

Chapter 3

## The Napoleonic Wars

The village I'm living in really thinks I am the be-all and end-all.—*Napoleon Chagnon, 1965*<sup>1</sup>

The wars that made Chagnon and the Yanomami famous—the ones he wrote about with such relish in *The Fierce People*—began on November 14, 1964, the same day the anthropologist arrived with his shotguns, outboard motor, and a canoe full of steel goods to give away.<sup>2</sup>

“A war started between groups which had been at peace for some time on the very first day Chagnon got there, and it continued until he left,” said Brian Ferguson, a Rutgers anthropologist who is an expert on violence in primitive societies. “I don’t think that was an accident.” Ferguson’s book *Yanomami Warfare*, published in 1995, is perhaps the most comprehensive account ever written about tribal conflict. Two of its chapters are devoted to Chagnon’s own role in fomenting warfare among the Yanomami.<sup>3</sup> “I originally considered calling my book *The Napoleonic Wars*,” Ferguson said.<sup>4</sup>

Ferguson’s work is part of a growing consensus that Westerners, including

scientists, profoundly disrupt tribal health, life, and politics on arrival. The 1998 Pulitzer Prize for nonfiction went to the UCLA medical researcher Jared Diamond and his book *Guns, Germs, and Steel: The Fates of Human Societies*,<sup>5</sup> a meditation on the worldwide spread of Eurasian war, disease, and trade goods. No tribal society could withstand their onslaught. Historians who have revisited the role of European scientists in the exploration of Africa (in *Dark Safari*) and New Guinea (in *First Contact*) have documented widespread devastation, caused almost unconsciously by specialists convinced of their own objectivity. In some cases, an expedition was not needed. Diamond, who did field research in the South Pacific, recounted how a single British sailor, Charlie Savage, drastically altered Fiji society in 1808 with the help of a couple of old muskets. “The aptly named Savage proceeded single-handedly to upset Fiji’s balance of power. . . . His victims were so numerous that surviving villages piled up the bodies to take shelter behind them, and the stream beside the village was red with blood.”<sup>6</sup>

Far-traveled Carib tribes that gave their name to the Caribbean once settled the Orinoco. They lived in large, fortified towns and plied the great river in hundred-foot canoes. The wars and disease that accompanied spasmodic efforts of Europe’s colonial empires to locate El Dorado exterminated their civilization. An enterprising Dutch governor of Suriname, Gravesande, launched the final quest in the first half of the eighteenth century. He formed a military-slaving alliance with a Rio Negro tribe, the Manau, whose leader, Ajuricaba, styled himself king of Gran Manoa (an alias for El Dorado) while flying the Dutch flag.<sup>7</sup> Brazil’s colonial authorities sent an army that crushed the Manau, captured Ajuricaba (who committed suicide by leaping into a river in chains), and supplanted the Dutch as the leading entrepreneurs in the slave business. The Portuguese kidnapped or purchased over five thousand Indian slaves between 1725 and 1750 on the Upper Orinoco alone.<sup>8</sup>

The earliest mention of the Yanomami came from a multidisciplinary expedition of engineers, surveyors, naturalists, and artists who worked for the Portuguese boundary commission. In 1786, Lobo de Almada described the Yanomami as the “remnant” of a “nation,” whose survivors were “still living” in the inaccessible headwaters between Venezuela and Brazil. Almada, who brilliantly directed the collection of new plant species and the cataloging of Indian cultures, contributed to genocide by relocating the Yanomami’s eastern neighbors, the Macuxi, to a reservation a thousand miles away, where most of them died in what the historian John Hemming styled “a grotesque experiment.”<sup>9</sup>

Other experiments were also underway. In 1784, Alexandre Rodrigues Ferreira, whom Hemming called “the first great naturalist to study the Amazon,” began an ambitious scientific enterprise that conscripted hundreds of native guides, porters, paddlers, and servants. “Such navigation is fatal to the Indians, most of whom generally die or are incapacitated for life,” a local bishop complained. Thousands perished or fled from the main rivers to escape Ferreira’s botanical enthusiasm, leaving whole stretches of the Rio Negro on the Yanomami’s southern border devoid of inhabitants.<sup>10</sup>

The Yanomami’s strategy of hiding in the hills was more successful—reportedly some three thousand managed to escape the slavers and naturalists and the plagues that accompanied both of them.<sup>11</sup> It was an accident of geography. Europeans failed to reach the source of the Orinoco because the river narrowed to a swift, stone channel—a granite flume only six feet wide in stretches, with wild waters broken by impassable cataracts.<sup>12</sup> Farther upriver, after the portaging of a dozen waterfalls but still far from the source, the going became excruciatingly slow. The Orinoco spilled out into a labyrinthine swamp, choked by rotting logs and densely matted vegetation, where navigation was out of the question. It was miserable going. Even in the so-called dry season, from January to March, downpours fell forty-eight days out of fifty.<sup>13</sup> There were few stands of rubber or cacao trees, nothing to excite collectors. And, along the Orinoco’s final stages, the only thing that obviously glittered was mica, fool’s gold. Given the surfeit of pain and the apparent absence of reward, every European expedition for two centuries turned back without reaching the Orinoco’s source. It was actually a tiny catch basin, a few feet in diameter, situated on the rim of a dark, steep gorge above granite escarpments, and it was finally located in 1951 by a Franco-German expedition. Nevertheless, earlier explorers left their mark and contributed to the creation of a Yanomami myth of unbridled ferocity.

The first American to attempt the Orinoco’s origin was the noted geographer Hamilton Rice, on assignment for the Royal Geographical Society. He camped above the turbulent Guaharibo Rapids, considered the border of Yanomamiland, on January 21, 1921. There, seeing his abundant supplies, a group of about sixty Yanomami came begging for food and trade goods. This was the Yanomami’s typical approach to outsiders,<sup>14</sup> but it startled Rice, who decided to take no chances. He opened fire with his Thompson machine gun and did not bother to count the dead. The Rice expedition fled downriver. He later wrote in Royal Geographical Society’s *Journal* that the Yanomami

were cannibals who ate raw flesh and that, given the danger of becoming dinner, it had been “necessary to fire to kill.”<sup>15</sup>

The next incursion of Americans on the Upper Orinoco came during World War II. A team of U.S. Army engineers and surveyors did a feasibility study on a super-canal to join the Amazon and Orinoco watersheds.<sup>16</sup> Although the canal, which would have dwarfed Panama’s, was never built, the friendly engineers got along well with the Indians. The Yanomami eagerly ate the army people’s leftovers and shared their cigarettes before returning home with priceless machetes—and deadly contagion. The new respiratory diseases decimated *shabonos* far from the Orinoco, while sparking wars over witchcraft accusations, the double whammy that outside infections have historically brought to Amazon tribes.<sup>17</sup>

The wars and epidemics that shadowed these expeditions profoundly altered the Yanomami landscape. According to local colonists, Rice’s machine-gun “massacre against unarmed Indians”<sup>18</sup> provoked Yanomami raids against the only remaining settlements on the Upper Orinoco between 1921 and 1931.<sup>19</sup> Although the Yanomami did not kill any whites, they stole all the steel goods they could find and wreaked so much havoc that colonists abandoned the area altogether. For the first time since the Spaniards arrived in 1750, there were no garrisons or trading posts within hundreds of miles. The jungle reclaimed old towns, missions, and forts. Another American geographer, Earl Hanson, reported on the phantasmagoric victory of the rain forest. “It is probable that the present regression of the region is the most complete in its history since the first advent of the Spanish,” he wrote. “An interesting spectacle is taking place . . . affording an opportunity for some ethnologist to record a brand-new primitive culture in the making.”<sup>20</sup>

There was no one better equipped than Chagnon to record this “brand-new primitive culture in the making.” *The Fierce People* was written in a fresh, unfettered voice. After giving an account of a man who beat his brother with the blunt edge of an ax, Chagnon confided that the victor was “one of few Yanomami that I feel I can trust.”<sup>21</sup> The anthropologist admitted he would have preferred studying some other, kinder group, but cautioned, “This is not to state that primitive man everywhere is unpleasant.”<sup>22</sup> He described Yanomami women over the age of thirty as having “a vindictive and caustic attitude toward the external world.” There was no puritanical preaching, no concession to the ideal of the Noble Savage. Another reason for the book’s popularity was that Chagnon combined two favorite undergraduate

themes—violence and sex—into a single theory about Yanomami warfare: Yanomami men fought over women, a message that has resonated on American campuses.

Chagnon survived a nighttime murder attempt by his hosts, whom he frightened off with his flashlight, and a close encounter with a jaguar, which sniffed him in his hammock. He hollowed out his own log canoe to ride down the Mavaca River, after a Yanomami guide abandoned him, and pushed on into unknown territory in spite of repeated death threats. You had to admire his courage—though it was harder to admire the Yanomami as Chagnon depicted them. By the end of the story, many readers concluded the Yanomami were, well, pretty awful.

Perhaps Chagnon's most brilliant achievement was fitting his grimly fascinating adventures into a clear, simple Darwinian framework that seemed to shed new light on human origins. *Time* magazine summarized Chagnon's theory: "the rather horrifying Yanomami culture makes some sense in terms of animal behavior. Chagnon argues that Yanomami structures closely parallel those of many primates in breeding patterns, competition for females and recognition of relatives. Like baboon troops, Yanomami villages tend to split into two groups after they reach a certain size."<sup>23</sup> You had to be fierce to survive and reproduce.

Chagnon said he had to become fierce himself in order to survive among the Yanomami: "I soon learned that I had to become very much like the Yanomami to be able to get along with them on their terms: sly, aggressive, and intimidating." Otherwise, they would have pushed him around unmercifully and stolen him blind. He learned to shout at them "as loudly and as passionately as they shouted at me." "I had to establish my position in some sort of pecking order of ferocity at each and every village."<sup>24</sup>

Pecking orders of violence were popular in the 1960s, in part because of Konrad Lorenz's influential book *On Aggression*, published in 1966. Lorenz, a Nobel Prize-winning biologist at the Max Planck Institute, made many crucial contributions to understanding the behavior of rats and geese—two very aggressive animals—and a few equally crucial mistakes in applying his laboratory observations to human behavior. He concluded that humans were a simian species gone awry, great apes deformed by hunting and technology to kill without inhibition unlike any other animal.<sup>25</sup> Thus, original sin was reinvented, and man became known as a killer ape. Chagnon's Fierce People resembled killer apes: Amazonian primates, similar to baboons, whose perfect amorality turned murder and treachery into tribal ideals.

Today even Chagnon's strongest supporter, the Harvard sociobiologist Edward O. Wilson, recognizes that humans are probably less violent than any other species, at least as measured by common homicide and infanticide: "The murder rate is far higher than for human beings, even taking into account our wars."<sup>26</sup> Humans are not killer apes, nor are the Yanomami "fierce people."

There are Amazonian tribes, like the Huarani and Achuar, that have levels of violence far higher than that of the Yanomami.<sup>27</sup> Among the Huarani, for example, over 60 percent of all men are killed,<sup>28</sup> compared with 30 percent among the Yanomami Chagnon studied.<sup>29</sup> But the Yanomami have four regional dialects and are spread out over 80,000 square miles. All other Yanomami subgroups have homicide levels much lower than those Chagnon recorded.<sup>30</sup> The adult male homicide rate for the entire tribe might be 12–14 percent. There are villages where no one has been killed in generations and others where a high percentage of the men have been slain.<sup>31</sup> Therefore, rates of adult male war deaths could be engineered in a range from zero to over 40 percent, depending on the village and the time frame. And, if the approximate Yanomami homicide rate appears high when compared with *domestic* rates for wealthy, democratic societies, it is unfair to say, as Chagnon often does, that the Yanomami have a higher homicide rate than the city of Detroit.<sup>32</sup> Such comparisons are dubious, not only because the data is so uneven but because tribal violence conflates war and common murder—categories that modern societies keep strictly separate. (If murder rates for the Soviet Union or Poland were computed like the Yanomami's—tallying *all killings* over several generations—they would also be high, since they would include millions of male "murders" during World Wars I and II.) In any case, the overall level of violence among the Yanomami is undoubtedly modest for a tribal society without written laws or police.<sup>33</sup>

The question is no longer why the Yanomami are so fierce, but why Chagnon's Yanomami have homicide rates so much higher than those of other Yanomami groups. Although Chagnon has portrayed his home village, Bisaasi-teri, as a "typical Yanomami village,"<sup>34</sup> it was exceptional. By the time Chagnon met the Bisaasi-teri, they were living at the juncture of the Orinoco (400 yards wide) and the Mavaca River (100 yards wide). From the air, the area looks lovely, with its riverine forests shading the muddy Orinoco's banks and granite foothills fingering their way out of the luxuriant growth. But the aerial view is deceiving, for this is a miserable, sticky, malaria-ridden place. No traditional Yanomami village was located anywhere near such a

wide stretch of river.<sup>35</sup> Archaeological excavations at Bisaasi-teri have uncovered pottery shards and manioc strainers commonly used in Carib cultures but unknown in the Yanomami's mountain redoubt.<sup>36</sup> The Yanomami penetrated this far down the Orinoco only because the Carib tribe that traditionally dwelt there was driven off or enslaved. Two thousand Carib speakers were pressed into servitude by a band of adventurers while an energetic Frenchman set up a trading village in the 1830s at the same spot where Chagnon met the Bisaasi-teri.<sup>37</sup>

All experts, including Napoleon Chagnon, agree that the existing Yanomami groups originated in the Parima and Siapa highlands, which they populated "during untold centuries." The first scientist to live with the highland Yanomami was a University of Pittsburgh geographer, William Smole. After experiencing the Yanomami in their ancestral habitat in 1969–70, Smole began to publicly dispute the "fierce people" appellation for the Yanomami. In the Parima Mountains, Smole settled near a large village that had been at peace for two generations. There were no headmen to speak of, and much less squabbling over marriageable females. Whereas Chagnon's villages had a dramatic shortage of women, the highland villages had a slight surplus. Sorcery was the main cause of what warfare did occur; capturing women was secondary.<sup>38</sup> Smole concluded that Chagnon's Yanomami differed so markedly from the villages in the tribes' more tranquil homeland that they could not be considered traditional Yanomami at all.

Even within the subgroup where Chagnon worked, there is a sharp split between highland and lowland villages. In fact, when Chagnon surveyed five mountain *shabonos* from his own linguistic group in 1990–91, he learned that only about one-fourth as many men had participated in killings as among the lowland groups (11 percent as opposed to 44 percent).<sup>39</sup> Chagnon has yet to reveal the actual homicide statistics for these mountain villages contiguous to the Mavaca River. Nevertheless, his more recent findings confirm what William Smole has been saying for decades—that violence is spatially variable in the Yanomami world, the villages living at low elevations along the Orinoco-Mavaca drainage being the most violent known. These dozen *shabonos*, with a population of 1,394,<sup>40</sup> comprise less than 6 percent of the 25,000 Yanomami alive today. As Smole put it, "Certainly the Yanoama who have moved to sites on or near navigable water are not representative. They are outside their niche in the broadest sense, caught in a squeeze between various adverse influences of 'civilization.'" <sup>41</sup> Smole believed that steel goods, disease, and the divisive influence of outsiders altered such émigré groups be-

yond recognition. Ferocity and fighting over women "might apply to a lowland zone of acculturation and acute cultural instability."<sup>42</sup>

Almost all subsequent researchers have echoed Smole's criticisms, including most of Chagnon's own students. Chagnon blamed these attacks on romantics trying to create a prettified version of Yanomami culture. Having met with some assaults myself for graphic description of violence among Amerindian groups, I initially sympathized with Chagnon. Once I reached Yanomamiland, however, I found it increasingly difficult to accept Chagnon's version of their culture.

Brazil's nomadic gold miners, whose cross-continental wanderings have brought them into contact with dozens of tribes, have often remarked on how friendly the Yanomami are compared with other Amazonian Indians. The Yanomami at first welcomed me with a kindness that was disconcerting—tied my hammock, brought me food and water, lugged my heavy equipment, and lit lights all around me at night. I soon realized they were desperate for medicines and for someone to take their dying children upriver to a medical clinic.

Later, I was robbed at gunpoint by several young Yanomami who were working with gold miners. Had I wanted to render a heroic, Chagnonian version of the incident, it might have gone like this:

When we came to the big curve of the Mucajaf River, white water sprayed us as we dodged in and out of eddy currents. Just after escaping the last whirlpools, we confronted a new danger: a canoe of belligerent warriors heading straight toward us. They pulled even. Then a vicious and powerfully built man leapt into our boat and pointed a shotgun at my head. "I kill gold miners!" he shouted as he beat his chest to establish his dominance. He swayed from side to side, proclaiming his murderous intentions. I stared him down, knowing that a true warrior will never display fear. I also knew the real motive for the treacherous assault: the Yanomami's perpetual suspicion that outsiders wanted to steal their women.

Actually, I had happened on a Yanomami funeral ritual, in which the ashes of the dead are taken out and shared in a tribal communion, a time when the feared ghosts from the past are honored and when old scores can be settled. My boat was boarded in midstream by a twenty-year-old who was drunk on imported whiskey, and he was soon supported by other drunken youngsters with guns of their own. The gold miner, named Cícero Hipólito

dos Santos, and I were forced out of the boat at gunpoint, and, as a crowd of warriors and women gathered around, there ensued a debate about whether they should kill us. The surprising thing was that the Yanomami did not kill the gold miner, or me, for that matter; they just stole all our stuff. The local chief, painted red and black, with macaw feathers in his ears, planted himself between the adolescents' guns and me. He yelled, "Go away! Go down the river! The Indians here are all drunk. Indians are very dangerous when they're drunk."

I realized that my own actions, as well as the Yanomami's needs and the bizarre twists of the gold rush, had created situations from which I could have fashioned either a romantic or a Darwinian image of the Yanomami. Of course, either one would have been a distortion, like the portrait in *The Fierce People*.

The Yanomami I met on the Mucajaí were certainly no proverbial saints. But in sixty years they launched only two raids; on two other occasions, a few Mucajaí men joined allied raiding parties. That was it. Yet Chagnon took one of the two raids that the Mucajaí people initiated, and turned it into both the prime example of Yanomami treachery and a case study of a war fought exclusively to capture women. In *The Fierce People*, he claimed that the Mucajaí Borabuk "had a critical shortage of women" and proceeded to describe "the treacherous means by which the group alleviated its problem":

The headman of the group organized a raiding party to abduct women from a distant group. They went there and told these people that they had machetes and cooking pots from the foreigners, who prayed to a spirit that gave such items in answer to the prayers. They then volunteered to teach these people how to pray. When the men knelt down and bowed their heads, the raiders attacked them with their machetes and killed them. They captured their women and fled.

Treachery of this kind, called nomohori (dastardly trick) is the ultimate form of violence.<sup>43</sup>

But the demographer John Early and the sociologist John Peters, who spent over eight years on the Mucajaí, have put this raid into a wholly different perspective. In the first place, the Mucajaí Borabuk (People of the Waterfall) were not trying to capture women. "They did not view themselves as having a sex ratio problem as such."<sup>44</sup> It is true that they had fewer women than men, but they were not overly concerned about it, because the

Yanomami can acquire wives through trade and bride service (such as providing game for a marriageable woman's parents). So the temporary imbalance, common in tribal populations, was taken in stride. In the meantime, they simply shared wives. Chagnon perceived "a critical shortage of women," but the Borabuk did not. In fact, they had not raided anyone in over twenty years.

