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Vanished Wars of Australia: the Archeological Invisibility of Aboriginal Collective Conflicts

Christophe Darmangeat[1]

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Abstract

In the debate concerning the existence of collective armed conflict before the advent of agriculture and the emergence of wealth differentiation, Australia—a continent entirely occupied by economic egalitarian foragers until the end of the eighteenth century—provides key insights. We explore the ethnographic data, striving to build a comprehensive database of the collective fights which were recorded. This survey brings a total of 165 events, among which 32 display a comparatively high level of lethality, with ten killed or more, a proportion far from negligible. An examination of each testimony leads to the conclusion that they are, as a whole, likely reliable. We then briefly discuss the nature of these collective conflicts, which purposes are marked by the lack of wealth in Aboriginal societies: the two main proximate causes, by far, are rights over women and retaliation for real or supposed aggressions—notably, conflicts over territories and resources are almost absent. It is also argued that at least some of these conflicts should be qualified as "wars". Finally, we show why those conflicts leave so few archeological remains, by dealing with art, bones, and material means of conflicts, with a special attention to the "hunting versus war" weapon question. We conclude that if in such technical and social circumstances, these events are fairly difficult to record ethnologically, they are almost (if not totally) invisible archeologically.

Keywords Australian aborigines · Violence · Warfare · Feud · Hunter-gatherers · Art · Weapons

The existence of collective armed conflicts, possibly deserving to be called "wars", in forager societies has been one of the most disputed topics of social anthropology for decades. Some researchers ascribe to war a remote origin, extending back to the biological heritage of the human species (Gat 2008). Others see it as a relatively recent phenomena (Fry 2009), arguing that foragers lacking wealth, accumulated goods,

✉ Christophe Darmangeat
cdarmangeat@gmail.com

[1] LADYSS, Université de Paris, 5, place Thomas Mann, 75013 Paris, France

permanent dwellings, and, all the more so, states, would not possess both the motivations and the means to serious confrontations, and that violence could therefore not go beyond the level of individual conflicts. During the last 20 years, the debate was nourished by several contributions originating from archeology (Allen and Jones 2014; Guilaine and Zammit 2004; Keeley 1997; Lahr *et al.* 2016). One recurrent problem, however, is the paucity of the material traces left by these possible events. The ethnographical data which shed a light upon the bellicosity of foragers also raise important difficulties. Yet, there is a wide agreement on their special interest for this discussion, and they often have been mobilized in case studies or cross-cultural comparisons (Ember 1978, 1982; Kelly 2000; Otterbein 1968, 2009).

The present contribution relies on a thorough inquiry of the Australian Aboriginal record, which has hitherto only partially been exploited. Some examples, such as the Tiwi from Bathurst Island, or certain famous bellicose episodes, are often cited. But, to our knowledge, no systematic survey had ever been undertaken, despite its unique richness. The general underestimation of bellicose tendency of traditional Aboriginal societies may be attributed to several reasons. Leaving aside the real or supposed political stakes of this issue (Allen 2014: 97; Sutton 2001), episodes of armed conflicts were relatively rare, and being in position to report them required an intimate and prolonged knowledge of the Aborigines. As a whole, they were also hardly conspicuous—most of the deadliest attacks were launched at night and by surprise. But the main factor probably remains the very fast disappearance of these conflicts after contact. It seems very significant that the few Westerners who lived among still preserved tribes (Buckley, Pelletier, Jackman, Morill…) as well as Aborigines who provided autobiographies were unanimous to highlight the existence of episodes pertaining to "warfare", although their level and nature vary significantly from one observer to the other.

The old debate between "hawk" and "doves" about primitive violence—a variation on the theme of the "good savage"—often crystallized around the conclusions that can be drawn of the absence, or near absence, of archeological marks of armed conflicts among foragers. The former many times reminded the latter the old motto according to which "lack of evidence is not evidence of lack". In turn, they were told that this motto could not be systematically invoked in order to suggest, in a faulty reversal of logic, that the lack of evidence could be held as an evidence for the presumed presence. The situation is similar to a policeman who would suspect a crime but would not have found the body of the victim, and would be wondering if his suspicions are justified, and eventually, how to convince a jury of them. Before any new (and unlikely) discoveries put an end to the discussion by providing undisputable proof of collective fights among traditional foragers, one must settle for a probabilistic reasoning—but is proof something other than very high probability? To address this thorny issue, the Australian case seems to be particularly informative, and prone to enlighten, for instance, the interpretation of the European Upper Paleolithic record. As we will see, the ethnological record of that continent shows that, contrary to a common view, deadly collective fights are not incompatible with the social structures of "simple" foragers. It is then all the more likely that they could also take place in the past within similar societies that the reasons to believe in their archeological invisibility are strong.

The first part of this article will be devoted to the presentation of a database of collective conflicts, with a focus on the most lethal ones. We will then proceed to a brief

discussion about different questions. In particular, we will examine their motivations and organization, trying to determine if some of them should be called "wars"—that is the reason why, we will avoid this term in the beginning of this text—and discuss the crucial point of their antiquity. In the third and last part, we will draw upon this material in order to illustrate the difficulty to locate such events in the archeological record.

A Database of Aboriginal Collective Conflicts[1]

The Building of the Database

Aboriginal Australia represents a unique set of foragers, both because they were the only ones in the world not to have been constrained by the neighboring of cultivators and relegated in hostile environments, and because of the abundance of the documentation concerning them. In parallel to professional ethnologists and, most often, long before them, travelers or settlers lived in close contact with the Aborigines for weeks, months, or years and reported the events and customs they had noticed. Some of them, castaways or evaded convicts, stayed among remote tribes, before returning to the Western world and bringing back a testimony that was all the more precious that the Aborigines among which they had lived had not yet experienced—or only marginally—the impact of contact. The dreadful effects of the colonial penetration on this continent cannot be overstated. Infectious diseases such as smallpox, against which local populations were not protected, land dispossession, not forgetting the outright slaughters, destroyed Aboriginal societies within a few years—often, far before they could have been described. Finally, we possess some precious narratives originating from Aboriginal people themselves. Unfortunately, almost inexistent during the first part of the colonization, they began to emerge only in the middle of the twentieth century, with the accession of some Aborigines to education and codes of western society.

Despite inevitable gaps, this documentation provides a rich set of conflict descriptions which, quite surprisingly, have received little attention from professional anthropologists. Compared with kinship or religion, for instance, which have been stirring up hundreds of articles and books for one and half century, the contrast is striking. Armed conflicts in Aboriginal Australia only resulted in limited developments. Except the penetrating but short chapter of Herbert Basedow's book (1979: 183–189), the only systematic study remains Lloyd Warner's, about the Murngin of Arnhem Land. In a 1931 article, taken again in his *Black Civilization*, he puts forth an analysis of the causes and of the modalities of a phenomenon described as central—"warfare is one of the most important social activities of the Murngin people and the surrounding tribes" (1937: 144), as well as a typology of the different forms of armed confrontations. Despite its interest, no attempt was ever made to examine to which extent Warner's conclusions on northeastern Arnhem Land remained valid in the other parts of the continent.

[1] The database, containing all the bibliographic references, is available online at: http://cdarmangeat.ghes.univ-paris-diderot.fr/australia/wars-data.html

The first aim of the following pages is to inventory, in the most systematic way, the various accounts of conflictual episodes and to evaluate the reliability of the most lethal ones. Part of them comes from professional anthropologists but, for reasons already mentioned, they are far less numerous than those left by ordinary witnesses: travelers, explorers, settlers, etc. A few newspaper articles complete this list. It would be daring to pretend having achieved a comprehensive survey. There are several thousands of sources dealing with Aboriginal Australia and, even with modern electronic means, many remain inaccessible to a scholar who lives on the other side of the Earth. There is, moreover, a vast unpublished—and most probably, poorly studied—documentation, available only in local libraries and institutions. Nevertheless, our sampling appears to be quite satisfactory, with 165 events of collective conflict stemming from 153 different sources (the same source sometimes mentions several events and, conversely, certain events are mentioned by different sources). The events span a century and a half, between 1803 and 1951. For each area, the correspondence between theses dates and western penetration supports the idea that these phenomena tended to disappear very quickly with the colonial presence.

