratorium or hiatus in research until new terms can be negotiated. At least one researcher, Kenneth Weiss, recipient of Neel's samples at Penn State University, has already placed a moratorium on the analysis of Yanomami blood samples under his curation.

### **Recommendations: Contract and Choice**

If the Yanomami continue to regard the terms of the contract as unmet, these cannot, on the basis of long-standing biomedical standards and principles, be regarded as satisfactory. The unanimity among the Yanomami of both Venezuela and Brazil in public, formal, statements raises questions regarding the legitimacy of the use of the samples.

What can be done? What, if any, remedial measures are possible? First, we must call for all anthropologists to be in compliance with federal guidelines and moral codes. In addition, apologies or admissions of past wrongdoings may be in order. Moreover, the codes state that "The duty and responsibility for ascertaining the quality of the consent rests upon **each** individual who initiates, directs, or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity."

One possible, as yet untried, action, is to re-open the negotiation process. One means to do so is to initiate a dialogue in which scientists and Yanomami can exchange viewpoints.

This could be accomplished through a set of meetings for this purpose. The Yanomami would be allowed to exercise their rights to complete disclosure of the research purposes and to withdraw their samples or not, as a result of an informative and full exchange of information.

The question remains, "who speaks for the Yanomami?" The more participants involved in the process, the more representative, and thereby, the more just, such a process will be. Only in this way may we attempt a process of reconciliation and understanding.

#### **6.2.4. Roles, Responsibilities, and Relationships between Anthropologists and Indigenous People in the Anthropological Enterprise (Joe Watkins, submitted 02/25/02).**

Note: This document incorporates draft statements of the AAA Committee on Ethics, available for comment on the AAA web site.

##### Introduction

Throughout the industrialized societies in the world, indigenous populations are often seen as "... politically weak, economically marginal, and culturally stigmatized members of the national societies that have overtaken them and their lands" (Dyck 1992:1). These groups, occasionally referred to as the "fourth world", point to the interruption of land tenure by colonizing interlopers, the suppression of native language by a dominant society that seeks to integrate dissimilar cultures into a singular "homogenous" one, the perception by their "conquerors" that indigenous people are an inferior race, and the social and economic marginalization of the group as a whole as being the primary factors that contribute to their on-going standing as second-class citizens.

Perhaps because of the political weakness, marginal economies, and stigmatized cultures of these indigenous populations, social scientists continue to study them in order to grasp the impact of culture change on smaller groups and cultures. But to what extent should the scientific interest in knowledge and education outweigh the religious, civil and sovereign rights of the indigenous populations? Is there anything within the anthropological enterprise that would allow anyone to define the "rights" of any person who wishes to study an independent group of people? And, perhaps more importantly, who has the "right" to determine the ultimate fate of the information about those cultures - the people who produce the culture or those scientists who record, analyze and describe it?

In order for this discussion to be meaningful, we must look beyond anthropology as only a series of methods driven by a set of theories reflected in a research design that define what a researcher wants to study. Scientific objectivity has a role even in the practice of the social sciences, but the ethical practice of science must involve a thorough examination of the relationship between the scientific community and those with the information so carefully sought. In the case of anthropology, it is imperative that researchers be aware that indigenous populations may be the primary stakeholders in a complex and multi-faceted culture owned by no one but controlled by many.

Anthropologists have the power to influence large segments of the population concerning the many different ways that the culture of indigenous populations is interpreted, discussed, and presented. Although many anthropologists don't attempt to realize that power (that is, do not overtly try to exert undue influence over the ways that the culture of an indigenous population is perceived), their decisions and interpretations are often accepted over those of untrained populations, including, in most instances, those of local and descendant communities. This results in an extension of their influence beyond a specific situation and into more esoteric realms. In contrast, most other stakeholders (especially local and descendant community members) often feel powerless, and, even in rare instances where they have economic or political control over a situation, they more often rely on the opinions of "experts" (people with the proper credentials) for information on which to base their decisions.

## Anthropological research: colonial, consensual, covenantal, or collaborative?

Anthropologists' approach to fieldwork has varied throughout the years. In the early years of anthropology, fieldwork usually was carried out by individuals whose training was in sciences other than what we have come to define as "anthropology". They were often scientists determined to reach an understanding of the ecological, natural, biological, or botanical environment of the unstudied peoples of the unexplored and thereby non-civilized areas of the world.

In this essay, I have artificially divided the spectrum of anthropological fieldwork into four subsets, with each carrying different meanings and implications when applied to the anthropological enterprise. The first, "colonial research" is the kind of research carried out without any consideration of the study population. Through a program of "scientific colonialism" (Zimmerman 2001: 169), anthropologists perform research without involving the study population or considering the wishes, desires, or feelings of the study population as the result of an apparent perception that the information as a resource is the anthropologist's for the taking. In America, early anthropologists, laboring under the impression that they had to work feverishly to "salvage" the history of the American Indian before their culture vanished (c.f. Bieder 1986; Hinsley 1981), took to the field and busily recorded kinship structures, word lists, and social ceremonies as if the Indians were merely biological organisms. While such a research orientation is uncommon today, many anthropologists still maintain a colonialist attitude toward indigenous populations and their cultures.

