



Ontology of the self and material culture: Arrow-making among the Awá hunter–gatherers (Brazil)

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ABSTRACT

The Awá are a group of hunter–gatherers in transition to agriculture living in the Brazilian Amazon forest. After contact with mainstream society from the 1970s onwards, their culture, and especially their material culture, has undergone important transformations. Many traditional technologies and artifacts have been lost, especially those related to women. In this context, the persistence of arrow-making, although threatened by the spread of shotguns, is remarkable. During ethnoarchaeological work conducted between 2005 and 2009, we have been able to observe that the everyday making and use of arrows cannot be explained in neither functional nor symbolic terms alone. From our observations, we conclude that making and using arrows is indissolubly woven with the self of Awá men and, for that reason, we consider that only a relational-ontological approach can help us understand the deep relationship between men and arrows. Finally, we argue that the Awá case offers new possibilities to investigate technologies of the self in other non-modern societies.

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1. A turn to ontology

In his short story “The encounter”, Argentinean writer Jorge Luis Borges explores from the point of view of literature the intimate relationship between people and things. In his narration, two knives that had belonged to different gauchos are the protagonists of a duel between friends, in which one of them ends up killing the other. In the story, those who fight are not just the men, but also the knives. The men were mere instruments and the arms, agents. The two knives in the story of Borges “had been looking for each other for a long time, when their gauchos were dust already, and in their iron slept and lurked a human rancor”. Despite the fact that the event is narrated within a Western context, Borges’ reflection allows us to approach from an anthropological and archaeological perspective the ontology of things and people in traditional societies.

Since the late 1970s great attention has been paid by archaeologists and anthropologists to the symbolic aspects of material culture (Leach, 1977; Hodder, 1982). Artifacts are considered to be meaningfully constituted and, as symbols, to be actively manipulated by social actors to attain certain ends, such as acquiring or legitimating status, contesting power, marking an ethnic identity, negotiating the individual self, or performing gender (Hodder,

1982: 85–86). At the same time, it has been argued that things have to be granted a more active role in culture, a claim that has also been made by anthropologists of technology (Lemonnier, 1992; Pfaffenberg, 1992) and behavioral archaeologists (Skibo and Schiffer, 2007). In post-processual archaeology, artifacts have been considered as “solid metaphors” which link different cultural domains and construct meanings (Tilley, 1999: 263). From the post-processual point of view, material culture is not a mere reflection of society, but is deeply involved in its constitution and transformation: “material culture transforms, rather than reflects, social organization according to the strategies of groups, their beliefs, concepts and ideologies” (Hodder, 1982: 212). Despite much talk about “symbols in action” and the active role of material culture, what we have in the end is individuals and groups consciously manipulating artifacts for diverse purposes. Thus, for instance, Ian Hodder (1982: 121) wrote that “The Lozi example shows how the dominant group may *consciously and carefully* manipulate material symbols in order to justify and legitimate its power” (our emphasis). As Hodder’s quote make clear, it is not material culture that transforms social organization, but individuals using material culture that wittingly maintain (or subvert) social organization. From this perspective, artifacts are but a medium in the hands of people who use them in their manifold social engagements—a view similar to that maintained by behavioral archaeologists (Skibo and Schiffer, 2007).

These views are still dominant under different labels, such as the theory of objectification espoused by Christopher Tilley

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(2006), which is concerned with the fabrication of the social persona. “Creating things is a fabrication of the social self”, argues Tilley (2006: 63) and the same can be said of exchanging and consuming things. From this point of view, artifacts are necessary for displaying, negotiating and enhancing a particular public self. Tilley (2006: 62–63) resorts to the *bilum* bag of the Telefol from Papua-New Guinea to show how the quality of this specific object is essential for self-worth and to impress others. Similarly, Kula shells are an example of things used in making social identities through the intertwining of the biographies of both shells and people (Tilley, 2006: 63). The objectification approach maintains the duality between people and things of earlier post-processual approaches as well as the focus on conscious action. The same occurs with behavioral archaeology, even if its concept of agency is different from that of post-processualism (Skibo and Schiffer, 2007: 22–28). Yet behavioral archaeologists still describe human actors as consciously manipulating artifacts, which are detached from people, for different purposes—including communicative ones.

An ontological approach to technology, as will be defended here, considers ecologies of humans and non-humans inextricably woven in the same existential sphere (Webmoor and Witmore, 2008). For this reason, the conscious projection or communication of the self through artifacts can only be a surface symptom of a deeper, preexisting and mostly unconscious ontological relation, in which person and thing are one.

Ontological perspectives are now proliferating in the social sciences, as we will see. However, some of its basic tenets had been previously espoused by different authors. Thus, anthropologist Marcelo Bórmida (1973) defended what he called an *ergological hermeneutic* approach to material culture in his study of the Ayoreo of the Paraguayan Chaco. For that he meant an understanding of objects as “contents of consciousness”, that is part and parcel of the Ayoreo self (Bórmida, 2005: 113). Sociologist Norbert Elias was an early advocate of an ontological approach to materiality. In an illuminating paragraph (Elias, 1987: 48–49), he anticipated some 50 years ago the viewpoints currently held by social scientists regarding the relationship between humans and non-humans:

“[It] is obvious that the whole existence of human beings is geared to a world (...). The interdependence is basic: it determines the way ‘objects’ act upon ‘subjects’, ‘subjects’ upon ‘objects’, non-human nature upon humans, human upon non-human nature. Whatever one likes to call it, it is an ontological and existential interdependence. Ontological dualism, the notion of a world split into ‘subjects’ and ‘objects’, is misleading. It gives the impression that ‘subjects’ can exist without ‘objects’. It induces people to ask which of the two functions is cause and which is effect. Where units stand ontologically in a relationship of functional interdependence, (...) [c]ircular processes, and double-bonds as one of their subdivisions, are, in that case, the rule”.

In fact, Norbert Elias has not been alone in underscoring the necessity to rethink the relationship between humans and non-humans from an ontological perspective (Hernando, 2007). Structuralist anthropologists, such as Lemonnier (1992), Descola (2005), and Viveiros de Castro (1992) have been crucial in fostering a debate on alternative ontologies in the social sciences, and their work has been influential in symmetrical sociology, Actor-Network theory and other approaches that intend to revalue the role of non-human actors in society (Latour, 1993: 14, 42).

What is new in current debates is the leading role that material culture plays in them. Recent critiques insist that there is more to material culture than meaning and also that symbolism is but one facet of the nature of things, not necessarily and not always the most crucial (Knappett, 2002; Olsen, 2003, 2010; Jones, 2007).

Things are more than a blank and malleable surface on which to project our needs, desires, ideas and values. Taking materiality seriously implies rethinking some assumptions taken for granted among many practitioners of the social sciences, such as the absolute centrality of conscious human agency: social roles are distributed among human and non-human actors alike (Latour, 2000). This approach does not deny the constructed nature of the social, but considers that “our attention should be devoted to *how* societies and cultures are constructed and to analyze the real building materials... involved in their construction. In other words, we should pay far more attention to the material agents that constitute the very condition of possibility for those features we associate with social order, structural durability and power” (Olsen, 2010: 5).

Critiques of the hermeneutic excesses of the symbolic approach to material culture are bringing about a turn in archaeology that is akin to that occurring in other social sciences. It is a material turn, for sure (Saldanha, 2003: 420), but is more than that: it is an ontological one as well (e.g. Mol, 2002), since what is at stake is a new understanding of the being of humans and non-humans and the collectives constituted by both. This turn is patently clear in science and technology studies (Latour, 1993; Law, 1991), anthropology (Viveiros de Castro, 1996; Descola, 2005) and archaeology (Webmoor and Witmore, 2008; Haber, 2009; Olsen, 2010). Labs, maps, ruins, vicunas and trees are breaking into territories where humans used to call the tune. The basic tenet is that human beings cannot be ontologically detached from other humans, animals, plants and things anymore than they can be from any of their limbs. Humans are constituted as persons through the manifold relations they keep and build with non-human actors to which they are intrinsically and intimately tied.

However, we face an unfortunate dualism here, derived from two different research traditions: on the one hand, science and technology studies emphasize the previously neglected role of things in capitalist, late modern societies. They study hospitals, factories and laboratories and show the complex networks of human and non-human actors (or actants) that make these institutions work or fail (e.g. Mol, 2002). On the other hand, there are anthropologists studying non-modern, small-scale societies and demonstrating that our particular being-in-the-world, what Philippe Descola (2005) calls “naturalism”, is just one alternative ontology among others (animism, totemism, analogism, perspectivism, etc.). In other ontologies, notably in Amerindian societies, animals, plants, mountains and rivers are perceived as social actants as much as humans themselves, and treated in equal terms. Although anthropologists acknowledge the role of non-humans (plants and animals) in constituting culture, they seldom take things into account. Thus, at the present time, we have sociologists who espouse the principle of epistemological symmetry to understand the role of things in modern societies, but are not interested in non-modern ones, and anthropologists who study the alternative ontologies of non-modern societies but are not interested in things.