To be precise, our data contain only group to group confrontations. They therefore exclude the very frequent situations in which a judiciary procedure aimed a particular individual, whether through what is traditionally and improperly called an "ordeal", where the accused, holding a shield, faced a determined number of avengers armed with spears (Basedow 1907: 79–80), or through a revenge expedition designed to put the presumed culprit to death (Gason 1879: 264; Spencer and Gillen 1899: 477). Besides, only continental Australia was taken into account, excluding data from Tasmania or the Torres Strait Islands. The collected results are gathered on an online interactive map[2] of which here is a preview (Fig. 1):

The markers of the map were designed following a double distinction.

1. The shape indicates the form of the confrontation. As far as it was possible, a difference was made between open battles, where each side goes to a previously agreed place and raids or ambushes, where one group attacks another by surprise. There are also two cases of campaigns, for which the narrative evokes a succession of confrontations, without further precision.
2. The color shows the level of violence of the confrontations, based upon the alleged or estimated number of deaths. Four categories were used: none killed, one or two killed, three to nine, ten and above. Of course, the chosen levels are somewhat arbitrary. Yet, they allow to cope with a chief dimension of reality, in particular the existence of events that were deadly enough to clearly distinguish themselves of confrontation known as "sham fights", sometimes also called "ritual" or "ceremonial", which ceased after the first bloodshed or, possibly, one or two people killed. By the way, one can notice how these denominations are deceptive: a fight in which several people can get severely injured, and even one or two killed, is certainly not "sham". As for "ritual" or "ceremonial", these terms may refer to a

[2] The map is located at http://cdarmangeat.ghes.univ-paris-diderot.fr/australia/wars-map.html. The most lethal elements, which will be commented in detail in the following pages, appear in black. Each marker can be clicked to display its bibliographical references in a popup.

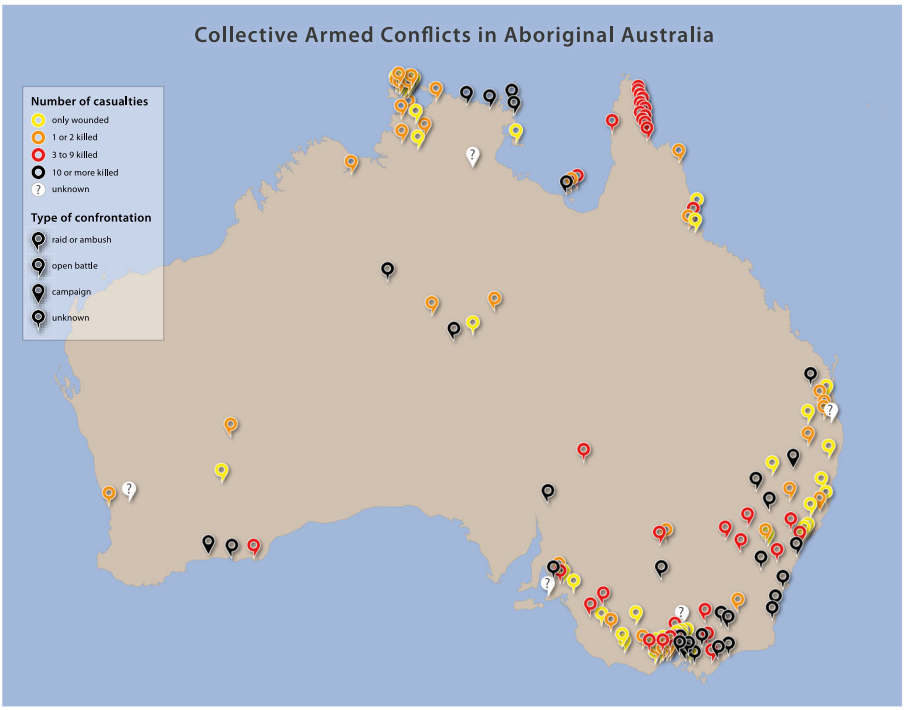

Fig. 1 The type and location of the conflicts reported in the database. The interactive map is available online at: https://cdarmangeat.ghes.univ-paris-diderot.fr/australia/wars-map.html

religious connotation entirely lacking in these situations. To our eyes, it is much more appropriate to speak about "stylized" or "regulated" fights.

Following these two criteria, the distribution of confrontations is the following (Table 1):

Thus, out of the 165 alleged events of collective violence, 32 can be assigned in a certain or probable way to the most lethal category, where the number of killed is supposed to have reached or exceed ten. These episodes are now going to be examined more closely.

Table 1 Forms and lethality of collective armed conflicts in Aboriginal Australia

Type of confrontation	Number of killed					Total
	none	1 or 2	3 to 9	≥10	?	
Open battle	37	27	21	3	4	92
Battle then pursuit			2	1		3
Campaign				2	1	3
Ambush, raid	1	7	9	12		29
Ordeal then battle	2					2
Indeterminate	6	10	9	14		36
Total	46	40	42	32	5	165

The Most Lethal Cases: a Brief Survey

Some of the testimonies seem imprecise or unreliable. It is therefore possible that they could have claimed an exaggerated count. Yet, conversely, some have been dismissed that may have deserved to be included in this category. This is, for instance, the case of this battle that involved about 500 fighters around 1887, in the south of Coff's Harbor, half-way between Sydney and Brisbane, witnessed by Walter Harvie (event #116). Harvie was told that three individuals lost their lives on the battle ground, but "there were dozens lying about the ground in various attitudes", among which "a great many had to be carried off to the different camps" and "were so seriously wounded that they never recovered". Another possible deadly confrontation is mentioned by the squatter L. Struilby, who cursively writes that it was "most fierce and bloody", without giving further details (event #91). To this, one may also add the 12 "wars" mentioned in Narcisse Pelletier's narrative. This French sailor, whose ship was wrecked in 1857 off the eastern coast of Cape York, was picked up by the Aborigines and lived among them during 17 years, hundreds of kilometers away from the next Westerner, before being brought back to his native country. His testimony, whose general reliability is recognized by the specialists of this area (Chase 2009), mentions battles in which the opposing sides counted some dozens of members, and which ceased « when some have beaten the dust » (Anderson *et al.* 2009: 234). Yet, Pelletier goes on saying that the winners « are ruthless; they never take prisoners. They finish off the poor soul lying wounded on the ground, even if it means returning his body to his family or his tribe » (*ibid*.). Given the doubts, preference was given to the low hypothesis, according to which these "some" were fewer than ten, and therefore these 12 wars did not enter the deadliest of our categories.

We thus count 32 "ten killed or more" events, reported by 21 different individuals, among which only three (Lloyd Warner, Theodore Strehlow, and Mervyn Meggitt) were academic anthropologists. Most others were Westerners who, from their professional activities or a more improbable turn of events, interacted with local populations. Among them, we find the names of George A. Robinson and William Thomas, who hold the office of Protector of Aborigines, and that of Edward M. Curr, a settler whose treaty on Aborigines still remains a reference nowadays. Finally, four informants are Aborigines recording their own childhood memories or those of older parents. The high interest of these testimonies makes us all the more regret their paucity, due to the fact that it took decades before the preoccupation to collect this direct speech emerged.

