# The Siriono of Eastern Bolivia: A Reexamination

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*The Siriono Indians of eastern Bolivia have one of the simplest cultures on record. In a famous ethnography, Allan Holmberg explained Siriono cultural poverty mainly with a psycho-functional model, in which the demands of the food quest were said to have prevented the elaboration of most aspects of Siriono culture. This article reexamines the cultural status of the Siriono in terms of population decimation, flight into a new ecological niche, acculturation to Whites and to other Indians and Afro-Americans, and a strategic but culturally corrosive shift from patrilocal to matrilocal residence. The article concludes that the reexamination of all past ethnographic work, and perhaps especially of the "classic, " or more influential ethnographies, is one of the most urgent tasks facing cultural anthropology.*

**KEY WORDS:** Siriono Indians; depopulation; acculturation; matrilocality.

# Introduction

The Siriono Indians of eastern Bolivia, who are widely known among social scientists through Allan Holmberg's famous Nomads of the Long Bow (1969),[1] have one of the simplest cultures on record. They are reported as having no games, no musical instruments, and very little decorative technique (Holmberg, 1969: 208, 110); virutally no myths, folktales, or cosmology (1969: 116–118, 238–240); no shamans or other ritual or medical specialists, almost no herbal medicines, rudimentary magical beliefs, and an "almost negligible" ceremonial life (1969: 228, 230, 240, 220); no knowledge of fire-making and no techniques for working bone, horn, shell, stone, hide, or metal (1969: 17, 22, 26); no poisons, traps, weirs, nets, or hooks for exploiting the numerous streams in their environment, nor any watercraft for crossing or navigating the streams (1969: 62, 103); no domesticated animals — not even the dog, which they fear (1969: 69); flimsy, inadequate shelters (1969: 34–38); and, in general, an inadequate adjustment to their rain-forest habitat (1969: 220, *et passim).*

Purportedly mainly hunters and gatherers, the Siriono are ineffectual pursuers of the relatively scarce game in their habitat (Holmberg, 1969: 71–72, 248–249). Although

[1] Holmberg's study was first written in the form of a doctoral dissertation at Yale University in 1947, under the distinguished aegis of George Peter Murdock, Clark Hull, John Dollard, and Bronislaw Malinowski. It was first published in 1950 as Publication No. 10 of the Institute of Social Anthropology, Smithsonian Institution, and it is this 1950 edition that is most widely cited in the anthropological literature. I have used the 1969 reprinted edition, however, for three reasons. First, it carries Lauriston Sharp's evaluative foreword. Second, it includes as an appendix Holmberg's "Adventures in Culture Change," originally published separately, which provides additional data and insight into the Siriono. Third, the 1969 edition is the one most readily available to professionals and students who wish to follow my arguments with Holmberg's study at hand.

"collecting ranks next to hunting in importance" (1969: 63), the range of gathered foods seems narrow. "The digging of roots and plants and the grubbing of worms are almost negligible occupations" (1969: 65). And, although the Siriono grow maize, sweet manioc, *camotes,* papaya, cotton, tobacco, *urucu,* and calabashes, their cultivated plots "are seldom over fifty feet square" and evidently are poorly tended. Furthermore, "little attention is paid to the time of year in sowing" (1969: 67–68, 101–102). One is left with the impression of shallow commitment to and relatively low returns from horticulture.

Although starvation "never occurs," there is "a strong anxiety about questions of food." Hunger is the "most frequently frustrated" of the basic drives, and "the attention of the Siriono is most frequently and forcibly focused on his stomach" — even in his dreams (Holmberg, 1969: 71–72, 83, 241–242, 248). Perhaps reflective of their subsistence insecurity, the Siriono have some of the least discerning palates on record: "Apart from snake meat, bats, and a few poisonous insects there are few things the Indians refrain from eating" (Holmberg, 1969: 79).

Holmberg judged the Siriono ungenerous and quarrelsome about food (1969: 87, 151, 154). Food is rarely shared beyond the extended family, and even within that unit its distribution "does not follow any strict pattern" (1969: 88). Although certain meat foods ideally are reserved for the aged, this rule is followed "only when other animals are relatively plentiful" (1969: 81). Furthermore, "few hunters pay any attention ... at all" to the rule that "a man is not supposed to eat the flesh of an animal which he kills himself' — although this rule apparently was observed closely in the past (1969: 79–80).

Complementing these Hobbesian patterns is the shortness of Siriono life. The average Siriono life span "probably falls somewhere between 35 and 40 years," and "there is a fifty-fifty chance, at least, that one's parents will not be alive when one reaches childbearing age" (1969: 225,220).

What are we to make of this culturally impoverished and ecologically insecure people? Are they legitimately representative of the interplay of "man and culture in a counterfeit paradise," as Meggers (1971) clearly implies by her inclusion of them among the five groups chosen to represent the cultural ecology of the Amazonian *terra firme?* Are they a "still-living Old Stone Age people ... who 'from the beginning' retained a variety of man's earliest culture," a view that Sharp (1969: xii) seems to favor? Holmberg's own assessment of the cultural status of the Siriono is problematical. Early in the monograph, Holmberg (1969: 10–11) writes:

> The Siriono are an anomaly in eastern Bolivia. Widely scattered in isolated pockets of forest land, with a culture strikingly backward in contrast to that of their neighbors, they are probably a remnant of an ancient population that was exterminated, absorbed, or engulfed by more civilized invaders ... With the rest of their neighbors the Siriono show few affinities, cultural or linguistic ... It is probable that... they have gradually been pushed north-

> ward into the sparcely inhabited forests they now occupy, and that in the course of their migrations they have lost much of their original culture.