What really disturbed them were the devastating illnesses that came with first contact, which had arisen from their desire for steel goods. "Previously such tools had been obtained by exchange with or raids upon other indigenous groups." But the Mucajaí group had been isolated since their last raids to obtain steel in the mid-1930s. "The tools they had were wearing out and in need of replacement. They had moved to the banks of the Mucajaí River in the hope of making contact with Brazilians from whom they could obtain the tools. At the time of contact this appeared to be their most preoccupying problem."<sup>45</sup>

In 1955, an amazing event changed their lives: missionaries flew a small plane over the Mucajaí Borabuk and dropped fishhooks. The Borabuk sent a party of men in search of the source of steel. They built canoes for the first time and dispatched them far downstream, where, in late 1957 and again in late 1958, they made contact with Brazilian peasants and received some trade goods. Unfortunately, on both occasions the Mucajaí people also "contracted respiratory infections from the Brazilians and many died after they returned upstream. They had no immunity due to their previous isolation." "The resulting sickness and death was a new and frightening experience for the Mucajaí community."<sup>46</sup>

Two months after the second wave of imported illness, the missionaries arrived, who treated the sick and contained the epidemics. Then the second act in the tragedy of contact began. On the pretext of going on a long hunt, the Mucajaí Borabuk borrowed a gun from the unsuspecting missionaries and traveled upriver, searching for the sorcerers who they believed had caused all the deaths. They investigated the Marashi-teri, on the Couto de Magalhães River, who accused another distant group, the Shiri-teri, of being the agents of witchcraft against the Borabuk. Finally, in a confused encounter characterized by mutual misunderstanding, the Borabuk and the Marashi-teri attacked the Shiri-teri, although they did not kill them with machetes as Chagnon reported. One Shiri-teri was actually shot with a gun, showing how radically the impact of first contact had changed warfare on the Mucajaí. Their tricking the Shiri-teri into "praying" for metal goods also under-

scored what a strange new brew of outside influences was working on the Borabuk.<sup>47</sup>

Shortly afterward, the Borabuk sent peace offerings to the Shiri-teri, and they have been on good terms for the last thirty-five years. Although the Borabuk live in some half-dozen different *shabonos* spread out over a wide area of the Mucajaí River, with a population of over three hundred, there have been no raids between any of these *shabonos*. Between about 1935 and 1985, a total of three Borabuk men were killed violently; two others disappeared.<sup>48</sup> By the standards of the Amazon, or the world, the Borabuk form a fairly peaceful tribal society.

I also visited over thirty Yanomami *shabonos*, including several in the Parima Mountains. Of all the varied landscapes of Yanomamiland, I loved these inaccessible highlands best. The *altiplano* has majestic scenery, splendid waterfalls, and a blessedly temperate climate. Mosquitoes are not as horrible a nuisance there as elsewhere. Until recently, the Parima Yanomami did not suffer from colds or malaria.<sup>49</sup>

Why, then, did the Bisaasi-teri end up at a malaria trap exposed to Western diseases on the main course of the Orinoco?

The Bisaasi-teri splintered from a larger block, the Namowei, which had been torn apart by the respiratory infections that coincided with the U.S. Army expedition of 1942–43. The outbreak killed off most of the tribal elders, giving power to immature and aggressive young men—like the ones who robbed me on the Mucajaí—who plunged the Bisaasi-teri into a fratricidal war. As usual, the killing started over suspicions that rival Yanomami had sent lethal new diseases through witchcraft. But the strife also involved competition to secure the trading routes to a new Protestant mission—the first permanent source of steel goods in Yanomamiland—which opened in 1948.<sup>50</sup>

Defeated by both disease and war, the Bisaasi-teri relocated and adapted to river life, learning canoe travel and line fishing. As upland Yanomami, they did not even know how to swim. Nor did they have any clothes to keep off the clouds of gnats and dive-bomber mosquitoes. Bisaasi-teri was a village created by the catastrophe of first contact, and it first coalesced, six years before Chagnon's arrival, in 1958, around a government malaria post, without whose medicine the Bisaasi-teri could never have survived the unhealthy lowlands.<sup>51</sup>

Chagnon's exciting narrative edited out these unfortunate details. Prior to the arrival of the U.S. Army and Protestant missionaries in the 1940s, the

Namowei Yanomami had lived in peace for a generation. Their only raiding parties had gone out searching for whites in order to steal machetes. But since there were no whites in the area, nothing happened. Other Yanomami journeyed three hundred miles to the Rio Negro in order to steal *madohe* (stuff): axes, machetes, knives, pots, and cloth.<sup>52</sup>

On one of these epic forays near the Rio Negro, the raiders captured a young white girl, Helena Valero, while she was traveling with her family on a hunting trip. "It was not to rob women but to seize the goods my family was carrying; they were not interested in women," Valero recalled. "They carried me off because they found me abandoned. But the Indians did not want to capture women, just *madohe*."<sup>53</sup>

During her twenty-four years as a wife and mother among the Indians, from 1932 to 1956, Valero witnessed the epidemics that carried off the Namowei leaders and the subsequent killings over sorcery suspicions. She described how the Namowei's young men had to be trained in the art of raiding because they had never fought anyone. In the beginning, they were comically incompetent, unable even to locate enemy *shabonos*.<sup>54</sup> But in the terrible struggle that followed the arrival of the first missionaries, Helena Valero's husband became the Namowei war chief. He was murdered in 1949; the other war leaders were all killed by 1951. The group split up into two villages—Bisaasi-teri and Patanowa-teri. Peace ensued.

After settling on the Orinoco, the Bisaasi-teri gained fitful access to Western manufactures. They traded a trickle of metal goods to villages in the hill country and received a bounty of young brides in exchange. From 1951 to 1964, no Namowei were killed in warfare. Then Chagnon arrived.

During Chagnon's brief, thirteen-month residence, ten Yanomami were killed in a war that once again pitted the people of the Bisaasi-teri alliance against their old Namowei cousins, the Patanowa-teri. These deaths constituted a third of all the war fatalities over a fifty-year period for the Namowei villages, according to Chagnon's Ph.D. thesis. All of the remaining male war deaths in these villages occurred during another brief period, 1949–51, when Protestant missionaries first established their bases on the Upper Orinoco.

The missionaries initially made serious mistakes. They distributed machetes to win converts and unknowingly provoked bloody battles for monopoly rights to their supplies. But they eventually brought stable trading relations and good medical care to the Indians. They also actively intervened to stop fighting.

Chagnon could not provide ongoing medical attention or stable terms of trade, not because his intentions were less good but because his research, which will be examined in the next chapter, 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,<sup>55</sup> 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," said 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."<sup>56</sup>

Chagnon has dismissed this charge as "the 'bad breath' theory of tribal warfare."<sup>57</sup> 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. Westerners 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.

Chagnon did not wait to be asked, according to his closest friend and main informant—Kaobawa, the Bisaasi-teri headman, who was videotaped

by Mark Ritchie, author of the 1995 book *Spirit of the Rainforest*. Kaobawa's picture formerly graced the cover of *The Fierce People*, where he held a pole with his right hand and jabbed an angry right index finger at the world. Chagnon has long considered this "unobtrusive, calm, modest, and perceptive" man as "the wise leader" of the Bisaasi-teri. Kaobawa's decision to help Chagnon sort out his interviews with dozens of informants "was perhaps the most important single event in my fieldwork," Chagnon wrote, adding, "Kaobawa's familiarity with his group's history and his candidness were remarkable. His knowledge of details was almost encyclopedic."<sup>58</sup>

Therefore, Kaobawa's videotaped statements raised a number of questions—about both men. Kaobawa claimed that Chagnon offered him a special deal. "That's my picture there," Kaobawa said when Mark Ritchie showed him a copy of *The Fierce People*. "When he was taking my picture he said, 'If you'll really help me, I'll give you a motor.' . . . He said, 'Father-in-law, I'm going to really be a Yanomami and you're going to get me a wife.' That's what he said. But although he said that, he just left. . . ."<sup>59</sup>

According to Ritchie, "The story of Chagnon trying to get a wife from Kaobawa is a comedy of errors. As Kaobawa explains it, Shaki—Chagnon—wanted to buy a wife from a distant village, and Kaobawa kept trying to stop him because Kaobawa didn't want Chagnon and his trade goods to move away. Apparently, Chagnon wanted a Yanomami wife, but far enough away from the missionaries so that they wouldn't find out."<sup>60</sup>

Chagnon suddenly went from being an impoverished Ph.D. student at the bottom of the totem pole to being a figure of preternatural power. His first letter from the field revealed this: "The village I'm living in really thinks I am the be-all and the end-all. I broke the final ice with them by participating in their dancing and singing one night. That really impressed them. They want to take me all over Waicaland to show me off. Their whole attitude toward me changed dramatically. Unfortunately, they want me to dance all the time now. You should have seen me in my feathers and loincloth! They were so anxious to show me off that they arranged to take me to the first Shamataru village so that I could dance with them."<sup>61</sup>

Chagnon's status was enhanced by a pair of shotguns. The geneticist James Neel described Chagnon firing off his gun preemptively to scare off young men they suspected might steal some goods. "At dusk Nap casually blasted the tips of a tree branch overhanging the *shabono* where we were sleeping, and we retired with the shotgun leaning against his hammock—to a quiet night."<sup>62</sup> Of course, this was an old conquistador strategy, one employed

over the centuries to keep the natives cowed. In 1531, when Francisco Pizarro reached his first Inca city, Tumbes, at the Bay of Guayaquil, a soldier named Pedro de Candia "astounded the inhabitants by firing an arquebus at a target."<sup>63</sup> For the Spaniards, it became a standard technique of forced entrance.

The American Anthropological Association first got word of Chagnon's shotgun diplomacy when, in 1991, the anthropologist Terence Turner, head of its Yanomami survival commission, interviewed Davi Kopenawa, the Yanomami's most visible spokesperson and a winner of the UN Global 500 Award for defending the rain forest. Kopenawa told of reports that had come to his community of Chagnon's threatening behavior—walking around villages brandishing firearms and showing himself as a warrior. "Chagnon is fierce," Kopenawa said. "Chagnon is very dangerous. He did crazy things. *Eletem a própria briga dele.*" This literally means "He has his own personal war."<sup>64</sup>

That is what Brian Ferguson concluded.

"Chagnon's role is a strange thing for me," admitted Ferguson, whose *Yanomami Warfare* breaks a professional taboo by scrutinizing a field-worker as though he were a native. "One of the things I'm saying is that anthropologists need to be looked at. Anthropologists have been trained to screen out their own effects on their subjects. Their behavior is also a fit subject for investigation. The influence of Chagnon in the Yanomami area is a fit subject for investigation."<sup>65</sup>

Chagnon found himself in a difficult predicament, having to collect genealogical trees going back several generations. This was frustrating for him because the Yanomami do not speak personal names out loud. And the names of the dead are the most taboo subject in their culture.

"To name the dead, among the Yanomami, is a grave insult, a motive of division, fights, and wars," wrote the Salesian Juan Finkers, who has lived among the Yanomami villages on the Mavaca River for twenty-five years.<sup>66</sup>

Chagnon found out that the Yanomami "were unable to understand why a complete stranger should want to possess such knowledge [of personal names] unless it were for harmful magical purposes."<sup>67</sup> So Chagnon had to parcel out "gifts" in exchange for these names. One Yanomami man threatened to kill Chagnon when he mentioned a relative who had recently died. Others lied to him and set him back five months with phony genealogies. But he kept doggedly pursuing his goal.

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."<sup>68</sup>

Chagnon was most successful at gathering data, however, when he started playing one village off against another. "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."<sup>69</sup>

When one group became angry on hearing that Chagnon had gotten their names, he covered for his real informants but gave the name of another village nearby as the source of betrayal. It showed the kind of dilemmas Chagnon's work posed. In spite of the ugly scenes he both witnessed and created, Chagnon concluded, "There is, in fact, no better way to get an accurate, reliable start on genealogy than to collect it from the enemies."<sup>70</sup>

His divide-and-conquer information gathering exacerbated individual animosities, sparking mutual accusations of betrayal. Nevertheless, Chagnon had become a prized political asset of the group with whom he was living, the Bisaasi-teri. He took a Bisaasi-teri raiding party partway to their enemies' *shabono* with his outboard motor; later he helped Bisaasi-teri's allies leapfrog their enemies and avoid an ambush. By making one man, Kaobawa, the principal funnel of his largesse, Chagnon effectively created him "headman," a pattern he would repeat at other villages. With Chagnon established at Bisaasi-teri, minding the store with his shotguns, the Bisaasi-teri could raid other groups at a much greater distance because Chagnon made them immune to attack. Chagnon gave one of his shotguns to a Bisaasi-teri guide who was afraid of traditional foes nearby. "I had two shotguns. . . . I gave one of them to Bakotawa, along with a dozen or so cartridges and a quick lesson in how to load and shoot a gun."<sup>71</sup>

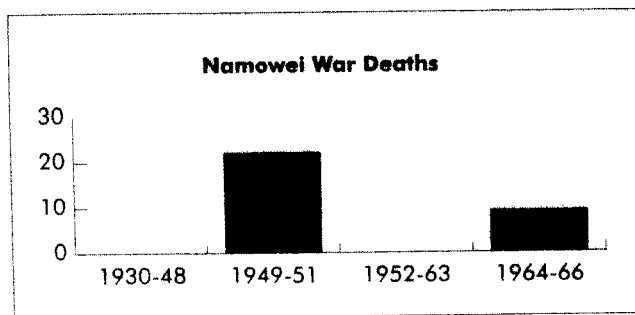
Another time Chagnon helped his Bisaasi-teri allies recapture a woman, Dimorama, whose abusive husband, Shiborowa, had shot her in the stom-



ach with a barbed arrow. " They were going to Momaridowei-teri to take Lir-morama away from her protectors by force, if necessary, and asked me to come along knowing that I always traveled with a gun, presuming that my presence, with a gun, would aid in their objective." Their presumption was correct. They recaptured the girl and gave her back to Shiborowa.<sup>72</sup>

Although any Westerner bringing piles of steel goods would have disrupted Yanomami culture, Chagnon's role was arguably unique. Not only did the Bisaasi-teri have first choice of Chagnon's seemingly endless supply of steel goods; they also had a Western chief of sorts. "Dancing in another village is a part of politics—one way of displaying strength," Ferguson noted. "The participation of a white man in feathers and loincloth, virtually declaring his identification with Bisaasi-teri in intervillage relations, would represent a major coup." He added, "And it was during these first months of Chagnon's fieldwork that the Bisaasi-teri's conflicts with the Shamatari and Mahekoto-teri transpired. . . . But while he was behaving more like a Yanomami big man in his interpersonal relations, his other actions—his quest for the taboo names of the dead ancestors, his moving back and forth between antagonistic villages, and, above all, his being the source of Western goods that every village wanted to monopolize—created a very different and 'un-Yanomami' context for his behavior. Chagnon thus became something of a wild card on the local political scene."<sup>73</sup>

It is precisely the "un-Yanomami" context of the Napoleonic wars that makes them so problematic. Chagnon now recognizes that Yanomami violence is "actually quite low" by world standards of tribal culture.<sup>74</sup> And it is undeniably connected to the fluctuating impact of Western technology and disease. Whatever else can be said about Yanomami warfare, it is not "chronic," as hundreds of articles, documentaries, and books still insist. All of the violence among Chagnon's subjects can be spelled out in two stark spikes, both corresponding to outside intrusion. This is the picture of



Yanomami reciprocity that actually emerges from Chagnon's own Ph.D. thesis, the only complete accounting of Yanomami war deaths he has published for any group.<sup>75</sup>

An "uncertainty principle" pertains to these wars. Would they have occurred at all without the germs, steel, and guns brought by strangers?

Chapter 4

Atomic Indians

I announced I would take blood samples that afternoon and evening. . . . As soon as I moved my sampling equipment over to an unoccupied section of the village, I was surrounded by about 200 pushy, impatient, angry, shouting people, each determined to get a particular item. . . .—*Napoleon Chagnon*<sup>1</sup>

A full moon was in a clear sky as we traveled the Padamo River easily under a natural spotlight. It was September 1996, and the rainy season was just easing up. I lay in the prow, looking for logs, while Agustín, a Yanomami man in his midtwenties, handled the motor. At full throttle, a collision with a submerged tree could have given us a severe jolt or broken the propeller. Fortunately, the Padamo, even this high on its course, was placid, wide, and deep; and Agustín was a master of the outboard who knew every rock in the main channel. As we came around a final bend, we could make out Mount Marahuaca, a tabletop over nine thousand feet high, overlooking the dark forest like a ghostly altar. Closer by, we saw a striking stiletto peak, with a curious rock resembling a bird in flight. It was Toki, Eagle Mountain.<sup>2</sup>

Toki is a Maquiritare village that has an indoor theater, where a mixed

crowd of six hundred Yanomami and Maquiritare were gathered to watch *Yanomama: A Multidisciplinary Study*, a film by James Neel, Timothy Asch, and Napoleon Chagnon.<sup>3</sup> When the Atomic Energy Commission's name came up in the titles, several viewers rose to their feet.

"Why did the Atomic Energy Commission want to study us?" a man named Antonio asked.

Students of *The Fierce People* have gotten only the vaguest inkling about why the agency that manufactured atomic bombs spent large sums studying the Yanomami. Chagnon reduced the AEC to a single footnote. And, for anyone who bothered to read the fine print, the AEC's Yanomami research acquired both a humanitarian glow and an otherworldly abstraction.

Chagnon reported collaborating with "a medical-genetics group whose responsibility it was to treat the survivors of the nuclear bombings at Hiroshima and Nagasaki."<sup>4</sup> This was true, in part. The geneticist James Neel was on the Atomic Bomb Casualty Commission; his team studied mutations. Neel never mentioned treating any survivors. Neel wrote, "One of the most frequent Japanese complaints has been that we (the ABCC) only examined them (like guinea pigs), but did not offer treatment in the event of findings of medical significance. The fact is that the terms under which the ABCC operated did not permit treatment. . . ."<sup>5</sup>

Why include the Yanomami in such a study? According to Chagnon, it was "justified in the sense that both the Japanese and the Yanomamo reproduce according to cultural rules."<sup>6</sup> Yes, but so does everyone else in the world. In 1966, in letters to missionaries responsible for Yanomami health care, Chagnon explained that the geneticists' primary concern was "in the well being of the Yanomamo, and a number of other tribes, particularly from a medical point of view." They wanted "to study the epidemiology, genetics, and disease problems of the American Indians."<sup>7</sup>

The suggestion that Neel's geneticists were trying to solve the Indians' critical "disease problems" persuaded both Venezuelan health officials and the Yanomami themselves to collaborate. "Whenever we asked Shaki [Chagnon] why he wanted so much blood from us, he would say it was to help us, to find cures to our diseases," said Pablo Mejía, a Yanomami leader on the Padamo River.<sup>8</sup>

Chagnon was actually the advance man for a new order of scientific adventure, the most comprehensive study of a tribal society ever undertaken. This project was conceived by James Neel, a doctor who helped found the modern science of human genetics. While still a medical student, in 1938,

Neel explained how red hair is inherited. He first won international recognition for discovering the gene for thalassemia, a frequently fatal form of anemia that occurs among those of Greek or Italian descent. Later, he helped demonstrate that sickle-cell anemia, which affects tens of millions in sub-Saharan Africa, as well as thousands in the United States, is a positive adaptation against malaria, a deep insight into the dynamics of disease and natural selection. After leading the atomic bomb survivor studies, he founded the first human genetics department in the United States, at the University of Michigan, now considered one of the world's finest.<sup>9</sup> Finally, Neel received several prestigious awards for his lifelong work. He conceivably could have won the Nobel Prize himself, like several of his colleagues and students whose research he furthered, but his openly eugenic views made him something of a pariah outside his specialty.<sup>10</sup>

Neel's autobiography, *Physician to the Gene Pool*, published in 1994, frankly explained his concern about the gene entropy of modern society. He was convinced that democracy, with its free breeding for the masses and its sentimental supports for the weak, violated natural selection. Even Neel's fellow scientists on President Reagan's National Council on Aging were startled by Neel's refusal to support genetic research to extend life expectancy. Neel objected that it could "only result in an increase in the number of senior citizens and exacerbate the problems already manifest in the emerging gerontocracy." He resigned rather than compromise his principles. Neel is probably the only geneticist of his reputation in the post-Nuremberg world to praise the early eugenicists for their "concern for the future" of the gene pool. He has also criticized other scientists for "fearing the opprobrium of an eugenic label" and refusing to take strong political stands designed to improve the gene pool.<sup>11</sup>

Neel was obviously not afraid of being called a eugenicist; the title of his autobiography, *Physician to the Gene Pool*, is a good definition of one. Sir Francis Galton, Charles Darwin's cousin, founded eugenics in the 1880s. It became a political-scientific movement to weed out undesirable traits from the gene pool, and encourage desirable ones. Eugenicists led campaigns for mass sterilization of the unfit. Neel had a career-changing moment when he visited the Eugenics Records Office in New York in 1942 and realized how much work it would take him to make eugenics a true science.