>Events are geographically concentrated in the south-east of the continent and chronologically in the first decades of the nineteenth century—21 of them are supposed to have taken place between 1820 and 1845. The few more recent events are located in Queensland, in the Western Desert, and, most of all, in Arnhem Land. This distribution seems to be globally consistent with both the densities of occupation for the precolonial times and the chronology of European penetration (Arthur *et al*. 2005; Gat 2008: 22). Regarding North Queensland and Arnhem Land, however, which were the densest areas, the number of reported events remains comparatively low. The testimonies of Pelletier, already mentioned, or of Pilling and Warner, which will be discussed later, suggest that this relative scarcity of conflicts is far less due to reality itself than to the low number of its potential witnesses.

We will now try to evaluate the likelihood of the various reports in the light of the quality and reliability of sources. This exercise raises many difficulties, both because of its partially subjective character and the impossibility to enter too far into details without lengthening this text unreasonably; it nevertheless remains essential.

Let us begin by setting aside a battle which, according to an anonymous columnist of the *Adelaide News* writing in 1931, is supposed to have taken place near this town in 1843 (event #69). It would have gathered no less than 1500 fighters, provoked 150 killings and severe injuries, and some scenes would have been drawn by John Michael Skipper. Despite our efforts, we could not find a single element in support of this statement. Most of this artist's works are nowadays held by private hands and thus inaccessible. Most of all, several dozens of killings makes a considerable number: such an event could not have been ignored by the local press. As far as we have been able to check it, there is only one mention, in May of this same year, of a fight between tribes that resulted in "several" deaths (event #72). Until more data are available, prudence dictates thus to assume that this battle never took place, or on a far lesser scale than reported almost 90 years later by the *Adelaide News*.

The next event, although it is among the most often cited by the scholars that advocate the existence of authentic wars in Aboriginal Australia (Allen 2014: 104; Gat 2008: 22; Sutton 2001), must be regarded as one of the most doubtful. The source is the narrative by Theodore Strehlow of a feud that opposed, in 1875 and in the following years, the Irbmangkara, a local group of the Aranda tribe, to a coalition formed around the Matuntara (event #120). This last troop which, according to Strehlow, amounted to 50 or 60 fighters, launched a surprise attack on the Irbmangkara camp, killing men, women, and children. There were between 80 and 100 victims, methodically dispatched in order to leave no witness. A woman, however, as well as a young man whose path crossed the murderers' the day after, managed to escape. In order to avenge this slaughtering, the Aranda selected a group of about ten fighters, chosen for their martial proficiency. During 30 years, they roamed the areas where the culprits lived, disposing of them one by one, sometimes putting also their wives and children to death. They were welcomed as heroes when they came back. Strehlow's narrative is full of details about the places and circumstances, providing for instance the protagonists' names. Given the fact that it was written by a professional anthropologist, the son of a missionary long settled in the region and closely familiar to the Aranda tribe, everything seems to advocate for its trustworthiness. However, as it has been noticed (Gill 1998), the story rises several problems, starting with the question to know whom Strehlow got its information from. The text, first published in 1969, described a journey that took place in 1922, when the author was only 14. The events were themselves supposed to happen 47 years before, and 2 years before the arrival of the first missionaries in the area. Most of the circumstances of the first attack could only be known by the protagonists… who are supposed to have been killed during the following months. In the absence of any other element that could corroborate these events (with the exception of some murders committed 12 years later and which possibility could be linked to them, at the expense of an important revision of the dating), their scale, if not their mere reality, seems quite dubious.

Another episode which arouses great suspicion is said to have caused "much slaughter (…) on both sides" in the beginning of the nineteenth century, around Canberra (event #26). Bluett, who mentions it (1954: 19), does not give any indication

on the origin of this information and, here again, we could not find any source to substantiate it. Another killing, perhaps less suspect because reported by a direct witness, remains quite vague. Maybe the original document, which I could not access, would bring additional information (event #1).

On the other end of the spectrum of reliability, one finds, at the outset, the two *gaingar*—a battle following a specific declaration of war—reported by Warner (events #150 and #151). It should be remembered that the pages which this anthropologist devoted to warfare in Arnhem Land are unmatched for the rest of Australia. Without giving much detail, Warner ascertains the occurrence of two particularly violent confrontations during the years preceding his field study, in which 14 and 15 fighters were killed. Although he does not say how he obtained this counting, it is not unreasonable to believe that it resulted from his intimate knowledge of the local people and of an individual identification of each victim. By the way, if these figures have often been ignored, they never seemed to have been contested. In addition to these two battles, Warner mentions the near extermination of a whole local group, in unspecified circumstances, that had occurred some years before (event #145).

Although he did not witness it directly, it is possible to believe Meggitt when he reports a battle in the Western Desert about the possession of a water source, which would have caused the death of at least "a score or more" individuals on either side (event #136). Admittedly, this is supposed to have happened at the beginning of the twentieth century, that is, about 50 years before his ethnography. But, contrary to Strehlow, the narrative gives no suspect detail, and the specific circumstances of the confrontation—an engagement which outcome, "by desert standards (…) was spectacular" (Meggitt 1962: 42)—suggest that its memory was preserved among the involved people. The fact that certain watering places were bitterly disputed is also reported by (Aiston 1921).

The memories of William Jackman represent a puzzling case. The "Australian prisoner", from the title of his successful biography edited by Chamberlayne and published in 1852, was a sailor who claimed, among other adventures, to have been shipwrecked on the south-west coast of the continent then deprived of any colonial presence. Picked up by the Aborigines, he said to have sojourned 18 months among them before being rescued by a whaleboat. Jackman reports several bellicose episodes that took place during his forced stay. One of them (event #52) is a surprise attack launched by some hundreds of men split in two groups, striking indifferently men, women, and children of the enemy camp, and striving to prevent anyone from fleeing. The number of victims is not stated, but amounts obviously to several tens. Another episode (event #54) is even more spectacular. Seven hundred fighters, accompanied by their families, divided in four groups, went across the enemy territory during 6 weeks. Jackman, who does not indicate the reasons of such a violent hostility, puts the figure at 200 killed on the side of the aggressors, half of them men, the other half women and children. In the opposite side, he states that 200 fighters lost their lives, besides an unspecified number of women and children.

Those figures, as far as it concerns foragers, seem at first sight too gigantic to be plausible. Yet, one should not dismiss them at once. First, the gathering of several hundreds of fighters, be it relatively uncommon, is not exceptional. In Queensland, Tom Petrie reports for instance two confrontations involving 700 to 800 individuals during the 1860s (event #96). Similar figures were given in 1837 on the Lachlan River (Event #51) and

around 1848 in Adelaide's vicinity (event #86). In the same place, in 1849, George Taplin, a missionary who wrote several texts on Aboriginal societies, claimed to have attended a fight gathering 1300 people, which was stopped by colonial authorities (event #87).

The reliability of Jackman's narrative was sometimes seriously questioned. Yet, the confrontation of the text with the historical documents and the ethnographic record, regarding both biographic elements and the customs of the involved Aboriginal tribes (here, the Nyungar), leads to conclude to its general credibility. Admittedly, Gibbs, who undertook this study (2002) remains very skeptical about martial episodes, especially concerning the number of victims. And one can only share this attitude when Jackman relates the torturing of two prisoners (which would be a unique case in the whole Aboriginal ethnography). But, if Jackman has probably embellished and exaggerated some traits, we should not dismiss his relation too hastily. To begin with, it should be remembered that the number of killed, that seems to reach a total of about 600, is supposed to result from an extended sequence of confrontations, undertaken by four different troops. Supposing, for instance, that each of them fought once a week during the time of the expedition, that is, 6 weeks, one concludes that each of the 24 potential engagements would have caused an average of slightly less than 30 victims. Besides, unlike what Gibbs suggests, such levels of violence—in the order of some tens of victims—, although rare, are reported by several other sources.