I define "consensual research" as a research program carried out by one party merely with the consent of the other. In many cases, restrictive terms or conditions may become a part of the consent process, but, once consent is obtained, the researcher is generally free to proceed with minimal interference. Study populations may be the party to place restrictive terms on the research, or an outside entity such as a governmental agency may impose the restrictions. Such research still occurs to some extent in Latin American countries where the anthropologist must receive certain permits from the host government to conduct research, but such permission does not necessarily emanate from the local (or indigenous) population but rather from a centralized or national government.

"Covenantal research" may be defined as research whereby one party agrees to do (or not to do) some specific thing. One party is free to conduct research so long as that research does (or does not) focus on specific areas agreed to in advance by both parties. Larry Zimmerman (2001: 301) believes that, if archaeologists and American Indians can develop a "relationship of trust", with covenants including not only research but also education, a covenantal archaeology will occur. The same can be said for any anthropological research "... where research questions and methods are negotiated and support a mutually agreed upon agenda" (Zimmerman 2001: 303).

Finally, in my view, "collaborative research" is results from the side-by-side work of two (or more) parties in a research program beneficial to all parties. Each party "collaborates" throughout the enterprise to produce research that adequately fulfills the wishes of all parties and formally recognizes the contributions of each party. Cultural programs of the Navajo, Hopi, and Zuni tribes of the American Southwest are good examples of collaborative research – the tribe works together with anthropologists to produce research that combines the research interests of the tribe with those of the anthropologists.

In reality, research programs may not be so easily defined, and often will include portions of more than one of the above-described research types. Additionally, the

implications of each program regarding relationships with study populations are subtle. Research programs of the type I call “colonial” act to exclude the study population and deny their rights in the anthropological enterprise. Such programs elevate the researcher’s agenda above any consideration of the study group. It serves to alienate the anthropologist from the people to a great extent and further prevents the study population from engaging in the active description and protection of its cultural history.

Consensual research involves the study population to a greater extent than colonial research programs in that there is an outside agent that can influence the research to some extent. Consent can be active (an agent issues a permit of some sort to the researcher) or passive (the researcher has permission to conduct research unless specifically precluded from proceeding), but the outside agent (working, one hopes, on the behalf of the study population) has a stronger role in influencing the research program through the external review of the research program. In situations where the study population is the agent that provides permission, the influence can be greater yet.

A covenantal research program involves the study population to an even greater degree than either of the two previously described programs. Such a program requires that the researcher and the study population actively communicate concerning the research program. The study population is able to shape the program into one that better fits the wishes of the group since certain areas of research are defined as outside of (or the focus of) the research program, and all parties are involved in developing the ultimate program goals.

Collaborative research involves all parties as equal partners in the enterprise. All parties participate not only in the development of the research design but also in all other major aspects of the program. Parties work together toward a common goal, with the contributions of each party formally recognized in the ultimate product of the research. While aspects of the research may be more important to one party than to the others, all parties derive benefits from the research.

### Responsibility of the Researcher to Indigenous Populations

The American Anthropological Association’s Code of Ethics tells anthropological researchers that their primary ethical obligation is “. . . to the people, species, and materials they study and to the people with whom they work.” Additionally, all anthropologists must be aware of the need to temper anthropological research with the rights and concerns of human populations. As such, they should read and become increasingly familiar with various codes of ethics as they relate to the study of human populations, such as the Ethical Guidelines for Practitioners of the National Association for the Practice of Anthropology (<http://www.aaanet.org/napa/code.htm>); the Code of Ethics of the National Association of Social Workers (on-line version at <http://www.socialworkers.org/code/code.htm>), and the full version of the AAA Code of Ethics (on-line version at <http://www.aaanet.org/committees/ethics/ethcode.htm>).

The scientific enterprise is regulated not only through the ethics statements of various professional associations, but also through a process of internal review for the protection of human subjects (or collaborators). In particular, the U. S. Department of Health and Human Services operates the Office for Human Research Protection, charged with monitoring compliance of research supported by Health and Human Services to standards outlined for the protection of human subjects (on-line version at <http://ohrp.osophs.dhhs.gov>). Universities and affiliated institutions also establish and monitor protection of human subjects in research through programs of internal review.

Clark and Kingsolver (2002) list international documents that should be consulted as part of any research program involving indigenous people. These include the 1995 Annex to the United Nations' Principle 9, Declaration on Discrimination Against Indigenous Peoples (on-line version at <http://www.cwis.org/fwdp/International/heritage.txt>) as well as the 1994 International Covenant on the Rights of Indigenous Nations (<http://www.cwis.org/icrin-94.html>).