Besides, a turn to ontology requires another shift in perspective that has not been fully performed thus far: from the realm of the conscious to that of the unconscious. This is a change implicit in the turn from a focus on symbolization and communication to a concern with ontology. Ontology implies a relation between humans and things that is prior to symbolization and therefore deeper and less obvious for the human actor. A turn to ontology implies rethinking and evaluating critically the vocabulary so common in post-processual archaeology and material culture studies that includes terms such as “strategy”, “negotiation” and “manipulation”, which inevitably implies a conscious human actor and a rather passive material world. From this perspective, things are only activated by human agency. However, from an ontological

point of view, non-human actors are already-always activated and at work, independently from symbolic action. They can be further symbolized, of course, and, in some contexts (such as culture contact or social crisis), actively manipulated. But this latter situation, at least in traditional, non-modern societies, should be considered the exception, not the rule. Pierre Bourdieu's notion of *doxa* is useful here (cf. Pauketat, 2001; Silliman, 2001). According to the sociologist, "when there is a quasi-perfect correspondence between the objective order and the subjective principles of organization (as in ancient societies) the natural and social world appears as self-evident. This experience we shall call *doxa*, so as to distinguish it from an orthodox or heterodox belief implying awareness and recognition of the possibility of different or antagonistic beliefs" (Bourdieu, 1977: 164). The problem with archaeological and anthropological studies in the wake of postmodernism is that their emphasis on orthodoxy and heterodoxy has eclipsed the much more common state of things, that is, the *doxa*, the unreflective reality of ordinary social life.

That material culture belongs to a realm beyond awareness was already noticed by some anthropologists decades ago. Henry Glasie (1975: 11), for one, argued that "occurrences [in material culture] cannot be explained by appeal to consciousness alone, because the historic pattern is at least as much the product of the unconscious as it is of the conscious". Evans-Pritchard (1970: 232), in turn, considered that Nuer spears were invested with a "deeper symbolism" (as compared to sacrifices, rites of passage and healing rituals) of which the Nuer were not fully aware: "there is a deeper symbolism which is so embedded in ritual action that its meaning is neither obvious nor explicit". The fact that material culture has a deeper existence beyond conscious symbolization, rather than a problem, might be considered an advantage for the researcher of material culture, who is not in an inferior position to understand culture than any specialist who works primarily

with texts or interviews: what is unconscious lies beyond the discursive realm. Hodder himself (1982: 180), in his study of Nuba personal art, states that "it is difficult to see how verbal information could add to the analyses. In this respect the archaeologist is in the same position as the student of art and design of modern societies".

Keeping in mind the previous considerations, the aims of this article are twofold. First, we present and discuss original data related to technological processes, the daily use, and the social and ideational dimensions of arrows among a group of hunter-gatherers: the Awá of the Brazilian Amazon forest. Second, we intend to bridge the gap between the two research traditions summarized above, that is, the symmetrical sociology that investigates the role of things in industrial or post-industrial societies and the symmetrical anthropology that explores alternative ontologies of non-modern societies but without properly taking into account material culture.

The data presented here were obtained during fieldwork undertaken as an ethnoarchaeological research project carried out in seven field seasons, between 2005 and 2009, totaling 23 weeks in the field. Two good monographs about the Awá (Forline, 1997; Cormier, 2003) were also helpful in our analysis. We understand ethnoarchaeology not only in the sense of purveyor of ethnographic analogies useful for archaeologists, but also as an archaeological way of exploring the material culture of living communities. In this way, however, we also attempt to produce "food for the archaeological imagination" (David and Kramer, 2001: 195).

2. The Awá

The Awá are a small indigenous group of around 300 individuals living in rainforest patches of the State of Maranhão (Brazil) (Fig. 1). With other neighboring groups, such as the Ka'apor (Balée,

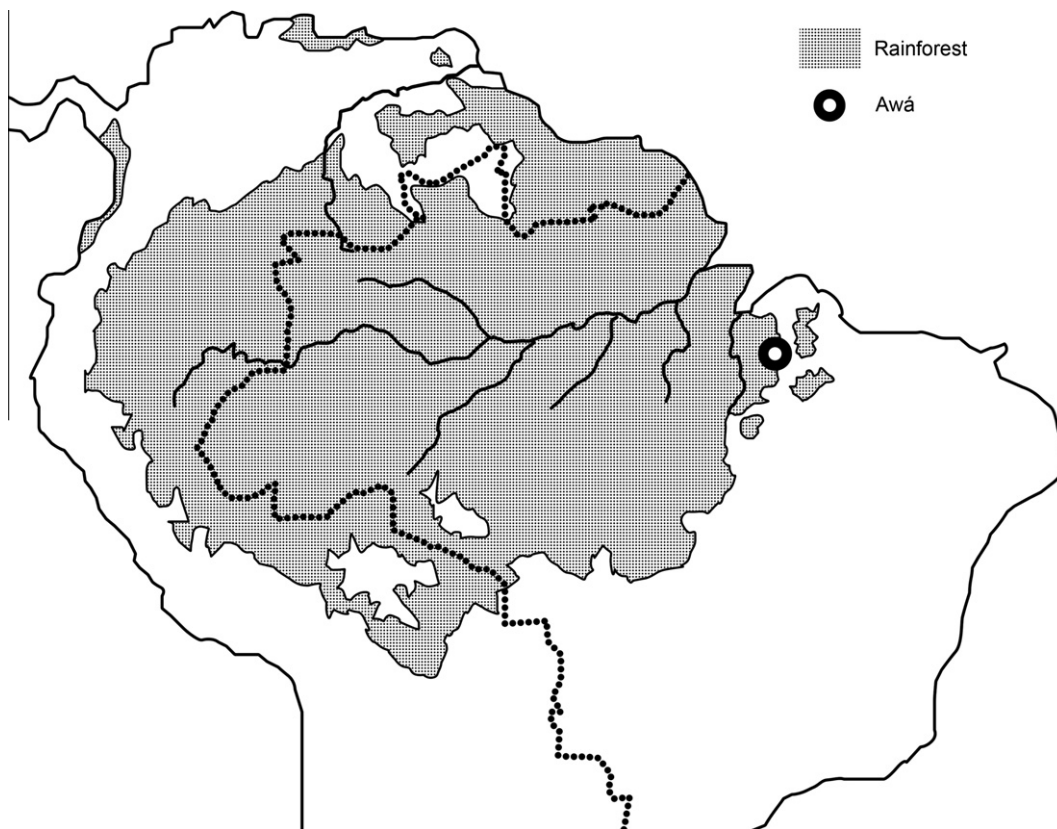


Fig. 1. Location of the Awá people in the eastern margin of the Amazon forest.

1994) and the Tenetehara (Wagley and Galvão, 1949), the Awá belong to the large Tupi-Guarani family, extending from northern Brazil to Bolivia and Paraguay. Unlike the Ka'apor and Tenetehara, with whom they share important cultural elements, the Awá have traditionally been hunter-gatherers and they still are foragers basically, although in forced transition to agriculture due to the pressure exerted by the FUNAI (National Indian Agency) (Hernando et al., 2006). The Awá were possibly horticulturalists at some point in history: their current situation could be explained by the effect of Portuguese colonialism since the early 17th century. However, the colonial and pre-colonial history of the Awá is unknown and their horticultural past has not been confirmed yet. The encroachment of Europeans from the coast to the interior—with its wake of wars, slavery, internecine conflicts between indigenous communities, social disruption, and pandemics—led to the disappearance of many coastal indigenous groups and the dislocation of many others. The Awá seemingly adapted to this unstable situation by turning to hunting and gathering (Balée, 1994: 209–210; Cormier, 2003: 3–5; Forline, 1997: 30), which could be combined with a high mobility pattern more easily than slash-and-burn agriculture. The Awá were able to survive in the rainforest, thanks to the groves of babassu-palms that provide nuts high in carbohydrates. These groves in turn are supposed to be the index of prior agricultural activities (Cormier, 2003: 11).

Although the Awá are now compelled to cultivate manioc, rice, corn, beans, and squash—which they do rather grudgingly—their diet is still very much based on foraging. All their meat comes from game hunted in the forest: monkeys (with a preference for howler monkey), peccary, tapir, agouti, paca, armadillo, and deer. They also fish and gather a variety of wild fruits, nuts and seeds. Before their contact with Brazilians in 1973, they were “pure” hunter-gatherers (Gomes, 1985; Forline, 1997; Cormier, 2003; Hernando et al., 2006) and some of the Awá have been contacted and resettled as recently as 1998. A few bands still roam free in the forests of Araribóia, one of the four reservations occupied by this indigenous group in Maranhão. Before their resettlement, the Awá used to move about the forest in small bands composed of two or three nuclear families. The encroachment of their lands by peasants, loggers, ranchers and development projects led the FUNAI to relocate them in permanent villages inside reserves so as to save them from sheer extermination. The FUNAI promoted sedentarization and introduced important changes in their lifestyle, the most dramatic of which are the aforementioned agricultural practices. They also introduced clothes, metallic vessels and shotguns, and the inventory of Western mass-produced items that arrive to the reservation does not stop growing. The way the Awá react to these alien materialities and the changes that they trigger in their identity and culture are extremely interesting and offer important insights for the anthropology and archaeology of cultural contact and colonialism (Thomas, 1991; Lightfoot et al., 1998; Silliman, 2001, 2005; Harrison, 2002; Rodríguez-Alegría, 2008), but, given the complexity of these issues, they will be explored in further works. Here, we argue that, despite the pressure of the state and globalization, the logics of Awá arrow-making cannot be explained primarily as a result of that contact. We defend that it is an ontological practice deeply rooted in a pre-contact reality that the encounter with the modern world only makes more obvious. In fact, unlike in other contexts (Harrison, 2002, 2004; Rodríguez-Alegría, 2008), arrows among the Awá are neither a revival nor a post-contact invention. The morphology and technical processes clearly predate their collision with the Western world.