Two narratives, in particular, altogether stem from direct witnesses and provide fairly accurate information. The first comes from a certain Martin Lynch (event #31), who reports a childhood memory: a battle which took place in 1830 in the vicinity of Sydney during 3 days and nights, and resulted in almost a hundred deaths. The other confrontation is reported for the same year around Canberra by William D. Tarlinton, who evaluates the outcome to 60 killed (event #32). It is important to note that if Jackman or Chamberlayne, who held the pen, may be suspected to have inflated the figures in the aim of gaining commercial success, this motivation can hardly be attributed to the two last witnesses.

Another sequence of episodes pertains to hostilities that took place during the 1820s and the 1830s, opposing the tribes of the Melbourne area to those from Gippsland, between whom, according to the general opinion, prevailed a bitter enmity. The main informant is William Thomas, who was in charge of the office of Protector of the Aborigines during more than 25 years and who let an extensive documentation. His notes, unfortunately not fully published, mention at least five different confrontations, noted by various researchers, supplemented by a testimony entrusted in the end of his life to R. B. Smyth, according to which one of the Melbourne local groups, in 1834, had lost half of its members (about 250 individuals) in such hostilities (event #41).

Two of the events reported by Thomas are borne out by other sources. By the way, Gaughwin and Sullivan (1984) are probably wrong when identifying the facts reported by Haydon to the elimination of "nearly half the tribe" evoked by Thomas around 1820 (event #29). The scarce indication leads us to rather identify the night attack which was launched around 1833 and that lead to between 60 and 70 victims (event #38). Along the other facts reported by Thomas around 1820 (event #33), one finds the 17 killed "about four years back (…) not nine miles from Melbourne" (event #17), or the 25 Bunurong slaughtered, once again in raids launched from Gippsland (event #39). But one finds also, for the same area and period, mentions of punitive expeditions

carried out in the opposite direction, where the winners boasted of the number of their victims, a claim supported by the large quantities of human flesh that they brought back (events #55 and #56).

Thomas' supervisor, George A. Robinson, also did not fail to mention deadly tribal confrontations, in particular for the eastern Victoria area. He evokes "an exterminating warfare" that happened during the 1830s, which "nearly depopulated the country" that was targeted (event #43), and the recent destruction of a "whole tribe" by the Yattermittongs, the bones being still visible on the slaughter place (event #62). According to his biographer Rae Ellis, Robinson's assertions, which are hardly suspect of darkening the acts of the Aborigines, are confirmed by the notes of the missionary Lancelot Threlkeld (Rae-Ellis 1996: 201).

Some years later, further north, E. Curr describes with many details a bloody punitive expedition launched in order to avenge the death of a very respected young Aborigine. The night attack made about 15 victims, among which the brother-in-law of one of the avengers who, in the confusion, did not recognize him (event #80). In the same area, a narrative mentions the slaughter, by the holders of the local rights, of a group who came to procure ochre and did not ask permission in the regular forms (event #117). A similar episode is related by Fison and Howitt, who held it from one of their informants: a group of Kurnai close to the territory of an enemy tribe (called by the generic term of "Brajerak", that is, "Barbarians"), discovered fresh tracks. After sending a spy to check the location of their target, they furbished their weapons, encircled the camp, and suddenly attacked it in the morning, killing men and children and capturing some women (event #61).Although rarer, mentions of similar episodes are found for Queensland. Around 1835, a certain James Davies, probably a squatter, witnessed one warring party bringing back 10 to 12 corpses of their killed companions that were, following this area's custom, butchered, roasted and eaten by their families (event #42). One can infer that the fight had possibly, if not probably, made twice this number of victims. A decade later, another squatter claimed that a feud carried out among Aborigines he knew had killed 60 to 70 people in the span of 2 years—such a figure is likely to have been reached only at the expense of deadly collective confrontations (event #82).

The same area provides one of the few testimonies originating from the Aborigines themselves and whose informative value must therefore be taken very seriously. During the 1870s, an old man named Billy Murri Bundar remembered a fight that happened in his childhood, thus likely in the 1820s, which lasted "till many were killed" (event #28). Billy Thorpe, whose own childhood memories are some decades later, mentions a "terrible battle", with "a lot (…) killed and wounded on both sides" (event #94). A tragic detail that gives credibility to this testimony is that Thorpe's own parents, among many others, lost their lives in this confrontation.

An even more significant Aboriginal contribution is Dick Roughseys'—his real tribal name was Goobalathaldin. Born around 1920 on Mornington Island, in the Carpentarie Gulf, he wrote an autobiography in which he relates customs and events from his youth, when western influence remained negligible. It includes the narrative of a feud undertaken by one of his friends, during which several murders were committed. But it also reports a massive confrontation which took place in an unspecified past where his own group, the Lardil, annihilated a hostile troop from a neighboring island (event #90). Old people claimed that these events had changed the regional balance of power, which explained the present situation:

> The old folk say that it wasn't a good thing to kill all those Yanggarl men, because their home island of Forsyth is between Mornington Island and the mainland, and when the tribe was strong they stopped the mainland tribes from raiding the Wellesley Islands after women. After the Warrenby fight the Yanyula tribe from Booraloola used to raid Forsyth Island, travelling by *walpa* [canoe] from the mainland. (Roughsey 1971: 71)

Roughsey reports another large-scale event, much more recent since it happened "not long before the white man came", that is, around 1910. A trading party had been attacked on the Forsyth island, and two Lardil had lost their lives. In reprisal, this tribe took the lead of a coalition and triggered a "big fight" during which "many" of its opponents were killed [Event #147]

Several other Aboriginal witnesses evoke relations between tribes or local groups marked by bitter hostility. Douglas Lockwood, a journalist, held the pen in 1962 for a quite informative narrative on this issue: the autobiography of Waipuldanya, a member of the Alawa tribe of north-western Arnhem Land. According to him, in the times of his grand-parents:

> The Malanugga-nugga came in from the coast to raid the Alawa, carrying off our women and killing our men (...) The raiding parties were known as *gulgar*. No more terrifying word existed in the Waliburu langage. They descended upon us in hundreds, throwing spears and boomerangs indiscriminately and thrashing about them with *nulla-nullas* [clubs] with cracked skulls and limbs. (Lockwood 1996: 43–44).

The story of Warrenby must be paralleled with that of another Aboriginal hero: Red Kangaroo, leader of the Kamilaroi, probably born in the end of the seventeenth century, and whose great deeds, passed down from generation to generation, were written down around 1890 by John Peter Ewing. If the details of his life are of course questionable, his existence seems quite plausible (his possible grave was searched, and the remains it contained were consistent with the oral tradition), and so are its main episodes (Bungaree *et al*. 2005). His major martial accomplishment was a crushing victory on a troop of "Cassilis", a community living on the upper Goulburn River, who was twice as numerous. Within one single engagement, thanks to a perfectly prepared ambush, Red Kangaroo's fighters are supposed to have killed 34 enemies and severely wounded 6 others, to which 5 more victims in peripheral confrontations must be added (event #2).

The similarities between Red Kangaroo's prowess and Warrenby's are striking: in both cases, the hero redresses a difficult situation altogether because of his martial abilities, his capacity to federate his group's energies, and a trick which wins the trust of the enemy and lures him into a deadly trap. As already noticed, the credibility of these narratives is all the more problematic that they occurred in a quite remote past—in case of oral transmission, some generations are a considerable lapse of time—, and that the reasons why a society wants to glorify a past hero by exaggerating his deeds are self-evident. In the present case, however, several elements suggest that these narratives, so complimentary they may be, do not take too much freedom with reality. On many aspects, they contrast true myths: they include many trivial or practical details and, most of all, if their heroes are remarkable individuals, they remain ordinary humans in

all aspects. They show neither particular power nor contact with supernatural beings. These stories do not mark a founding event that would have established a new order of the world. And if the figures they mention may be questioned—but our conviction is that they are trustworthy—the social realities they describe seem quite accurate. Lastly, there are some other Aboriginal testimonies about recurring collective fights in Rose (1991: 101–112). But the text, besides including few specific details, touches upon facts that may be a consequence of the white penetration.