The impact of the anthropological researcher may be in many different areas, some of which may not be foreseen by individuals participating in the immediate present, but wait unexpectedly around the corner to be stumbled across at inopportune moments. As a related aspect of the Darkness in El Dorado controversy, the Committee on Ethics was asked to provide guidelines to the membership of the American Anthropological Association regarding six issues relating to: 1) Informed consent; 2) the Negative Impact of the Publication of Factual Data on a Population; 3) Health Emergencies in a Population; 4) the Impact of Material Assistance by a Fieldworker on a Population; 5) Remuneration; and 6) Sexual Relations between the Anthropologist and Members of a Research Population (Watkins 2001, 2002a). The following discussion is taken from briefing papers submitted by the Committee to the Executive Board of the AAA at its November 2001 meeting in Washington, D.C. and published on its website at (<http://www.aaanet.org/committees/ethics/bp.htm>). Names that follow the separate sections below indicate the primary authors of the briefing papers, even though the papers are not presented in their entirety here.

### **Informed Consent (Clark and Kingsolver 2002)**

Researchers involved in the anthropological enterprise should endeavor to be certain that informed consent is an integral part of their research. The AAA Code of Ethics states that

"Anthropological researchers should obtain in advance the informed consent of persons being studied, providing information, owning or controlling access to material being studied, or otherwise identified as having interests which might be impacted by the research. It is understood that the degree and breadth of informed consent required will depend on the nature of the project and may be affected by requirements of other codes, laws, and ethics of the country or community in which the research is pursued. Further, it is understood that the informed consent process is dynamic and continuous; the process should be initiated in the project design and continue through implementation by way of dialogue and negotiation with those studied. Researchers are responsible for identifying and complying with the various informed consent codes, laws and regulations affecting their projects. Informed consent, for the purposes of this code, does not necessarily imply or require a particular written or signed form. It is the quality of the consent, not the format, that is relevant."

Researchers seeking valid and informed consent should find it necessary to engage in an ongoing and dynamic discussion with collaborators (or human subjects, in the

language of some codes) about the nature of study participation, its risks and potential benefits. Such programs will require that the researcher actively solicit advice from research participants at all stages, including planning and documentation of the research. It is imperative that researchers engage in a dialogue with human subjects who have previously or continuously been involved in a particular study about the nature of ongoing participation or resuming participation in a study so that the human subjects understand the nature, risks and potential benefits of their participation at any particular time. They should also seek to answer all questions and concerns about study participation that potential subjects may have about their involvement in the research process.

Approval by the appropriate committees and/or review boards must be obtained prior to recruiting subjects, obtaining informed consent, or collecting data. Then the researcher should obtain official consent from the human subject to participate in the study prior to the collection of any data to be included in the research process. The form and format of official consent can vary, depending on the appropriateness of written, audiotaped, or videotaped consent to the research situation. Those individuals who are granting the permission should be involved actively in determining the appropriate form of documenting consent. Written forms pertaining to informed consent should be maintained with the research records.

The researcher should discuss with potential research subjects the ways that their participation in the study might affect them when research data are disseminated. For example, if photographs documenting participation in a particular event or situation could prove incriminating if viewed by a wide audience, the participant should be warned and alternatives discussed. As a corollary of this, potential subjects should be given the opportunity for anonymity, and aspects of confidentiality and security measures for all types of study data (including digitized, visual, and material data) should be made known to them.

Anthropological researchers should not practice “hit-and-run” research, but should, where possible, develop more long term and lasting relationships with the people they study. They should provide a long-term mechanism for study subjects to contact the researcher or the researcher’s institution to express concerns at a later date to withdraw their data from the research process. Alternative contact information should also be provided in case a potential research subject or collaborator does not want to participate in the research but does not feel able to communicate that wish directly to the researcher.

Research collaborators should also understand the role of all research equipment and documentation techniques prior to providing consent so that they may be said to be adequately informed about the research process.

Finally, researchers should also recognize that informed consent given for research undertaken in the past does not necessarily imply informed consent for the use of that data in another context. New informed consent should be sought in instances where materials under consideration are not merely products of the anthropologist’s interpretation of previously collected data but rather products of another individual or culture. For example, individual informed consent for the collection and use of human blood for one study should not be misconstrued to imply that the giver would necessarily agree for the use of the samples for an unrelated study.