Thus, despite the influence of the external world, the culture of the Awá still revolves very much around hunting. Previous nomadic patterns have been altered, but many Awá still spend days—and even weeks—in the forest, where they establish temporary camps (González-Ruibal et al., in press). They use these camps as bases

around which they go hunting and fishing. Even those who do not spend time in the camps participate in foraging trips almost every day. On the other hand, the introduction of shotguns has not yet been able to displace bows and arrows, although their survival in the long term looks very dubious. In the village of Juriti, where most of our research has been carried out, nine men and four teenagers use bows and arrows versus four individuals who use shotguns,¹ one of whom still uses bow and arrows from time to time.

During our fieldwork, it soon attracted our attention two things: the fact that men spent much time every day making arrows and that they carried with them a large amount of arrows in hunting expeditions, well in excess of what was actually needed. This prompted us to pay closer attention to the relationship between the Awá and arrow making and using (for a summary and discussion about women activities and social roles see Hernando et al., 2011). Awá bows and arrows are much more than useful implements for hunting and, in older times, fighting. We argue that they are crucial in the making and maintaining of Awá male being. We consider that there are several facts that support this ontological perspective: (1) an enormous investment in time and energy is made in the fabrication of arrows; (2) the Awá produce an excessive amount of arrows, which go well beyond actual necessities; (3) there are significant structural relations between arrows and key themes of Awá culture; (4) there is an intimate relation between arrows and people, which is perceptible in the way arrows are made, used and discarded. In the following sections, we will elaborate on each of these points.

3. Making arrows

The Awá, as other Tupi-Guarani peoples (Grenand Orstom, 1995: 27), use slightly curved bows (called *irapara*) made of hardwood—*Tabebuia* sp. (“pau d’arco” in Portuguese) (Fig. 2). They are around 1.6 m long and their section is plano-convex, features that are shared among many Tupi-Guarani groups (Métraux, 1928: 71). The string (*tikwira*) is made with *Astrocaryum* palm fibre, which is substituted among Tupi-Guarani horticulturalists by cultivated cotton (e.g. Grenand Orstom, 1995: 30). For fabricating bows, the Awá use wood from the heart of fallen trees. Bows are very strong and flexible and they are long lived. We only had the occasion to see the making of two bows, one by an adult man (Chipa Ramãy Cha'a) and one by a teenager (Kawi'i). The process of making a bow is very similar to that of an arrow: the hardwood is peeled off, scrapped, smoked and heavily polished with the help of a knife. During polishing, the bow is held among the toes, like arrows (see below).

There are four types of arrows, two of which are traditional and very frequent (Fig. 2). The third and fourth types (one of which has an iron point) are rare and usually have a foreshaft. The two common types are used to kill different kinds of animals: one has a hooked tip (*u'iwa*) and the other is blade-shaped (*takwara*). The same dual typology is found among the Sirionó of Bolivia, a group which show striking similarities with the Awá (Holmberg, 1969: 30). In principle, the first one is used to hunt monkeys, agoutis, birds, and to fish electric eel, whereas the second is employed for big game: e.g. peccaries, tapirs and jaguars (which are not eaten, but are killed for protection). However, *takwara* are sometimes

¹ One of them (Pinawa) started using a shotgun during our last stay in Juriti, but he was very clumsy with it, due to a sight problem. Pinawa died shortly after our last trip to the area, so we cannot know whether he would have reverted to the bow and arrows, in which he excelled, at some point. Two others, Pira'i Ma'a and Hamoku Ma'a, still used bow and arrows, when we first met them in December 2005. As a matter of fact, we witnessed the hunt of an agouti with arrows at that time. Hamoku Ma'a only abandoned bows and arrows early in 2007.

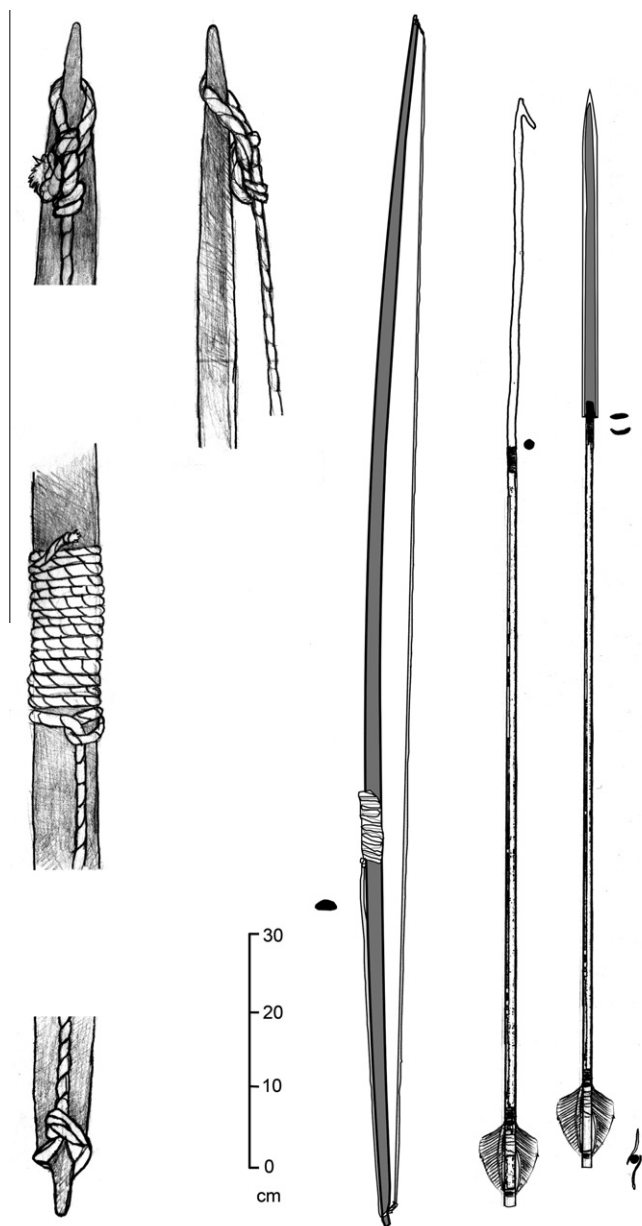


Fig. 2. Traditional bow and arrows used by the Awá. Details of the string and knots used in the bow are shown. The two arrows are the *u'iwa* (right) and *takwara* (left).

used to hunt howler monkeys and coatis. The other two are a mid-size triangular point, with stem and shoulders, which is usually attached to a foreshaft. It is made with a wooden point, usually hardened by fire and smoke. The fourth type has an iron point and seems to be more recent; however, it has to be noted that the Awá have been scrapping iron for arrows for quite a long time (Beghin, 1951: 139). These two last types are basically used to kill felines. It is possible that the typology of the Awá arrows was more varied in the past, as documented among other Tupi-Guarani groups (Métraux, 1928; Grenand Orstom, 1995; Grünberg, 2004), but that there was a formal simplification through time due to historical circumstances of cultural stress. At present, the proportion of arrows is not equal: for every *takwara* there are four *u'iwa*. The latter are also discarded much more frequently. We documented the arrows discarded around three houses and of the 68 fragments and parts of arrows, only one belonged to a *takwara*. The third and four types are rare and not even every man has

one. We recorded only six arrows belonging to these types in Jurití and never saw any of them discarded.

All arrows are composite: they are divided into a proximal part or shaft, where the feathers are attached, and a distal part, where the point is located. As we said, only a few arrows have foreshafts. The distal and proximal parts are made separately and later assembled, using string woven from *Astrocaryum* palm and resin (Awá: *irati*, Sirionó: *iriti*) from a tree (*Symphonia globulifera*). Throughout the process, both parts of the arrow are continuously smoked for strength and straightened out with both hands. The same activities take place regularly for maintenance after the arrows have been finished. Young, flexible trees and reeds (*Gynerium sagittatum*) and the ribs of babassu-palms are used for the shaft. Points are made with bamboo (*Guadua glomerata*) in the case of the *takwara* (meaning “bamboo” in Awá), or with a forked young tree for the *u'iwa* (for tree species see Balée, 1994: 56). The raw materials (wood, resin and fibre) are obtained during foraging trips. During one of these trips, we observed one person, To'o, cutting, shaping and sharing pieces of bamboo from a shrub in the forest among the other hunters. This episode of sharing can be explained by the fact that bamboo is not very common, as opposed to the other materials used in arrow making which are available almost everywhere (Fig. 3).

The blade-shaped arrows (*takwara*) are sometimes decorated with smoked resin, peccary blood or by scrapping off the smoked bamboo surface (Fig. 4). The aim is to create a contrast between lighter and darker areas. A similar contrast is to be found in *u'iwa* arrows. The organization of dark and light zones varies. The different combinations allow arrows to be individualized and their owner to be identified. Another mark of individuality is to be found in the feathers (*papó*), which come from a variety of large birds: (urubu, harpy eagle, curassow). Furthermore, the size of the arrows, which depends on the height of the person, seems to be a good criterion to identify the owner: normal *u'iwa* arrows from adults vary between 1.36 and 1.69 m. Despite their great similarity, then, the Awá—men, women and even preadolescents—are able to recognize the maker of an arrow by just taking a glance at it, a fact which proves the effectiveness of what Polly Wiessner (1983: 258) calls assertive style: “formal variation in material culture which is personally based and which carries information supporting individual identity”. In the 2008 field season, we found a broken arrow during a daily foraging trip. It was the only case of a piece of arrow, a shaft with some remnant of feathers, we recorded discarded (or lost) outside the village. We collected it and when we arrived to



Fig. 3. To'o cuts bamboo (*Guadua* sp.) for making *takwara* arrowheads during a stop in a hunting trip.