Five General Questions

Our database is an entry point to several essential issues related to the causes, the form, and the nature of these conflicts. This discussion, to which it is not possible to devote here the space it would deserve, will be the object of a future publication. We will then try to sum up at best what should be said on the nature of Aboriginal societies, on the proximal causes of conflicts, on their possible qualification as "wars" and on their level of lethality, finishing with the essential question to determine whether these events stem from the internal social logic of Aboriginal tribes, or they should be considered as a recent by-product of Western penetration.

Lethality Rates

Is it possible to go a step further in quantitative evaluations, especially by estimating the level of lethality of Aboriginal conflicts or, at least, of some of them? This issue is the focus of Keeley's book, already mentioned, who argues that far from being the "sham" or "ritual" fights often described, primitive confrontations were as a whole deadlier than those of state societies. Unfortunately, the data we could gather for Australia do not provide any element likely to take significantly the debate forward. In about 50 cases, the sources provide an estimation of the number of engaged fighters, and the rate of lethality can therefore be estimated. The major—and prohibitive—problem is that these rates vary dramatically from one case to another. At one end of the sample, we find regulated battles, which could gather up to a thousand individuals and result in one or two deaths at most. Conversely, during some raids, a relatively small group wiped out the totality, or nearly so, of an adverse camp. Between these extremities, in battles such as mentioned by Pelletier, for instance, several tens of fighters laid down their arms after "some" deaths, without any further precision, what suggests a killing rate about 5 to 10%. Besides the heterogeneity of these figures, one must add the fact that from one case to another, the killings concerned only (male) fighters, or entire populations, including elders, women, and children. It seems therefore difficult to draw general conclusions from the data on this issue, except the fact, already noticed, that at least in certain cases, conflicts could lastingly reduce the numbers of a tribe or local group, and possibly wipe it out.

Yet one fact emerges: among the deadliest events, the proportion of the different types of confrontation does not reflect their general distribution. It supports the general feeling of the first observers, according to which the most spectacular engagements, as a whole, were not the most dangerous. Open battles count only for 30% of the events of our most lethal category, whereas they represent 75% of our data. For the raids and

ambushes, the picture is inversed: they count for more than 50% of the deadliest episodes, whereas they are only 20% of the total events. These figures confirm the old remark that the best way to inflict heavy losses to an opponent was "not kill each other in open warfare, but secretly and treacherously" (Howitt 1845: 187). This is all but surprising. In itself, ambushes and raids mean resorting to surprise, which is consistent with the intention to kill numerous foes—often the maximum possible of them. Conversely, open battles at least mean that the "foreign relations" between both groups still operate, given that the date and place of the battle must be chosen and observed. As a general rule, especially in Australia, this meant that no side had the intention to inflict serious losses to its opponent, and that the battle was to be of a "regulated" kind. Yet, as Warner's typology highlighted it (and some of our data coming from other areas support the generality of this remark), one should resist to interpret the general tendency in a too strict way. If a large majority of open battles actually followed the scheme of regulated fights, others, in a premeditate manner or, possibly, in the heat of the moment, fell outside of this framework and experienced a far more violent result.

Were Aboriginal "True" Foragers?

Firstly, some could argue that part, at least, of the involved societies were not true foragers, but belonged to the "transegalitarian", or even "complex" societies (see for instance Hayden 1995; Keen 2006; Williams 1987). If this were true, the presence of collective armed conflict among them would be much less surprising, and our data would then more support the traditional view than challenge it. Our map, however, shows reported deadly conflicts outside the areas which have most often been proposed as transegalitarian. But more fundamentally, the problem is to figure out which criteria should be considered as relevant to qualify a hunter-gatherer society as more or less "complex" or "transegalitarian", an issue on which there is no clear consensus. Nobody would deny that every society has its "complex" features, and concerning Aborigines, kinship, and religion, for instance, are intricate enough to have occupied generations of anthropologists. But in literature, the so-called "complexity" of hunter-gathers always implies some mingle of, among other things, relatively high population densities, storage, sedentariness, and socio-economical differentiation. Following Testart (2005), we think that the determining criterion to grasp the transformation of social structures is wealth, that is, the existence of payments in material goods to satisfy social obligations such as marriage, blood compensation, or mourning. The relationship between wealth and storage or sedentariness is strong but complex (Darmangeat 2018a, b, 2019), and a definition of complexity encompassing broadly all these aspects takes the risk of reporting "false positives". This is the case with Australia: some degree of sedentariness has been brought to light in the last years (Builth 2006; Wallis *et al.* 2017), and it is recognized that some permanent installations, notably eel traps, had reached an impressive scale. Thus, by their way of producing their daily subsistence, some of these societies were, to a certain extent, not classical foragers anymore. Yet, in terms of social structure—the point which should be regarded as decisive—there is, to say the least, no concluding evidence of Aborigine societies being marked by wealth and socio-economical inequalities. In particular, with the very partial exception of a few cases where goods were involved in a marginal way (Lockwood 1996: 50; Meggitt

1962: 267), nowhere marriages were settled by bridewealth, nor homicide compensated by *wergild*. Everywhere on the continent, Aborigines had remained true instances of Testart's classification "World I": societies which lacked wealth (and wealth differentiation).

The Proximal Causes of Conflicts

The second point—directly linked to the previous one—concerns the proximal causes of armed conflicts of our database, which grouping in relevant categories gives the following results (Table 2):

Despite the deficiencies of ethnological record, the results are quite clear and in complete accordance with the previous point. They show that one never fought, or so it seems, to plunder movable goods or to make captives—at least males who could be reduced into dependency (captured women became spouses whose status was not different from the ones obtained by more pacific means). But even the abducting of females, a motive so common for individual raids, never seems to appear as a purpose of collective armed action. Territorial conflicts, if not totally absent, remain negligible: this motivation appears only in three occasions. On the one hand, this seems to be a sufficient figure to tamper the idea that such causes of conflicts could not exist on this continent because of the specific religious link that Aborigines maintained with their territory (Berndt and Berndt 1992; Elkin 1967; Warner 1969: 18). On the other hand, the figure seems far too small to conclude that a significant part of the Aboriginal conflicts were caused by population migrations and pressures (Allen 2014; Pardoe 2014; Sutton 1990; Taçon and Chippindale 1994). At least, advocates of the "territoriality hypothesis" should explain why this supposed general cause of conflict so rarely appears as the alleged one, and how resource or territorial rivalry could take the form of contested rights over women or revenge killings. By the way, it is remarkable that the violation of the hunting territory, so often mentioned in literature as a general cause of fights (Arden 1840: 96; Curr 1883: 244; Fraser 1892: 224; Lang 1865: 5; Tindale 1974: 24), is not represented by a single instance in our data. A possible explanation is that these trespassing, and thus the fights they provoked, were

Table 2 Proximal causes of conflicts

Rights over women	43
Including: vengeance	5
Vengeance (other)	30
Including: attested crime (unknown origin)	20
Including: sorcery	5
Including: non specified motivation	4
Miscellaneous	7
Including: accusation of ritual fault	1
Including: preventive conflict	1
Including: territorial conflict	3
Unknown cause	85
Total	165

far more often individual than collective. More probably, entering a foreign territory without being invited or signaling oneself was commonly considered as a sign of hostile intentions, which does not mean at all that the territory was the object of the conflict which derived from it.

The two main causes of conflicts are retaliation and, above all, rights over women. A consequence of the widespread—although not universal—polygyny on this continent is that in these societies lacking material wealth, one of the main components of the manly social success was the number of spouses he managed to accumulate. Engagement, sometimes secured even before the birth of the girl, and marriages, commonly infringed by abductions or unilateral breakdown of marriage promises, were a key issue in the relationship between men, were they friendly or hostile.