The Potentially Negative Impact of the Publication of Factual Data about a Study Population on Such Population (Watkins 2002b)

The AAA Code of Ethics provides the practitioner general guidance regarding this issue. In the Introduction (Section II), it states that "... the generation of anthropological knowledge is a dynamic process using many different and evolving approaches; and that for moral and practical reasons, the generation and utilization of knowledge should be achieved in an ethical manner". In Research (Section III), it notes that anthropological researchers should be open about the "... potential impacts ... (of) research projects with funders, colleagues, persons studied or providing information, and with relevant parties affected by the research." Under III(A)(1), the Code notes that researchers have primary ethical responsibilities to those studied and that those obligations "... can supersede the goal of seeking new knowledge, and can lead to decisions not to undertake or to discontinue a research project when the primary obligation conflicts with other responsibilities...". While the following subsection of the Code warns the researcher "To avoid harm or wrong, understanding that the development of knowledge can lead to change which may be positive or negative for the people or animals worked with or studied", it perhaps does not go far enough in warning the researcher to consider the possibility of harm that the presentation of factual data may have on a population. For example, because of the social stigma attached to cannibalism by Western society, a researcher might wish to consider the ways that such a statement concerning the practices of a marginal culture might be used to further marginalize that culture. Section III(B) of the Code of Ethics speaks to the anthropologist's responsibility to scholarship and science, noting that anthropologists "should utilize the results of their work in an appropriate fashion, and whenever possible disseminate their findings to the scientific and scholarly community." Finally, under III(C)(1), anthropologists are reminded "... they are not only responsible for the

factual content of their statements but also must consider carefully the social and political implications of the information they disseminate. They must do everything in their power to insure that such information is well understood, properly contextualized, and responsibly utilized. ... At the same time, they must be alert to the possible harm their information may cause people with whom they work or colleagues."

The anthropological enterprise is one that involves the collection of data relating to the study of human cultures. As such, it is imperative that the anthropological researcher understands that the presentation of information, even if scientifically factual, might have an impact on the population under study and that the possibility exists that the researcher may be placed in an ethical dilemma concerning the question of publishing or not publishing such data. Of additional importance, however, is the realization that any self-censorship by the researcher might be harmful both to the discipline and to the population under study and might amount to a misrepresentation by omission. Often the anthropologist is the only researcher qualified to understand the complexity of the social structures of the population under study and to present the information in such a way to facilitate its comprehension by the society at large. It is perhaps more important that the anthropologist be aware that the sensationalized presentation of factual data usually has more of an impact on the population under study than the mere presentation of the data.

Therefore, anthropological researchers should consider the potentially negative impact of the publication of factual data about a study population on such population prior to beginning a project. They should attempt to identify at the on-set of any project the possible personal, social, and political implications that the publication of factual data concerning a study population may have on that population. Many issues may not be recognized at the onset of the research, but anthropologists should continually reexamine their research in order to be aware of any such implications.

The involvement of the study population throughout the entire process of the project (from the formulation of the research design, the collection of the data, the synthesis of data, and the publication of data) helps assure that the cultural context of the population under study is represented within the project to as much an extent possible. This helps the researcher weigh the scientific and anthropological importance of the data against the possible harm to the study population and to integrate the data in such a way that its role within the cultural context is fully explained.

While it is important to report truthfully any scientific or cultural biases that may be inherent in the presentation of the data, the researcher should attempt to explain the importance of the data under discussion both to the scientific and local communities in language understandable by each community and disseminate the information in both communities as widely as possible in order to minimize sensationalism while maximizing the contextual comprehension of the data.

While advocacy is a personal choice that each researcher must make, it is imperative that the researcher acknowledges the scientific need for balance in anthropological reporting.

Health emergencies can threaten both researchers and research subjects. Given that every situation arising in the course of fieldwork cannot be anticipated, researchers should consider in advance the local health status profile of residents and the epidemiological patterns of communicable illness, accident, and injury before entering the field. They should try to anticipate emergencies they may encounter personally and among residents in the research area. The decision to treat or not treat a human illness or condition may be fraught with ethical conflicts resulting from the nature of the illness or condition, the relationship of the researcher and subject, and the responsibilities and qualifications of the researcher. Furthermore, taking action in response to a human subject's or research population's illnesses or health risks involves a research stance of advocacy. As stated in the AAA Code of Ethics, "Anthropologists may choose to move beyond disseminating research results to a position of advocacy. This is an individual decision, but not an ethical responsibility." Although it may be an individual decision to intervene in the course of a health emergency, it is imperative that researchers consider the possibility of, and plan for, health emergencies they might encounter in field situations.

There are four types of health emergencies addressed: 1) Researcher Emergencies encountered by the researcher or research team in the course of fieldwork; 2) Research Subject Emergencies affecting human subjects who participate in fieldwork and result from their participation; 3) Individual Health Emergencies Observed by the Researcher, where the emergency is unrelated to participation in the research; and 4) Community or Population Health Emergencies Observed by the Researcher, where the emergency is unrelated to participation in the research.

#### Researcher Emergencies

With foresight, common emergencies faced by researchers in a particular locality can be anticipated. In locations where communicable diseases are endemic, the researcher would be wise to obtain recommended immunizations prior to entering the field. Researchers should thoughtfully consider the benefits of purchasing medical evacuation insurance for members of their research team should their field setting warrant such emergency measures.