In Michigan, Neel campaigned for statewide screening of defective fetuses and did a cost-benefit analysis showing how much money each abortion would save the state (\$75,000). Where Neel differed from most people,

and most scientists, was his belief that fetuses with some easily curable defects should be aborted—because they would ultimately run down the gene pool by passing on the undesirable trait.<sup>12</sup> Like Galton, Neel stood in self-confessed "awe" of the process of evolution, and horror of modern society's attenuation of competition. Galton preached a crusade to promote Social Darwinism and went as far as suggesting that "a missionary society" be founded "with an enthusiasm to improve the race."<sup>13</sup> In some respects Neel's Department of Human Genetics became this missionary society.

But while European eugenicists saw northern blonds as the pinnacle of creation, Neel felt a romantic attraction to tribal societies. By 1957, he had begun speculating that primitive tribes optimized selective breeding. In 1962, he visited Brazil's Xavante tribe, where he had an almost conversion experience while hearing their shamans chant around night fires. "Suddenly the thought came to me that I was witness to a scene which, in one variation or another, had characterized our ancestors for the past several million years. The sudden realization of this contact with the thread of evolution resulted in another of those very emotional professional moments; this time I could feel the hair on the nape of my neck stirring. . . ."<sup>14</sup>

In fact, the Xavante had been caught up in contact and conflict with Brazilian armies, missionaries, traders, and raiders for over two centuries. Most historians would agree with Claude Lévi-Strauss, the world's preeminent cultural anthropologist, that tribes like the Xavante are "not examples of archaic ways of life that have been miraculously preserved for millennia, but the last escapees from the cataclysm that discovery and subsequent invasions had been for their ancestors." Lévi-Strauss compared the Amazon's so-called Stone Age societies to "scattered groups of survivors after an atomic holocaust"<sup>15</sup>—the very groups Neel had studied in Japan.

Terence Turner, an Amazon specialist now at Cornell, recalled an encounter with Neel: "In 1963, James Neel brought me out from Harvard to give a talk to Chagnon and a few other students working for him about doing field research in the Amazon. I'd just returned from being with the Kayapo [Indians of Brazil]. So I went, and after the talk there was a little reception where I heard James Neel say to his group of researchers, 'Good. Now we'll have a chance to find the leadership gene.' I was amazed. I turned to him and said, 'You must be joking. You don't seriously believe there's a gene for leadership?' Things became hushed, and I realized this was an important belief of theirs. Neel answered, 'I don't think it's so silly. I think there might be a genetic basis for dominance.' And he went on to explain his theory that

in Amazonian tribal societies headmen battle for control of the greatest number of women, and their fights select out the genes most fit for survival. So in these small breeding populations, leadership has a chance to reproduce itself genetically. It's like the baboon model of alpha males who keep other males from their harem. In Chagnon, this works out to killers who differentially reproduce themselves. And he's been loyally pursuing this ever since."<sup>16</sup>

Neel's autobiography confirmed that he had originally planned to send Chagnon to live with the Kayapo. And, although he never used the phrase "leadership gene" in his writings, he proposed a genetic "Index of Innate Ability." Neel believed that this Index of Innate Ability (IIA), located at alleles along the DNA chain, became concentrated in the offspring of dominant, polygamous chiefs, just as Turner recalled.<sup>17</sup>

Scientific discovery is driven by strange dreams. These, too, can break hearts. Neel never did locate the elusive alleles for his Index of Innate Ability. "That was the greatest disappointment of my life," he told me.<sup>18</sup>

In Neel's great quest, Napoleon Chagnon became "the indispensable cultural anthropologist."<sup>19</sup> For the twenty-six-year-old undergraduate, it was an opportunity to escape not only academic obscurity but also the bleak poverty he had experienced all his life. Chagnon was born in the tiny frontier town of Port Austin, Michigan, the second of twelve children. His childhood home did not have plumbing.<sup>20</sup> He was a boy of small stature from a low-status family who had inherited a big name from his French-Canadian grandfather. It is not hard to guess how this affected him in a tough little town in rural Michigan, where differences were not welcomed, where xenophobia, linked to anti-Communist feeling, ran high, and where Senator Joseph McCarthy enjoyed strong support.

Chagnon had to fight to keep afloat in more ways than one. In high school, he earned five dollars to date his sweetheart—whom he later married—by embalming an extra body at his father's undertaking business. He started higher education as a scholarship student at the Michigan College of Mining and Technology, spending his summers as a surveyor.<sup>21</sup> The detached efficiency he learned while draining body fluids as an undertaker's assistant later proved invaluable in the AEC's vast blood-collecting project. So did his surveyor skills, once he ventured beyond Venezuela's official maps.

From the mining school, and from his austere childhood, Chagnon retained a sympathy for industrial progress. He also retained a deep dislike of anything remotely related to Communism, so much so that he wanted to be-

come a physicist to help battle the Soviet Sputnik threat.<sup>22</sup> Throughout his studies and his career, Chagnon demonstrated a commitment to hard work that was wholly admirable. As the filmmaker Timothy Asch wrote, "Chagnon was the perfect Horatio Alger, American hero: the boy from the sticks who, through his own diligence and perseverance, competed and made good."<sup>23</sup>

In *The Fierce People*, James Neel has also been reduced to the barest of footnotes ("Neel et al., 1971"). Neel, who needed no further testimonials, may well have approved. For thirty years, Chagnon has insisted that he arrived in Yanomamiland as a convinced cultural anthropologist who expected wars to be related to the environment, not to reproduction. He told *U.S. News & World Report*, "I went down there looking for shortages of resources, but it turns out they are fighting like hell over women."<sup>24</sup>

If Neel had sent Chagnon to Brazil's Kayapo Indians, a tribe whose muscular warriors have a homicide rate about three times as high as the Yanomami's, the history of anthropology might have been quite different. (Several of Chagnon's most outspoken critics have admitted that it would have been much harder to refute his theories if he had draped them upon other Amazonian tribes.) But a funny thing happened in 1964 while Neel was en route to Brazil. During a layover in Caracas, the Brazilian military staged a coup. Neel had to wait three days. And during this time he met Charles Brewer Carías. "Charlie occupies a special place in my heart," Neel wrote. "He wished to join forces with us, so I brought him to Ann Arbor for a year of training." With Brewer as part of his "forces," Neel decided to make the Venezuelan Yanomami the object of his genetic studies. Chagnon agreed.<sup>25</sup>

Neel had given himself a ten-year deadline to document Darwinian sexual selection among tribal people. He and Chagnon believed that their informants were destined to die out or suffer such alteration through contact with missionaries and other outsiders that they would in a few years become useless to science.<sup>26</sup>

There was also a political program underlying this scientific endeavor. Though Neel's politics were too extreme for Reagan's council on aging, he was liberal compared with Brewer and Chagnon. As I will explain later, Brewer organized his own gang of thugs to attack the Marxist government of Guyana. Chagnon's early patriotism blossomed into personal hatred against hippies. In 1984, according to the anthropologist Jesús Cardozo, then a graduate student of Chagnon's at the University of California at Santa Barbara, a ponytailed student raised his hand and asked Chagnon, "Aren't there any pacifists among the Yanomami?"

"You mean cowards?" Chagnon shot back. "I don't go to the Amazon to study cowards."<sup>27</sup>

It is easy to forget that *The Fierce People* had its genesis during the Vietnam War and its cultural equivalent on the University of Michigan's Ann Arbor campus, where hippies in tepees chanted slogans like "Make love, not war." The whole point of Neel's genetic perspective was that you had to make war in order to make love—that violence was part of the natural order.

Yet, despite their philosophical embrace of violence, neither Neel nor Chagnon took the opportunity to fight in the wars of their times. During World War II, Neel was assigned to a medical school hospital in Rochester, where other scientists began studying the effects of radiation three years before the bomb fell on Hiroshima. Neel saw the Yanomami expeditions as a way of testing himself after a "safe life."<sup>28</sup> Chagnon, who was a married graduate student as the Vietnam conflict began, also continued his studies during the war.

As a Cold War metaphor, the Yanomami's "ceaseless warfare" over women proved that, even in a society without property, hierarchies prevailed. Thus, Communism was unnatural because even the most classless of societies had pecking orders in reproductive matters. The underlying ferocity and deceit that fueled the Yanomami's successful military strategy also offered a kind of parable: the ruthless Communists were going to win if long-haired hippies did not rejoin the march of Darwin.

The agency behind the atomic bomb was not on the side of the hippies. The AEC's decision to promote Yanomami films, including at-cost distribution in the United States, was rational and fruitful, given the AEC's political bias. The AEC-financed expeditions produced over fifty scientific articles, a host of popular articles, and a paradigm shift that is still with us. Chagnon recently admitted, in a newspaper interview, that he had hoped, in writing *The Fierce People*, to correct "all the garbage about the Noble Savage," and he was glad he had ushered in a "revolution in writing anthropology."<sup>29</sup>

Most anthropology students are not out to start revolutions. So, from the outset, Chagnon's scientific mission differed from that of a typical anthropology student—and in several important ways. Most anthropologists develop friendships with a small circle of trusted informants, but this was not an option for Chagnon. He was an employee of Neel's, and his job was to prepare thousands of Yanomami at dozens of villages to receive teams of scientists.

Many Yanomami who attended the screening of *A Multidisciplinary Study* at Toki wondered what had happened to all the blood Chagnon collected.

In Yanomami mythology, blood is a dangerous, taboo substance. The first men were born of blood dropped by Moon Spirit, who was a cannibal. The Yanomami cosmos teems with voracious beings hungry for blood. It was interesting that Chagnon, when he took hallucinogenic snuff, identified himself with Vulture Spirit, Rahakanariwa, the most fearsome cannibal entity of them all.<sup>30</sup> But none of these mythical creatures matched the appetite of the Atomic Energy Commission.

Data I have obtained through the Freedom of Information Act shows that, between 1965 and 1972, the AEC funded James Neel's genetic study, which compared "the survivors of the atomic bombings in Japan" with the Yanomami and other, less intensively studied tribes. The AEC spent \$2,289,279 to "determine the mechanisms by which radiation induces changes in the genetic material of cells," using the Yanomami as the principal virgin population control group. The AEC wanted thousands of Yanomami blood samples, together with their corresponding genealogies, to determine mutation rates in a completely "uncontaminated" population. "The general approach was to search for and characterize mutations among 35 different proteins found in blood." Yanomami blood thus provided the baseline for "our understanding and characterization of the health risks associated with exposures of people to energy-related radiation and chemicals."<sup>31</sup> It was not an abstract, academic exercise. And, though it helped set radiation safety standards in the United States, the Department of Energy did not pretend that the research benefited the Yanomami in any way.

Today, Venezuelans charge that the AEC took what it wanted without explaining what it was doing. "Using the Yanomami as a control group to compare them with the survivors of the atomic bomb is absolutely unjustifiable from an ethical point of view," said Alejandro Arenas, the physician who heads Venezuela's Yanomami Health District. "If an experiment is done with a closely controlled protocol for the benefit of the same community where the study is performed, then I think it might be valid, provided it didn't take human lives or negatively affect the quality of life of the participants. But if the experiment offered no solutions to the community itself, then it was basically criminal. It would be like using a human being as a guinea pig or a laboratory rat."<sup>32</sup>

In fact, the Department of Energy's admission that its Yanomami research

helped to bridge the gap between mutagenesis studies in experimental animals and observations in people”<sup>33</sup> raised questions of medical violation. “In 1957 the U.S. Supreme Court ruled that scientists had to receive ‘informed consent’ from experimental subjects,” said John Earle, a medical historian at the University of Pittsburgh. “It would be interesting to know how they obtained informed consent from the Yanomami.”<sup>34</sup>

“I think this Atomic Energy Commission study was wrong from the start,” said Ysbran Poortman, a biologist at the University of Utrecht and president of the European Alliance of Genetic Support Groups, a two-million-member organization that is developing ethical guidelines for teaching genetics at European Community schools. Poortman said the AEC Yanomami project violated the 1947 Nuremberg Code, whose first statute prohibited experimentation on people without their full knowledge and agreement. “Taking blood from people without informed consent is theft,” he said.<sup>35</sup>

The AEC Yanomami research took place at the height of the Cold War and the Vietnam conflict, a period when the agency building nuclear weapons was not especially scrupulous about its experiments. An AEC study at Vanderbilt University subjected 850 pregnant women to daily doses of radioactive iron; in other cases, hospital patients were injected with plutonium and uranium and retarded children were fed radioactive oatmeal. None of these people knew what was going on.<sup>36</sup> In 1996, the federal government agreed to pay twelve people who had been injected with radioactive plutonium or uranium an average of \$400,000 each. Secretary of Energy Hazel O’Leary said, “This settlement in no way fully compensates families for what they have suffered and for what they haven’t known about their suffering.”<sup>37</sup>

Admittedly, Chagnon and Neel faced uncommon difficulties in obtaining “informed consent” from Yanomami Indians, who had no idea of what the atomic bomb was—or radiation, or Japan, or the deadly risks associated with even brief encounters with outsiders. Yet Chagnon’s closest friends and field collaborators—including New Tribes missionaries, the Catholic Salesian order, scientists at the Venezuelan Institute of Scientific Investigation, and members of the government Malaria Department—were all distressed to learn that the AEC had conducted a huge experiment comparing Yanomami blood samples with those of atomic bomb survivors.<sup>38</sup> “Chagnon always sounded so interested in helping the Yanomami,” said Gary Dawson, a Protestant missionary who has lived on the Padamo River near Toki for forty years.<sup>39</sup>

It was true that Neel and Chagnon had their own research agendas. Chagnon wanted a Ph.D.; Neel sought the Index of Innate Ability. But the AEC administrators were not whistling Dixie. They paid for a blood study to determine radiation pathology, and they got it.

It was also true that, as a graduate student, Chagnon could not control the inherent flaw of the AEC protocol: the decision to use the most remote tribe in the world as a laboratory to benefit American military and industrial pursuits.

As Chagnon recounted in 1997, he was a subordinate to senior geneticists in an expanding project that turned into “a bad nightmare.” Conflict was built into a “study that by nature required that maximum data and samples be collected from each village in the shortest amount of time possible.”<sup>40</sup> This type of maximization followed its own inevitable logic, one closely patterned on James Neel’s experience as the military officer who directed the A-bomb studies in Japan. Initially, Chagnon prepared the way for a team of eight researchers—a biologist, a linguist, a dentist, three geneticists, a filmmaker, and himself.<sup>41</sup> But each researcher needed many native assistants, to collect everything from beetles to hallucinogenic plants. As time went on, Neel enthusiastically added new shifts: when the first multidisciplinary team was finished, a second team landed on the same cargo plane that evacuated Team A (from the airstrips an engineer enlarged). Finally, Neel had three teams coming and going in a single season.<sup>42</sup>

Bloodletting was their most crucial ritual, and it was expensive. “Thus, to assure the complete cooperation of entire villages for some of our studies, I had to give goods to men, women and children,” Chagnon recalled. He frantically traveled ahead of the geneticists, preparing dozens of *shabonos* where he “had gotten agreements from the Yanomamo to provide endless outstretched brown arms into which many needles would be stuck for the next weeks.”<sup>43</sup>

According to Brian Ferguson’s book *Yanomami Warfare*, Western influences were disruptive at their inception and termination. Long-term Western influences, like missions, could give rise to peace and stability, depending on circumstances. But short-term, fluctuating infusions of trade goods always created conflict. Gold miners were a fluctuating Western presence that caused huge disruptions in terms of trade and war.

The geneticists’ fluctuations were as uncertain as any miner’s. A single visit from the geneticists or filmmakers could multiply a village’s steel goods a hundredfold overnight. Sudden downpours of steel presents created a brief

euphoria, followed by the inevitable letdown. "The distribution of trade goods would always anger people who did not receive something they wanted, and it was useless to try to work any longer in the village."<sup>44</sup> Chagnon always came with promises of "big" presents; he always left with angry, disappointed people. Then he went back to the village's nearest enemies, to read the names of the dead and check his data against their enraged reactions. "More than the depressing constancy of giving goods and withholding them as each situation developed, the threats are what ultimately wore me down. I particularly disliked threats to my life."<sup>45</sup>

It was not much fun for the Yanomami either, judging from the reactions of those who watched *A Multidisciplinary Study*. For some of members of the audience, the film brought nightmares to life. It took nearly two hours to get through the fifty-minute documentary because speaker after speaker stood up to interrupt and object.

Pablo Mejía, who at age forty-five is now literate and fluent in Spanish, first met Chagnon when Mejía was about twelve years old. "I was in Momaribowei-teri. That's the first village where Chagnon arrived after he established himself at Bisaasi-teri. He thought he would become a sorcerer [*brujo*]. In order to be a sorcerer, he asked the other *brujos* to teach him. When he arrived at the village, he had his bird feathers adorning his arms. He had red *onoto* dye paint all over his body. He used a loincloth like the Yanomami. He sang with the chant of his shamanism and took *yopo* [a powerful hallucinogen used by Yanomami shamans that alters vision and self-awareness]. He took a *lot* of *yopo*. I was terrified of him. He always fired off his pistol when he entered the village, to prove that he was fiercer than the Yanomami. Everybody was afraid of him because no one had ever seen a *nabab* [white man, outsider] acting as a shaman. He would, say, ask, 'Who was your dead father?' He said to my brother Samuel, who was the headman, 'What is your mother's name?' My brother answered, 'I don't want to say her name. We Yanomami do not speak our names.' Shaki [Chagnon] answered, 'It doesn't matter. If you tell me, I'll pay you.' So, although they didn't want to, people sold their names. Everyone cried, but they spoke them. It was very sad. I remember well because I was about ten or twelve years old. That's how things were with Shaki. He said, 'I want to be a shaman who works only for your village. Go ahead and teach me.' He would say this to the old ones, the shamans. But they were afraid. Later he went to Mishimishi, where they taught him. Shaki had his own shaman circuit. He would say, 'I am the *cacique* of all the Yanomami.' He played everything, risked everything. I'm

not the only one who heard—everyone heard him. He can't deny it. When he would come to our village, all the children would run into the forest screaming with fear. I've never seen anything like it."<sup>46</sup>

The Yanomami were in awe of the *nabab* (outsiders) and their technology. "If I had just suddenly flown straight up into the sky, they would have been surprised, but it wouldn't have come as an utter shock to them," wrote Kenneth Good. "They don't know about *nabuh*, about what they can do. They know *nabuh* have incredible powers. . . . Even after a year and a half of living with the Hasupuweteri, with all the friendship and understanding we had developed, I was still not clear to what extent they even considered me a human being. They would still ask questions that you wouldn't ask a fellow human being. 'Are you going to die sometime?' they would say."<sup>47</sup>

In *The Fierce People*, Chagnon described taking hallucinogens with the Bisaasi-teri. Chagnon took off all his clothes except a swimsuit, decorated himself with feathers, and took a hit of *ebene*, a generic name, used interchangeably these days with *yopo*, for any one of the mind-altering snuffs—derived from two different trees—that the Yanomami use on the Upper Orinoco.<sup>48</sup> As the green powder penetrated, Chagnon began dancing and chanting. "Wild things passed through my mind," he wrote. His song, however, disturbed some of the Yanomami warriors. They "hid the machetes and bows, for I announced that *Rahakanariwa* [Vulture Spirit, a cannibal entity usually invoked to kill enemy children] dwelled within my chest and directed my actions, and all know that he caused men to be violent."<sup>49</sup>

Chagnon's shamanism was an extension of warfare by other means. He struck out against other spirits on the horizon, threatening them with arrows, which he broke over his head. "As my high reached ecstatic proportions, I remember Kaobawa and the others groaning as I broke the arrows over my head and pranced wildly with the shambles and splinters clutched tightly in my fists. . . ."<sup>50</sup>

Why was Kaobawa groaning as Chagnon's ecstasy reached its climax? Kaobawa explained his consternation in a 1995 interview with the author Mark Ritchie. "Shaki [Chagnon] started eating Yanomami souls," Kaobawa said. "Shaki said, 'Come here Shoriwe [Brother-in-Law] and help me eat this child.' Before he killed the child I said, 'You know what you're going to do? You're going to bring retaliation to me.' So I said, 'Go ahead. But somebody from my village will have to pay the price.' So he killed the child."<sup>51</sup>

Gary Dawson, who was also present when Chagnon took *ebene* on this occasion, translated for Mark Ritchie during this interview with Kaobawa.