Fig. 4. Kamarachá painting a *takwara* with peccary's blood.

the village in the evening, almost every one asked us immediately where had we found the arrow of Takčá (the owner of the arrow).

The operational sequence (*chaîne opératoire*) of arrow-making is complex and demanding. Actually, there is no other artifact in Awá culture (and it does not seem to have existed before) that involves so many technical decisions, technical gestures and sensorimotor coordination. Normally, an arrow is not made from beginning to end in one go. A man can make several points one day and several shafts another day: they are assembled together in another occasion. At times, a point or several points are just planed down to be finished later. It is therefore difficult to calculate how much time takes to make a whole arrow. This is related to a different conception of time, which in turn affects the allotment of activities during the day: from our modern perspective, it would look anarchic. Also, there is no fixed number of times a particular gesture has to be carried out for an arrow, or part of an arrow, to be considered properly finished. It depends on the quality of the wood,

the intention of making a more or less perfect point, or the will to spend more or less time preparing it. Most of the operational sequence for making an arrow takes place in one's hut, near the hearth, since fire and smoke are involved in the process. Arrows or parts of arrows are never made in the forest. During daily foraging trips they are only straighten up, sharpening the tip quite frequently, or smoked to keep them in good condition.

Shaft and point are made independently. For making the shaft, the Awá select a light wood, cut both ends with a knife, and scrap it off (*parará*). This process usually does not take much time, as the wood is only superficially peeled off, unlike the points—both *takwara* and *u'iwa*—which require intense scrapping and shaping (Fig. 5). When the shaft is made of *Gynerium*, it is not scrapped off, just smoked, since *Gynerium* stems (a kind of thick reed) are naturally smooth and straight. The shaft has then to be perforated (*piará*), so that the point can later be inserted. For this doing, one has to stand upright or sit on a stump (Fig. 6). The end of the shaft that is going to be assembled with the point is placed on top of an iron tip and secured between two toes. Then, the other end of the shaft is held between both palms and spun very fast, as if for making fire. Through friction, the iron tip perforates the end of the shaft. The toes are also used to grip the shaft tightly while scrapping.

After this operation, it is time for fixing (*papanú*) the feathers (*uru*). This takes approximately 15 min. Every arrow requires two feathers, which are cut lengthways alongside the shaft, and then bent over a piece of bamboo (called *ki'ia*), where they are trimmed (Fig. 7). This is to provide every half of the arrow with the same curvature: when the arrows are fixed on the shaft, the curvature is reversed, thus producing the effect of a helix, which helps stabilize the arrow faster in rotation. This arched and helical feathering is very widespread among the Tupi-Guarani and, for its geographical occurrence, it has been called "East Brazilian feathering" (Métreaux, 1949: 219). After being trimmed and bent, feathers are smoked and then fixed to the shaft with string and some resin, first one and then the other. Before being used, feathers are collected and stored in bags made of palm leaves.

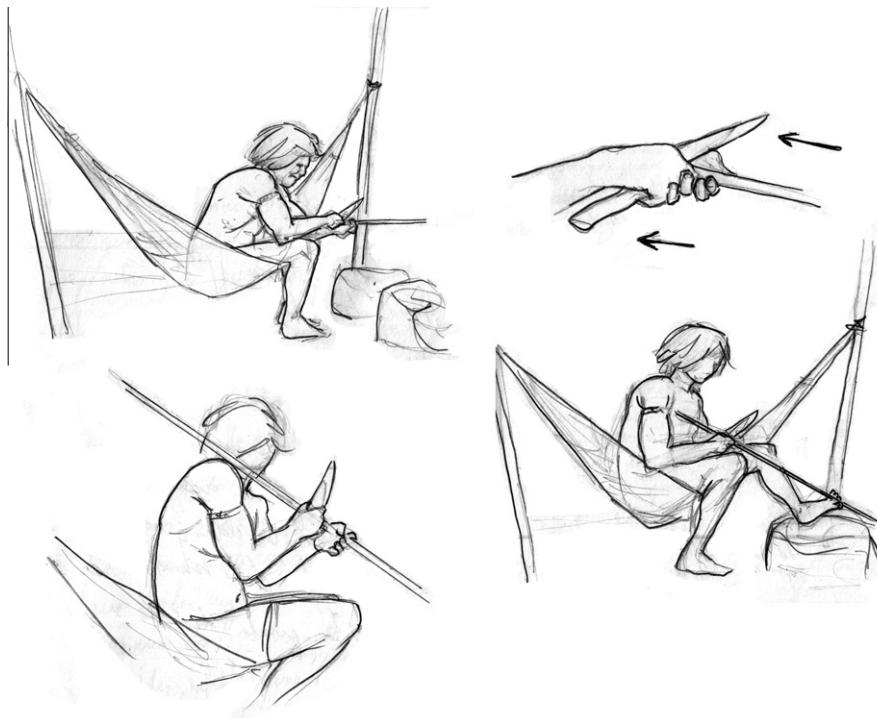


Fig. 5. Some of the technical gestures involved in the scrapping of a shaft (either for making it or for mending it).



Fig. 6. Kamarachá perforates a shaft. To his left there is the *ki'ia* used to bend the feathers.

The making of a point takes more time. Scrapping, fashioning and polishing (*pararahá*) a hooked arrowhead may take around 75 min (without considering the smoking) (Fig. 8). The Awá enscend themselves in their hammocks to do the work in a relaxed way (Fig. 9). We were told that originally (*ka'a ripi ko mehê*, "the time of the forest") bows and arrows were shaped using the tooth of an agouti or paca, but now knives and files provided by the FUNAI have completely superseded the traditional implement. The activity that takes more time is the straightening up of the arrow. This implies at least three technical gestures: putting the arrow on the fire (*yapyō tatá rehê*), biting it (*yachu'u yaphyō*) and pressing it with the fingers and against the head and/or the thigh. The pressure against head and thigh is applied so as to give it flexibility. During the straightening of the arrow, the maker sights along the arrow obliquely up and down to check that is straight and releases the arrow a bit to feel whether it vibrates correctly (Fig. 10).

When the arrows are ready, they are put together with those that are in use, over the grill or leaning against a pole. After a while, those "active" arrows that are not used are put in bundles of fifty or more and hanged from the roof or stored on racks, where they are gradually blackened by the smoke coming from the hearth (Fig. 9). The blade-shaped arrows are often protected with hoods made with palm leaves tied with vegetable fibre (*marapúa*). The total of arrows in the possession of a single hunter varies: at the time of our counting in 2008, Takanihí Cha'a, for example, had 39, Muturuhū, 66, Kamará 26, and Chipa Ramāy Cha'a, 205 (171 of which were *u'iwa*). We recounted again the arrows of Chipa Ramāy Cha'a and Takanihí Cha'a in 2009 and the numbers had increased to 227 (194 *u'iwa*) for the former and 52 for the latter.

Many Awá men spent a remarkable part of their time—four or more hours a day—making, re-sharpening or mending arrows.



Fig. 7. Takía feathering an arrow. Top: tying one of the feathers. Bottom: passing resin along the shaft before tying one of the feathers.

Even those who hunt with shotguns make arrows from time to time and some boys are eager to learn the craft. Arrow-making takes place especially during the morning and, if there is no hunting expedition, it can go on for hours. Before a hunting trip, people are especially active at preparing and repairing arrows. During the fabrication process, the Awá appear to be completely absorbed by the technical operations and they often mutter and make gestures while working, as if reflecting aloud. There is only another context where one can see an Awá man so engrossed in a technical activity: hunting. Interestingly, those men who have stopped making arrows, still devote much time to prepare cartridges. They have extrapolated the technical gestures to the new technology and they adopt the same bodily gestures (such as sitting astride a bench or log) to clean, fill and assemble cartridges.

Making and using bows and arrows are a typical male activity, but they are not completely strange for women. The oldest woman in the village of Juriti, Ameri Cha'a, is sometimes seen carrying a bow and some arrows in the village (although we never saw her using them). We know of at least a woman who is an owner of a bow and arrows: Panachi (Kamará's and Chipa Ramāy Cha'a's wife—polyandry exist among the Awá). To'o, another Awá from Juriti, made her a bow and we were told that she goes hunting from time to time with it around the house. We have recorded two other women making arrows, Amapirawi and her daughter Amapira'a, although they do not make complete arrows, just the initial stages of scrapping and fashioning the wood, and they do not make the arrows for themselves, but for their male relatives. They can also perform tasks related to the making of arrows: in July 2007, for example, we saw Amapirawi preparing *tikwira* (the string made with vegetable fibres) for his male partner, Takia, who was making arrows at the same time. It is possible, then, that women used bows and arrows more frequently before the contact, although it is difficult to ascertain in which context and how often.