But later in the monograph, Holmberg quite forcefully explains Siriono culture in strictly psycho-functional and mentalistic terms that ignore historical factors. Besides touting the Siriono as the "quintessence" of "man in the raw state of nature" (1969: 261), Holmberg explains Siriono cultural poverty by referring to their privations:

> It would seem that their concern with the immediate world has left the Siriono little time to speculate on cosmological matters (1969: 116).
>
> Native religion has not reached a high degree of elaboration among the Siriono. One of the reasons for this may be that the Indians are forced to devote most of their time and energy to the immediate struggle for survival (1969: 238).
>
> Since most of a native's time must be spent on the quest for food (or resting from it), little is left over for the pursuit of other activities. It would seem, indeed, that preoccupation with the food problem, *more than any other single factor,* has operated to prevent an elaboration of most other aspects of Siriono culture (1969: 254; emphasis added).

The implication is clear: The Siriono have been so busy just trying to survive that they have not had time to think their way to cultural complexity. We also have Sharp's statement that Holmberg "long rejected" the view that the Siriono "may have degenerated to this level from a more advanced technical condition" (Sharp, 1969: xii).

Steward and Faron (1959: 378–379), Service (1966: 7), and Martin (1969: 248, 254) have all suggested in passing that the Siriono present us with an example of deculturation, that is, a case in which significant cultural elements or even whole institutions have been lost to the group and not replaced by functional equivalents. But, to my knowledge, no one has fully examined the Siriono case in light of what we can infer of their own history or of analogous instances of known deculturation in South America. Such examination is the purpose of this article. The Siriono case is here reassessed; consideration is given to the effects of acculturation, entrance into a new ecological zone, depopulation, and a decultur- ative change to matrilocality. The first of these processes, acculturation, is assessed on the basis of evidence provided by Holmberg's monograph, Ryden's slightly earlier monograph (1941), and inferences from ethnohistorical materials. The arguments for the disruptive effects of the last three factors must rest on analogy, and for this purpose I shall discuss the Kaingang (Henry, 1964) and the Mundurucu (Murphy, 1958, 1960). I recognize that the processes of change at work in these other cases do not duplicate exactly the processes or results in the Siriono case. For instance, the Siriono became ungenerous and quarrelsome about meat, whereas Kaingang hunters continued to allow others first rights to game (Holmberg, 1969: 87, 151, 154; Henry, 1964: 98–99). Within these limitations, however, the analogies seem to me legitimate and heuristically valuable.

# Acculturation

Holmberg reports that Siriono-White contact goes back to 1693 and that some of the present-day Siriono purportedly living under "aboriginal conditions" are escapees from missions and neo-Bolivian plantations (Holmberg, 1969: 11, 72, 266, 275; cf. Ryden, 1941: 38). Furthermore, even among a band of Siriono who supposedly "had had so little contact with the outside world that about the only items of Western technology found among them were two machetes worn to the size of pocket knives" (Holmberg, 1969: 263–264, xxiii), there existed the "logical suspicion on the part of the Siriono that we intended to profit by the results of their labors, as had been the case in all previous instances of contact with whites" (Holmberg, 1969: 271).

Holmberg notes in passing that the Siriono are "almost Negroid" in pigmentation, and that European "travelers and monks" are responsible for such markedly Caucasoid features as pilosity (1969: 7). But he seems to underestimate the possible cultural implications of these Afro-American and Euro-American contacts. Holmberg also largely ignores the possibility of acculturation to other indigenous peoples, although he does volunteer that the Siriono have adopted the cultivation of calabashes and tobacco within living memory (1969: 67,90). Cardus (1886), whom Holmberg cites (1969: 14–15) but does not quote, provides a more complete picture of the external forces impinging on the Siriono in the 19$^{th}$ century. Cardus reports not only the presence of Caucasoid "Siriono" who have been abducted from neo-Bolivian settlements, but also the presence of "a Negro among them, whom we assume is the offspring of some Negro deserter from the army in Independence times," as well as "some families of a different origin, whose language the Guarayos [with whom the Siriono had close contact] could not understand" (Cardus, 1886: 280, translation mine; cf. Ryden, 1941: 3638). It seems apparent that in the 19$^{th}$ century the Siriono were living in close proximity to Whites, that they had received in their midst at least one Afro- American (and perhaps more), and that they had absorbed other Indians (escapees from haciendas?) as well. It would be strange if these diverse contacts were culturally unimportant. As Nordenskiold (1924: 186, 188) cautioned, "we must always bear in mind that more than 400 years have elapsed since the Discovery of S. America, and that the Indians have learnt a great deal since then. There are writers who consistently forget this fact" (cf. Nordenskiold, 1919: 166–168, 227; 1920: 119–122). Indeed, the possibility exists that there had been no "aboriginal" Siriono culture for many decades prior to Holmberg's study.