#### Research Subject Emergencies

Research subjects face health emergencies as well -- some as a direct result of participation in a research study and others during the course of their daily life. Since certain types of research may involve the collection of tissue samples or other invasive procedures that could be implicated in the development of a resultant medical emergency for an individual study subject, it is the researcher's responsibility to determine the risks of study participation in advance of fieldwork and to make plans for the appropriate training of research staff in safe and effective administration of all study procedures. Contingency plans should be established for complications or side effects resulting from all study procedures. As with all research protocols, plans for the minimization of research-related risks to human subjects should be reviewed and approved by the appropriate committees and internal review boards.

#### Individual Health Emergencies

Health emergencies for individuals unrelated to participation in the research program may arise, and the anthropologist should consider in advance the role of the researcher in response to observed health emergencies. When reviewed in advance, profiles of health and illness alert the researcher to conditions in field settings. For health emergencies of individuals, researchers should design and obtain approval for protocols to

guide the administration of pharmaceutical agents to individuals should individual health emergencies be observed.

#### Community or Population Health Emergencies

For health emergencies of communities or populations, researchers may arrange in advance for consultation on an as-needed basis with a health expert should a disease escalate to epidemic proportions during the course of field work. Researcher interventions for health emergencies experienced by a population should be undertaken with the guidance of intervention protocols and after consultation with experts.

Some anthropologists also have credentials (such as the Medical Doctor degree or Nurse Practitioner certification) that prepare them to diagnose and treat human health conditions. In these cases, the researcher may use his or her professional judgment and appropriate consultation with colleagues and specialists to determine whether or not a situation constitutes a health emergency and how to respond to the situation within his or her scope of practice.

Researchers should arrange in advance for consultation for potential health emergencies in field settings, and should contact the Centers for Disease Control and Prevention (CDC) to discuss health situations that may be classified as population-level health emergencies.

#### Impact of Material Assistance to Study Population (Luong 2002)

Anthropological researchers frequently provide material assistance to study populations as a reciprocity to collective or individual local assistance, or as integral parts of the newly formed/evolving relations with individuals or groups in study populations. The direct material assistance provided by anthropological researchers is normally limited in scope, as it is constrained by researchers' resources.

In conformity with the AAA Code of Ethics, despite its normally limited scope, anthropologists should attempt to be certain that the distribution of material assistance to the study population should avoid exacerbating conflicts within the study population or conflicts of the study population with other populations. The researcher should also attempt to avoid the distribution of material assistance in such a manner that might disrupt social relationships or pose health risks to the study populations.

Anthropological researchers may not be able to foresee all the consequences of their material assistance to study populations. But in order to minimize harm and to contribute to the well-being of the study population and the conservation of its environment and archaeological and historical heritages, the material assistance should be based on researchers' best professional knowledge of the study population in its historical, social, physical environments, as well as on careful consultation with other experts and with as many potentially affected individuals as possible.

#### Remuneration to Subject Populations and Individuals (Wagner 2002)

While appropriate and fair wages and remuneration must be culturally situated, ethical codes and guidelines of professional and scientific organizations touch on this subject. While anthropologists should be aware of the AAA Code of Ethics, other codes and guidelines (such as that of the International Society of Ethnobiology (<http://guallart.dac.uga.edu/ISE/SocEth.html> and <http://guallart.dac.uga.edu/guidelines>) are appropriate. Additionally, a number of international organizations, declarations, studies,

and covenants specifically deal with wages, remuneration, ownership, and who should decide what is appropriate and fair. These include the International Labour Office of the United Nations, Universal Declaration of Human Rights (1948), Draft United Nations Declaration on the Rights of Indigenous Peoples (1993, Annex in 1995), United Nations Study on the Protection of the Cultural and Intellectual Property of Indigenous Peoples (1993), and International Covenant on the Rights of Indigenous Nations (1994). Anthropologists and anthropology students who conduct research resulting in the need to remunerate subject populations or individuals should become familiar with all applicable guidelines and codes of ethics, as well as all applicable international organizations, declarations, and covenants.

The AAA Code of Ethics provides general guidance regarding the issue of remuneration. Section III (Research) says that researchers should “be alert to proper demands of good citizenship or host-guest relations”. In III.A.1 it advises the researcher “to consult actively with the affected individuals or group(s), with the goal of establishing a working relationship that can be beneficial to all parties involved.” It further addresses compensation under III.A.6, when it recognizes anthropologists’ “debt to the societies in which they work and their obligation to reciprocate with people studied in appropriate ways”.

In some cases, appropriate and fair ways to reciprocate or compensate the people studied are relatively clear. However, in societies where knowledge or ownership is communal, widespread, or not a commodity, or knowledge or labor are not appropriately compensated by money, anthropologists must seek individual solutions. Like the informed consent process (III.A.4), adequate and fair compensation may be a dynamic and continuous process. A number of international declarations and covenants that deal with indigenous rights may be helpful in formulating what sort of remuneration and to whom is both appropriate and fair. These will be outlined in the following section.