Concerning retaliation, which appears to be the second proximal cause of conflicts, we are well aware of the unsatisfactory—not to say shaky—character of our breakdown. From an analytic point of view, conflicts inspired by a want of retaliation should be opposed to those that broke out for what may be called primary reasons. One should therefore distinguish on the one hand all those primary causes and establish their relative occurrence, and on the other the proportion of conflicts sparked by initial offenses and by the will of retaliation—this proportion evoking, in the mind of an economist, the Keynesian investment multiplier concept. Unfortunately, the sources do not allow such an approach and, our typology was kept for want of any better solution. It is then possible that an important part of what is recorded here as a vindication, without further precision, should be added to the category of the fights originally revolving around rights over women. But the proposition can—and should certainly—also be considered in reverse. The rapt of a woman being regarded as a crime equivalent to a murder, and appealing the same course of actions from the wronged party, can be said that Aboriginal collective conflicts were, in their vast majority or in their totality, of a judiciary and, more precisely, of a vindictive (or retaliatory) nature.

It is often believed that because they lacked wealth, economically egalitarian societies possessed none of the motivations which, for millennia, prompt human beings to kill each other, and therefore lethal collective confrontations were unknown in these societies. To the eyes of the proponents of this perspective, those who claim great antiquity for the collective conflicts are guilty of ethnocentrism by failing to acknowledge how different these societies are from ours. Yet this argument, supposed to disqualify all those who would ignore the social structures to understand armed conflicts, seems to be double-edged. Does not the ethnocentrism criticism equally, if not more, apply to the idea that conflicts cannot exist for other reasons for which they arise within wealth societies?

Another debate, of which we can here only scratch the surface, concerns the biological roots of warfare. Part of the "hawks" side has been advocating that a warlike behavior, or propensity, was selected long ago in human ancestors, as an adaptation to its environment. In the last decades, it was discovered that several of our close primate species (especially chimpanzees) proceeded to intra-species killings—in particular, under the form of a party of males surprising an isolated individual from another group and putting him to death. This renewed the old debate about sociobiology, and of a possible convergence of evolution between humans and those species.

Given the complexity and the difficulty of this discussion (Manson and Wrangham 1991; Rodseth *et al*. 1991; Wilson and Wrangham 2003; Wrangham 1999), the

following lines can only be cursory remarks. To begin with, there are admittedly some striking similarities between chimps and human lethal conflicts: mainly, they are waged by males, females are often one of the major issues, and the attacking side uses surprise to assure an overwhelming balance of power with its victim. To this, in the Australian case, one can add the "philopatry", that is, the pronounced tendency to patrilocality which makes social units to regroup related males. The first point derives from a common feature of both species (although for different reasons), in which the warring sex is also the hunting one. It is most probable that the second point is a direct consequence of the first—at least among humans: being unarmed, females are defenseless. They may be kidnapped and have to be protected by those who hold rights on them. The situation seems to be very different in the animal reign, at least in the restricted field of primates, where sexual dimorphism reveals far less about the relations between males and females than between males themselves (Picq and Brenot 2009). The third point, contrary to Wrangham's claim, seems to have only a limited reach. Given that there is an intention to kill, the seek for imbalance of force is an obviousness, whatever the context.

This is where sociobiological reasoning finds its probable limits. Even if aggressiveness or conflictuality should be considered as a feature of human nature, the most striking is the diversity in the manner with which societies handle this "common fund". This seems to be one major point of Knauft's criticism (1991), who claims that concerning deadly conflicts, chimpanzees have much more in common with "intermediate" (*i.e.*, wealth) societies than with "simple" foragers. Let us add, however, that in Knauft's description of the "simple" foragers, Australians Aborigines (and their organized violence) are conspicuously absent. They might represent a third category, as distinct from other "simple" foragers as from the "intermediate" societies. In any way, the comparison between their organized violence and that of the chimpanzees should address several major differences. One of them is the motivation for conflict: the bond between males and females is much less formalized among chimpanzees than it was in Aboriginal societies, with their remarkably complex matrimonial rules. Lumping altogether the conflicts by saying they concerned "access to females" seems to be a sweep generalization. Moreover, vengeance, which motivates many Australian killings, is totally absent among chimpanzees—conversely, as we saw, the territorial conquest or domination was almost unheard in Australia. On another level, one should explain the jump from the "warlike behavior" showed by the chimpanzees to conflicts waged not only upon individuals, but upon entire groups. But perhaps the most challenging point is the supposed mechanism of evolution. In Australia, it is doubtful whether the "pushers" of collective conflicts (and even, their executioners) ever gained any substantial benefit in terms of reproductive success. Everything indicates that the most lethal fights were decided by elders who already were at the head of polygynous households, and the ethnological record indicates that raiding was a minor way to obtain wives (Hiatt 1996).

Did the Aborigines Wage "War"?

We now come to the third major issue, that is, the possibility—or the necessity—to qualify these collective conflicts as "wars", a question on which so far we purposely and carefully remained silent—we wanted to avoid the traps of a purely semantic

debate, and describe the facts as precisely as possible before asking in which terminological category they should be classified. Again, we only intend here to sketch a few essential ideas. Much has been written about the definition of war and its relations to feud, and the debate never reached a general conclusion. Some consider that war is opposed to feud (Fry 2009), whereas others consider feud as a particular type of war (Black-Michaud 1975). There is, however, a global—and minimal—agreement to regard "war" as a public armed action and "feud" as a private one; this criterion is more or less linked to a collective versus private opposition. War, anyway, qualifies a particular social form of violence, and it is necessary to stress that one should not confuse its presence with the general level of violence in a given society. Not only the two phenomena are analytically different, but it is quite possible that they have no empirical relationship. Modern democracies experience war outbreaks; they nevertheless are marked by an overall comparative low level of violence. Conversely, in an Australian tribe such as the Tiwi where, in our opinion, no real war was waged, the rate of violent deaths was very high. This is an important point on which scholars such as Gat, who tend to consider every evidence of interpersonal violence *ipso facto* as a proof of war, given the fact that man is a social animal (Gat 2015: 115) should be more careful.

Anyway, the criterion of "public versus private" conflicts, if it works smoothly in states, gets seriously blurred in societies which not only lack states, but any form of defined political organization. The main point of controversy about the existence of authentic wars in Aboriginal Australia is therefore their public character—this issue concerning the attackers, but also the targets of the action: Prosterman claims that a war must have "the primary purpose to inflict serious injury or death on multiple non specified members of [another] community" (1972: 140), a statement endorsed by Fry. Otterbein, whose definition of war includes the restrictive condition that the involved communities should be "political" (2009), nevertheless recognizes wars in Australia whereas Fry does not. In Australia, one of the tricky problems is precisely to encompass what the "communities" were exactly—not to mention their "political" nature. Aboriginal social organization is well-known for its complexity, as it illustrates the famous controversy among anthropologists about the correspondence between "hordes" and "clans" (Hiatt 1996). Gerald Wheeler, who was perhaps the first scholar to attempt a synthesis on inter-tribal relation on that continent (1910), confessed his perplexity about tribes who almost never acted as such and local groups who seemed to enjoy the greatest autonomy. In fact, it is quite difficult to know which "community" is exactly involved in case of collective conflicts. If we can rely on relatively numerous descriptions, and if some of them show that there were sometimes mobilizations of a large scale, very few are precise enough regarding the solidarities at stake—the ethnography of the Tiwi by Hart and Pilling, and that of the Murngin by Warner being a welcome exception. One striking difference between these two cases is that the Tiwi lacks "corporate" clans, whereas the Murngin have them. Among Tiwis, conflicts seem to always remain at an individual scale. Even if a troop is gathered, it remains an aggregation of individuals having each their own grievances (Hart *et al*. 1988: 84–85). By contrast, among the Murngin, the solidarity of the clans and their antagonists positions in the access to women tend to give to individual conflicts a collective character, as illustrates the description of *gaingar*, the most deadly form of battle, which is "a regional fight where a large number of clans are involved" (Warner 1969:

162). In other words, although the global rate of homicides may be of the same order of magnitude, Tiwi have only feuds, whereas Murngin have also wars.