Ritchie wanted to know whether the child Kaobawa referred to had physically died, or whether this was a spiritual event. But, as Dawson explained, the distinction between physical and spiritual did not make much sense to Kaobawa. "In Kaobawa's mind," Dawson said, "and in anybody else's in that village, Shaki killed that kid with the spirit, probably without the foggiest idea of what he was doing. He was on drugs, dabbling with something in someone else's culture when you don't have the slightest idea of what you're doing."<sup>52</sup>

Although it might appear that these were simply the antics of an ego out of control, there was a logic to Chagnon's anthropological methods. He had two nearly insurmountable problems. The first was how to get the Yanomami to divulge their tribal secrets and give up their blood; the second was how to protect his treasure of trade goods long enough to buy off the Yanomami's objections to his research. He was alone with all this metallic wealth. Just as firing off his guns frightened the Yanomami into leaving his trade goods untouched, so his shamanic pretensions also strengthened his hand. The Yanomami believed that white men were supernatural beings who had the power to send terrible epidemics. Chagnon's guns and claims of magical power were necessary correlates of the AEC's high-pressure research agenda. And, just as Pizarro had started the tradition of firing guns off to impress South American Indians, Cortés had begun the equally venerable conquistador strategy of posing as a native deity. Cortés was Quetzacoatl, the Plumed Serpent. Chagnon was the Vulture Spirit.

At Toki, I heard the word *anthro* for the first time. It was an attack word, both epithet and noun—like "communist."

"These *anthros* come, they take pictures, collect blood, carry them off to their countries, sell them, and make money," Mejía declaimed before the gathering at Toki. "And we get nothing. We have to stop this study of the Yanomami. They are like miners, and we are like their gold. Why do they want to study us so much? *Nabah* [foreigners] have a brain; Yanomami have a brain. *Nabah* have two eyes; Yanomami have two eyes. *Nabah* have five fingers; Yanomami have five fingers. Why are they so interested in studying us?"<sup>53</sup>

As James Neel explained it in the film, other tribes had been studied, but the result had been an unsatisfactory "mosaic of unrelated findings." Neel wanted the definitive "population structure" of the world's least acculturated tribe. "Population structure includes the totality of factors that determine

how genes are transmitted from one generation to the next. . . . Since transmission of genes of course depends on survival well into adulthood, we feel we must understand many aspects of the disease pressures to which these Indians are subjected. . . . Since the Yanomama are extremely warlike, we must understand how warfare, as well as disease, decimates the population."<sup>54</sup>

This was a coded message. Neel hoped to prove that the Yanomami "population structure" was the one dictated by natural selection: a society dominated by aggressive, polygamous chiefs, where very few people reached the age of fifty. His core belief was that modern society's gene pool problems arose "primarily from abandoning the population structure and the selective pressures under which humankind evolved."<sup>55</sup>

While most people saw draft deferments for the handicapped as a humane necessity, Neel detected an "agent of negative selection."<sup>56</sup> While almost everyone applauded the democratic freedoms that allowed women to choose their own mates, Neel glumly concluded that the "loss of headmanship as a feature of our culture, as well as the weakening of other vehicles of natural selection, is clearly a minus." This loss could "contribute to lowering IQ, and by a fairly direct extension, to undermining human abilities." Discovering "test procedures to determine whether and to what extent the headman really is characterized by a high IIA [Index of Innate Ability]" became, for Neel, "the number one objective."<sup>57</sup>

In his autobiography, Neel regretted that his Amazonian insights had been "the most difficult to project to those who are not professional geneticists." That is why, in the film *A Multidisciplinary Study*, Neel did not come out and say that students at American universities were all products of a mediocre gene pool—"a large, increasingly homogeneous, quivering blob of jelly"—incapable of reproducing the superior qualities of Yanomami warriors.<sup>58</sup>

Like the early Jesuit missionaries who sought to create perfect Christian communities among unspoiled natives, Neel saw salvation coming from uncontaminated Yanomami genes. From Neel's standpoint, the Yanomami's "extremely violent" society was not pathological. But American society *was*—with its costly medical interventions, draft deferments for the handicapped, and other well-intentioned kindnesses that defiled the gene pool. Neel defined his own culture as "dysgenic." There was quite a bit of self-hatred in this picture, since Neel thought doctors were among the weakest specimens of our pampered society.

While Neel saw salvation coming from Yanomami chromosomes, the



Yanomami had other goals. They were searching for metal goods, not realizing that their reliance on Westerners for steel also made them susceptible to new diseases that only outsiders could cure.

If germs, steel, and guns were the Three Horsemen of the Amazonian Apocalypse, germs had the greatest impact, and they were intimately associated with steel. Some 95 percent of all New World Indians died of Old World diseases.<sup>59</sup> These were usually disseminated far beyond the immediate circle of contact by the natives' desire to obtain and barter precious metal. The Yanomami shared this fatal attraction for steel gifts.

Although the AEC protocols admirably maximized data collection, they also maximized exposure to a host of new germs. In some ways, the assembly-line blood-collecting routine was a formula for disease propagation, starting with the arrival of scientists from major cities around the world, who were ferried by speedboat to isolated Yanomami *shabonos* in the company of Yanomami guides from the missions. At no time in their films, or in any of the voluminous writings of the scientists who participated, is the question of how their own presence among barely contacted villages added to "the disease pressure" that "decimates the population."<sup>60</sup>

It was not as if Chagnon was unaware of the problem. He frequently warned about missionaries or tourists spreading deadly illnesses among the vulnerable Yanomami. In *The Fierce People*, he wrote, "I once put the hypothetical question to a Protestant missionary: 'Would you risk exposing 200 Yanomamo to some infectious disease if you thought you could save one of them from Hell—and the other 199 died from the disease?' His answer was unequivocal and firm: 'Yes.'"<sup>61</sup>

In spite of their early mistakes, during the 1940s and early 1950s, the missionaries soon lost their taste for the adventure of first contact. By the time the AEC-financed expeditions started, the missionaries had settled into established posts from where they spent at least as much time ministering to the Yanomami's health needs as proselytizing. Consequently, the Yanomami population boomed around the missions. Even discounting immigration, the demographic explosion at all the Yanomami missions, Protestant and Catholic—in Brazil as well as in Venezuela—amply testifies to what Ferguson has called "the sphere of mission beneficence."<sup>62</sup>

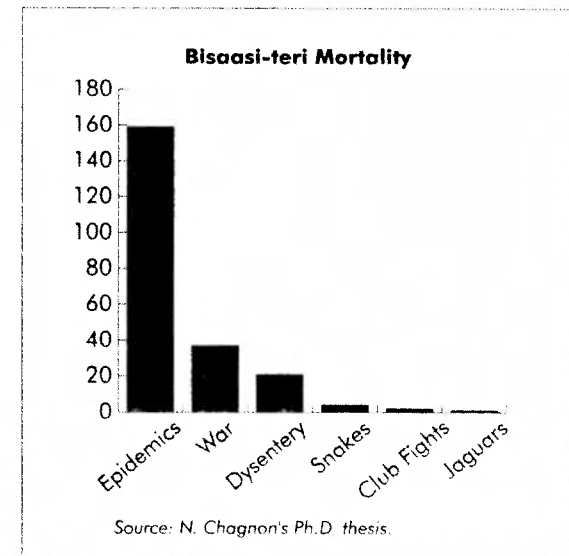
The story was completely different for ephemeral visits by gold miners, tourists, or scientists. Just as brief outpourings of steel goods sparked wars, brief exposure to outside pathogens without medical follow-up sparked uncontrolled epidemics. "In my paradigm there is a close correlation between

large expeditions and epidemics," observed Ferguson. "In the 1950s, you had big, military-style expeditions on the Upper Orinoco, and it was a time when sickness ran very high. The more people who go in without being screened, the more likelihood of disease. Chagnon is the one who's saying that people are spreading diseases among the Yanomami through trade goods, and here he's got all these trade goods and people are vying for them, carrying the goods and diseases all over the place."<sup>63</sup> In fact, Chagnon criticized missionaries for giving steel machetes to the Yanomami, because the trade in steel could innocently disperse colds and other illnesses from mission stations to the Yanomami hinterland.<sup>64</sup>

Yet the AEC purchased twelve thousand Yanomami blood samples, dispensing a steel gift for each vial of blood—along with thousands of other presents for other services. Today, those vials are located in an old refrigerator at Penn State University, where Chagnon once taught, and are the property of the Human Genome Diversity Project of the U.S. government.<sup>65</sup>

Of course, steel was not the AEC's only gift to the Yanomami. Chagnon's data showed that infectious disease, including colds and malaria, unknown in the Yanomami highlands, caused 70 percent of all the deaths at his home village, Bisaasi-teri.<sup>66</sup>

War accounted for only 15 percent of the adult mortality. Less than 2 percent of all adults died of old age, a catastrophic profile common at first contact. Yet the true picture was actually much worse, since Chagnon did not



take infant mortality into account (and deaths of young children almost always outnumbered those of adults). A less ideological researcher might have called the Yanomami the Sick People.

The wars Chagnon documented, and the sorcery accusations that inspired many of them, took place against a backdrop as terrifying as Europe's fourteenth-century Black Plague. By 1966, Chagnon's base camp had become a deadly repository of imported illnesses; it soon emerged as a hub for distributing those diseases to remote villages. Pathogens followed the AEC's steel paths.

Chapter 6

## Filming the Feast

And I have to do so many work about the feast and about the blood.—*Charles Brewer Carías*<sup>1</sup>

The first person in Yanomamiland who was killed in the line of photographic fire was reportedly a Protestant missionary. He navigated up the Ocamo River in 1951, accompanied by his ten-year-old son. It was part picnic, part tour of duty. When they reached a remote Yanomami village, the Indians set to stealing the missionary's goods. Unconcerned, the missionary pulled out his camera, attached a flash, and took his last picture. The explosion of white light was interpreted as an attack, and one of the Indians put a six-foot bamboo arrow through the man. The missionary's son ran off into the forest, where he lost his way. A rescue team of rubber tappers found the blond boy days later, by which time he had also temporarily lost his mind.<sup>2</sup>

The Yanomami believe cameras kill. This is not an aesthetic judgment, like Susan Sontag's in her book *On Photography*. It is a technical evaluation, hav-

ing to do with emanations that the Yanomami perceive shooting from photographic devices. For them, cameras are like sci-fi ray guns, whose energy envelops and steals its targets' spiritual essence, *noreshi*.<sup>3</sup> What remains after this photographic kidnapping has occurred are people devoid of vital force—empty shells, body husks. Cameras are soul cannibals in the Yanomami's version of *Body Snatchers*.

Yet the Yanomami, like many other impoverished artists, have reluctantly embraced Hollywood. They are "the most filmed non-Western, non-industrialized society in the world."<sup>4</sup> As early as 1978, there was a Paris film festival devoted exclusively to the Yanomami<sup>5</sup>—who were either masters of the spirit world, according to French filmmakers, or making war, according to American artists. As documentary crews, news teams, and ethnographic filmmakers competed for authentic footage, cinema verité became the principal source of income for many Yanomami along the Orinoco.<sup>6</sup> These acculturated Indians became professionals at creating sets and enacting violent scenes for the camera.<sup>7</sup> The cost of a new *shabono* or a new war rose over time, driven upward relentlessly by demand. Eventually, a few Yanomami acquired enough skills to begin filming the filmmakers, which has created a new genre—Yanomami noir.<sup>8</sup>

Napoleon Chagnon was a pioneer in this frontier of film, and he was perhaps inevitably drawn into its controversies. He started taking 35mm photos and found that the Yanomami "are not fond of being photographed." Women and infants were particularly fearful. Fortunately, he was able to enlist young helpers who began "dragging various people out of their hammocks to have me take their photographs. . . . They assumed the obligation of assuring that nobody escaped, which resulted in a 100 percent photographic sample of the village in a matter of hours." As the anthropologists' photographic interests expanded, so did the opposition: "I have been chased around the village on a number of occasions by irate people wielding clubs and firebrands, people who were very upset because I was attempting to photograph specific events—particularly cremations."<sup>9</sup>

Chagnon saw himself as recording "specific events." The Yanomami recall his staging them. For example, a man named Waloiwa was Chagnon's first guide in the field, taking the anthropologist inland from Bisaasi-teri in early 1965 on his initial foray into the inland communities. "When Shaki arrived, I was visiting here at Bisaasi-teri at the time," he told me at the village of Guarapana, located on the Mavaca River not far from the Orinoco confluence. "He took me as his guide on this trail here to my village, and I walked

with him. Momanipac was the village. Then Chagnon told me to dress up in my ritual paint, the way my ancestors did, and he asked me to get the whole village to dress up like that. Since he promised us axes, machetes, and knives, we did it. Chagnon really took a lot of pictures; he even had me shoot a branch way up on a tree."<sup>10</sup>

Waloiwa was not blaming Chagnon. But his perspective was fairly common among Yanomami at villages where Chagnon had worked. Eventually, these films seriously complicated Chagnon's relations with the Yanomami. Some Yanomami threatened to kill him over his filming.<sup>11</sup> "You have made films . . . with many bleeding Yanomami," wrote Cesar Dimanawa, a leader of the Yanomami trade cooperative, United Shabonos of the Upper Orinoco.<sup>12</sup> Dimanawa told me that he was conveying a message from the men of Mishimishimabowei-teri who had been paid by Chagnon to fight for a film.<sup>13</sup>

"I think it is highly unlikely Chagnon paid them steel goods to fight," said Patricia Asch, an ethnographic filmmaker at the University of Canberra, Australia, who is Timothy Asch's widow. "But they may have thought they'd get paid more steel goods if they acted more violently."<sup>14</sup>

Similar allegations surrounded *Dead Birds*, a celebrated documentary about New Guinea's Dani tribesmen, filmed in 1962 by Robert Gardner and Karl Heider of Harvard's Peabody Museum. "We were accused of starting wars so that we could film the Dani in battle," said the anthropologist Heider, who has steadfastly denied the Dani's account. But Heider now admits, "Despite what we said, our very presence at the battles gave a kind of implicit approval to these events."<sup>15</sup>

*Dead Birds* was Chagnon's model, and he took his first footage to Harvard's Gardner for advice.<sup>16</sup> But whereas Gardner had filmed magnificent battles on open fields, with gory killings carried out by hundreds of warriors in full ceremonial regalia, Yanomami warfare proved far more elusive. No scientist has ever witnessed a Yanomami war death despite two hundred years of cumulative observations. This was frustrating for Chagnon. Doctors at the University of Michigan who did not consider his anthropological studies to be real science constantly taunted him.<sup>17</sup> He had found the Fierce People but no proof they actually fought.

Working on his own, with a 16mm Bolex camera, Chagnon filmed a raid in June 1965. (This sequence, Chagnon explained, was spliced into *Yanomamo: A Multidisciplinary Study*.)<sup>18</sup> Although Chagnon never identified the raiders, the Yanomami I interviewed described them as coming from

a mixed-up village) with members of three groups who had had formerly lived in separate *shabonos*.<sup>19</sup> Shortly after Chagnon took up residence at Bisaasi-teri, they all came together to build a giant new village, protected by a palisade.<sup>20</sup>

Although Chagnon mentioned the new *shabono*, and its protective wall, he did not mention his role in building the round house. In the film, however, six big pots, bright new, without smoke stains, graced the center of the structure. These were among Chagnon's contributions to an inaugural feast celebrating the triple alliance.<sup>21</sup> He also supplied the warriors with red cloth.<sup>22</sup> One of the evangelical missionaries in the area, Joe Dawson, recalled, "Chagnon invited me and my sons to come and visit the new *shabono* he'd built for the Bisaasi-teri. He said he built it because he wanted them to hold their dances with other groups, so he could film them."<sup>23</sup> This new *shabono* was the largest near the main course of the Orinoco, with 202 members<sup>24</sup>—three times the average village size.<sup>25</sup> It was also the only village Chagnon studied that had a surplus of females (106 to 96),<sup>26</sup> a surplus achieved by exporting steel to the interior villages. According to Chagnon's theory of war, villages without enough females must fight to obtain them.<sup>27</sup> Yet Bisaasi-teri, in spite of its surplus of women, launched, after Chagnon's arrival, one of the most intense wars in Yanomami history against Patanowa-teri, a village with a sharp deficit of women.<sup>28</sup> This war ultimately produced more than twenty-five raids against Patanowa-teri, as well many counterraid, without the capture of a single woman by any war party on either side.<sup>29</sup>

Chagnon's first raid footage was from an attack in which he played an active role.<sup>30</sup> Through a frame-by-frame analysis, I have been able to identify the raiders and to match the action with one of the most debated episodes of *The Fierce People*, a war whose ostensible purpose was to avenge the recently killed headman of Monou-teri.

. . . the [Monou-teri] raiders lined up, shouted in the direction of Patanowa-teri, heard the echo come back, and left the village to collect their provisions and hammocks. 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 Patanowa-teri without having to cross the numerous swamps that lay between the two villages. There were only ten men in the raiding party, the smallest the war party can get and still have maximum effectiveness. As we traveled up the river, the younger men

began complaining. One had sore feet, and two or three others claimed to have malaria. They wanted to turn back because I had forgotten to bring my malaria pills with me as I had promised. Hukoshikuwa, a brother of the slain headman, silenced their complaints with an angry lecture on cowardice. . . . They unloaded their seemingly enormous supply of plantains. . . .<sup>31</sup>

For years, anthropologists have speculated about why Chagnon interjected himself into this war. "This assistance gave the Monou-teri a significant advantage. Because of the impassable swamps, the intended victims would not be taking the precautions of a village expecting raiders."<sup>32</sup> Even more puzzling, Why would the raiders need incentives, like transportation and malaria pills? Until now, no one has realized that this raid was also Chagnon's film initiation. The raid sequence spliced into *A Multidisciplinary Study* consisted of a ten-man war party from Monou-teri, led by Hukoshikuwa, whose black body paint exactly matched a 35mm photo included in *The Fierce People*.<sup>33</sup> Most of the warriors wore new loincloths fashioned from Chagnon's red cloth.