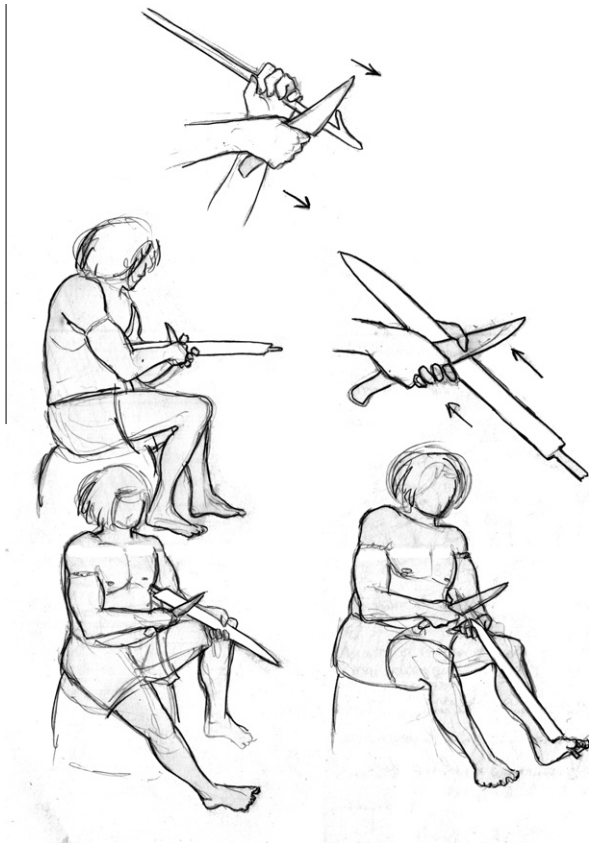


Fig. 8. Technical gestures involved in the scraping of an arrowhead. All are *takwara* except the one on the top (*u'iwa*).



Fig. 9. Chipa Ramāy Cha'a smoking a *takwara*, sitting on his hammock.

4. An economy of waste

The continuous production of arrows creates a large surplus, especially because the input is always greater than the output. That is, the number of arrows spent in hunting is much lower than the number of arrows that is continuously fabricated. For hunting a regular group of howler monkeys, for example, a single hunter may spend at the most five or six arrows, taking into account also those that are lost, and most of the time no more than two or three. This kind of game is always procured communally, so other hunters will use their arrows, too. Despite the fact that never more than

half a dozen arrows are used during a hunting trip and that most of them are retrieved, hunters always carry with them a large amount of these items (Figs. 11a and 11b).

We quantified the number of arrows carried by hunters in foraging trips in which we participated between 2006 and 2008. In August 2006, seven adult hunters carried with them a total average of 12.2 arrows (max = 27, min = 4) in five foraging trips. Two teenagers carried an average of 6.3 arrows. In the January–February 2007 field season, in a sample of 11 daily foraging trips we recorded seven adult hunters who carried an average of 17.6 arrows each ($n = 23$, max = 31, min = 6). In the same period, three teenagers carried significantly less: an average of 7.87 ($n = 8$, min = 3, max = 10). Between July and August 2007, we counted the arrows carried by ten people in nine daily hunting trips: the total average was 20.1 arrows. If we discount the two teenagers and leave the adults only, the mean rises to 21.72 (max = 39, min = 10). In May 2008 the average was much lower 12.2 arrows in average, carried by five hunters in six daily trips (max = 27, min = 3). Finally, in July–August 2008 we counted the arrows carried in eight daily foraging trips. As in previous seasons, teenagers carried significantly less arrows than the elders: the latter carried an average of 14 arrows (max = 23 min = 5), the former, six arrows (max = 9, min = 3).

The field season of July–August 2007 is particularly informative as to the apparently meaningless effort involved in transporting arrows, because most of the game was eventually obtained through the use of shotguns. During the nine foraging trips recorded, a total of 402 arrows were carried by hunters. Of these, only nine arrows were used. Out of nine arrows shot, only five killed an eatable animal (one caiman, one howler monkey and two electric eels). An arrow wounded a peccary that escaped, and an aquatic bird and a large lizard were killed with arrows but not retrieved. Other animals were killed with arrows in hunting trips in which only one or two people were involved. In fact, arrows seem to have played a more significant role in these events. We were not present in those trips and therefore could not record the process, but several monkeys and a jaguar were killed. Also, the scarce utility of arrows in collective hunting in the summer of 2007 does not mean that arrows are useless: in December 2005 six howler monkeys were killed in a single morning with arrows and shotguns and in August 2006, the same occurred with six coaties. Yet in both cases, the Awá carried with them much more arrows than were actually needed.

It is easy to imagine that going around for hours in the forest with dozens of arrows is rather cumbersome and unpractical. Furthermore, carrying many arrows is uneconomic from another point of view. Since they are packed together very tightly, they suffer from the pressure and from scratching against the others: the feathers are often lost or torn and fissures appear along the shafts (Fig. 12). They are also brushed and scratched by the undergrowth and the trees of the forest. This implies an important labor of maintenance and repair back home. Actually, at first sight, many of the arrows that the hunters carry with them in foraging trips are not in a usable condition. Repairing arrows affects primarily to the shaft, which is the part that suffers most, both because the feathers are worn easily and because the wood used for the shaft is softer than the one used for the point. For fixing the feathers anew, one has to untie the old feathers, pull them off, scrap the base and the distal part of the shaft, smooth down the shaft, cut and bend the new feathers, tie them to the shaft and put resin over the strings that fix the feathers. The whole process takes about 20–25 min, which have to be multiplied by the number of arrows that require such treatment after a hunting trip or just after long storage.

Although the disproportion is not so great, hunters also have more bows than they actually need, and at times they go in foraging trips with two of them. Among those who have more bows are Chipa Ramāy Cha'a and Pira Ma'a, both of whom have four bows. The former was preparing a fifth bow in August 2008.

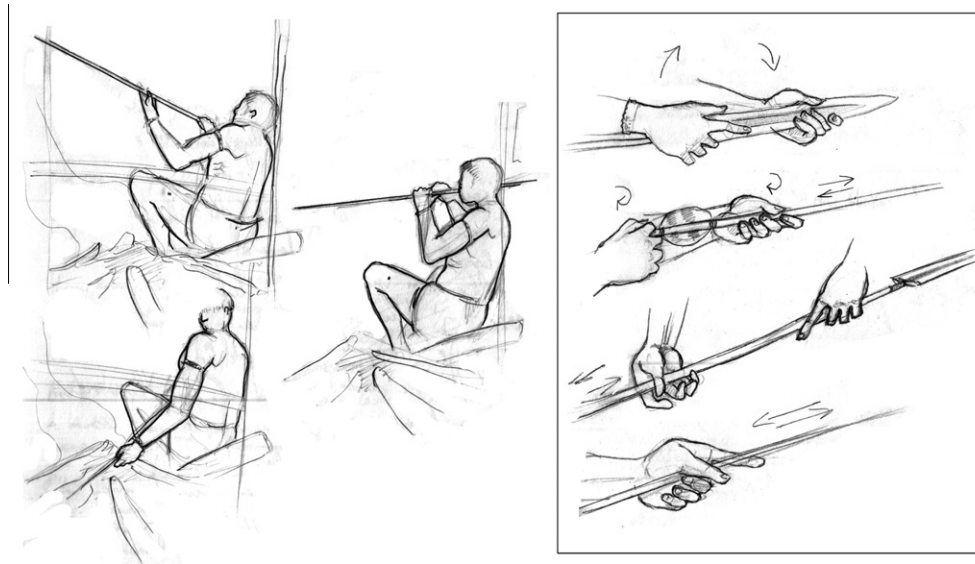


Fig. 10. Technical gestures involved in the straightening of arrows. In the left: sighting, smoking and biting. In the right (from top to bottom): testing the flexibility, rotation, smoothing with both hands and smoothing with one hand.



Fig. 11a. Muturuhū ties a bundle of arrows during a foraging trip.

One might think that this excess of arrows is quite new (as in the Australian case studied by Harrison (2002, 2004)), since it was not possible for the Awá to carry around so many arrows when they were pure nomads. However, daily foraging trips nowadays are probably the same or even longer than in pre-contact times, because now residential mobility is almost nil (Politis et al., 2009). Moreover, descriptions of the Awá before the contact already note



Fig. 11b. Pinawa returns from a solo hunting trip. The image exemplifies well how cumbersome the arrows can be: apart from the heavy armadillo, he captured four turtles, for none of which he had to use the many arrows he carried with him.



Fig. 12. Muturuhū's feathers after a hunting trip. Many feathers will have to be replaced.

that they had abundant reserves of arrows. One of the first Westerners to meet them, François-Xavier Beghin (1951: 139), wrote that “beneath the huts’ roof there is a large amount of arrows carefully arranged” (also Beghin, 1957: 200). On the other hand, we know of other nomad or semi-nomad Tupi-Guarani groups that carry a large amount of arrows with them. Some of the photos of the Ka’apor taken in the early 1950s show them transporting voluminous bundles of arrows (Huxley, 1956: 192) and the same occurs with the Asurini, who also produce great numbers of arrows (Lukesch, 1976: 116).

Uneconomic decisions regarding key tools in the cultural inventory of a non-modern community are not rare. Dani youngsters in Papua-New Guinea use disproportionately voluminous axes, much bigger than actually needed, for felling down trees and they walk about the forest with these cumbersome tools (Pétréquin and Pétréquin, 2008: 59). A case that presents striking similarities with the Awá is the above mentioned of the Kimberley points studied by Rodney Harrison (2002, 2004). Harrison compared the assemblages of spearheads in pre- and post-contact Aboriginal sites in Australia and discovered that the latter showed higher proportions of arrows (Harrison, 2004: 6). This is particularly intriguing, since after the European invasion, “most other items of material culture were being replaced by manufactured ‘western’ substitutes” (Harrison, 2002: 358). Like the Awá, the Jaru Aborigines seem to have produced much more points than they actually needed for hunting purposes and, in fact, the shape and size of the longest type of spearhead, which became increasingly fashionable, prevented their functional use. Although the phenomenon can be explained in that context by the growing demand of points by white collectors, in both the Aboriginal and Awá case the overproduction of a finely-crafted traditional item seems to be crucial in the making of masculine identities. According to Harrison (2002: 368), during the phase of drastic change after European invasion, “men needed to find ways of expressing self-worth and to develop a sense of identity that was not dependent on hunting”. Making spearheads, as for the Awá making arrows, became an essential part of the making of their self. In both cases, overproduction result in artifacts overflowing the limits of the community. The difference is that, whereas in the Aboriginal case “traditional” artifacts flowed to outsiders, among the Awá, they are simply discarded: a pure economy of waste.