Holmberg states that the Siriono frequently raided neo-Bolivian rubber tappers for machetes and axes during the rubber boom of the 1920s (1969: 159) and quotes *in extenso* (1969: 13–14) a passage from D'Orbigny (1839: 341–344) stating unambiguously that the Siriono were raiding "to obtain axes and other tools" in the early 19$^{th}$ century. In this regard, Holmberg might also have quoted Cardus (1886: 283), who observed that, apart from the motive of vengeance, the Siriono raided settlers and travelers in the late 19$^{th}$ century because "they lack ... cutting instruments, such as

axes and knives, instruments which they sorely need and which they cannot procure by any other means" (translation mine). Ryden (1941: 36) is also clear on this point: "The most important reason for these forays [raids on neo-Bolivian settlements] ... is their need of implements made of iron." Did the Siriono, like the Tapajos River Mundurucu described by Murphy and Steward (1956: 344), become so dependent upon securing certain tools from Whites that they abandoned and failed to transmit to succeeding generations part of their aboriginal material culture? It seems possible that they did.

Assessment of the possible effects of these raiding patterns upon Siriono material culture is complicated by the fact that much of Siriono territory lacks stone, although a "poor grade of igneous rock" is available along the rivers (Holmberg, 1969: 4; Nordenskiold, 1924: 4). Could there have been a genuine "necessity" for the Siriono's obtaining materials for cutting implements from outside of their habitat? Perhaps, but in a very special and limited sense. The Siriono are by no means devoid of nonlithic cutting implements. Holmberg (1969: 26) writes that "Any piece of bamboo serves for a knife," and Ryden (1941: 70, Fig. 24) provides an illustration of a variety of nonlithic utensils. If, as is probably the case, the Siriono migrated into eastern Bolivia from the Gran Chaco, they have long been accustomed to a stoneless habitat. Metraux (1946: 198) observes that "not a stone can be found over most of [the Gran Chaco]," where the major cutting tools are made from teeth, bamboo, and shell (Metraux, 1946: 293; Nordenskiold, 1919: 62–65) — veritably the same materials the Siriono use. In both cases, arrow points are made from bamboo and other woods (Holmberg, 1969: 31–33; Metraux, 1946: 295). Although many Chaco groups do use stone axes and wedges for splitting wood and perhaps for felling trees, the material for these implements must be obtained through trade with peoples to whom local stone is available (Metraux, 1946: 293). Assuming that the Siriono are relatively new to their present habitat, it is possible that they did not have time before European intrusion to work out the intra- and interethnic trading networks that would have allowed them to obtain stone cores or tools. It is also possible, as Nordenskiold (1924: 4) suggests, that existing trade networks collapsed once neo-Bolivians became a ready source of metals through raid. In either case, we are dealing with a type of "acculturative" effect, if we regard "acculturation" in its general sense of the effects that one culture has upon another with which it is in direct contact.

In one instance, that of Siriono ignorance of fire-making, the record is clear. Holmberg (1969: 17) acknowledges that the loss of fire-making techniques occurred within living memory, and we know from other sources that the Siriono indeed traditionally made fire by the friction method (Cardus, 1886: 281; Wegner, 1934: 177; Ryden, 1941: 46–47). But Holmberg fails to explore the possible connection between this known instance of culture loss and the Siriono practice of raiding neo-Bolivians, or other possible acculturative experiences. Interestingly, Ryden (1941: 35–36) reports that the Siriono at the Casarabe mission station, which was also the site of Holmberg's initial contact with the Siriono, "stated that sometimes they raided a settlement ...just to provide themselves with fire when their own had gone out." Like other rainforest peoples,

the Siriono were careful conservers of fire (Holmberg, 1969: 17; Dillingham and Isaac, n.d.), and only rarely did they have to resort to the laborious, hour-long process of generating fire anew by friction (Wegner, 1934: 177). In this light, it seems reasonable that, once neo-Bolivian settlements became a convenient source of replenishing fire in the infrequent event that a band's fires were all extinguished, the Siriono simply abandoned their own fire-making technique and did not transmit it to the next generation (again, cf. Murphy and Steward, 1956).

Finally, there is the peculiar relationship between epidemics and warfare on the one hand, and Siriono contact with neo-Bolivians on the other. Holmberg (1969: 12) mentions the smallpox and influenza epidemics of the 1920s. He also reports that the Siriono were under attack from the south by the Yanaigua and from the north by the Baure (1969: 159). But it was Ryden (1941: 26, 29–30) who perceived most clearly the relationship of these events to Siriono accult nation:

> It is the heavy decimation worked by that epidemic that, in conjunction with the onslaught by the Yanaygua [Yanaigua], compelled the Siriono after 1925 to seek contact with the whites ... At the beginning of the hostilities with the Yanlygua Indians, the Siriono had suffered severe decimation from the abovementioned epidemic. They were unable to put up effective resistance to their invaders, and had to seek protection from the whites. Therefore, in 1925 they made peace with the settlers of the Rio Grande region, and it is thanks to these newly established peaceable conditions that Franciscan missionaries among the Siriono were able to found the mission station Sta. Maria de Lourdes. For the same reason, the more northern Siriono hordes have entered into peaceful relations with the whites, and it has been possible to establish the Casarabe pacification station (1941: 26, 29–30).