Another factor that contributes to blur the lines between feud and war in Australia is that the Australian collective conflicts were almost completely of a judiciary nature. As we already said it, one does exceptionally fight for a territorial resource, and never in order to plunder moveable goods. Even the abduction of the women of the vanquished is a by-product of hostilities, and not a purpose. In a vast majority of cases, collective conflicts aim to right a wrong, whether real or imaginary, a fact perfectly noticed by an early observer who wrote that "the fights of the natives are generally conducted on the principles of retributive justice" (Hodgkinson 1845: 236). As many scholars noticed it, war in Aboriginal Australia is an extension of law (Berndt and Berndt 1992: 356; Wheeler 1910: 130). Henceforth, there is no discontinuity between feud and war. Aboriginal war is a generalized feud. Under which conditions could such a change of scale and nature happen? Which factors may explain the outburst of generalized conflicts out of the routine of the individualized justice procedures, such as the "ordeal" and the feud? We can doubt that the available information brings satisfactory answers to these thorny questions; anyway, they will be dealt elsewhere, and the present article must now come back to its main purpose, that is, exposing the gap between the social significance of collective armed conflicts and the paucity of the marks they left in the archeological record.

A By-product of Foreign Influence?

The elements presented in part I, taken as a whole, seem probative enough to attest the reality of deadly collective armed confrontations in Aboriginal Australia. Yet, the question remains to know whether they came into being after contact with technically more advanced societies, or they stemmed from its internal social logics, and existed from more or less remote times. Would it be valid, the first hypothesis would constitute a straightforward explanation for the absence of these events in the archeological record—and this argument has always been put forward by the "doves". We do not think, however, that this opinion is supported by the facts.

A first aspect of the question, maybe partly anecdotic, but nevertheless informative, is to estimate the influence of western arsenal upon the frequency and lethality of the conflicts. In some cases, the access to modern weapons undoubtedly opened new opportunities and allowed certain groups to inflict unusual losses to their foes. It was the case in one of the already mentioned raids where the outnumbered assailants, managed on some pretext to borrow a squatter's rifle (event #55). That was also the case of a fight witnessed by a fisherman named James McPherson in 1910 in Arnhem Land, where one of the sides was armed with iron bars and could slaughter at least a dozen of its opponents (event #142). Yet, technical appropriation was not always an easy process. In a tragi-comic passage, Waipuldanya says that his group had taken hold of a telecommunication post, in the aim of seizing firearms that could be the mean to inflict, at last, heavy losses to the Mara, its traditionally superior enemies:

> They had recently raided us and this was to be their moment of truth. The Malanugga-nugga would be next. But the only people killed that day were hit with spears and boomerangs. My people fired the rifles aimlessly into the air,

> unaware that the bullet and not the explosion of the cartridge was lethal. (Lockwood 1996: 44)

But, as a whole, Western presence probably contributed much less to stir those conflicts, than to put them to an end, often very quickly—be it only because of the sharp demographic decline of potential protagonists. Fundamentally, the idea that Aboriginal conflicts could have been a colonial product is challenged by two main (and, to our eyes, decisive) arguments.

First, if most or all of the major events reported by ethnology were a consequence of the arrival of Westerners, this influence should be translated into the motivations of these conflicts. One would have fought for territories having become too narrow, to seize foods or goods distributed by the colonial power or sold by merchants, for the power over a trading route, for becoming or remaining the privileged interlocutor of the new masters of the continent. Yet, as we saw, the data tell absolutely nothing of this kind. Conflicts over territories or natural resources remained exceptional, conflicts over movable wealth totally unknown. It is actually very hard to imagine how Western presence could have raised disputes over women or over sorcery, without ever bringing its own (and new) motives to the front.

The second point is that if conflicts were really a consequence of colonial penetration, this change—better say, this turmoil—would inevitably have appeared in the concerned people's discourse. In most places, Western presence was only one, maybe two, generations old when the Aborigines' discourse, be it written down by a foreign hand or uttered directly. If wars were only a few decades old, or even if their number and bitterness had experienced a significant increase, various testimonies should state that according to the old ones, everything was different before, that once, people lived in peace, and that things had changed in the recent times, etc. But, among the hundreds of available sources, not a single one contains such an indication. When they speak out on this matter, all of them, to the contrary, describe these battles and these raids as profoundly rooted in the traditions, insisting on the fact that certain enmities existed since time immemorial, and passing the torch of remembrance about events so deadly that they had reconfigured the local balance of power between tribes. The great warrior figures, such as Warrenby or Red Kangaroo, lived in a time where Westerners were still far, or had not even stepped on the continent yet. And among the Lardil of Mornington Island, the foundation myth claimed that armed violence was as old as human condition itself, coming ahead of the ways by which Dewallewul, the Dreamtime being, had cursed men:

> `From now on all men will die. You will die from the spear, from the nulla-nulla [club], from sorcery, from poisonous food, from snake-bite and drowning.' He called all the ways in which man would meet his death. (Roughsey 1971: 22)

How those elements could be consistent with the hypothesis of the introduction, or even the substantial development, of collective violence in a recent past? Although it is almost impossible to estimate its antiquity, all the evidence supports the lines written in the beginning of the twentieth century by Basedow, who was a keen observer and possessed a thorough knowledge of Aborigines:

> Aboriginal warfare might be (…) of the nature of a true and bloody inter-tribal fight (…). In any case, the hostilities might be of long standing and the enmity might have existed for generations past. (…) When the arch-foe is to be faced, (…) the main objective to be achieved is to make an assault as murderous as circumstances will permit, and to establish a record massacre, in order that the enemy might be thoroughly cowed and taught to long remember the affair. In former days such battles were, according to all accounts, of fairly frequent occurrence, but nowadays, no doubt largely due to the interference by European settlers, and the smaller numbers of natives, one very rarely hears that any warfare is conducted on a large scale. Indeed, many of the one-time bitterest enemies (…) can now be seen living in close proximity to each other, and apparently on the best of terms. (Basedow 1979: 183–184)

This leads us to the other side of the coin: the necessity to explain why this ancestral warfare is so conspicuously absent from the archeological record.

Archeological Invisibility of Forager Collective Conflicts: the Australian Case

Regardless of the societies in which they occur, collective conflicts are subject to leave three broad categories of archeological traces. Firstly, documents which relate or describe them: written texts, visual representations, etc. Secondly, the material means of these conflicts : weapons, of course, but also defensive works, places for troop training, troop transports, etc. Thirdly, human bodies, upon which marks of violence, will possibly be discernable.

Art

It is no need to remind that among people without writing, the only documents which can relate to war are visual representations. One could consider the inclusion in this category of some means of communication, such as the message sticks which in Australia were carried by people entrusted of a mission of embassy (Curr 1886: 150–151; Fraser 1892: 42). This would require, however, to be able to decipher the inscription they bore, which is clearly impossible: on no account do they represent any form of writing. They were non-codified representations, used as a reminder for the messenger. The only possibilities left are thus the depiction of conflicts in the field of art (carvings, engravings or paintings), which raises two main issues: the interpretation of artistic works, and the relationship between them and social reality. In other words, we face the double difficulty to understand what is depicted and—the thorniest part—to determine the social nature of this subject (be it a scene of daily life, an exceptional event, a myth, etc.).