The International Labour Office of the United Nations specializes in social and labor questions and promotes the rights of working people, including indigenous workers. Article 23 of the Universal Declaration of Human Rights of 1948 (<http://www.un.org/Overview/rights.html>) states that (2) “Everyone, without any discrimination, has the right to equal pay for equal work,” and (3) “Everyone who works has the right to just and favourable remuneration. . .” Article 18 states that indigenous peoples “enjoy fully all rights established under international labour law and national labour legislation”. Furthermore, they should not “be subjected to any discriminatory conditions of labour, employment or salary”. Article 27 states that (2) “Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author”.

The Draft United Nations Declaration on the Rights of Indigenous Peoples (1993) addresses rights of indigenous people relating to indigenous lands and natural resources (Part VI); protection of cultural and intellectual property (Part III); and preservation of cultural and ethnic procedures for handling issues such as remuneration (Part VII). Basically, it places the identification of what is fair and appropriate remuneration in the hands of the population that is studied.

The International Covenant on the Rights of Indigenous Nations (1994) addresses the cultural rights of nations (Article II, Part III), the right to land, territories and place (Part VI), to intellectual property (Part VI, Para. 27), and “to determine the responsibilities of individuals to its communities” (Part VII, Para. 32).

In a 1995 United Nations Annex on Principles and Guidelines for the Protection of the Heritage of Indigenous People, indigenous people are (3) “recognized as primary guardians and interpreters of their culture”. Words such as “heritage”, “IPR”, and “researchers” are defined. Principle 5 places ownership and custody of heritage under the “rules and practices of each people”. Principle 8 recognizes indigenous “control over all research conducted within their territories, or which uses their people as subjects of study”. Principle 10 states that agreements “for the recording, study, use or display of indigenous peoples” must ensure that the people concerned “continue to be the primary beneficiaries of commercial applications”.

The question of what is appropriate and fair remuneration to subject populations and individuals may arise in relation to wages for labor, remuneration for interviews or demonstrations, or remuneration for heritage (intellectual property or traditional knowledge). The first step is to identify who it is appropriate to remunerate. The anthropologist must keep in mind that knowledge or ownership may be communal, that not all aspects of culture should be treated like commerce, and that money may not be an appropriate form of remuneration. The international documents are clear that all people should receive equal pay for equal work. Likewise, they are clear about placing the ownership of heritage and the appropriate ways to handle issues such as remuneration in the hands of the people being studied. Appropriate and fair remuneration is culturally situated, and can be seen as a process that should be individually negotiated by each anthropologist under the guidance of those people with whom the anthropologist works.

While such codes and guidelines exist to provide information to the researcher, it is also imperative that the anthropologist understands that the study population might have different views concerning the remuneration of individuals or cultures. The idea of “equal pay for equal work” is a Western notion that does not take into consideration cultural, status, or other social ideas held by non-Western populations on the concept of remuneration.

### Sexual Relations (Watkins 2002c)

It is imperative that the anthropological researcher be aware of the ethical implications of sexual relationships between the anthropologist and members of the communities or organizations with whom research is being conducted, and that researchers read and become increasingly familiar with various codes of ethics as they relate to the study of human populations. Additionally, the United Nations High Commission on Human Rights (<http://www.unhcr.ch/map.htm>) offers guidance in the form of Fact Sheets, Covenants and Conventions on the rights of children (“Fact Sheet No. 10, revision 1, the Rights of the Child”) and the rights of women and the girl-child (“Fact Sheet No. 22, Discrimination against Women: the Convention and the Committee”).

The AAA Code of Ethics pays scant attention to the issue of sexual relations between anthropological field researchers and the populations with which they work. In the Preamble (Section I), it states merely that “... fieldworkers may develop close relationships with persons ... with whom they work, generating an additional level of ethical considerations.” Additionally, the Code notes that researchers have primary ethical responsibilities to those studied and “To avoid harm or wrong...”. The topic is addressed in a more general sense under Section III, Research, Part A(6), where the Code of Ethics notes that anthropologists “... must not exploit individuals ...”. Section IV. Teaching speaks to the responsibility of the anthropologists as teacher/mentor to students and trainees, and,

in (1), encourages them to "... conduct their programs in ways that preclude discrimination on the basis of sex ...sexual orientation ... or other criteria irrelevant to academic performance." More specifically, however, the anthropologist as teacher/mentor in (5) is reminded to "... beware of the exploitation and serious conflicts of interest which may result if they engage in sexual relations with students/trainees for whose education and professional training they are in any way responsible." The Code of Ethics, however, is quiet concerning sexual relationships between the anthropological researcher and the population under study.

The anthropological fieldworker must be aware of the actual or perceived difference in economic and social "power" between the researcher and the population studied. In many field situations, the anthropologist is an exotic "other" whose presence may be disruptive to the local cultural group and who is often perceived to be from a world of wealth and power. As such, it is imperative that the anthropological researcher understands the implications of becoming involved in a sexual relationship with members of the population under study. The researcher must recognize that the population under study might try to enlist the real or perceived "power" of the researcher through the encouragement of a sexual relationship. Such actions should be discouraged.