Ryden goes on to state that, at the time of his visit in 1939, the Siriono at Casarabe "lived in fear" of raids by the Yanaigua, who resided in "close vicinity to Casarabe" (Ryden, 1941: 30). Apparently, however, more than fear of the Yanaigua detained the Siriono at Casarabe, because Holmberg speaks of "forced labor" there and of Siriono who "had run away from ...Casarabe" (1969: xxii, 72). Regardless of the nature of the hold the missions had over the Siriono, it is evident that whatever "aboriginal" content remained to Siriono culture was put to a severe test some 15 years before Holmberg conducted field work among a Siriono band purportedly "wandering under aboriginal conditions in the forest" (1969: xxii).

## Ecological Displacement

There is general agreement that the Siriono were pushed into the Bolivian rain forest from the south or east, that is, from a savannah environment (Holmberg, 1969: 10–11;

Metraux, 1942: 111; Steward and Faron, 1959: 379; Ryden, 1941: 127; Nordenskiold, 1924: 10–11). Although none of the above sources so states, the Siriono's lack and fear of the dog (Holmberg, 1969: 69) may also be indicative of a Gran Chaco origin, since Metraux (1946: 265) reports that "there is some historical evidence that the Chaco Indians did not have domesticated dogs before their contacts with the Whites." He states that the Machicuy and the Mbaya, for instance, acquired the dog late in the $18^{th}$ century (cf. Nordenskiold, 1924: 114).

It is reasonable to hypothesize that a mere change from one ecological zone to another could account for some of the peculiarities and poverty of Siriono culture? Instructive in this regard are the Kaingang Indians of the mountain forests of Santa Catarina, Brazil, studied by Jules Henry in 1932–1934 (Henry, 1964).

> The Kaingang were [until pacification in 1914] forest nomads. For perhaps three hundred years that was the only life they knew, and they resented it. The forest was not their original home, for they were driven into it from their farms on the savannahs to the west by their enemies [the Kangdja]. They speak with nostalgia of the time long ago when they lived in little fenced villages and planted corn, beans and pumpkins. Before the pacification [in 1914], they had no villages and instead of dividing their time between cultivating ... and hunting in the forest as they used to do [some 300 years previously], they wandered in the forest and planted no crops at all (Henry, 1964:3).

Henry does not offer any explanation of why the Kaingang gave up horticulture entirely in their new, mountain home, but it is possible that their knowledge and techniques of savannah cultivation could not be transferred to the higher altitudes. Also, the social breakdown that occurred with the shift from savannah to mountain forest necessitated a nearly constant mobility — actually, flight —that doubtless would interfere with successful horticulture. Although the Kaingang were warlike and "were busily killing their affinal relatives and raiding the villages of 'other' groups of their 'own people'" (Henry, 1964: 59) when they were savannah dwellers, their flight into the mountains resulted in a chaotic "Warre of every one against every one," to use Thomas Hobbes's famous phrase (Henry, 1964: 50, 59).

In fact, nearly the entire Kaingang social fabric unraveled. Henry speaks of the "formlessness" and "structurelessness" of Kaingang society, and of social bonds "haphazardly" slung (1964: 33, 45, 49). In the mountains, band composition became "ephemeral," and "even the biological family had little permanence as a cooperating unit" (Henry, 1964: 97, 36). Phratry organization, with its strict exogamy and rules for the transmission of personal names and body-paint designs, became "socio-sexually a dead issue" (1964: 176–177). Most other rules governing marriage broke down as well. The mountain Kaingang practiced "every kind of marriage known to anthropology" (1964: 33), and they engaged in "marriage and love affairs among almost all classes of relatives. Only marriages between parents and children and between full brothers and sisters are avoided"

(1964: 19). Other aspects of Kaingang traditional culture suffered loss, too. Curative singing and shamanistic extraction of super- naturally intruded projectiles were both discarded (Henry, 1964: 96). The repertoire of myths and folktales apparently was reduced, and the remaining tales feature "a monotonous repetition of compulsive murder, revenge, and annihilation" (1964: 95).

In terms of subsistence, the pre-1914 mountain Kaingang were mainly bow hunters. They lacked animal traps, fishing techniques, and any method of taking birds except to shoot them individually with the bow and arrow (Henry, 1964: 6, 157; cf. Holmberg, 1969: 62,56). In marked contrast to most nonhorticultural- ists, for whom gathering equals or outranks hunting in importance (Friedl, 1975: 13, 18–19; Lee, 1968: 4248; Service, 1966: 10–11), the mountain Kaingang relied relatively little on gathering, and women's role in the total economy was re- lativly slight (Henry, 1964: 172). Although they collected substantial quantities of pine nuts in season and were able to store some for later consumption, wild fruits were of slight dietary importance, and Henry says he "never heard of the Kaingang using any roots for food" (1964: 161 ;cf. Holmberg, 1969: 65). Furthermore, the mountain Kaingang were precariously dependent upon one game animal, the tapir, which was easy to track and kill only in summer, the only season in which wild fruits and nuts were available in quantity. As a result, "in the lean days of winter they ... grow weak and retch and vomit with hunger" (Henry 1964: 6). And, "in human relationships the overt, articulate emphasis is always upon food" (Henry, 1964: 35; cf. Holmberg, 1969: 71).