Despite Chagnon's encouragement, the Monou-teri came home without ever firing an arrow in anger against Patanowa-teri. They were not so terribly overwrought about the death of their leader, after all. It appeared they were just doing Chagnon a favor: "It was then that I discovered they were dallying, trying to be polite to me," he wrote.<sup>34</sup> In the film clip, as the young men lined up for their "attack," they kept looking right at the camera, embarrassed and curious and seemingly waiting for the cue that they were free to go. Alfredo Aherowe, who comes from one of Bisaasi-teri's allied villages, Mahekoto-teri, said, "This film is not true. They are just making a show. . . . Shaki [Chagnon] tells them, 'Do this. Do that.' And they do it."<sup>35</sup> Like César Dimanawa, Aherowe is an elected leader who is one of Chagnon's political opponents; his remarks have to be understood in the context of that polemic.

By the same token, however, Chagnon's political problems in Yanomami-land are inextricably wound up with his filmmaking. Aherowe's opposition to Chagnon is based in large part on his childhood experience that the anthropologist's filming created havoc at his village, Mahekoto-teri, and other communities.<sup>36</sup> "There is no way I will allow this kind of filming to go on again," Aherowe said.<sup>37</sup>

The "mixed-up" alliance that Chagnon filmed and helped form in 1965

driery made his friend Kaobawa the head of the largest and most militarily potent village on the Orinoco. Within weeks of Chagnon's departure, the triple alliance splintered; half the Bisaasi-teri moved to another *shabono*.<sup>38</sup>

What endured was a formula for Yanomami filmmaking. The way to make a successful Yanomami movie was to build a new *shabono*, sponsor a feast, create a new military alliance, and record a raid by the newly created power. A frequent sequel to this stock sequence was an epidemic, which might kill a quarter or more of the Yanomami actors.

In January 1968, Timothy Asch and Napoleon Chagnon arrived in Yanomamiland, intending to film a feast between two Yanomami villages. They wanted to illustrate feasting as a dangerous political-military event, where participants risked ambush for the sake of new alliances to launch wars. Prior to this, aboriginal feasting had been portrayed as a celebration of crop fertility.<sup>39</sup>

By shifting from the magical to the Machiavellian, Asch and Chagnon broke new ground in anthropology.<sup>40</sup> But the strategic analysis Chagnon and Asch applied to Yanomami feasting also applied to their own drama. By the late 1960s, cameras had changed the way football was played, presidential campaigns were run, and the war in Vietnam was fought. It also changed fieldwork on the Orinoco.

Asch and Chagnon flew in on a Venezuelan C-34 transport, a flying boxcar. They needed space for all the expeditionary equipment and heavy trade goods they brought with them. Asch wrote, "In the face of a coming rain storm, Napoleon hurriedly separated the mountain of belongings the airplane had disgorged, and I loaded them on a huge hand truck. . . . Though I had worked in tropical climates before, this was really the worst fatigue I had ever experienced. Napoleon is such an eager athlete, I worked hard to show that I could carry my share of the load."<sup>41</sup> Asch nearly collapsed from heat prostration.

The next day, they traveled upriver to Mavaca, where Chagnon was reunited with his old friend Kaobawa. Though they were happy to see each other again, Asch was frightened at the change he saw come over Chagnon. It was not just his loincloth and body paint. Chagnon's personality seemed to morph, making Asch feel he was alone in the jungle with aliens.<sup>42</sup>

The Yanomami were also capable of instant changes. On seeing Chagnon's boatload of trade goods, Kaobawa immediately announced that a feast was scheduled at an allied village, Reyabobowei-teri. The coincidence took Asch

by surprise— never dreaming the opportunity to him a feast would come so soon. . . . Starting off the next day for the feast, the Yanomami were put off by all the camera equipment they had to carry, with the promise of some trade goods they were willing."<sup>43</sup> In fact, fifteen Yanomami accompanied the filmmakers,<sup>44</sup> and they left Mavaca, without quarantine precautions, at the height of an epidemic of bronchopneumonia that had already taken five lives,<sup>45</sup> to visit a remote interior village that was extremely vulnerable to outside disease. The very same day Asch and Chagnon left Mavaca,<sup>46</sup> there were more than thirty Yanomami with temperatures above 104 degrees Fahrenheit, "seven of them very grave and in danger of death."<sup>47</sup> This critical picture does not take into account the malaria problem, or Chagnon's later claim that Marcel Roche had diagnosed measles forty-eight hours previously at a mission twenty miles downstream.<sup>48</sup>

According to Chagnon, he and his fellow scientists "ended up spending most of our research time trying to vaccinate a 'ring' around the [measles] epidemic."<sup>49</sup> In fact, Chagnon and Asch were wholly engrossed in their filmmaking itinerary. They did not vaccinate anyone at Mavaca, or at the interior villages of Momaribowei-teri or Reyabobowei-teri. Their trip, which lasted "over six days," pushed Asch to the limit of his endurance. Several times the Yanomami stole away, leaving the filmmaker completely lost in the forest. He found that "the Yanomami had some devilish streaks,"<sup>50</sup> but he did not care for Chagnon's fieldwork methods either. Their final approach to the Reyabowei-teri *shabono* resembled a stealth attack. "We snuck up on the village and only at the last moment announced, by shouting, that we were nearby. Napoleon and the headman [Kaobawa] who had guided us, knelt at the entrance to the village, with his shotgun over his knees. . . . Napoleon looked up at me and said, 'It's alright, I only have to shoot one of them.' . . . That really terrified me."<sup>51</sup>

There was no feast at Reyabobowei-teri.

Asch made a short film, *Kaobawa Trades with the Reyabobowei-teri*. The actual trading, however, occurred "without much enthusiasm because both hosts and guests are annoyed that the feast could not be held for lack of meat."<sup>52</sup> Kaobawa traded the AEC's steel presents for arrows. (The film showed only the traditional Yanomami gifts Kaobawa received in return.) By then, however, Asch was exhausted. On his first night at the village, he just fell down on the ground inside his limp hammock, too tired to tie it up. Nearby, Chagnon adopted the posture of a visiting chief, hands over his face.

Chagnon did not move to help Asch up. Instead, he shout-whispered, "For God's sake, get that hammock strung up! You're embarrassing the whole expedition."<sup>53</sup>

There were other embarrassments. In a fit of enthusiasm, Asch decided to go naked, like the Yanomami. Or so he thought. But the Yanomami women hid themselves in the bushes and the men began screaming at him.

"You're naked!"

"What's wrong with that? You people run around like that. Why can't I?"

"Yes," Chagnon interpreted. "But they say your penis is dangling down."<sup>54</sup>

Once Asch tied up his penis to a Yanomami waist string, he was socially acceptable. On returning to the Mavaca mission, Chagnon stayed at their base camp, while Asch, a young missionary, Danny Shaylor, and three Yanomami porters went on an even longer trek, to the highland village of Patanowa-teri.

The next time we filmed a Yanomamo event was in a village Napoleon told me to find. He had known Patanowa-teri before, but it had now moved to a mountain hide-out to escape its myriad enemies. . . . After finding the Patanowa-teri we set up an aircraft radio and reached Napoleon at Mavaca. He convinced the headman to move back to an old garden near the Orinoco River where the genetics expedition could work with them and we could take film. The radio connection was full of static and Napoleon's voice cracked and sputtered. The headman behaved as if he were talking to a ghost and said later, throwing down the microphone, "Eech, that awful machine—did you hear it coughing? It's going to give everyone in the village a cold."<sup>55</sup>

Asch's guide and translator, Danny Shaylor, recalled, "I went with Asch to find Patanowa-teri—that was the craziest trip of my life. We got lost for I don't know how many days. We had some carriers from Mavaca loaded down with pots and other gifts for the Patanowa-teri. They got tired and threatened to go back home. So I said, 'All right—you can go back, but I'll tell everyone you couldn't make it when I return to Mavaca.' They continued."<sup>56</sup>

Nobody knew exactly where the Patanowa-teri were hiding out. All told, Asch, Shaylor, and their three porters wandered for eleven days. Food was scarce and wild game scarcest of all. Asch fainted from hunger on the trail; if the Yanomami hadn't revived him, he would have died. When the Indians finally killed a small bird, they gave all the meat to Asch.<sup>57</sup>

Except for Helena Valero, the white girl kidnapped by the Yanomami in 1932, Danny Shaylor and Timothy Asch were the first twentieth-century explorers who ventured into the mountain redoubt known as the Siapa Highlands. It is an ecological island, similar to the Parima Highlands, but even more inaccessible, separated from the surrounding highlands by the Orinoco, Siapa, and Mavaca rivers. The Yanomami were occupying the Siapa Highlands in the eighteenth century when the Portuguese explorer Lobo de Almadá first heard of them, and the earliest maps place the "Yanomami Nation" here—inside a triangle formed by the Orinoco, Mavaca, and Siapa rivers.<sup>58</sup> All the groups Chagnon studied lived there prior to 1950,<sup>59</sup> though all modern groups had originated even farther away, in the Parima Mountains.<sup>60</sup> When Chagnon finally flew into the Siapa Highlands, in 1990, he invoked its "mythical" quality.<sup>61</sup> The highlanders were left unmolested for so long because all previous explorers stuck to the navigable rivers. Maybe the fact that Asch and Shaylor nearly died persuaded Chagnon to wait for helicopters.

At this time, Patanowa-teri was perhaps the most marginalized Yanomami village, with enemies to the east, west, and north, completely cut off from the lowland *shabonos*.<sup>62</sup> They had gotten the worst of the Napoleonic wars against Bisaasi-teri (three Patanowa-teri and one Bisaasi-teri died). When Chagnon left the field, in January 1966, he made a testable prediction: Patanowa-teri warriors would not cease raiding the Bisaasi-teri alliance until Patanowa-teri had avenged its war dead.<sup>63</sup> But, contrary to this confident expectation, there had been no more killing. By retreating into the more peaceful highlands, the Patanowa-teri became inaccessible.<sup>64</sup>

There was another advantage to this strategy. While the Yanomami along the wide Orinoco had steel and medicine, they also had malaria and influenza, both of which were running rampant in 1968.<sup>65</sup> The Siapa Highlands had neither—as yet. Nevertheless, the Patanowa-teri had experienced the onslaught of respiratory infections during the 1940s, when the U.S. Army Corps of Engineers was active nearby. That is why the old chief was fearful that the "ghost" in Chagnon's radio would give them all colds. In accepting Chagnon's invitation to relocate for the sake of filming the event, the Patanowa-teri also shared responsibility. They knew they should beware of gringos bearing gifts—that their joint feast might prove fatal.

Asch was guarded about his actual payments of metal pots, axes, and machetes to the Patanowa-teri. Their gleaming presence, however, can be seen all over the Patanowa-teri *shabono* in *A Multidisciplinary Study* and *The Feast*. Guarded though it was, Asch's memoir prompted scholars in recent years to

politely question the authenticity of *The Feast*, as film scholar Jay Ruby did in an issue of the *Visual Anthropology Review* dedicated to Timothy Asch.<sup>66</sup>

Chagnon denied that he had choreographed events. "I intended, with Asch, to film a feast that year and knew the Patanowa-teri would be having one with one of its allies, not knowing which one. They eventually held a feast for the Mahekodo-teri. I did not 'stage' this—it happened naturally. They could not have cared less about our interests in filming and are the kind of people who would not do something this costly and time consuming for two whole communities simply to accommodate the filming interests of outsiders. . . ."<sup>67</sup>

For anyone who knew the history of what trade goods can buy in Yanomamiland, this was a bitterly comic overstatement of Yanomami cultural purity. But anyone who read Chagnon's Ph.D. thesis would have had reason to doubt his explanation of *The Feast*. When he left the field, Chagnon wrote that the Patanowa-teri had a single ally—Ashidowa-teri.<sup>68</sup> Therefore, he could not have guessed that Patanowa-teri would be having a feast "with one of its allies, not knowing which one." There was only one. And Ashidowa-teri was located so far into the Siapa Highlands that it remained beyond the reach of Chagnon's research for another generation.

To attract the Patanowa-teri toward the Orinoco, Chagnon altered the political landscape. He brokered a new alliance with one of Patanowa-teri's "myriad enemies,"<sup>69</sup> the Mahekoto-teri. They were the closest village to an old Patanowa-teri *shabono* site on the Shanishani River, an Orinoco tributary located an hour and a half by motorboat from the mission post of Platanal.

The Mahekoto-teri, like the Patanowa-teri, were fearful when Chagnon and Asch proposed the new alliance. They finally accepted on two conditions: a machete or an ax for every man and boy, and Chagnon's guarantee of their safe conduct—with the expedition's shotguns as surety.<sup>70</sup>

Even so, there were snags. Yanomami feasts were usually prepared with months of anticipation and required vast amounts of food to meet native standards of generosity. Whatever the spiritual significance of bananas and fresh meat in these seasonal celebrations, one needed a lot more of them than could be gathered on short notice, as the aborted festivities at Reyabobowei-teri showed.<sup>71</sup>

Moreover, Yanomami feasts were preceded by a formal invitation—*texemomou*<sup>72</sup>—extended by a messenger from the host village. But the Patanowa-teri refused to send a messenger to Mahekoto-teri, which forced Chagnon to assume this role. "Shaki [Chagnon] told us not to be afraid, that he would

talk to the Mahekoto-teri," said a Patanowa-teri elder, Kayopewe. "He spoke to us by radio and promised a huge amount of trade goods—a machete for each man. Each leader and elder got a cooking pot as well as an ax. He also promised to hunt with his shotgun and provide the meat himself. So we went to our old *shabono* at Patanowa, which we had thrown away, and fixed it up like new for the film."<sup>73</sup> Kayopewe said Chagnon initiated the rebuilt *shabono* with a small mound of machetes that he dramatically gave away as a sign of his sponsorship.

But why did Neel and his team have to induce Patanowa-teri, such a distant village, to come out of the hills? Why did they not just pay one of the forty-odd villages where they collected blood to put on a feast? I believe they tried to arrange another feasting event near the Mavaca mission, at Karohi-teri, on the Manaviche River. The Karohi-teri took me to an abandoned *shabono* that they had built at the request of the scientists. "Neel and Asch paid us to build the *shabono* and to do our dances here," said Jepewe, a middle-aged man with a wispy beard who had been an adolescent during the 1968 expedition.<sup>74</sup> We stood in the undergrowth that enveloped the ruined round house, one much smaller than normal and apparently never occupied for anything but theatrical purposes. Jepewe was angry at Chagnon—whom he blamed for having brought the measles vaccine that he said killed many people—but still fond of Neel, who paid the Karohi-teri all the trade goods promised for their performance.

It must have been a poor affair, like the failed feast at Reyabobowei-teri. In this way, through trial and error, starts and stops, Patanowa-teri became, in Neel's words, "the principal objective of this year's work." Patanowa-teri, located "in the very heartland of the tribe,"<sup>75</sup> was certainly a more dramatic site for filming.

The AEC had agreed to finance two different films—one on Neel's biological program and one on a Yanomami feast.<sup>76</sup> To simplify matters, Asch decided to make both films at Patanowa-teri. The documentary on Neel's work, *A Multidisciplinary Study*, began with the expedition motoring up the Shanishani River, Brewer and Chagnon each piloting a boat.<sup>77</sup> The next cut showed Chagnon painting himself and entering the village as a visiting headman—with his bow and arrow and shaman's monkey headdress. It was a rousing and apparently spontaneous arrival. But it had taken more than two days to orchestrate.<sup>78</sup>

The Patanowa-teri had traveled slowly from Sheroana, where Asch found them, to their old *shabono* near the Shanishani. I have walked there. You can



make it in one day if you are a young Yanomami male who has no burdens and can go at a jog trot for about ten hours. You can make it in two days at a brisk walk, which is what I did. You can make it in three or four days if you have children to feed on the way. Since Asch had asked the whole village to relocate for filming and blood taking, the Patanowa-teri were obliged to make frequent detours for food gathering. And when they finally arrived, they found their old *shabono* in a collapsed state.<sup>79</sup> It required extensive repair in order to pass muster for the film. When the two AEC boats made it to their take-out point on the Shanishani River, the morning of February 19, the Patanowa-teri were still not ready to produce the cheering, theatrical entrance Asch finally obtained for Chagnon. Even so, he had to micromanage the event, which occurred at noon, on February 21.

"Come on, come on. Come all at once! Don't look in that camera, okay?" Asch yelled.

A scientist remarked, "They aren't ready. Give it half an hour."

Neel rebelled at the choreographing: "He has me sitting in the sun, and I can't take it."

"You can't do that!" Asch exclaimed, as someone apparently broke ranks.<sup>80</sup>

While the Indians repaired their round house, Danny Shaylor, the AEC's missionary translator and guide, came down with a severe case of malaria. Shaylor was so sick that Chagnon had to take him back downriver to the Mavaca mission. "That was the worst case of malaria I ever had," Shaylor told me.<sup>81</sup> He thought it was falciparum malaria, a potentially fatal strain that attacks the brain. But he was unsure because nobody was doing malaria microscopy on the expedition. In a radio conference, Chagnon remarked that everybody in the expedition had come down with "the same thing."<sup>82</sup> Neither Neel nor Chagnon even knew what the correct malaria medication was when Shaylor nearly died—they can be heard scrambling around, calling to another doctor, trying to figure it out. And this was after being in the field for a month at the height of the malaria season, moving from infected village to infected village along the main course of the Orinoco. If all the AEC researchers came down with malaria like Shaylor, the doctors became carriers to the villages in the healthier hill country.

Malaria proliferation has been one of the two most common causes of death to Amazonian Indians at first contact. As medical researcher Daniel Reff has noted, "There have been numerous instances in which malarial epidemics, some of which have claimed thousands of lives, began after one or more individuals harboring plasmodium entered an area where anopheles

mosquitoes and susceptible hosts coexisted in large numbers."<sup>83</sup> Similar tragedies were common outside the Amazon. Hudson Bay Company trappers brought malaria to California in 1833, killing twenty thousand Indians. The historian Albert Hurtado has written that "a decade later there still remained macabre reminders of the malaria epidemic: collapsed houses filled with skulls and bones, the ground littered with skeletal remains."<sup>84</sup>

Common colds closely followed malaria as a cause of death among the Yanomami.<sup>85</sup> A Venezuelan doctor who spent many years helping the Yanomami said, "The Indians simply have no resistance while among us these diseases are relatively benign."<sup>86</sup> Though Patanowa-teri's headman feared that Chagnon's radio would give them all colds, it was probably the expedition's cook who did so, because he shared the scientists' leftover food and cigarettes with the Indians. As he cooked, the Yanomami gathered around, waiting for handouts. The gregarious cook puffed on his cigarette and then shared it with the Indian next to him. This scene made *A Multidisciplinary Study's* final cut. As Asch put it, "While the scientists work, Juan, the cook, teaches the Yanomamo to smoke."<sup>87</sup>

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," Asch 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."<sup>88</sup>

Asch was understandably confused. Just five days earlier, at Mavaca, Neel had been equally adamant about capturing "the whole gamut of measles."<sup>89</sup> 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.

The “minister and his flock” was, for a eugenicist like James Neel, the emblem of dysgenic behavior—the cosmologically confused priest who foolishly “helped” the weak by violating the laws of Darwinian selection. At Patanowa-teri, Neel was far from the missionaries and out of range of the Venezuelans, except for his disciple Charles Brewer. After a stressful month in the rain forest, time was running out for the 1968 expedition, and Neel’s civilized façade was cracking.