Humans are sexual animals, and the possibility exists that the researcher may be placed in an ethical dilemma should a sexual relationship develop in a field situation. It is equally important that the anthropologist be aware of the health implications of such a relationship to the researcher as well as the population under study. Therefore, anthropological researchers should be aware of and consider the ethical implications of sexual relationships with a study population prior to undertaking a relationship. All cultures define sexual relationships in differing manners. What is not perceived as a sexual relationship in the researcher's culture might be perceived as one in the population under study.

The cultural milieu in which each culture operates (that of the researcher and the culture under study) can impact the perceptions of sexuality and the sexual relationship. The overall relationship between the anthropologist and the population under study is one that hinges on trust. As such, sexual relations may act to undermine that trust by placing the anthropologist in conflict with portions of the population or institutions within the local population.

Sexual relationships with individuals under the local, national, or international age of consent should NEVER be undertaken. In situations where such age of consent is variable, the anthropologist should exercise common sense and control in determining which age of consent should be followed and should likely follow the most stringent code possible. Any sexual relationship between the anthropologist and members of the study population should at all times be consensual and be of free choice, with no explicit or implicit threat of retribution for failure to comply.

Cultural displays of sexuality (i.e., flirting) vary by population and should be placed within their proper context. Such actions should not be misconstrued by the field researcher to indicate either sexual interest or social acceptance.

Since the institutional meaning of sexual relationships is integrated into cultures in different ways, the role of sexual relationships as a part of a specific culture should be identified and understood prior to the initiation or consummation of a sexual relationship with members of the culture. The anthropological researcher should be aware of the cultural implications of the sexual relationship beyond the physical act itself. For example, a researcher might view a sexual relationship as merely physical, while the other party might consider it paramount

to marriage. Sexual relationships between consenting adults still carries with it an implied contract whose articles have different meanings within each culture.

The researcher should be aware that what is perceived as a sexual relationship by one culture might be perceived as prostitution in another, and that gender relations vary within each culture, as do the rights of each gender. It is imperative that the researcher understand the cultural limitations placed on each gender prior to the initiation or consummation of a sexual relationship and be aware of the impacts of such on the exercise of free choice.

The researcher should not facilitate or ignore the sexual misconduct of others either through direct participation or non-action so long as the personal safety of the researcher is not threatened. Where the researcher feels his or her safety is at risk, the researcher should try to refrain from giving the impression of tacit approval through non-action.

The anthropological researcher should be aware of the possible impact of a sexual relationship on social and cultural institutions upon the termination of the field research.

The researcher should be aware of the impact of the implications of the reporting on the sexuality of a culture in professional and public media on the members of that culture and the perceptions of the general public.

Researchers should be aware of the economic implications of sexual relationships in that they might lead to the unequal distribution or access to material goods or be perceived as such, and that a sexual relationship between the researcher and a member of the population under study might be misconstrued to indicate a conscious choice of one portion of a population over another.

While a sexual relationship carried out between the researcher and a member of the population being studied may be totally acceptable, consensual, and between adults, it is important that the researcher recognize that such a relationship might impact the objectivity of the anthropological study. Any such marriages that might result from a sexual relationship should be recorded in the cultures of each participant and should be acknowledged by whatever means necessary in both cultures.

Sexual harassment in any form is NOT an acceptable part of any anthropological program, study, research, or other endeavor, and may vary by culture. As such, the anthropological researcher should operate under the most stringent code possible in order to minimize the threat of real or perceived sexual harassment

### Rights of Indigenous Populations

While the above discussion relates to the study of human populations in general, there are additional concerns that the anthropologist must consider as a part of the anthropological enterprise.

The United Nations has taken active strides in developing programmatic approaches to protecting the rights of indigenous populations. Its 1948 International Bill of Human Rights consists of the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights (and its two Optional Protocols). These and additional documents may be accessed through the Office of the High Commissioner for Human Rights on the Internet at <http://www.unhchr.ch/map/htm>.

Article 1 of the Universal Declaration of Human Rights recognizes that “(a)ll human beings are born free and equal in dignity and rights”, that they are “endowed with reason and conscience” and admonishes them that they “should act towards one another in a spirit of brotherhood.” Article 2 sets out the basic principle of equality and non-discrimination and

forbids “distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.”

Article 1 of the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights states that the right to self-determination is universal and calls upon states to promote the realization of that right and to respect it. As such, neither governmental bodies nor any other bodies may infringe upon these rights.

In 1992, the General Assembly provided “Fact Sheet No. 18 (Rev. 1), Minority Rights”, including Annex I: Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities”. This provides basic information concerning the rights of minorities, but also provides a discussion of “special rights” – rights granted to make it possible for minorities to preserve their identity, characteristics and traditions.