Inadequate clothing and shelter added to the misery of Kaingang life in the mountains. Although primarily hunters, the mountain Kaingang "never do anything more with an animal skin than make soup of it" (Henry, 1964: 5 ; cf. Holmberg, 1969: 22). Their net robes and shirts, which doubled as night covers, left them shivering and miserable on winter nights (Henry, 1964: 5). And, although they had lived in durable houses on the savannahs some 300 years prior to entering the mountains — and, surprisingly, were still able to construct one such dwelling to satisfy Henry's curiosity (Henry, 1964: 165–166) —in their new setting they "hate to build the frail little shelters they call houses, and they never do until the rain is upon them" (1964: 9, 164–165). Finally, they had "no knowledge of boats or rafts to carry them across the rivers that lie everywhere around them" (Henry, 1964: 6; cf. Holmberg, 1969: 103, 105; Nordenskiold, 1924: 175).

In summary, the Kaingang experienced not only social disruption but also marked deculturation as the result of their forced migration from the savannah into the mountain forest. And the passage of some 300 years in this new environment did not result in a successful sociocultural readjustment. Of course, ecological displacement is not the only force impinging upon Kaingang culture. The Kaingang also experienced some indirect acculturative displacement even before the present century, e.g., raiding of neo-Brazilians for metal pots resulted in the virtual cessation of pot-making among the Kaingang themselves (Henry, 1964: 172–173). But for heuristic purposes, I have restricted the discussion to those cultural effects that seem to be the result of ecolog-

ical displacement. In this framework, depopulation resulting from internecine warfare is treated as an effect of ecological displacment, insofar as displacement removed restraints on homicide as well as peace-making mechanisms.

# Depopulation

We have already seen that the Siriono suffered population decimation from smallpox and influenza in the 1920s (Holmberg, 1969: 12; Ryden, 1941: 26, 29–30). Furthermore, Holmberg's reference to the present-day Siriono as a possible "remnant of an ancient population" (1969: 10) surely means that he suspected a much earlier, severe decimation. Indeed, the present 15% incidence of clubfootedness and the apparently 100% incidence of the peculiar depressions in the skin of the ears would seem more likely attributable to genetic drift induced by depopulation — which, in this regard, operates much the same as migration, the classic mechanism of genetic drift — than merely to "the highly inbred character of the group" (Holmberg, 1969: 8–9).[2] At any rate, neither Holmberg nor Ryden seems to have appreciated that depopulation by itself can result in decul- turation. To illustrate the swift and profound ramifications of rapid depopulation, we shall turn to the Mundurucu of the State of Para, Brazil, described by Murphy (1958, 1960).

In conjunction with the demands of rubber collecting, the decimation of nearby hostile Indians, and mission influence, depopulation brought an end to Mundurucu warfare in 1912–1914. The cessation of warfare severely affected other important aspects of Mundurucu culture (Murphy, 1958: 53–58). First, it brought to an end the elaborate head-taking and intervillage victory celebration feasts. Second, it deprived moiety organization of an important *raison d'etre,* the burial of the humeri of each other's slain warriors. Third, it further weakened clan organization, which, as we shall see, had already lost many of its corporate functions as the result of a change from patrilocal to matrilocal residence: "the attachment of feather pendants to the ears of the trophy head was one of the few remaining corporate functions of the fragmented clans" (Murphy, 1958: 58). Finally, the cessation of warfare deprived Mundurucu males of one of their primary interests: "valor, trophy-head and captive taking, and the great ceremonies centering on the heads" (Murphy, 1960: 44). Whether or not the cessation of warfare had similar effects on Siriono culture neither Holmberg nor Ryden tells us. But it is clear that depopulation in the 1920s was a major factor in the cessation of Siriono hostilities toward both Whites and other Indians (Ryden, 1941: 29–30).

[2] Interestingly, Cardus observed a foot deformity late in the 19$^{th}$ century: "The feet of all of the Siriono are a bit twisted toward the inside *[un poco torcidos hacia adentro]*, which gave the impression that parents worked this violence purposely on the feet of children, especially females, so that they would not flee. But it seems that this irregularity stems only from the custom they have of sitting upon their feet and with their legs half-crossed" (Cardus, 1886: 281; translation mine). I gather he was describing a condition we might call "pigeon-toed" rather than "club-footed," but this lesser deformity may have been the precursor of the more marked foot deformity observed some 55 years later by Holmberg.

Further depopulation within a decade of the cessation of warfare had even greater corrosive effects on Mundurucu culture. At this point it should be noted that, whereas it is the riverine Mundurucu who were immortalized in Murphy and Steward's (1956) famous "Tappers and Trappers" article, I am discussing here the effects of depopulation upon the culture of the nonriverine, savannah villages, where "a way of life which is distinctively Mundurucu" could still be observed in recent years (Murphy, 1960: 148). During the 1920s and 1930s — only a generation before Murphy's field study in 1952–1953 — a large number of savannah Mundurucu relocated on the Cururu River in order to engaged in rubber collecting, thereby reducing the population of the remaining seven savannah villages to 360, or less than one-half the previous total (Murphy, 1960: 148, 154–177).