Asch did not yet know James Neel, so he had some trouble figuring out what the geneticist objected to so vehemently. Neel was by no means opposed to featuring routine medical interventions. In the multidisciplinary film, Asch showed doctors vaccinating the Indians immediately following Chagnon’s entrance. Neel then appeared on camera, radioing to Protestant missionaries. “But what is also needed is a good supply of antibiotics in order to treat the secondary infections that so often go with measles. And I hope that you will let us know as soon as possible . . . so we can begin to think how we can help with the program of medication. Over to you.”<sup>90</sup> The film concluded with Neel’s passionate plea to meet “the humanitarian challenge—to protect these people from against [*sic*] the medical and cultural deterioration which has so often been the lot of primitive man in the past. . . .”<sup>91</sup>

From the film, as well as from books and articles the AEC scientists have produced, one would readily expect that, once they had completed vaccinating the Patanowa-teri, they moved on to the next village—caring for the sick, administering antibiotics, continuing their humanitarian efforts.<sup>92</sup> Certainly, their assistance was desperately needed. On the day following Chagnon’s stirring entry into Patanowa-teri, on Thursday, February 22, Robert Shaylor, father of the AEC’s sick translator, called with more bad news. Protestant missionaries had applied the Edmonston B vaccine on the Padamo River—sometime between February 4 and February 15<sup>93</sup>—and another measles outbreak had followed, just as it had at Ocamo and Mavaca. “They used up all that was sent there and were able to get quite a few of the folks done. But of course the measles have broken out there. And we’re *pendiente* to see how they’ve gone and how many villages have possibly been infected.”<sup>94</sup>

In the film, this statement from the missionary Shaylor was edited out, and a voice-over simply asserted that the scientists were vaccinating a ring around the epidemic, saving all the groups they managed to inoculate. When the voice-over ended, Neel was heard and seen speaking over the radio, offering to help with more vaccinations. “I’m sorry to hear this. Now, when we

come out to get the blood to the plane, we will after that work on the Padamo if possible. And if Danny is still badly I would try to get down to Tama Tama to see him.”<sup>95</sup> But Danny Shaylor did not see Neel again that year.<sup>96</sup> Nor did Neel’s doctors join the missionaries and government doctors in controlling the epidemic on the Padamo River or anywhere else.

According to the sound tapes, the scientists left Patanowa-teri on Saturday, February 24. They traveled two days by boat to the Esmeralda airfield, where they met a plane on Monday, February 26.<sup>97</sup> They were rushing to get their blood out of the tropical heat. In all, the scientists purchased a staggering amount of blood, urine, and saliva at nearly forty Yanomami villages during their three weeks on the Upper Orinoco in 1968.<sup>98</sup> Thousands of Yanomami were placed on what Asch called “a production line: numbers are assigned to them: specimens of their blood, saliva and stools are collected; impressions of their teeth are made; and they are weighed and measured by the physical anthropologists.”<sup>99</sup>

Even as Neel and Chagnon at least feared their vaccine reactions might turn into an uncontrolled epidemic, they tried to attract hundreds more Yanomami to their blood-collecting station at Patanowa-teri.<sup>100</sup> Chagnon promised the Bisaasi-teri at Mavaca that he would return downriver, pick them up, bring them to the feast at Patanowa-teri—and have them go several days off into the jungle to extend an invitation to the distant village of Ashidowa-teri. Chagnon also hoped to draw blood from another group, the Hasupuwe-teri,<sup>101</sup> who had two *shabonos* with a total of over three hundred people above the Guaharibo Rapids.<sup>102</sup> On February 18, Neel had told the Venezuelans that he was going to vaccinate the groups on the upper reaches of the Orinoco, but he never vaccinated any of them. Under the circumstances, it was just as well that he did not do so. But his misinformation distorted the rescue plans of the Venezuelan emergency medics, who left the Hasupuwe-teri to their own devices. About one hundred Hasupuwe-teri died of measles.<sup>103</sup>

Although I believe Neel was sincere when he told the missionaries he would join them in battling measles on the Padamo River, the logic of his immense scientific enterprise followed a momentum all its own. Asch explained that “the blood and other samples must be quickly taken out to laboratories to prevent spoiling due to heat. Patanowa-teri was the last village they were able to inoculate.”<sup>104</sup>

The split between the on-camera and the off-camera James Neel was only one of the film’s anomalies. Why were the AEC doctors vaccinating at all?

They were at an extremely isolated village, with no medical backup. Vaccination with Edmonston B required at least fifteen days of continual care after inoculation.<sup>105</sup>

Panic and dispersal had followed their only other vaccinations, around the Ocamo and Mavaca missions. The same day the expedition left Mavaca, about seventy Yanomami who had just been vaccinated ran off into the jungle, where the missionaries retrieved them ten days later all "very sick."<sup>106</sup>

Chagnon had admitted that the vaccine was almost as bad as measles.<sup>107</sup> Neel's data showed that the vaccine reactions were indistinguishable from severe measles.<sup>108</sup> But, once they had told the Venezuelan authorities that their vaccine produced no rash, they stuck to their story so tenaciously that they apparently believed it. The expedition physician Will Centerwall looked the camera in the eye and said, "This kind of measles, especially the vaccine, is very unlikely to cause any trouble. Okay?"<sup>109</sup>

This was a confusing testimonial. What "kind of measles" was he talking about? *Especially the vaccine?* Asch cut this, along with the fact that Centerwall decided not to vaccinate pregnant women.

"Aaah. Let's put it this way. I think this is the lesser of the evils."

"Then give her the vaccination?"

"I think so. I'll just give her two, three, I'll give her three cc's of gamma globulin, which means that if measles does hit her it'll be moderate."<sup>110</sup>

Some doctors felt it was better to suspend vaccinating in the middle of an epidemic and to provide gamma globulin coverage only. But Neel's decisions were increasingly driven by the logic of the film rather than by safe medical practice. He was trapped by promises to vaccinate "a ring around the epidemic" and by the pretense that the vaccine was harmless. The film became a defense against the unraveling of Neel's story, a way of canonizing the geneticist's version of reality. By filming the Patanowa-teri being inoculated, Neel justified his earlier vaccinations as well as his decision to leave the sick at Mavaca behind. "This village was fortunate," Neel narrated. "It was vaccinated in time."<sup>111</sup>

It was not. Neel did not have nearly enough gamma globulin to vaccinate the whole village of Patanowa-teri. In the outtakes, Chagnon is heard admitting that they had been unable to finish the job. Worse, Yanomami exposed to measles from Mavaca trekked through the forest trying to rejoin the expedition. Only one of them made it to Patanowa-teri. The others were too sick—they dropped off in the forest. By radio, Chagnon told the missionaries that he was trying to quarantine the Patanowa-teri from the sick man who

had arrived from Mavaca. "We'll have to try and isolate them as best we can. Meanwhile, we've gone ahead and vaccinated all of the rest of the Patanowa-teri that we had vaccine for."<sup>112</sup>

In fact, they had enough vaccine, but not enough gamma globulin. They never admitted this in repeated radio conferences, however, perhaps to keep the Venezuelans and missionaries from realizing that the expedition was giving out an antiquated vaccine. Even a poor country like Venezuela had by then switched to the Schwarz virus, which did not require gamma globulin with vaccination.

The expedition simultaneously exposed the Patanowa-teri to malaria, bronchopneumonia and, depending upon which group they were in, either the Edmonston live virus or the germs of a carrier from Mavaca. As time went by, more and more people started coughing. None of this was shown, per Neel's instructions.

Instead, the Yanomami were presented as pictures of exuberant health. "This is the chief here," Centerwall gushed. "He certainly is a fine specimen of a man."<sup>113</sup> (Actually, he weighed 108 pounds, but he was big by Yanomami standards.) Centerwall was equally enthusiastic about Yanomami urine. "You know these urine specimens, ah, Tim, are a beautiful assortment of yellows and ambers. . . ." <sup>114</sup> Neel found the fecal samples "remarkable." Charles Brewer, a dentist, praised the natives' teeth. "They are perfect. No decay or accumulation of debris." Brewer attributed their good health to a high-fiber, sugar-free diet. Yet Neel warned that the Yanomami's idyll was ending. "Each year extends further the tentacles of civilization. . . . The health of primitive man usually quickly deteriorates in the course of acculturation."<sup>115</sup>

At Patanowa-teri, acculturation and deterioration were well underway.

The expedition had trouble simply feeding the Indians from one day to the next. By moving toward the Orinoco, the Patanowa-teri left their producing gardens far behind. Their nearest one was a three-hour walk away.<sup>116</sup> They could not feed themselves, much less supply a feast for 125 guests.

Although Chagnon had promised to provide all the meat for the feast, it was not an easy task, even with the AEC's two shotguns. "Look at this," Charles Brewer complained on returning from one hunt. "I have been out since six o'clock this morning, or five-thirty, I don't know what time I got up. And I have to do so many work about the feast and about the blood. And this guy took me for a five-minute ride to do some hunting, and there I am getting up at one o'clock now. Well, you know I went to do some hunting for them because they were really hungry."

"And I got several candies," Brewer added in disgust, referring to the expedition's sweets, which were now littered all over the place. "They asked me to pick them up after I point them, and here they are."<sup>117</sup>

Thousands of candies were being paid out to Yanomami women and children. One of the women's tasks was to collect beetles for the expedition's biologist, who soon found himself inundated with the same species and unable to pay them the lollipops they were demanding.

"You told them if they brought in beetles you'd give them candy," Chagnon said, sticking up for the women.

"Tell them there must be some adjustment," the biologist insisted. "If the beetle is not the kind I want, then I cannot pay them for it. . . . Come to my rescue. Tell them at this point I would settle for something different and bigger. But I can't take any more of these beetles. My bottles are all full."

"Unless we change this into a bonafide beetle hunt, there's no way of stopping the flow once you've asked for it," Chagnon replied.<sup>118</sup>

It was hard to stop. Everything was falling apart. The scientists were also hungry. "But there is it: we have to eat also in spite of all the scientific work we have to do," Brewer said.<sup>119</sup> Their shotguns quickly drove off game; they killed a few birds and finally a pregnant monkey, which Brewer would never have shot had game not been in short supply. Not surprisingly, the Patanowa-teri's feast suffered from a lack of meat—just like the improvised feast at Reyabobowei-teri. In the film, Chagnon blamed the village headman. "His hunters have done so poorly that he must make the meat go further than it should."<sup>120</sup> But the chief's hunters were Chagnon and Brewer.

"Before apologizing for this, I am not to blame, you know," Brewer began.

"You're not?" Neel asked, who sounded amused. He had a soft spot for Brewer, but he was tougher on Chagnon. He complained that Chagnon hadn't hit anything with his shotgun the whole expedition.

"You're a sad crew, you guys," Asch said.<sup>121</sup>

In all fairness, both Chagnon and Brewer were overburdened with other tasks. Chagnon supervised the making of the ceremonial plantain soup that was the main beverage at the feast. This meant hauling a ton of plantains from a distant garden, a thankless task that would never have been necessary at a normal feast, held at the harvest season near a producing garden.

According to the film, the Patanowa-teri headman was Kumaiewa. "He's the big man."<sup>122</sup> However, the Patanowa-teri elders told me the real village headman was an older shaman, Shamawe, who was less pliable to Chagnon's desires than the younger Kumaiewa. The competition over Chagnon's favor

was evidently a source of internal conflict at Patanowa-teri, as it had been at Bisaasi-teri.

This could be seen from a brief conversation between Chagnon and a Yanomami woman. As translated in *The Feast*, the woman asks, "Shaki, are you my older brother? Tell me you are my friend."<sup>123</sup> Now, this would be a surprisingly forward thing for a Yanomami woman to do, publicly asking a *nabah* to be her "friend" and "older brother." Quite a few eyebrows would have shot up around the campfire.

The Yanomami text is quite different, however. *Shaki wa wohimai ya irawe* really means, "Shaki, do you love your brother?"<sup>124</sup> What she wanted to know was whether Chagnon would favor her husband, Hotihewe, when the anthropologist distributed trade goods—as he did on a regular basis, marking the Yanomami with different colors once they had been paid for their various tasks and bodily fluids.

Trade goods played a key role in the film's assessment of Yanomami politics. "The trade goods help bind the alliance by creating obligations which the visitors must discharge at a return feast."<sup>125</sup> This was certainly true of the AEC's goods, the true basis of the alliance. Chagnon skillfully plied the Patanowa-teri with presents and the promises of presents to keep them working. While hauling plantains some people seem to question making the film, and Chagnon apparently tempts them with the vision of *madohe totobiwe*, "beautiful trade goods."<sup>126</sup> But here, too, supplies proved inadequate to the size of the project. When his trade goods ran out, Chagnon radioed for another planeload.<sup>127</sup>

Asch was surprised when, en route to get food at another garden, the Yanomami burst into a frenzied dance, "screaming at the top of their lungs, waving branches of leaves in the air." Asch filmed them, believing it was "a garden ritual." When the exhausted, sweating Yanomami finally stopped, Chagnon asked them, "What was that all about?"

They were mystified. "Isn't that what you just asked us to do?"<sup>128</sup>

There was a question of how much Chagnon was really able to communicate with the Yanomami. He had spent a total of fifteen months in the field, and no one has become proficient in Yanomami in such a short time. At one point, he said to Asch, "Shoot that scene over with me in it. My Yanomamo is a little rusty."

"That was kind of nasty and not really called for, you know," Neel interrupted. "If your Yanomamo is rusty now, you ought to be should be [*sic*] ashamed of yourself."<sup>129</sup>

The Yanomami understood that Chagnon wanted scenes of violence. Asch also got that message. Chagnon's preference was the subject of an article Asch wrote, "Bias in Ethnographic Reporting," excerpted in the April 1995 memorial issue of the *American Film Quarterly*. Asch said Chagnon became "bitter" if Asch trained his camera on anything but aggressive behavior. Chagnon thought nonviolent episodes were a waste of valuable film. When Asch urged Chagnon to film women's activities, Chagnon "whipped around" and asked, "What makes you think there are any women's activities?"<sup>130</sup>

Chagnon, who narrated *The Feast*, explained, "Women are rather inconspicuous at political events such as these."<sup>131</sup> This was true at the AEC's feast, but it was not true for Yanomami feasting in general. Normally, women begin the festivities with marathon, call-and-response chanting called *amoamou*.<sup>132</sup> This often becomes a long, friendly competition between the women hosts and visitors.<sup>133</sup> Later, the women from the visitors often danced with the men from the hosts, in a spectacular performance, *hakimou*, that sometimes ended in sexual dalliances.<sup>134</sup> But the women of Patanowa-teri were terrified that enemies might attack them at any moment (a fear that had caused them to move away from this site). In fact, Dr. Centerwall noted that the lovely colors of the women's urine were caused by dehydration—they were afraid to venture down to the nearby creek to drink.<sup>135</sup>

It was violence and the expectation of violence that appealed to film juries and students and that gave *The Feast* its edge. "The Patanowa-teri have been raided twenty-five times in the previous sixteen months, with a total of ten deaths," Chagnon narrated.<sup>136</sup> Actually, the Patanowa-teri had been raided twenty-five times during Chagnon's fieldwork, from November 1964 until January 1965, with a total of ten deaths. But there had been no deaths since Chagnon left the field.

Nevertheless, Chagnon was right when he said, "Many of the Patanowa-teri still regard the Mahekoto-teri as enemies. They are fearful, as are their guests, because they know that any feast can end in violence. . . ."<sup>137</sup>

Any feast can turn violent. Very few actually do. In this case, the atmosphere was strained because neither group wanted to be there in the first place. With the AEC's sponsorship and Chagnon's shotguns, however, there was no danger of violence occurring during the feast. The film achieved the illusion of immediate conflict by mistranslation. In the film, a lead dancer for the Mahekoto-teri entered the Patanowa-teri plaza dancing ecstatically and shouting, "Fight! Fight! Fight!"<sup>138</sup>

That was the film's translation. Actually, his chant was, *Mita mitabe*—"Look! Look!"<sup>139</sup> He was not threatening anyone.

The real danger lay elsewhere. Neel explained why: "Feasts are also the occasion of a joint raid on enemy villages. . . . Sometimes villages will unite at a feast, drink the cremated bones of a common friend or relative killed in war, and leave in a group to raid a mutual enemy." This is precisely what happened after the filming of *The Feast*. The Patanowa-teri and Mahekoto-teri united to attack the village of Yabitawa-teri, where they killed an old woman, an unusual event in Yanomami warfare. But since this whole feast was inspired, paid for, provisioned, and arranged by the diplomacy of the AEC scientists, this put the resulting raid and death in a dubious light.

"It might seem like a great idea to bring two groups together and make peace," said the missionary Mike Dawson, who has lived for over forty years among the Yanomami. "But the Yanomami don't wage war that frequently, and their way of avoiding war is to move apart, so they don't have any more contact with their enemies. When you bring them together to film an alliance, you're naturally going to make these two groups remember all their previous hostilities, and just about the only way they can channel that is to launch an attack against a third group. And this has happened more than once after filming."<sup>140</sup>

A handful of warriors, Asiawe told me, went on a joint raid. My sense is that the young men who helped broker the feast and act as intermediaries for the outsiders were the only participants. It was a sign of the social disruption that outsiders always brought, promoting youths before they had matured in tribal traditions. Given the size of the feast—attended by 340 individuals—a normal raiding party would have been far larger—60 or 80 men.<sup>141</sup> And, since this was a new alliance, the older male leaders would have been virtually obligated to participate along with everyone else.<sup>142</sup> But the headmen did not join the attack.

Nor did the newly allied villages perform any of the ritual preparations for a raid, which center on the sharing of funeral ashes in a sacred meal. The women keep these precious ashes; significantly, only they are allowed to imbibe the ashes, in a plantain soup, before the warriors depart. It is also at this mortuary meal that shamans take hallucinogens and divine the spiritual enemies whom the warriors should attack. Although the raid which followed *The Feast* does appear to have had purely material motives, based on trade advantages, it was a feast alliance unlike any other described in the extensive

Yanomami literature.<sup>143</sup> The raid was, like the feast, an event without a sacramental center, and it happened just after the filmmakers left.

Chagnon appeared disappointed with the film's weak finale. "Come on, I've pleaded with you to put the fucking recorder on," Asch snapped. "There was a lovely little kid just standing there lounging."

"Look, Tim, I'm in a bad mood," Chagnon answered darkly.

"Then you're in a bad mood on the most important day of the filming."

"There's nothing here that's that important."<sup>144</sup>

After shooting this last scene, Chagnon and Asch left the village. As they headed downriver, the raiders jogged off into the jungle, led by Asiawe, son of the Mahekoto-teri headman.

"We went with the Patanowa-teri to raid Yabitawa-teri, where we killed an old woman with arrows," Asiawe told me when I interviewed him at the village of Mahekoto-teri. "The next day we returned to Patanowa. I was beginning to feel sick by then, and so were some of the others from my village. Then we left the Patanowa-teri and returned to Platanal, but by that time many of us were very sick. Four of my people died, and González [the government nurse] helped me to hang them up in the jungle." Asiawe was referring to the Yanomami's custom of leaving their dead inside hammocks, or baskets, or on top of platforms, high above the forest floor, when many people die at once during an epidemic and no one has the strength to perform the cremation ceremonies. "Then I moved across the river," Asiawe continued. "And when I was across the river, more of my people died. We hung them out in the jungles there. Then I moved downriver a little bit, and more of my people died again, and they kept dying. Then we moved back upriver, and we started getting better. During this time, González helped us hang our people out in the jungle and gave us medicine. There weren't very many Shashanawa-teri [another group the AEC took blood from but did not vaccinate]. They had only four leaders—and they all died off. While I was tying my dead out in the jungle, they were doing the same thing: they just tied their dead up in hammocks inside the *shabono*. . . . After I drank my bones then, we went up there and drank their bones. Shashanawa-teri first came to our cremations at Mahekoto; then, when they did their bones, we helped them."<sup>145</sup>

According to Chagnon, 25 percent of the "Platanal Yanomamo" died of the measles.<sup>146</sup> What he never admitted is that the Platanal Yanomami are no other than the Mahekoto-teri, and that they died immediately after *The Feast* was filmed. Timothy Asch was the only member of the expedition who eventually acknowledged the sad truth.<sup>147</sup>

The death of 20–30 percent of Indian tribes at first contact was normal over the centuries. The first English colonists at Roanoke, Virginia, noticed that every time they entered an Indian community "within a few days after our departure . . . the people began to die very fast." This mysterious phenomenon was initially blamed on "the Eclipse of the Sun," but was later attributed to divine providence.<sup>148</sup> Nobody took responsibility for these acts of nature or of God. Thousands died, but nobody was to blame. Finally, it was decided, more or less universally, that the Indians were destined to die off.