While these convention, covenants, and papers discuss the general rights of indigenous and minority populations in relation to international governments, perhaps the paper more applicable to anthropology was produced by the Sub-Commission on Prevention of Discrimination and Protection of Minorities for the 45<sup>th</sup> session of the United Nations. The paper, “Study on the protection of the cultural and intellectual property of indigenous peoples” by Erica-Irene Daes, discusses contemporary issues involving indigenous heritage. Rather than outline the paper here, the anthropologist is urged to consult it as background to the protection of the heritages of indigenous populations.

In the United States, federally recognized Indian tribes have a special status in relation to the federal government. Tribes are considered to be sovereign nations, with rights different from those of states and other governmental agencies. By way of a Presidential Memorandum for Heads of Executive Departments and Agencies dated April 29, 1994, President Clinton reminded federal agencies that relationships with American Indians should be conducted on a government-to-government relationship and not as a patronizing or parental relationship. This special status, while not binding on relationships between private individuals and tribal groups, carries with it implications for the rights of tribal groups in the anthropological enterprise. The anthropologist should realize that relationships with tribal groups should be conducted in a manner similar to one’s own government, that tribal governments have the right to place limits on anthropological research, and that the researcher is obligated to live up to any covenant that might become a part of the research program.

This discussion has dealt primarily with the rights of indigenous populations and other minorities in relationships with governments and other agencies, but there are also implications for private research. Anthropological researchers should be aware that permission should be pursued through not only the recognized governmental body but also through local governments or agencies of the population under study. If, as the United Nations declarations promote, indigenous populations and minorities have certain “unalienable rights”, it is presumed that the right to deny study by an outside entity might be considered to be within their purview.

## *VI. A cloudy future*

A growing body of evidence, as epitomized by the work of a number of anthropologists (cf. Bettinger 1991; Downer 1997; Ferguson 1996; Kehoe 1998; Lurie 1988; McGuire 1992a, 1992b; 1997; Meltzer 1983; Trigger 1980, 1986, 1989), has traced the history of anthropology and its relationships with American Indians. These works, and others like them, indicate that science does not operate in a vacuum from the social structure in which it occurs. Trigger generalizes that the "problems social scientists choose to research and (hopefully less often) the conclusions that they reach are influenced in various ways . . . (among them) . . . the attitudes and opinions that are prevalent in the societies in which they live" (Trigger 1980: 662). He argues that during the first half of America's existence (1770s through the 1870s), American Indians were held to be inferior to civilized men in order to rationalize the seizure of Indian lands, and that, eventually, racial myths grew to supplant any other myths about the Indians as a justification for waging war on the Indians and violating their treaty rights. While these writers analyzed only the relationships between anthropologists and American Indians, it might be said that colonialist attitudes of many governments influenced not only the manner in which indigenous populations were treated, but also the way that social scientists have studied and portrayed them.

Research programs based on a scientific colonialism model where the researcher mines the social, cultural, or intellectual resources of research populations should have no place in future anthropological fieldwork programs. While the researcher should have latitude in developing research protocols and research designs, the involvement of indigenous populations in their development helps insure a more engaged anthropology. While some study populations might not wish to participate in such studies, it should be their option based on a truly informed consent – they should understand fully the implications of their participation (or non-participation) in the research as well as the benefits and drawbacks of their involvement.

But the engagement of indigenous populations does carry with it certain issues of concern, especially when the groups are in incipient stage of political development in comparison to Western political ideation. For example, if the research population is formed of a loose (and perhaps constantly changing) coalition of groups, can any one person be presumed to speak for the entire cultural organization? Furthermore, how does a researcher identify individuals or agencies with whom to consult if there are only a handful of individuals who are able to understand and translate concerns from the language of the researcher to that of the study population?

The Yanomami, by any definition, are members of a marginalized population in Venezuela and Brazil. They are politically weak, economically marginal and culturally stigmatized. They have consistently struggled to maintain their homelands against encroachment by rubber tappers, gold miners and others who have sought to steal resources from them. They have also struggled to maintain their homeland in spite of governmental edicts that have acted to further limit their territory. Relationships between anthropologists and indigenous populations have changed over the course of anthropology's development, and few might consider today's fieldworkers to be as openly colonial in their attitudes toward indigenous populations, but what might indigenous populations expect from anthropologists in the future? Should anthropologists become advocates for a group or should they remain "neutral"? The AAA Code of Ethics at Part III(c)(2) states that "(A)nthropologists may choose to move beyond disseminating research results to a position of advocacy. This is an individual decision, not an ethical responsibility". More truly, can anthropologists remain neutral?

We are uncertain what the future holds regarding relationships between indigenous populations and anthropologists, but we are certain that, such relationships must include more of the native voice, or anthropology will be doomed to be nothing more than an anachronistic exercise offering little in the way of explanation or benefit to anyone.

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