5. The structural relations of arrows

Bows and arrows are structurally linked to other cultural phenomena and moral principles, which hint at their crucial role not just in Awá culture, but in making Awá persons as well. The case of the feathers is particularly interesting. Feathers have to be of a dark, earthy color necessarily (black, greyish, dark brown), such as those of the urubu, harpy eagle or curassow. Feathers from the many colorful birds that inhabit the forest, such as parrots and toucans, cannot be employed. The same happens with other Tupi-Guarani peoples (Holmberg, 1969: 32; Lukesch, 1976: 82; Viveiros de Castro, 1992: 43; Balée, 1994: 56; Grenand Orstom, 1995: 30; Grünberg, 2004: 115), but not with those belonging to other linguistic families, such as the Kayapó, who do use colorful feathers (Blixen, 1968: 9).

Some Tupi-Guarani groups, such as the Kayabi, have arrows with colorful feathers, but these are only used in ritual ceremonies (Grünberg, 2004: 115). Similarly, chromatic feathers among the Awá are specifically employed in the making of headbands and bracelets used in rituals (*karawara*) through which the Awá males communicate with the supernatural world (*iwa*). Feathers from the head of a toucan (*Ramphastos vitellinus*), called *uru riwijera* in Awá, are an unavoidable prerequisite for the participation in the *karaw-*

ara and for this reason they are a prized possession. Unlike the dark feathers fixed in the arrows, which are an exclusive male preserve, it is women who prepare the colorful headbands and bracelets (*pu’ira*) employed by men travelling to the *iwa* (Hernando et al., 2011). The world of the spirits and ancestors is conceived as a place full of bright, warm colors (especially red and yellow): the *wariyuwa*, red howler monkey (*Alouatta seniculus*), for example, is an inhabitant of the *iwa* (Cormier, 2003: 100–101). We could check this point with our informants, who added to the *wariyuwa*, the *yapaiyú* (red handed tamarin, *Sanguinus midas*) as an inhabitant of the *iwa*. Fish and caimans are also bright red (*pirá* or *pesahô*) in heaven. Among the Araweté, the dead people who go to the *iwa* have to give the gods presents of feathers of colorful birds, such as cotinga, toucan, and macaw (Viveiros de Castro, 1992: 210).

Meaningfully, the only person who uses bright-colored feathers in his arrows is Takanĩhĩ Cha’a—the only man who does not socialize with the rest of the village. After being separated from his group during a raid, he wandered about for years accompanied by a girl, who eventually became his wife and with whom he had four children. During his wanderings, he did without many cultural principles out of necessity, including important food taboos: he and his family are the only ones who eat snakes, jaguar, large lizards, deer’s entrails and hide, and some scavenger birds. Their current neighbors despise him for that and mock his arrows, which are not only colorful, but exceedingly long (2.30 m in average as opposed to 1.6 m in the village). They are another sign of his loss of “Awá-ness”. The deviation is not restricted to arrows alone, Takanĩhĩ’s bows are also overly wide (6 cm as opposed to 3 cm in the village), too curved (Awá bows are only very slightly curved), their section is too flat (instead of plano-convex), and they are very crudely made, with irregular surfaces and scarce polishing. The bows are made in a rather soft, yellowish wood, instead of *Tabebuia*. There is obviously little investment in the making of the bow—cf. a strikingly similar example among the Araweté (Viveiros de Castro, 1992: 57).

Another important structural issue is the need to keep the arrows “warm” (*hakú*). When the arrows are in use or active they are usually placed on the grill or nearby, although not exposed to direct fire. Apparently, warmth and smoke make the arrows harder. It would be wrong, however, to see in the smoking of arrows a mere functional consideration. There are several behaviors regarding warmth and arrows that do not seem functional. For instance, one can see the point in smoking the shaft and, especially, the point. Yet it is more difficult to understand why the feathers ought to be smoked as well. Another interesting behavior was documented in July 2006, when one of the domestic groups living in Juriti, that of Kamará, established a hunting camp in the forest 8 km away from the village. We had the occasion to spend 3 days in the campsite. The first day, we went with the group for a hunting expedition. During the night, two hunters—Kamará and Kamarachá—had been tracking a herd of howler monkeys. When we arrived to the place in the morning, Kamarachá was waiting for us, with his bow and a bunch of arrows. He had made a small fire and was smoking the arrows in them. This is by no means exceptional. The Awá devote much time to heating or smoking arrows when they are at home or in hunting camps. When one is not carrying the bundle of arrows that one uses most, they are left near the hearth or directly over the grill (*makapá*). This can only be explained because the Awá perceive the necessity of the arrows to be “warm” (*hakú*), like the body. Interestingly, the word *hakú* is also used to describe the act of putting the arrows on the fire (*hakú u’iwa*). The aforementioned phrase *yapyô tatá rehê* seems to be a more specific technical task (that of straightening the arrow on the fire), whereas *hakú* seems to stand for “heating up” more generally, as it is not necessarily accompanied by the typical manipulation of the arrow with the hands to set it right. When the arrows

are not in regular use any more, they are placed under the roof, far from the fire and in some way they are considered “dead” or “dormant”. Nonetheless, they can be brought back to life eventually by putting them on fire, a process that reminds that of the divine cooking of the souls’ flesh to resuscitate the dead among the Araweté (Viveiros de Castro, 1992: 212). The number of “dead” or “dormant” arrows is always much superior to that of “warm”, “living” arrows.

The symbolic opposition between warmth and coldness is a relevant one among the Tupi-Guarani peoples. In the case of the Awá, Cormier (2003: 106) notes that *hakú* is related to the dry season, healing, and the divinities, whereas *hacha'a* (cold) is linked to the wet season, illness, and the *aiñá*, the evil spirits. These links can be extended further: the *iwa* is not just a colorful world, as we pointed out, but also a hot place. When the Awá tell about their experience in the *iwa*, always use the verb *epirakú*, “to be hot”—no wonder, since they keep dancing and beating the ground heavily while they are inside the *takaya*—the ritual structure made of palm leaves through which the *iwa* is accessed. Meaningfully, the Awá say that women do not go to the *iwa* because they are afraid of the heat (*hakú*). Only men can bear the high temperatures of the *iwa*.

Heat is also associated to making fire and cooking, which are male elements among the Awá: men are in charge of making the grill (*makapá*), looking for firewood, and preparing meals for everybody. Smoked meat and smoked arrows are very often found together over the *makapá* (Fig. 13). The association of arrows and fire was probably greater in the past. We pointed out how the technical gesture for drilling the shaft reminds a traditional way of making fire in different Amerindian cultures. In fact, the Guarayú, who are another Tupi-Guarani group, do make fire with their arrows, using the shaft as a drill and the bamboo head as the hearth (Métraux, 1942: 103), in the same way that the Awá perforate arrows (other examples of rotation drilling in Cooper (1949: 283–288)). It is worth noting, in this context, the structural analogy proposed by Viveiros de Castro (1992: 257–258) between the raw, the earth and women, on the one hand, and men, divinity and the cooked, on the other. Moreover, the process of cooking is associated to supernature and immortality (Viveiros de Castro, 1992: 260). From this perspective, it is meaningful that the Awá make arrows in the same place where they make food, beside the *makapá*, using the same hearth. Apart from cooking and making arrows, heating up is a crucial action in other processes as well, the most important of which is conceiving children. Araweté men, like the Awá, have to heat up the foetus with frequent contributions of semen for a healthy gestation (Viveiros de Castro, 1992: 129). There seems to be, then, a strong relation between warmth and the keeping of things alive and healthy.

Arrows are associated to another critical element in Awá culture: the killing of people. The Awá, unlike other neighboring indigenous groups, are not particularly renowned for being fierce warriors. Quite on the contrary, faced with an enemy group they have almost invariably escaped, an attitude that has allowed them to go almost unnoticed until late in the 20th century. In their tales of the “time of the forest”, they portray themselves as perpetual victims, killed and eaten by other Indians (*Kamará*) or white people (*Karaí*). However, this does not mean that they do not defend themselves. Needless to say, bows and arrows have been their traditional weapons. They are not known to have had other weapons, such as spears, clubs or axes. Today, the enemies that they face are not other Indians, but loggers and peasants invading their lands. Despite the availability of shotguns, bows and arrows are still used to scare and kill foreigners. For reasons still unclear to us, we were not welcomed to the village of Awá (the same name of the Indian group, one of the four FUNAI posts in the Awá territory) in our first exploratory trip in December 2005. When we arrived to the place,



Fig. 13. Meat (a deer's leg and liver) and arrows over the grill.

some Awá men, especially youngsters, reacted to our presence with obvious signs of anger, shouting and gesturing. Interestingly, although in the village of Awá there are a large number of shotguns, we were threatened only with bows and arrows. All reports of Awá attacks on foreigners involve the use of these traditional weapons (e.g. Povos Indígenas, 1996: 455–456). Also, in September 2008, the Awá of Juriti captured an illegal logger inside their reservation, brought them to the village and killed him with arrows. In those cases, it is more a conscious act of identity reaffirmation toward the other that we are dealing with (as in Levi, 1998). Nevertheless, the intimate relation between killing humans and arrows again emphasizes the critical role of these artifacts in Awá culture.