Big expeditions always left the dead behind as the explorers went on to win knighthoods or estates or Ph.D.'s. Even when historians or Indians complained, the real evidence was gone: the dead could not speak.

That's why Asch's unedited footage was invaluable. Indians about to die are complaining on tape about the visitors who have come with germs, guns, and steel. At one point, on February 27, just prior to the feast, shamans can be heard conjuring away sickness and people are heard coughing.

A woman weeps and shouts, *Hariri*—disease. Another woman apparently does not want to join the feast with the Mahekoto-teri, because they are fierce: *Mahekoto-teri waiteri*.<sup>149</sup> Meanwhile, people are yelling at the cameraman Timothy Asch and hurling rocks at him. Asch apparently responded—I have not seen the film's outtakes—by throwing a rock back and hitting a dog, setting off yelps from the dog and a chorus of cries from the Yanomami.<sup>150</sup>

Asch: "Actually, it isn't good."

Chagnon: "I think that's enough, Tim."

[Women are coughing loudly and spitting.]

Asch: "It's mean. . . ."<sup>151</sup>

It *was* mean, but they had to keep choreographing everything. Asch wanted a shaman to repeat something: "I wonder if he would do that again without that kid in there."

A Yanomami man began to intone Asch's name. *Ashe, Ashe*.

Asch, who took no notice, said, "Those are wild sounds to go with the cotton scene, but they may be too . . . not quite what . . ."

At one point a man muttered a sentence including the word *horemu*, meaning "lying" or "faking."<sup>152</sup> Though the tapes still await competent translation, this was the same word the Patanowa-teri elders repeated, over and over again, when they saw a screening of *The Feast* in September 1996. They felt the film was undoubtedly a *horemu*, a fake.

It would be an equal deception, however, to think that any of us would have done things differently. I know I would not have done things very dif-

ferently. Not at the age of twenty-nine—as both Chagnon and Asch were—with new film equipment and orders to record a military alliance. Maybe I would have done a few things otherwise. I would have organized a much bigger, better finale and made sure that all the raiders went off with an enormous cheering section. If the Yanomami men wanted their axes, they would have had to put on a finer performance.

But if the edited film was a *horemu*, the unedited *Feast* truly broke new ground. It brought all the unconscious horrors of contact into the open. The cook from Caracas passed his cigarette and shared his food with the Yanomami, possibly sharing respiratory illness. The missionary translator Danny Shaylor contracted malaria on the Orinoco's main course and brought it with him to Patanowa-teri. The doctors applied a dangerous vaccine and then abandoned the Indians. An infected man from Mavaca searching for steel presents stumbled out of the jungle with measles. James Neel became infuriated at filming wasteful acts of altruism. Meanwhile, industrial quantities of blood, beetles, urine, and plants were collected, miles of film rolled, and food ran out. The scientists had "so many work to do,"<sup>153</sup> as Brewer lamented, and so little time.

All prior studies of first contact had been, to use Neel's apt phrase, "a mosaic of unrelated findings."<sup>154</sup> In bequeathing the National Archives his take-outs, Asch left the definitive documentary on how disease and acculturation were introduced to a vulnerable tribe. At Patanowa-teri, all the skeletons from the past came out and danced for *The Feast*.

Shortly after *The Feast*, the surviving Patanowa-teri joined another village, Iwahikoroba-teri, in making an effigy of Chagnon. They set it up and shot it full of their long arrows. Both groups blamed Chagnon for having worked black magic against them; both relocated far away from Mavaca, to escape the anthropologist's deadly powers. Chagnon noted merely that he was "annoyed"<sup>155</sup> that his former friends had participated in such a ritual—the only time a non-Yanomami has been targeted in this way. But when Chagnon tried to revisit Patanowa-teri, in 1969, his guides forced him to turn back. "His informant warned him as they went upriver, 'We can't go on, doctor. They're going to put an arrow through you,' " said Sister Felicita of the Ocamo mission. "They had made a doll [of Chagnon] out of banana and palm leaves. When Chagnon came back to the mission, he was almost in tears."<sup>156</sup>

## Chapter 7

### A Mythical Village

I was their village. Their village was me.—*Napoleon Chagnon*<sup>1</sup>

While the Yanomami who had been filmed in *The Feast* were fleeing in panic and abandoning their dead to improvised funeral platforms in the jungle, and as measles spread to villages all over Yanomamiland, Napoleon Chagnon began the most challenging adventure of his career. During the second week of March 1968, he traveled up the Mavaca River to explore villages that "had never seen a foreigner other than me in their entire history."<sup>2</sup> These villages belonged to a Yanomami subgroup—the Shamatari. "My subsequent work among the Shamatari would lead me to describe them as the 'Fiercer' people."<sup>3</sup>

Fiercer, farther, Chagnon was always pushing himself to new limits, going where no other anthropologist had gone before. For the real addict of El Dorado—conquistador or explorer, scientist or journalist—the quest never ends, though it always disappoints. In a sense, El Dorado was history from the be-

ginning—a history of civilizations that had ceased to exist. The Spaniards kept looking for the same pristine places they had already erased. El Dorado, a high, cool city ruled by a runaway Inca, sounded a lot like Cuzco, where the Spaniards had an unforgettable and unrepeatable looting party.

American anthropology was born of a similar nostalgia. Just as “wild Indians” had been wiped out or reduced to reservations, scientists conceived a desire to recover them. That is why there was a stampede of publicity and scientific hoopla when a solitary survivor of the Yahi Indians emerged in 1911. His name was Ishi and he had been hiding for forty years in the Sierra Madres of northern California. Cartoonists drew Ishi as a Stone Age man with a club, capturing white women and dragging them off by the hair. (In fact, Ishi had been celibate all his life; he had no culturally acceptable partners because vigilantes, ranchers, and government agents had hunted four hundred members of his tribe to extinction.) Ishi became a living display at the University of California at Berkeley’s museum and, in a real sense, its foundation sacrifice. Thousands lined up to see him every Sunday. Ishi was photographed and filmed so often that he became an expert in posing and lighting, able to suggest the right props and angles to prospective picture takers. Within weeks, he contracted pneumonia. The scientists were aware of the risks; in 1897, amid extraordinary fanfare, Admiral Perry had brought six Eskimos to New York, where four of them died of tuberculosis. In the end, Ishi also died a lingering death from tuberculosis, hastened by deathbed interrogations from America’s leading linguist.<sup>4</sup>

If a single Yahi Indian after the turn of the century could launch a major museum and catapult his discoverers to national prominence, the scientific potential of totally uncontacted villages in the late 1960s was incalculable. For an enterprising man like Chagnon, it was also irresistible. He honestly admitted that his motive was “scientific curiosity.”<sup>5</sup> Like his predecessors at the University of California, he saw this as a final opportunity for science. “The Yanomamo, like all tribesmen, are doomed, and soon they will be swept aside and decimated by introduced diseases as Western civilization penetrates deeper and deeper into the remaining corners of the world where it has not extended itself.”<sup>6</sup>

Chagnon had been trying to contact the Shamatarí Yanomami since his first months in the field. “These were the people against whom Kaobawa and his people had waged ceaseless war for half a century. . . .”<sup>7</sup> When the Shamatarí heard that Chagnon had arrived with his bounty of steel goods, they sent messengers asking him to come and visit them. In fact, they began

migrating from the Siapa River to the Mavaca headwaters shortly after Chagnon set up camp at Bisaasi-teri. Although they were receiving handed-down axes and machetes, they wanted an unmediated relationship with the anthropologist.<sup>8</sup> Chagnon eagerly accepted.

The Bisaasi-teri opposed Chagnon’s plan with arguments, delays, threats, and war. When Chagnon first attempted to travel up the Mavaca, the Bisaasi-teri lined the banks and screamed at him not to take his steel presents to the worthless, treacherous Shamatarí, who were going to kill him anyway. All of Chagnon’s Bisaasi-teri guides abandoned him two days upriver, forcing the angry anthropologist to return.<sup>9</sup> Bisaasi-teri allies launched preemptive attacks at the largest Shamatarí village, killing one man, the first death in the war between the two villages in five years, but keeping them at bay. When, against all odds, Chagnon tried to contact them on foot, he became violently and mysteriously sick after eating food his Bisaasi-teri friends gave him.<sup>10</sup>

This clash of wills naturally soured Chagnon’s relations with his host village and with its headman, Kaobawa. Chagnon resented the fact that the Yanomami saw him only as a dispenser of metal goods, not as a friend. But the Bisaasi-teri could not understand that their growing acculturation, which Chagnon had done so much to accelerate, made them less valuable to him as informants and film subjects.<sup>11</sup>

By 1968, Chagnon had found a way to move on. He hired a boy, Karina, who had been raised at one of the villages Chagnon wanted to visit. Although Karina was now living with one of Bisaasi-teri’s allies, he was treated as “an outcast” in the village. “The boys of his age also teased him mercilessly, and the adults ordered him around as if he were a recently captured enemy child.”<sup>12</sup>

Chagnon repeatedly risked his life in this journey to the edge of the world. Or so it seemed. No one had traveled the Mavaca in seventy-five years. Its headwaters were off the map. As it progressed upriver, Chagnon’s party found a profusion of wild peccaries and turkeys—an almost Edenic scene of abundance. Against this idyllic backdrop, however, lurked the ever-present threat of death from the terrible Shamatarí and from other, mysterious forces. Karina had to be reassured against *Raharas*, mythological serpents that inhabited unexplored rivers. Chagnon combated the Yanomami myth with one of his own: he told Karina he had killed many *Raharas* in his youth and had a special weapon for them. Chagnon demonstrated how he would shoot them. “Right here! In the neck!” At last, he reached the “almost legendary village of Mishimishimabowei-teri.” When his guide stole his trade goods and boat,



Chagnon hollowed out a canoe and radioed to missionaries for help. The missionaries left Yanomami villages afflicted by measles on the Padamo River in order to rescue the anthropologist.<sup>13</sup>

Chagnon shrewdly understood the appeal of the virgin frontier to American audiences. And he skillfully turned what is normally a long day's run up a deep river with no rapids into a harrowing, three-day trip. (When I checked one of Chagnon's handwritten maps, published in *Studying the Yanomamo*, I saw that it took him exactly eight hours to reach a point a few miles below Mishimishimabowei-teri, but he had also stopped for two hours to talk with an informant.)<sup>14</sup> The Mavaca is such an easy waterway that it was a major route for rubber traders in the nineteenth century. They had a post on the Upper Mavaca, and hauled rubber overland to the Siapa River, on its transcontinental journey to Manaus, Brazil. Though Chagnon claimed to be the first to travel the Mavaca River in a century, the explorer Carlos Puig had reached the Mavaca headwaters in 1941,<sup>15</sup> as had the government malaria service in 1962.<sup>16</sup>

Chagnon's most suspenseful drama, making "first contact with Mishimishimabowei-teri," was also questionable. Helena Valero, the white girl previously mentioned, lived with the group for most of 1933. She ran away to one of their allies, but continued to see them at feasts for about a decade.<sup>17</sup> Actually, while Chagnon and Asch filmed *The Feast*, the Venezuelan government nurse Juan González took two Bisaasi-teri guides up the Mavaca River, where he claimed to have vaccinated some Shamatari with the government's more benign Schwarz vaccine.<sup>18</sup> That might explain why the village that Chagnon contacted was apparently not hit by measles. Whereas Chagnon constantly emphasized his own anxiety and the risk of death at the hands of the Shamatari, González said he felt no fear, though as a nurse his humanitarian mission was very different from Chagnon's. Later the Shamatari took González on foot all the way to the Siapa River.

There was a limited sense in which Chagnon made "first contact" on the Upper Mavaca. Until his trip, no one had used the name Mishimishimabowei-teri; Juan González said he visited the Mowaraoba-teri in 1968. That was the name this group had used for about three decades. I have not found any references to Mishimishimabowei-teri prior to Chagnon's 1968 visit. In 1967, they had been living in two separate communities in the Siapa River valley. By 1968, only eighty of them were at a place called Mishimishimabowei-teri. On hearing that Chagnon had come with fifteen machetes, six axes, and twelve pots,<sup>19</sup> and promised to return with gifts for

everyone, other villages from the Siapa River valley immediately pulled up stakes and joined their cousins. Salesian mission records initially describe it as a hodgepodge of five different villages.<sup>20</sup> As late as 1972, the priest at the Mavaca mission, José Berno, was unsure whether this was "a great tribe or five tribes who live together."<sup>21</sup> The unusual village of four hundred—the largest ever reported for the Yanomami—apparently coalesced around Chagnon. And it remained intact, like the triple alliance of the three previously separate villages around Boca Mavaca described in the last chapter, only as long as Chagnon's extended visits lasted (1968–72).<sup>22</sup>

The Mishimishimabowei-teri acknowledged this with a remarkable gesture. Chagnon had christened the new, five-tribe village "Mishimishimabowei-teri." The villagers returned Chagnon's compliment by bestowing their new name on him. They called *him* Mishimishimabowei-teri. "I was their village," Chagnon wrote. "Their village was me. That is about as high an honor a Yanomamo can achieve."<sup>23</sup>

The "ceaseless warfare" between Kaobawa's village and the Mishimishimabowei-teri was another exaggeration. Helena Valero, who remained in the region until 1956, witnessed a decade of peace between the groups in the 1930s and early 1940s. That tranquil period ended when the leader of Mishimishimabowei-teri's parent village was accused of causing the epidemic that followed the U.S. Army Corps of Engineers' foray into the Upper Orinoco. Some Bisaasi-teri and some members of its close ally, Wanitamateri, massacred six of the Mishimishimabowei-teri. But many members of the two villages vehemently denounced the massacres.<sup>24</sup> Then another seven or eight years passed without violence until, within months of the permanent establishment of a Protestant mission, a complex alliance of villages killed somewhere between eleven and fifteen Bisaasi-teri. According to Chagnon, all of the actual killings in 1950 were accomplished by one of Mishimishimabowei-teri's allies, while the Mishimishimabowei-teri themselves played an ineffectual role.<sup>25</sup>

Whatever the reason for their old wars, the Bisaasi-teri had achieved clear military dominance since joining missionaries, malaria workers, and anthropologists on the banks of the Orinoco. They killed three Mishimishimabowei-teri in 1960, and the Mishimishimabowei-teri made no response.<sup>26</sup> In 1965, when another Mishimishimabowei-teri man was killed by Bisaasi-teri allies, they also failed to retaliate.<sup>27</sup> Instead, they retreated into the Siapa Highlands, where they had spent most of the preceding decades. This region, according to Chagnon, has poorer food resources<sup>28</sup> and less access to metal

goods than lowland villages.<sup>29</sup> Typically, the Siapa villages were militarily weak and lost women to resource- and metal-rich villages near the Orinoco.<sup>30</sup> Mishimishimabowei-teri was no exception. It suffered from “a severe shortage of females”<sup>31</sup> and had a pathetic dearth of metal tools, both characteristic of the vulnerable highland villages.<sup>32</sup>

Their known warfare from the mid-1930s until 1968 suggested that the Mishimishimabowei-teri were one of the least efficient groups of warriors in Yanomamiland. Against the Namowei—the group including Wanitama-teri, Bisaasi-teri, and Monou-teri—their record stood at ten war deaths to zero.<sup>33</sup> And it was about to get worse.

In 1970, Chagnon decided to help foster a new alliance between Bisaasi-teri and Mishimishimabowei-teri. He had some initial misgivings: “This was risk taking in spades. . . . I was also worried I might be a contributor to an enormous disaster.” Nevertheless, he felt he could help end “twenty years of war.” In June 1970, Chagnon ferried Kaobawa to Mishimishimabowei-teri, where he witnessed “the social and heroic ingredients of Neolithic Peace.” Once again, Chagnon’s 16mm camera and shotgun played key roles. As Kaobawa prepared to meet the Mishimishimabowei-teri, Chagnon was prepared to fire in his defense. “I recall,” he wrote, “how difficult it is to be ready to shoot, but yet try to look friendly and nonchalant, pretending that your weapons were not really ready to shoot THEM. . . . Kaobawa shouted that I was with him and we were friendly. He was extraordinarily alert, like an animal who had detected either prey or a predator, his eyes dodging rapidly back and forth scanning the dim, gray jungle ahead. . . .”<sup>34</sup>

Although peace would have appeared out of the question, and death almost certain, what actually happened was very similar to the alliance building captured in *The Feast*. Not only did the Mishimishimabowei-teri have no problem with welcoming the Bisaasi-teri; they had no problem with being filmed together in a remarkable ritual that Chagnon made into another award-winning film, *Magical Death*.<sup>35</sup> This took place in the late spring of 1970.<sup>36</sup> The Mishimishimabowei-teri “began an elaborate two-day shamanistic attack on the souls of children in Mahekoto-teri.” Their purpose was “to make friends” by killing enemy babies “and stealing and eating their souls.”<sup>37</sup> The ritual involved taking hallucinogens, chanting, and enacting a pantomime of devouring the children of Mahekoto-teri (the guests at *The Feast* who lost a quarter of their people to measles).<sup>38</sup>

Timothy Asch did not participate in this film. Indeed, he hated it. He begged Chagnon to remove it from circulation because he had found that his

students at USC were horrified by the Yanomami’s symbolic cannibalism. Eating enemy children, even in the spirit, appeared psychotic to southern California undergraduates, according to Asch. Chagnon attributed this to jealousy on Asch’s part; after all, Chagnon had made the film all by himself, and it won a blue ribbon at the American Film Festival.<sup>39</sup> In spite of the film’s initial accolades, the anthropologist Linda Rabben, of Amnesty International, has recently echoed Asch’s complaints about *Magical Death*. “They [students] watch green mucus pouring from the nostrils of Yanomami warriors dancing and chanting under the influence of a hallucinogenic powder. All the scholarly explanations (and the sight of Chagnon himself, befeathered and painted, prancing about in a drug-induced trance) cannot eclipse that image.”<sup>40</sup>

That image, however, was less immediately relevant than the new power arrangements that Chagnon helped consecrate. In 1968, Chagnon and Asch brokered a new alliance between the Mahekoto-teri and the Patanowa-teri, creating a formidable military force—one that immediately attacked a nearby village and killed an old woman.<sup>41</sup> Now Chagnon was participating in a new peace that also meant a new war—one that would pit *The Feast* allies, 350 strong, against the *Magical Death* allies, some 500 strong, in an innovative regional war fought with shotguns and outboard motors.