Apart from war-related ceremonies, mentioned above, and clan-related activities, which will be discussed later, the ceremonial life of the savannah Mundurucu centered around two ceremonies at which the spirit Mothers of Game were propitiated. The longer and more elaborate of these ceremonies lasted throughout the rainy season (mid-September through May), while the shorter, 10-day ceremony was held during the dry season. Among their other functions, the Mothers of Game ceremonies promoted inter-village integration, because they required the cooperation of several powerful shamans, and neighboring villages took turns hosting the gatherings (Murphy, 1958: 58). The longer Game ceremony lapsed about 1930, "when a large part of the Mundurucu population moved to the Cururu River," and the short, 10-day ceremony lapsed about 1945 (Murphy, 1958: 51–52). Although the savannah Mundurucu still depend upon hunting for meat and "still believe in the game-animal spirits and still give credence to the efficacy of the ceremonial means of propitiating them ... the failure to translate the beliefs into ... action has robbed them of immediate reality and caused their transmission to the young to become attenuated" (Murphy, 1960: 134–135).

Murphy's informants attributed the cessation of these Game ceremonies to a lack of "a sufficient number of powerful shamans to perform the rites effectively" (1958: 51; 1960: 132ff.). Also, "there are not enough people left in the savannahs to stage a large-scale reunion" for carrying out intervillage ceremonies of any kind (Murphy, 1960: 134).

Furthermore, the number of shamans was declining rapidly in the early 1950s, and there may soon come a day when the Mundurucu, like the Siriono, lack shamans entirely. Murphy describes a vicious circle of shamanistic decline. First, depopulation reduced the number of shamans and the total population so drastically that the most important shamanistic ceremonies could no longer be held. Second, the remaining shamans — having largely been deprived of their positive roles — became increasingly vulnerable to scapegoating and execution for sorcery, their traditional negative role. Third, many other shamans left the Mundurucu area "in flight from execution parties or in fear of future accusation. Others refuse to practice shamanism in the hope, often vain, that they will thus shield themselves from suspicion" (Murphy, 1958: 138).

## The Change to Matrilocal Residence

Although Holmberg referred to the Siriono kinship system as "matrilineal" in his famous ethnography (1969: 128), he did not mean to convey unilineality in the modem, more precise sense of that term. In fact, he later stated unequivocally that his data indicated "that no such unilineal descent groups exist" (letter, quoted in Postal and Eyde, 1963: 285;cf. Scheffler and Lounsbury, 1971: 159–161).[3] But apart from Shapiro's unexplained "suspicion" of patrilocality (Shapiro, 1968: 45n), there seems to be no doubt that the Siriono residence pattern is predominantly matrilocal (Holmberg, 1969: 217–218; Scheffler and Lounsbury, 1971: 160–161).

Recently, Divale (1975) has demonstrated persuasively not only that "societies which are predominantly matrilocal ... have migrated to their present locale in the recent past," but also that matrilocality itself is the result of this migration "into a new region which is already inhabited by other societies of similar social complexity" (102, 104–105; see also Divale, 1974). Although the Siriono are not included in Divale's cross-cultural sample, they apparently would fit comfortably into his model. The Mundurucu, who do fall into Divale's sample, not only exemplify the model but also provide an instance in which we can assess some of the concomitants of this change in residence pattern. When first reported by Whites in 1770, the Mundurucu inhabited the savannahs of the upper Tapajos River drainage, an area into which they had probably recently intruded, having expanded from a more southerly homeland. Unlike the Kaingang case, discussed above in the section on ecological displacement, Mundurucu expansion evidently did not take them into a greatly different ecological zone from the forest-savannah to which they were previously adapted (Murphy, 1969: 9–10).

Until about mid-19$^{th}$ century the Mundurucu were a patrilocal people whose more than 40 patrilineages were organized by clan, subclan, moiety, and phratry (Murphy, 1958: 10–11; Murphy, 1960: 71ff.). Each village had a men's house in which the dominant or only clan of the village stored its large, wooden "trumpets," which had to be played and "fed" daily in order to placate the clan spirits that resided in them (Murphy, 1958: 63–67; 1960: 106–107). Elaborate ceremonies were held whenever a new trumpet was installed in the men's house or when existing trumpets were moved into a new men's house. Each village held a special annual feast to the spirits of the trumpets.

The change from patrilocal to matrilocal residence, which occurred after the middle of the 19$^{th}$ century, undermined lineage and clan organization and those aspects of

[3] Holmberg's classification of the Siriono kinship system as "of the Crow type" (1969: 140) reinforced the impression of "matrilineality." But, as Scheffler and Lounsbury point out, Crow cousin terminology does not always indicate the presence of matrilineal descent groups (1971: 155). Furthermore, in the Siriono case, Scheffler and Lounsbury point out that "one might have made out almost as good a case for its being 'Omaha' as for its being 'Crow'" (1971: 109). Shapiro (1968: 42) agrees on this point and further notes that Siriono kinship terminology appears to be "an amorphous entity displaying, here and there, characteristics of several more definite structures" (1968: 43). Apparently, the Siriono have a basically bilateral kinship system of the "hawaiianoid" type (Shapiro, 1968: 50). Needham's (1961, 1964) argument for Siriono matrilineality and prescriptive alliance seems weak and forced.

Mundurucu religion that centered around the men's house and clan trumpets. In the 1950s, "informants were often vague when asked to explain the connection between clans and instruments," and "it is doubtful that many new [trumpets] will be made" (Murphy, 1958: 135,66–67).