An interesting relation is the one that exist between the arrow, the bow and the penis. *Astrocaryum* cord (*tikwira*) is used to tie the feathers and the two parts of the arrow (shaft and head). *Tikwira* is also employed for the bow string, which is tied in three complex knots (cf. Fig. 2), the biggest of which is located in the lower third of the bow, as among many other Tupi-Guarani groups. The word for “tying” in Awá is *yamichí*. The same word is used for tying the penis. The Awá do not use a penis sheath: they tie their prepuces using *tikwira*. Although the penis string is not used anymore in daily life, because the majority of Awá wear shorts, it is still mandatory for the men who go to the *iwa*, as they can only access the sky completely naked. It is not surprising that the same technical act binds together the virile objects par excellence—the bow and arrows—and the sexual organ. Again, the Araweté provide a good analogy. Here, the bow is not only the sign of masculinity par excellence (as opposed to the sexually-ambivalent rattle and the feminine girdle), “bow” is also the general term for penis (Viveiros de Castro, 1992: 223).

What is apparent from all the associations of Awá arrows is that the more entangled objects are in structural relations in a given

culture, the more difficult it is for them to be ontologically dissociated from people and the more relevant they are in the constitution of selves. Jerome Levi (1998: 317) talking about the role of bows and arrows among traditional Rarámuri notes that the more the “social life of things” is wrapped up with symbols of self and strategies of survival, the more long-lived a particular object or technology will be in that culture. The same occurs with spears among the Nuer, among whom this weapon, which is associated to key themes in their culture, stands for masculinity and for the self (Evans-Pritchard, 1970: 239). This could explain the relevance of bows and arrows among the Awá as well. However, the ideas of “symbol of the self” and of things “standing for the self” imply a mediated relation with things and a metaphorical construction of reality, which do not properly account for the deep relation between person and artifact. Spears and arrows are no image or representation. They are not a displacement of the self, but an intimate part of the self. The relationship is ontological, not analogical.

6. The intimacy of things

Being Awá is intimately linked to bows and arrows: the constitution of things and selves go hand in hand. In many cultures bows and arrows evolve through life together with persons—their size, number and decoration changing as individuals grow, mature and get old (Pétrequin and Pétrequin, 1990). Not only bows and arrows, of course, but other artifacts such as spears (Larick, 1986; Harrison, 2002, 2004), blowpipes (Rival, 1996), scrapers (Bórmida, 1973: 50–60) and sticks (Kassam and Megerssa, 1999) accompany the development of the self in many societies. Among the Awá, as in the case of other hunter-gatherers (Dawe, 1997; Politis, 1998), children start using miniature bows and arrows (splinters of *Gyne-rium*) as soon as they can walk. Interestingly, even those men who use shotguns still teach their children how to make and use the traditional weapons and, in occasions, children have to “kill” with bow and arrows a prey previously captured alive by their parents (Fig. 14).

The deep relationship between men and arrows among the Awá can be traced back at least to the time of the European invasion. The Europeans that first contacted Tupi-Guarani peoples in the Brazilian coast during the 16th century left us interesting descriptions of the relevant place of bows and arrows in those societies. André Thevet (1575), for instance, after emphasizing the important part of the social labor undertaken by women among the Tupinambá, says that “men, only in certain times, fish or hunt in the forest for food, when they are not busy in the making of bows and arrows” (quoted in Fernandes, 1963: 129). Jean de Léry (1578), in turn, noting that women work much harder than men, writes that for the latter “nothing is more important than war, hunting, fishing and the making of *tacapes* [clubs], bows, arrows and adornments of feathers” (quoted in Fernandes, 1963: 204). The geographical scale of the phenomenon is equally remarkable. For the Sirionó, a Tupi group from the Bolivian Amazon, bows and arrows, which are extremely similar to the Awá, were an essential male property and an ethnic identifier when Holmberg studied them in the 1940s. “So important are these weapons”—wrote the ethnographer—“that when not hunting, a man, if busy, is most frequently observed making a new arrow or repairing an old one broken in the last hunt” (Holmberg, 1969: 26). It is not by chance that Holmberg chose this element of material culture to characterize the group: “Nomads of the long bow”.

An episode with the Araweté told by Viveiros de Castro (1992: 56–57) is also telling as to the ontological importance of bows and arrows: in September 1988, a group of isolated Araweté were taken to the village where Viveiros de Castro was conducting his re-



Fig. 14. Child Makarai kills an agouti with his miniature bow and arrow. The animal has just been captured by his parents with the help of dogs.

search. Those people were the surviving remnants of part of a family who had split off 30 years before as a result of a Kayapó attack: a man—Iwarawí, an adolescent girl and two little boys (a situation similar to that of Takanihī Cha'a and his family before arriving in Juriti). At the moment of contact, Iwarawí was carrying some arrows and he took them to the Araweté village, “the arrows were strange, crooked, dirty and poorly feathered, a caricature of Araweté arms. Examining them, an elder of the village declared that Iwarawí was becoming less and less Araweté and was starting to ‘become an enemy’” (Viveiros de Castro, 1992:57). What is interesting of this story is that the elder made his judgment not based on the appearance, speech or behavior of Iwarawí, but on the aspect of his arrows.

The intimacy of some key artefacts is, in the first place, a bodily one (cf. Dobres, 2000: 74–76, 128). Among the Nuer (Evans-Pritchard, 1970: 232) the fighting spear must be constantly in the man's hand “forming almost part of him”. Actually, the spear is felt as an extension of the arm and for this reason they shout “my hand!” when it is hurled. When a man lays down the spear, “it has to be within his reach and he is never tired of sharpening and polishing it”. This bodily intimacy has not only to do with body parts, but also substances: among the Nukak (Politis, 2008), hunters cannot eat ripe fruits or sweets because this would affect the toxic power of the poisoned darts that they employ in their blowpipes. In the case of the Awá, bodily intimacy starts with the very process of making the arrows. The *chaîne opératoire* is a sensuous experience that involves almost every part of the body and every

sense: hands, legs, arms, feet, mouth, eyes and head. Arrows are pressed with the fingers, bitten with the teeth and held between the toes. Arrows are seen, touched with almost every part of the body, their vibration is listened to, they are smelled and tasted (Fig. 15). There is no other artifact that has such a close proximity to the entire body. As Dobres (2000: 151) has remarked, the artisan's body "is not just simply a surface (or stage) on which to perform manual skills... Personhood, in all its multiple layers, is internalized through the experience of technical practice". Once the arrows are made, the Awá are often seen carrying one or two of them around, even when they are idle. This is especially the case with the older and more traditional people, such as Kamará (contacted in 1998), Kamará Cha'a, Takia, Pira Ma'a and Muturuhū. In August 2008, for instance, we saw Kamará Cha'a coming to the FUNAI post to ask for salt with an arrow in his hand and Takia going to have a bath with a bowl of manioc in one hand and an arrow pressed against his armpit.

We said above that the owner/maker of an arrow is always easily identifiable by the rest of the group, even when it is broken and incomplete, thanks to the diacritical elements that personalize the item (size, design, feathers, etc.). This is another sign of the intimate character of these artifacts. Although bows and arrows are not strictly speaking an inalienable possession, the truth is that they are rarely, if ever, given away or exchanged within the group. Not surprisingly, when a person dies, the bow and arrows are buried with him—we only have evidence for one such case: To'o, who

died in 2006. It is interesting to note that this inalienable character is absent in shotguns, which are borrowed and lent. Thus, in 2006, a shotgun was shared by To'o and his daughter's husband, Hamoku Ma'a (who often hunted with bow and arrow at that time) and when To'o died that same year, Hamoku Ma'a inherited the weapon. The explanation for this is twofold: on the one hand, modern weapons are alien artifacts, provided by FUNAI officers to particular individuals, that is, there is an act of giving at the origin of this technology; on the second hand, a shotgun is not made by the person who uses it nor is adjusted to one's body and gesture. There is nothing that ties the owner and the gun so intimately.

That arrows and people are ontologically linked is not only seen during the making and using of arrows, but also in the way they are discarded. After a hunting episode, all arrows are carefully looked for, and even those that are broken are taken back to the village—as observed among the Sirionó (Holmberg, 1969: 33). Since very few arrows are lost, they are usually discarded in the village. Reasons for discard vary, but the predominant reason is that the points were broken by impact during hunting. The answer to our question "why was this arrow (*u'iwa*) discarded?" was almost always *quebrou capelão* ("the howler monkey broke it", in Portuguese). Howler monkeys are certainly the favorite prey for the Awá, but they do hunt many other monkeys and animals with arrows. It seems that what we obtained was a stereotyped answer. Actually, many of the arrows were not exactly broken, but just worn out or fissured from lengthy storage. During our field trips we only found one broken shaft in the forest, as opposed to some 68 points and splinters located in the village, around the huts. Also, very few arrows are broken during the manufacturing process. When this is the case, the pieces are discarded around the house, like used arrows.