Chagnon merely wrote, “A peace had been forged and a new era of visiting and potential alliances had opened up. The Mishimishimabowei-teri were invited to his [Kaobawa’s] village to feast and dance, and they agreed to come.”<sup>42</sup>

But they received a little help from their friends. On June 28, 1970, Father Berno wrote in the Mavaca mission chronicle that he “was invited by Dr. Chagnon to accompany him” four hours up the Mavaca to the Mishimishimabowei-teri, who were then ferried to the Orinoco for visits to three different villages, with dancing, drug taking, and ritual fighting.<sup>43</sup> The rituals turned ugly. According to Chagnon, one of the men from Mishimishimabowei-teri died after he was beaten with an ax.<sup>44</sup>

So “a new era of visiting and potential alliances had opened up”<sup>45</sup> with Mishimishimabowei-teri, but the opening brought the first violent death between the two villages since 1960. And it led to another war, this time against Patanowa-teri, which the new alliance promptly attacked. A picture of the Bisaasi-teri/Mishimishimabowei-teri raiders preparing for their first attack—the largest Chagnon had ever witnessed or filmed—was featured in the 1997 edition of Chagnon’s textbook.<sup>46</sup> It was part of “a new chapter that dis-

cusses how a dramatic alliance between the Mishimishimabowei-teri emerged, ending a war between them that lasted over 20 years.<sup>47</sup> In the new war, however, Bisaasi-teri raiders would blow off the head of Patanowateri's headman, Kumaiewa, and kill one other member of his village with a shotgun.<sup>48</sup>

Chagnon blamed these shotgun attacks on missionaries who unwittingly lent guns to the Yanomami, ostensibly for hunting purposes. But the real problem was that villages on the Orinoco could barter goods to buy shotguns. In fact, the first shotgun killing by a Yanomami was committed by Heawe, son of the Mahekoto-teri headman, after *The Feast* in 1968.<sup>49</sup> A new shotgun was worth somewhere between six and ten new pots;<sup>50</sup> an old shotgun, much less. The tremendous windfall in steel wealth the AEC expedition dispensed for its filming event, including a large number of new pots, could easily have allowed the Mahekoto-teri's headman to buy his family a gun. By this time, the Yanomami were able to buy guns from many sources.<sup>51</sup> Whatever the immediate source of their shotguns, it is a fact that the two first-recorded shotgun killings were carried out by villages where Chagnon brokered large film productions. It is also interesting that the killings targeted leaders of the rival film teams. The Mahekoto-teri blew off the head of a close relative of Rerebawa, who starred in *Magical Death*. The Bisaasi-teri blew away the Patanowa-teri headman, who starred in *The Feast*.

In 1971, Timothy Asch joined Chagnon at Mishimishimabowei-teri. (*Magical Death* had not yet been released, and they were still on good terms.) The year 1971 became the annus mirabilis in ethnographic filmmaking. Asch and Chagnon took twenty-two miles of footage and made twenty-six films. It was astonishing how productive they were. It was even more astonishing how accommodating the ferocious Mishimishimabowei-teri were.

Within twenty-four hours of Asch's arrival at Mishimishimabowei-teri, on February 26, 1971, a fight broke out. Chagnon had advance warning of who was going to fight, and where. "Bring your camera over here," he ordered Asch. "It's going to start."<sup>52</sup> A flurry of blows, shouts, and duels followed, involving about fifty people in a madcap sequence. This gave rise to the most popular and enduring ethnographic film ever made, *The Ax Fight*. It was their third film to win first prize at the American Film Festival.

One of the novel features of *The Ax Fight* was its inclusion of dialogue between the filmmakers as the events unfolded. First, a viewer saw a frantic scramble, people threatening each other with poles, machetes, axes. Yanomami of all ages and both sexes flailed about, screaming and shouting.

But the camera picked up only a piece of the action, and a very inconclusive piece at that. What happened?

When the *shabono* plaza finally cleared, Chagnon appeared, a pipe in his mouth and a 35mm camera around his neck, looking very pleased. He explained, "Well, two women were in the garden, and one of them was seduced by her 'son.' It was an incestuous relationship and the others found out about it, and that's what started the fight."

"No kidding!" Asch said, equally pleased. "So this is just the beginning of lots more."<sup>53</sup>

But, as Asch edited the film, he deconstructed this simple, sexual explanation. Incest had nothing to do with it, after all. Chagnon's first informant had been incorrect, and, as the film developed, Chagnon realized the fight really started because a young man hit his aunt, who had refused to give him some plantains. "Ethnographic filmmakers had never before been so honest about the difficulties of fieldwork," according to Peter Biella of USC's Center for Visual Anthropology.<sup>54</sup>

But the film was not totally honest, even about this initial misunderstanding. In reality, no one told Chagnon the fight started over incest. Chagnon mistranslated the Yanomami word *yawaremou* as "sexual incest."<sup>55</sup> The word really meant "improper behavior toward a blood relative." By glossing over Chagnon's difficulties at understanding the subtleties of Yanomami language, *The Ax Fight*, like *The Feast*, fostered a comforting illusion that the anthropologist in the wild knew what he was talking about.

Arguments over food were not uncommon among the Yanomami, though they rarely became full-blown village nightmares like the one witnessed in *The Ax Fight*. Chagnon could not accept the idea that a disagreement over food, followed by a blow to a female relative, could convulse the whole *shabono*. After viewing the footage over and over again, Chagnon developed a wholly different theory about the fight: it was actually a conflict between two patrilineal descent groups for dominance of the village.

A group of guests, the Ironasi-teri, had refused to leave the village at the accustomed time. This often happened to Chagnon. His policy of distributing trade goods at the end of each visit gave a strong incentive for everyone to stick around. Chagnon was eventually driven from the Mishimishimabowei-teri after the headman, Moawa, threatened to put an ax in his head—unless Chagnon distributed his machetes to the men Moawa indicated. "Distribute all of your goods and leave," he told Chagnon.<sup>56</sup>

Yet Chagnon treated these trade disputes as secondary. Sex and domi-

nance were always in the forefront of his thinking. "You know the joy of *The Ax Fight* is that because Chagnon was so stuck in simple theories that, right away, the film became a real joke," Asch said in an interview. "It is funny with its simplistic, straightjacketed, one-sided explanation . . . I was feeling, you know, halfway into making the film, this great suspicion of the whole field beginning to fall apart before my eyes as I was putting *The Ax Fight* together. I had a powerful piece of material and it was suddenly looking kind of foolish. . . . I felt it was a little bit like a gargoyle at Chartres . . . one of those strange things that stick out and you say, what's this?"<sup>57</sup>

The Mishimishimabowei-teri offered me other interpretations of the film and the fight. Gustavo Konoko, one of the adolescents who joined the ruckus, claimed he and the other *huyas* (young men) were encouraged to start "una pelea horemu," a fake fight. "He [Chagnon] said, 'Fight with poles! We're going to film, and then I'll pay you. I'll give you whatever you want.' When he said that, many young men bloodied each other, playing. 'Hit each other! Be fierce! Argue! When the young men play, let the women begin to scream at them.' That's what he said." Konoko claimed he and other young men each received a machete, a knife, and red cloth.<sup>58</sup>

Personally, I think the dispute that triggered the ax fight was real and that Chagnon was not, in spite of Konoko's account, coaching matters so directly. But I also accept Konoko's statement as a real reflection of his state of mind and that of other young men at Mishimishimabowei-teri. Without their desire to earn trade goods, the family squabble over plantains would probably not have boiled over into a public free-for-all. I think Chagnon's informants realized that this private fracas was a valuable offering for the film crew. By now, they were all veterans of *Magical Death*. So they expertly rescheduled the fight and relocated inside the *shabono*, several hundred yards away. "It's very strange that Chagnon knew when and where the fight was going to take place," said the anthropologist Leda Martins, who spent three years directing Yanomami health programs for the Brazilian government. "The Yanomami are spontaneous, and, when they fight, they don't send a messenger to the nearest white person to have him come and film it."<sup>59</sup>

Almost certainly, different people in the film had different motives. Some were really angry; others were acting out, hoping for trade goods. At first, the combatants, an uncle, Uuwa, and his young nephew, Mohesiwa, deliberately missed each other half a dozen times. Then, after the older man landed a minor, glancing blow, his nephew got angry and chased him. Things began

to take on a different color. "Some people started to get mad," Konoko recalled. "The fight almost became real."<sup>60</sup>

Most of the people in the fight maintained a distance that suggested they did not take it seriously. Moawa, the headman whom Chagnon called the most violent man he had ever met, took no interest in the fight, even though his own blood relatives from Ironasi-teri were beaten. The only thing that concerned Moawa was the camera. The great headman turned his back on his embattled relatives, posed for Asch, and then turned around and went back to his hammock.

A little later, the plaza cleared, and all the others returned unhurt to their hammocks. But a group of seven men surrounded the cameraman Timothy Asch and the soundman Craig Johnson. These Yanomami men were all laughing. One of them, wearing a bright red loincloth, took a new machete, brandished it at the film crew, and pretended to rush them. At the last minute he pulled back. The Yanomami all laughed even harder, though Johnson was terrified. Another man took a pole and deliberately drew a line in the ground in front of the filmmakers, seemingly excluding them from the *shabono*.

"Notice how completely out of their social relationships [we are] that they can kid us about it," Asch observed.

Johnson was still in shock. "Some guy came up with a machete and . . ."

"Yeah, but he was joking!"

"I know, but I didn't know that."

"But they were all—they were all joking! We're really, we're really out of it!"<sup>61</sup>

One of the best jokes about *The Ax Fight* was its solemn title. According to Chagnon, Mishimishimabowei-teri did not have any real machetes and only two old axes when he first met them. In the film, new machetes and axes were everywhere.

Although the images of *The Ax Fight* were confusing and ambiguous, Chagnon's narrative was spellbinding. A 1997 CD version of the film, put together by two USC film professors, included a wealth of unedited material that showed how Chagnon kept rhetorically ratcheting up *The Ax Fight*. He gave one account at Mishimishimabowei-teri, another at a Harvard sound lab, and yet another in an article.<sup>62</sup> Chagnon's first thesis was incest. His second thesis was that closely related men were vying for control of Mishimishimabowei-teri. This latter interpretation matched that of his Ph.D.

dissertation, which sketched Yanomami war in terms of fratricidal conflict over reproductive resources. Chagnon had observed that brothers competed for the same pool of available women,<sup>63</sup> and, as the men got older, they drew closer to their in-laws.<sup>64</sup>

But in 1975 E. O. Wilson published *Sociobiology*. A renowned international authority, Wilson explained how biological relatedness was the key to evolution. In this new conception of biological competition, it was less orthodox for brothers and cousins to fight each other over reproductive resources. In 1977, Chagnon then reworked the entire ax fight into a battle between two groups whose hostility was an exact function of kin distance. The members of Team A were more closely related to one another than to those of Team B. The members of these teams gravitated to one another—like atoms—by the very weight of their biological proximity. Chagnon brought a mathematician on board, performed Olympian feats of genetic looping, and claimed that his revised version was based on conclusive evidence from still photographs only he possessed.<sup>65</sup>

The 1997 *Ax Fight* CD untied all the genetic loops. Of the seventeen individuals Chagnon identified as one “team,” only eight actually behaved in the way Chagnon aligned them.<sup>66</sup> A number of closely related males, including three uncles of Mohesiwa, acted directly opposite to Chagnon’s detailed descriptions. Asch was right about Chagnon’s mental straitjacket.

But the wealth of new material raised new questions. For instance, it was not possible to determine from the freeze-frames and accompanying still shots whether anybody was ever struck with an ax, much less whether, in the climactic moment of the film, the youngster Torawa was “knocked unconscious” or “almost killed,” as Chagnon asserted. This was the traumatic blow, never seen, never filmed, that has made students cringe all over the world—as they heard the horrific thud of the Atomic Energy Commission ax descending on Torawa. But Asch admitted in 1992 that he had created the sickening sound of impact by striking a watermelon.<sup>67</sup>

It was a case of the incredible, shrinking *Ax Fight*. Asch had suspected as much, and he designed *The Ax Fight* to undermine any easy interpretation, by including evidence that, as he put it, made the film “unintentionally post-modernist.”<sup>68</sup> Unfortunately, his dialogue with Johnson flashed by so quickly that only a few viewers ever shared his moment of epiphany—when he realized the Yanomami were “all joking” and the filmmakers were “really, really out of it.”<sup>69</sup>

Student surveys found that a large majority saw *The Ax Fight* as a tradi-

tional chronicle of savagery. A sophomore at USC reacted typically: “The only thing I know about the Yanomami is that they act on their raw passions. They are very primitive people. It seems that they don’t even think before they act. They are very violent people that just go raiding other villages. They take drugs and they freak out on drugs, and on drugs they’ve been known to attack people.”<sup>70</sup>

Chagnon, in his textbook narrative, also looked upon the Mishimishimabowei-teri primarily as threats. “My study of the Shamatarí groups began with threats to my life and ended that way.”<sup>71</sup> There was no question of how Chagnon’s expeditions and their germs might have threatened the lives of the Mishimishimabowei-teri and the other Shamatarí.

During the filming of *The Ax Fight*, the village of Bisaasi-teri was experiencing its worst epidemic since the measles outbreak of 1968. Again, there was a double outbreak of malaria and respiratory disease. Falciparum malaria claimed six lives out of about three hundred at the Mavaca mission; four persons died while trekking to another village, so the missionaries could not immediately medicate them. It was terrible, and other villages along the Orinoco experienced similar outbreaks.<sup>72</sup> But it was a only fraction of the loss the Mishimishimabowei-teri experienced.

In the middle of the double epidemic, Chagnon took Bisaasi-teri guides up the Mavaca River.<sup>73</sup>

With sickness raging at the mission stations, there should have been an absolute ban on travel to the inland villages except for express emergency relief. But the widespread sickness was also related to the frenetic pace of scientific research in 1971. During this year, Chagnon gathered blood at more than a dozen villages on the Ocamo River alone,<sup>74</sup> made first contact with another huge village on the Upper Mavaca (where he also collected blood),<sup>75</sup> and shot sixteen miles of film at Mishimishimabowei-teri. He kept traveling through the malaria and cold epidemics sweeping the mission bases, picking up guides, paying everyone in steel, and never stopping for quarantine controls. Sometimes he had to travel at full throttle at night. He couldn’t stop. This was the year Neel sent more geneticists into the field than ever before—three complete expeditions, one after the other. And this was the year Asch received a grant from the National Institute of Mental Health to film the Yanomami as never before. Asch needed half the village of Mishimishimabowei-teri to carry all their gear.<sup>76</sup>

In this way, the worst epidemics to hit the Upper Orinoco coincided with the AEC’s two most productive years, 1968 and 1971.<sup>77</sup> Sickness soon spread

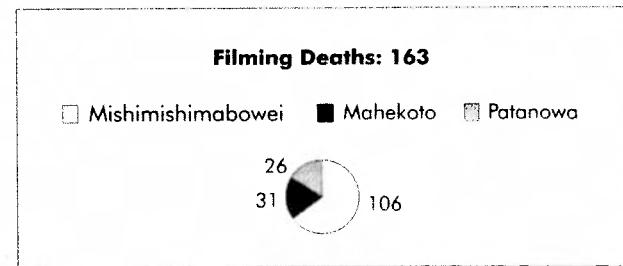
to Mishimishimabowei-teri. According to Chagnon, one man from Ironasi-teri, Mohesiwa's group, died of respiratory disease right after *The Ax Fight*.<sup>78</sup>

Many other deaths followed. "A month after Chagnon left the Mishimishimabowei-teri in 1971, I was fishing on the Mavaca River," recalled Juan Finkers, a Salesian brother who has lived on the Mavaca River since 1971, where he collected plants and myths and wrote a book, *The Yanomami and Their Food System*. "Two Yanomami, a man and a boy, came downriver in a boat made of bark, like a shell, that they use. 'Where are you going?' I asked. 'We're all dying, and we don't want to die,' they answered. 'We're at the Moshata River [a tributary of the Mavaca], and we're all very sick.' That's the first time I met the Mishimishimabowei-teri because the mission had never gone that far. I went back to the mission to get the nuns who were nurses, and then we went up the Mavaca, where we found a group of twenty-eight Mishimishimabowei-teri. We cooked and took care of them while the government malaria team, which landed by plane in Mavaca, came upriver by boat. They found that twenty-four had falciparum malaria. Others had hepatitis. Many others had either died or fled into the mountains because they go to the mountains in small groups to get the spirits off their trail, so that they can't make them sick any more."<sup>79</sup>

Students who see *The Ax Fight*, *Magical Death*, or any of the twenty other films about the Mishimishimabowei-teri have not been burdened by the knowledge that the community was decimated shortly after the filmmaking. Chagnon employed the same distancing device he had used to soften the death of so many Yanomami filmed in *The Feast*. He changed the name of the village, again.

The Yanomami who died after the filming of *The Feast* became "Platanal Yanomami," instead of Mahekoto-teri.<sup>80</sup> The dead Mishimishimabowei-teri became "Village 16." In an obscure journal, Chagnon wrote about an epidemic that devastated Village 16—a *shabono* of nearly 400 individuals on the Upper Mavaca that he had first contacted in 1968.<sup>81</sup> Disease wiped out 27.4 percent of its members, 106 people. Because of its location, its size, and the time frame, the village could only have been Mishimishimabowei-teri. To clinch the matter, Chagnon identified Mishimishimabowei-teri as "Village 16" in an appendix to his book *Studying the Yanomamo*.<sup>82</sup>

Chagnon has maintained that respiratory epidemics decimated Village 16. He has admitted he has only a vague notion of when this might have happened—sometime in 1973 or 1974—because he was gone for two years.<sup>83</sup> He cites Salesian nuns as his sources. The missionaries have not surprisingly



pointed the finger back at Chagnon, saying his expedition was probably responsible.<sup>84</sup>

The mission records support Finkers's account to a significant degree, but not perfectly. After *The Ax Fight* was filmed, Finkers did go up the Mavaca River, where he found, as he claimed, twenty-four of twenty-eight Indians extremely ill from falciparum malaria and hepatitis.<sup>85</sup> However, this happened three months after Chagnon left the field, not one month. And it appears that a later epidemic, in the fall of 1973, was responsible for about 40 percent of the total deaths at Mishimishimabowei-teri.<sup>86</sup>

But whether the Mishimishimabowei-teri died in 1973 or 1971—or sometime in between—the fact is that Chagnon's procedures of "first contact" and alliance making opened up a new era of epidemics. (See Appendix 1: "Mortality at Yanomami Villages.") Chagnon attributed the deaths at Village 16 to intervisitation with the Mavaca mission.<sup>87</sup> Elsewhere, he took credit for brokering that intervisitation.<sup>88</sup>

When he decided to arrange an alliance between Bisaasi-teri and Mishimishimabowei-teri, Chagnon knew "this was risk taking in spades." He correctly feared that he "might be a contributor to an enormous disaster."<sup>89</sup>

Today, anyone who brings a remote group into permanent contact with the outside world and outside disease is held accountable, at least to the anthropological community, for providing ongoing medical care. "All newly contacted native groups should be provided with immediate, long-term access to modern medical care," according to a 1989 *National Geographic Research* article by the anthropologists Kim Hill and Hillard Kaplan. "Once new diseases are introduced, intervisitation among groups leads to massive epidemics. If untreated, a third or more of the population can die within a very few years. . . . [O]ften, the groups are neglected after the initial excitement associated with contact wanes."<sup>90</sup>

The protagonists of Chagnon and Asch's most famous films all met with

disaster. Some 27 percent of the Mishimishimabowei-teri,<sup>91</sup> 25 percent of the Mahekoto-teri,<sup>92</sup> and at least 12 percent of the Patanowa-teri died.<sup>93</sup> Chagnon did not forget them, however. He blamed others, principally the Salesian missionaries, for these deaths, even as he changed the names so that no one could link the villages to his own expeditions. Chagnon's computer printouts, blood samples, ID photos, maps, and films were all scientific supports for an American saga in which the anthropologist triumphed over intransigent Indians and the Indians politely died off-camera. Watching *The Feast* and *The Ax Fight*, knowing that many of the dancers and fighters will soon be dead from imported disease, gives these documentaries the feel of unintended snuff films.