The number of Mundurucu clans has declined from "well over 40" to only 30, and although Murphy attributes this decline to depopulation, it surely also reflects the disorganizing effects of the shift to matrilocality (Murphy, 1960: 72). The declining importance of the clan as a unit of social and religious organization is reflected in the demise of clan mythology. "Some myths, such as that of the origin of clans collected by Father Kruse [in 1934], were specifically sought, but were unknown to those questioned" (Murphy, 1958: 68). For that matter, oral literature in general is clearly on the wane, and there may well come a day when the Mundurucu are as devoid of mythology, folklore, and cosmology as the Siriono are.

As the result of depopulation and the dispersion of clan membership through the change to matrilocal residence, "collective religious activity, in general, has almost completely disappeared among the Mundurucu" (Murphy, 1958: 134). Even the men's house, which traditionally was "the single most important institution in the structuring of male activity" (Murphy, 1960: 105), has declined in importance. In fact, one of the seven remaining savannah villages had no men's house in the early 1950s (Murphy, 1960: 75–76). And the two- or three-year initiation rite for boys, which formerly was held in the men's house, had not been held within living memory by the early 1950s (Murphy, 1958: 52). The cessation of this rite spelled the disappearance of certain shamanistic practices and the demise of tattooing (Murphy, 1958: 42, 52–53; 1960: 10). Although some shamanistic practices, especially sorcery and the curing of soul loss, have retained great vitality (Murphy, 1958: 135, 139), the Mundurucu appear to be rapidly approaching the Siriono in the poverty of religious, mythological, and magical rituals and beliefs.

Certain other changes in Mundurucu social organization have occurred within the last century, perhaps as the result of the change to matrilocal residence. Cross-cousin marriage, once the preferred form, no longer occurs frequently, and the levirate is no longer compulsory (Murphy, 1960: 89). Avuncular marriage, which the Mundurucu were said to practice a century ago in cases "when the sister's daughter had no other prospective husband," not only is "nowhere in evidence among the contemporary Mundurucu," but also is presently prohibited as incestuous and is "vigorously denied" as having ever been permitted (Murphy, 1960: 90). Interestingly, the Siriono may also have once practiced avuncular marriage but subsequently abandoned it (Shapiro, 1968: 49), perhaps concomitantly with the shift to matrilocal residence, as Watson (1952: 118–121; cited in Murphy, 1960: 90) argues for the Cayua. In fact, the contemporary Mundurucu offer a great many parallels with the Siriono. At the hands of an ethnographer who is inattentive to history, the Mundurucu might be rendered as sensationally primitive and as ethnologically curious as Holmberg's Siriono.

# Discussion

In light of the foregoing, it is instructive to compare Holmberg's (1969) and Ryden's (1941) approaches to the study of the Siriono. Early in his monograph, Holmberg acknowledged that the Siriono are a linguistic and cultural anomaly in their present locale (1969: 10); briefly entertained the probability of Siriono deculturation (1969: 11); dismissed the diachronic dimension with the terse statement that "the intangible aspects of Siriono history still await reconstruction" (1969: 11); accused Ryden of having "padded his work with irrelevant speculations and comparisons which are largely meaningless for the reconstruction of Siriono history" (1969: 16); and went on to present a synchronic, eminently psycho-functional description and analysis in which frustration of the hunger drive became the independent variable, or efficient cause, of Siriono cultural poverty. In short, the Siriono cultural and linguistic anomaly was of merely passing interest to Holmberg.

In contrast, the Siriono anomaly itself was the focus of Ryden's (1941) study. Were the Siriono an incompletely Guaranized people indigenous to the Bolivian rain forest, or were they an intrusive, Guarani people who had not yet adjusted ("acclimatized") to the rain forest (Ryden, 1941: 126–127)? These questions — rather than being "padding," of which Holmberg uncharitably accused Ryden — account for Ryden's laborious, often tedious comparisons of Siriono dwellings, cooking techniques, hammocks, bows and arrows, rodenttooth chisels, etc., with the corresponding traits of other native South Americans (Ryden, 1941: 43–44,47,52–56, 62–66, 71–72). Whatever shortcomings we might find today in Ryden's analysis reflect the paucity of comparative data at the time, and not basic flaws in the methodology itself. In fact, Ryden's study is a model of salvage ethnography carried out under difficult conditions (illness) and very little field time (three weeks), and complemented with thorough library research — which was itself "hampered by military service" (1941: 10). And in another aspect of his methodology, Ryden was brilliant: He carried out archeological excavations in the present-day Siriono area and tested Siriono reaction to the excavated materials (1941: 24). It was partly on the basis of the Siriono's nonrecognition of these artifacts that Ryden concluded that the Siriono are probably intrusive — and, hence, poorly "acclimatized" — to their present habitat.