The aim of taking the arrows that are badly broken during a hunt back to the village is not recycling, as they are not reusable in any way, so there is something at stake here that has nothing to do with practical reasons. When asked why the broken arrows were not abandoned in the forest, the answer was *faz mal*, "it is bad" or rather "it harms" (in Portuguese). It is a moral attitude, then, rather than a functional one, that explains the behavior. Arrows are intimate things; they are too linked to people as to be abandoned in the forest. They belong to the realm of people and, more specifically, they belong to the house: in July 2008 young Kib'be was building a new house near the old, cockroach-infested hut of his parents. When we arrived, the frame and half of the roof had been finished, but nobody had moved to the new dwelling; there were no hammocks, pans, grill or any other element that identifies a house in use. Except for one thing: a bunch of arrows, belonging to Kib'be, hanging from one of the roof beams. However, structural links between house and self go even further. Both arrows and houses are intrinsically related to fire: we mentioned above that arrows had to be warm, smoked, close to the fire. Likewise, a house is only a proper house when there is a hearth inside. Both arrows and houses (and people) need to be warm to stay alive. Cooking is carried out in the house: like meat, the arrows are cooked; like bones from consumed meat, they are thrown away around the hearth. It is also perhaps because of this that the Awá make a grill to roast the meat even when they camp for a very short time: the grill, the hearth par excellence, creates domesticity and enables the proper consumption of meat in the forest. Unlike other hunter-gatherers, the Awá do not eat meat cooked in improvised fires during hunting trips. Making, consuming and discarding arrows and meat require a precise context of domesticity.

Generally speaking, all things in any culture are involved in one way or the other in the constitution of people (Fowler, 2004: 13), but only a few artifacts are actively involved in the constitution of the self. Technologies of the self, according to Foucault (1988), "are those which permit individuals to effect by their own means



Fig. 15. Biting an *u'iwa* (up) and bending a *takwara* over the head.

or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality". For Foucault, writing in classical times was an essential technology of the self among the elites, through which awareness of oneself (including one's body) was attained. The way of building the self among hunter-gatherers is, obviously, very different from that of literate societies. Therefore, the technologies employed have to be equally different: the self of a hunter-gatherer is not separated from the rest of beings. Writing creates a distance with the world; the making of things with one's own hands dissolves it. Writing is an act of mediation; making is an act of sensuous engagement with the world (Ingold, 2009). Nevertheless, in both cases, a sense of awareness of the cosmos and the self emerges (Treherne, 1995; Fowler, 2004). It is obviously not by chance that bows and arrows, a technology of hunting, are a technology of the self among the Awá. In fact, they cannot be seen in isolation, but related to hunting, which may be considered as a general technology of the self for the Awá, as for many other hunter-gatherers, which includes a myriad of specific technologies and techniques.

The role of bows and arrows as a technology of the self, though, is exemplified at its best not by the Awá, but by two people that live among them. Residing in the settlement of Tiracambú, in one of the Awá reservations, there are two men, Aurá and Auré, who belong to a group that was exterminated in the 1980s (Mello, 1996). The fate of their community was sealed by the large development projects that affected this area in the context of the Grande Carajás mining project (Treece, 1987). Aurá and Auré are the last representatives of their culture. They live alone, in a hut located in the outskirts of the Awá village. Their language is not understood by their neighbors, with whom they maintain scant relations. Having no social or economic life (they depend for their livelihood on the FUNAI), they spend most of their time in solitude, making arrows. When we visited them in 2005, we counted 1630 arrows in their hut placed on the crossbeams of the roof (Fig. 16). This is an example of routinization made pathological through intense trauma (Giddens, 1984: 60–61): Aurá and Auré's culture has been reduced to a single activity—making arrows.

Based on the nature of Awá bows and arrows, we propose a tentative list of features (which might be useful for a better understanding of the archaeological record) that should characterize an artifact in order to be considered as part of a technology of the self:

- (1) It has preferably to be built by his or her owner.
- (2) Its fabrication, use and maintenance have to take time and require intellectual concentration and educated sensorimotor skills.
- (3) It must be recognized by others as personal (even inalienable) property.
- (4) It has to be individualized to a certain degree (that is, to be clearly distinguishable from similar items belonging to other people).
- (5) It has to be intimately tied to its owner (it might be often carried away with him or her, even when it is not used).
- (6) It must have a corporeal, prosthetic character, as an extension of the human body.
- (7) Its making and use must be frequent and imply routine: the repetition of the same acts is fundamental to the maintenance of ontological security and the continuity of being.
- (8) When the owner dies, it has to be buried with him or her or destroyed; it is not usually inherited or used by other persons after death.

In short, some artefacts are a technology of the self in the Foucauldian sense not in that they produce perfection or purity (concepts that are related to a notion of the individual self typical of socio-economically complex societies), but in that they lead to the well-being, self-awareness and a sense of order and orientation of the person in the world. As we have seen, this is an important role played by the making of spearheads among the Jarú Aborigines studied by Harrison (2002: 368): it makes them feel that they are skillful and worthy individuals. As in the Awá case, the making of spearheads among the Jarú is strongly linked to the enactment of the masculine self.

Bows and arrows among Awá men clearly fulfill this function. The question is, what about the women's self? The role could have been played by weaving. Weaving covers most of the aspects mentioned above for a technology of the self. Even more than the making of arrows, weaving requires great concentration and skill, demands much time, and the operational sequence is always structurally related to key cultural themes in many societies (e.g. Guss, 1989). The problem is that Awá women no longer weave. During the "time of the forest", this was a vital technology, because it was necessary for making hammocks, baby slings, and skirts. Women, however, abandoned this task and most other chores traditionally assigned to them with forced resettlement by the FUNAI and the subsequent introduction of industrial hammocks and cloth. This fact inevitably brings deep and negative consequences to the construction of the women's self and to their social status (Hernando, 2010; Hernando et al., 2011). As it has been repeatedly pointed out, contact with modern society has often resulted in a decrease of women's influence within their own groups (Forline, 1995: 61–62; Begler, 1978:576–577; Flanagan, 1989: 259; Seymour-Smith, 1991: 639, 644; Lee, 1982:50–51; Stearman, 1989). The Awá case is not an exception, and this loss of power and gender balance is also expressed in material culture: female technologies of the self are disappearing correlatively to the opportunities of women to take decisions within the group.

7. Conclusion: troubled selves, troubled things

The technological process that leads to the making and use of arrows, spears or blowpipes may be seen as a typical example of "routinization" (Giddens, 1984: 60–61). According to Anthony Giddens, "Routine is integral both to the continuity of the personality of the agent, as he or she moves along the path of daily activities, and to the institutions of society, which are such only through their continued reproduction". Relevant for the Awá case is that "We can



Fig. 16. Some of Auré and Aurá's arrows.

probe the psychological nature of the routine by considering the results of situations where the established modes of accustomed daily life are drastically undermined or shattered—by studying what maybe called ‘critical situations’” (Giddens, 1984). The apparently incongruous survival of archaic technologies in contexts of cultural contact, such as lithic artifacts (Silliman, 2001; Harrison, 2002; Rodríguez-Alegría, 2008), can be explained as an attempt of keeping routines alive, which are linked to the making of the self. It is precisely in these critical circumstances when routines are more necessary to maintain ontological security (Giddens, 1984: 50).

The situation of the Awá is a good example of daily life drastically undermined—through resettlement, the breaking up of family units, and the introduction of new subsistence practices and technologies. Bows and arrows, in this context, must have acquired a greater relevance, because they link Awá men to the security of the pre-contact world. But even before their current traumatic contact with modernity, the Awá, as other Amerindian populations, have gone through critical situations of displacement, war and conflict, both before and after colonial contact, and in each of those situations the groups that have not perished have been forced to reconstruct their societies. Anthropologists have often investigated social mechanisms employed for social reconstruction (such as ritual and kinship). Yet a full ontological remaking of the person under critical conditions involves other issues that have been less noticed by anthropologists. These issues have to do with the intimate relationship between people and things. Those everyday objects that are crucial for the constitution of human beings under normal circumstances, suddenly receive disproportionate attention. Thus, for indigenous populations which had been expelled from their lands and their livelihoods radically altered, the few possessions that they are able to keep from their former lives—the most essential things, those more directly related to sheer survival, such as bows and arrows—acquire a new life of their own. It is not surprising, then, that those things appear to us as aberrant: the extremely long bows of the Sirionó—a displaced and isolated Tupi-Guaraní group—, the many arrows of the harassed Awá and Ka'apor, the exceedingly long bows and arrows of lonely and alienated Takanĩhĩ Cha'a, or the immense amount of bows and arrows made by Auré and Aurá. For Aurá and Auré, the obsessive repetition of technical gestures gives back a feeling of something that remains in the middle of chaos. Interestingly, in all cases mentioned, the cultural trait that survives, the activity whose potential is so strong as to represent the entire lost culture, is making arrows. This is extremely enlightening towards the enormous relevance that they had in their vanished society. However, this relevance was not just economic or symbolical—both concepts help detach people from their material culture. As among the Awá, the importance of bows and arrows was, in the first place, ontological. That bows and arrows are essential in the constitution of the Awá as human beings might have become especially obvious under the present circumstances, but, after all, what the traumatic contact situation does is just making transparent what had always been crucial in their constitution as human beings.

Losing the material culture through which the Awá related to their pre-contact world—as it is happening today with industrial fabrics in relation to women and with shotguns in relation to men—is a radical way of transforming their selves. Other anthropologists and archaeologists (Viveiros de Castro, 1996: 132; Treherne, 1995: 129–130) have stated that in non-modern societies there is no divide between appearance and essence and that the self is constructed through bodily performance—unlike our distinctions between body and soul, subject and object. Here, we have tried to go a step further, as we contend that the performance of the self needs a technology in the more material sense of the term, a technology through which people and things mutually constitute each other.

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