The "lowly but instructive" Siriono (Sharp, 1969: xii) turn out to be much less instructive, or instructive of different things, than some have thought. This deculturated, moribund people probably has little to teach us about the "nature vs nurture" controversy (Sharp, 1969: xiii). In retrospect, Holmberg's characterization of the Siriono as the "quintessence" of "man in the raw state of nature" (Holmberg, 1969: 261) was an unintentionally cruel caricature of a people struggling desperately but vainly against the ravages of acculturation, depopulation, ecological displacement, and (inferentially) a strategic but corrosive shift from patrilocal to matrilocal residence. Also, Holmberg's psychoanalytic interpretation of the Siriono as a people whose culture "compensates" them for their hunger frustration by allowing them "great license in the realm of sex"

(1969: 255–256; cf. Watson, 1951) certainly requires reevaluation in light of the probable recency of the forces that induced hunger and of the dynamic of disintegration of Siriono culture. Furthermore, the Siriono clearly should not again be used as Meggers (1971) has used them, to imply that the Amazonian environment is a "counterfeit paradise" so far as cultural evolution is concerned.

But the Siriono are indeed instructive of something, namely, of the fact that cultural systems are fragile and easily can be tipped toward disintegration. In this regard, it is interesting that Meggers recognizes that all five of the *terra firme* groups she chooses to represent the cultural ecology of Amazonia "have suffered decimation ... In addition to population decline, most *terra firme* groups have experienced some degree of acculturation." Although she cautions that these factors "must be kept in mind in assessing the role of certain cultural practices," Meggers errs, at least in the Siriono case, in thinking that "relatively complete ethnographic descriptions were obtained for the groups in our sample while the effects of this contact were still superficial" (Meggers, 1971: 40, 42, cf. Wagley, 1948: 16). It is also interesting that Lauriston Sharp — whose name is known in anthropology mainly through his brilliant demonstration of the rapid and thorough breakdown of the Australian Yir Yoront culture and society occasioned by the mere introduction of a new type of axe (Sharp, 1952) — should dismiss as "irrelevant" the question of whether the Siriono had "degenerated to this level from a more advanced technical condition ... or [were] ... survivors who 'from the beginning' retained a variety of man's earliest culture" (Sharp, 1969: xii).

The larger ethnological lesson is that ethnographic description and analysis must always take into account the historical dimention. A recent case in point is Clastres' (1972) account of the Guayaki of Paraguay. All previous ethnographers had stressed the importance of gathering, rather than hunting, in Guayaki subsistence, but Clastres' recent ethnographic field work revealed them to be mainly hunters — and desperate ones at that, rather reminiscent of Holmberg's Siriono or Henry's Kaingang. Clastres concluded that all of the previous ethnographers had been in error about Guayaki subsistence. The decided probability of recent culture change among this fleeing, remnant population apparently was not entertained seriously by Clastres. This pathetic people has long suffered fierce attack by the Mbya, who within the historical period "tried to exterminate the Guayaki... The owrd 'guayaki' comes from ... the Mbya and would appear to signify ... 'the ferocious rat.' As for the Guayaki, they name their adversary ... 'many arrows'" (Clastres, 1972: 143). Clastres bases his assessment of past ethnographic error upon the study of two "tribes," together comprising 100 individuals, who had recently sought the protection of a Paraguayan national against the ravages of "professional Guayaki hunters" (Clastres, 1972: 144). Recent and disastrous disruption of the traditional subsistence pattern would seem a more likely explanation than past ethnographic error in this case.

Indeed, Martin (1969) argues persuasively that most of the simpler cultures of South America have experienced marked deculturation, usually before they were described ethno graphically. Service has recently extended this argument to include most of

the cultures described by "scientific" ethnographers everywhere in the world (Service, 1971: 151–157; Sahlins, 1972: 5n, 7–8; Leacock, 1972: 19–20, 39, 58–59). In anthropology, the firm entrenchment of the Hobbesian view of the primitive stages of cultural development was due largely to our failure to assess in proper historical perspective the ethnographic materials upon which our theories rest. And so long as the Hobbesian view prevailed, Holmberg's description of the Siriono — with their desperate food quest, short life span, quarrels about food, etc. — did not seem odd.

But we have learned much since the "classic ethnographies" were written. As White (1975: 52) has said, "it is high time that ethnologists review the work of their predecessors and give serious consideration to such things as (a) reflective thought, (b) what constitutes scientific evidence, and (c) the validity of the criteria by which conclusions are reached." Perhaps nowhere is this review more needed than in the Latin American area, where the "culture and personality" school of United States anthropology, with its ahistorical and nonecological approach to sociocultural processes, has heavily influenced both the framing of ethnographic problems and the ethnographic reporting itself. And the increasing popularity of statistically based cross-cultural studies adds urgency to this ethnographic review. Confining the discussion to the present case, we find the Siriono included in both editions of the "Standard Ethnographic Sample" (Naroll *et al.,* 1970: 241; Naroll and Sipes, 1973: 123), as well as in the "Standard Cross-Cultural Sample" (Murdock and White, 1969: 336, 367), in all of which Holmberg's *Nomads of the Long Bow* is cited as the sole "qualified work" or "authority."

In summary, further progress toward formulating sound sociocultural generalizations and theories would seem to await the completion of two tasks, both of which involve the historical dimension of sociocultural data. First, we must reexamine ethnographic sources in order to pinpoint and assess such factors as acculturation, ecological displacement, and depopulation. Second, we must develop methodological tools for controlling for these very factors in cross- cultural surveys. This article is intended as a contribution toward the first of these tasks, while Divale's (1976) recent use of the date of European contact for time-lagged variables in cross-cultural surveys is a major contribution toward the second task.

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