Concerning the first point, it can reasonably be expected that a work whose purpose is to represent collective conflicts, except in a symbolic and inscrutable way, should depict acts of violence or individuals equipped in order to commit them. But, conversely, each scene of violence, even involving several individuals, cannot be necessarily held as such. Violence may be used in many other situations, including ritual or

individual judicial executions. One of the most famous examples of these problems is the Levant rock art, although one of the most narrative and realistic. If some of the scenes located in the Cingle of Mola Remigia or Los Dogues clearly depicts the confrontation of two groups of archers, others show a lying body riddled with arrows, the exact context of this killing being destined to remain an unanswered question (Porcar Ripolles 1945; Saura 2000; Vinas and Rubio 1988). The second category of difficulties is well illustrated by the debate around another scene which seems to involve two groups of foragers—San people from the South of Africa. The Battle Cave painting, with rare details, has long challenged archeologists. To begin, one can wonder why the individuals whose specific bow and arrows allow to be identified as San are also equipped with axes, a weapon normally typical of the Bantu populations from the east of the area. But, most of all, the scene could be regarded sometimes as a realistic depiction of a battle (Rudner and Rudner 1970; Willcox 1956), sometimes as a mystical experience. In this later view, the arrows of the painting are not real weapons, but "arrows of sickness" which malevolent shamans are supposed to be able to cast into people's body (Campbell 1986). We intend not to say here that all interpretations are always of equal likelihood and scientific value. A theory involving, for instance, visiting aliens, could be put aside without too much regret. Nevertheless, it is not offending the specialists of Paleolithic art to note the difficulty of evaluating the various interpretations, as the debate on the "shamanist" theory showed it once again in the past years (Clottes and Lewis-Williams 2015; Lorblanchet and Bahn 2006). This is clearly a shifting terrain, where the subjectivity of the scholar easily impinges on scientific rationality.

Aboriginal Australia—and more precisely, Arnhem Land—provides hundreds of rock paintings which seem quite clearly to depict scenes of armed confrontations. Being estimated to be possibly up to 10,000 years old, they may therefore represent the more ancient visual representations of interpersonal violence in the world, the only possible exceptions being much more questionable cases such as the Pech-Merle "wounded man". The debate which followed their presentation by Taçon and Chippindale (1994) illustrates however the second category of difficulties just mentioned. Rock art in Arnhem Land, although not realistic in a strict sense, is depictive enough do make the identification of armed confrontations quite undisputable. While in the earlier works, the scenes involve only a few individuals, in later periods collective battles appear, with up to 60 individuals fighting. Taçon and Chippindale offer a straightforward analysis, according to which these paintings depict true events, and the appearance of such battles in art five millennia ago express their appearance in reality, following various social changes also noticeable in other dimensions of the archeological record. A few scholars, however, pointed that this proposal, as reasonable as it may seem, rests on a hypothesis which, in the absence of any direct information from the people who realized these paintings, remains a conjecture (Davidson 1994; Loendorf 1994; Whitley 1994).

It is therefore complicated to find the correct balance between a "nihilistic" attitude, according to which archeology should avoid anything but pure description, given the fact that all reasoning about social signification can never go beyond the mere presumption, and a "speculative" one, according to which in a discipline where proof is so difficult to administrate, every theory should be considered as the potential truth. To our knowledge, no potential criteria or methodology have ever been proposed, that

could be a step in the right direction—such a methodology, if it exists, should rely on a huge and careful study of the relationship between social forms and art but, unfortunately, it is likely that this relationship is so complex that strong correlations will be very difficult to identify.

In any case, the existence of collective armed battles in the Arnhem Land art for about 5000 years must be acknowledged as a very serious, although not totally decisive, element of their presence in social reality, especially since such battles are present in the ethnological record. Yet, the paintings give no decisive element to estimate the degree of lethality of those battles. The largest and bloodiest scene described by Taçon and Chippindale (1994: 222–223) depicts 52 fighting figures (34 against 18), "a number of [them] wounded with barbed spears through their bodies." This is probably a *gaingar*, but the possibility of a tough regulated battle—thus hardly significant of any true warfare—cannot be dismissed. As fragile and unsatisfactory as this may be, it remains however the full half of the glass. The empty half is that the art of many foragers does not tell anything at all about this dimension of their social life. Of course, this is true when art does not represent any human beings, nor any scene in general, as it is the case in the Upper Paleolithic (Guy 2017; Testart 2017). But this is also the case when art, although partly figurative, is focused on ritual or religion, as in the rest of Australia. If Arnhem Land had not produced its specific and somewhat deviant artistic expression, collective armed conflicts would not have left the least possible trace in whole Aboriginal art.

Material Means of Violence

We now deal with the second category of potential evidence of warlike activity: the material means of violence. If there is no strict equivalence between the two phenomena, a strong correlation can nevertheless be assumed between the importance, in a given society, of the armed combat between humans and that of a material production specially designed for this activity. This production can be divided in two broad categories: weapons and other material productions intended to be used more or less directly in confrontations. Among them, the most obvious, which flourish during the Neolithic and even more, during the metal ages, are the fortifications. For obvious reasons, such material production in general, and such infrastructures in particular, have no chance to be found among mobile foragers. The only possible remaining category of goods is weapons, whether offensive or defensive, which raise two categories of problems.

The first, supposed to be commonplace, relates to the conservation of the materials with which these weapons were crafted. Yet, many developments on the "emergence of war" in Europe during the Bronze Age seem to ignore it—we will come back to this point later. The second one, which is obviously much more challenging, consists in identifying the use for which the various weapons were designed: were they devised firstly for other purposes, and employed to fight human beings only in rare circumstances, like our kitchen knives and our hunting guns? The question is all the more thorny that if our own society makes a distinction between hunting weapons and weapons of war, this distinction is far from being always so clear in other social contexts. Actually, the contemporary definition of weapons of war is strictly juridical: they are those whose possession and use are restricted to soldiers. In societies without a state, this definition becomes totally useless.

The offensive aborigine armament can be classified in seven broad categories:

1. The spear, whatever its mode of propulsion.
2. The club (of which certain variations come close to a sword).
3. The throwing stick, including the boomerang.
4. The piercing stick (a wooden stick about two feet long, held in hand, and whose two extremities are tapered).
5. The stone axe.
6. The stone knife.
7. The strangling rope.

The first three categories are altogether the most common and the most emblematic of Aboriginal Australia. In addition to the bow, also lacked the sling, the weighted rope (bolas) and, with some very particular exceptions, poison. Conversely, the three last ones played only a marginal role. Axes were mainly used as a tool, and much less for fighting—may be due to the general scarcity of suitable stone. The knife seems to have been restricted to certain codified confrontations, mostly—and may be only—in duels (Aiston 1921; Bennett 1927: 407; Roth 1897: 139–140; Sharp 1933). The purpose of the rope was, during a sneaking attack on an enemy camp, to neutralize the target, making possible to open its back and take the "kidney fat", a substance highly prized and sought in whole Australia for its magic powers.

Each category of weapon experienced local variations and types, of which spears may be the most telling example (see Davidson 1934).

It should be emphasized that the spear thrower, which was emblematic of this continent, was yet not hegemonic. In addition to Tasmania, it was totally lacking in the northern islands (Bathurst and Melville) and in a large eastern area which formed a triangle between the Queensland coast and the present Adelaide. In the southeast and two western coastal regions, the spear-thrower was present but occupied a minor place compared the spears thrown by hand. And even in the vast central area where it was prevailing, it coexisted with hand spears which were, admittedly, sometimes restricted to very specific uses, such as sweet water fishing. This survival of projection by hand seems like a paradox, given the improvement that mechanically assisted shooting is supposed to have represented. Davidson gives part of the answer: the spear thrower limits the weight of the projectile and can be efficiently used only with spears light enough—even if they remain much more massive than arrows. Thus, where necessity advocated the use of heavy spears, it was all the more likely that the spear thrower would be discarded in favor of propulsion by bare hand.

Throwing-sticks were also of very different shapes, some being destined to hit, others to pierce, and still others to hit with the trenchant after a flight—the famous boomerangs, among which few were "returning", and which were neither present everywhere in Australia (Davidson 1936). The categories of sticks were not watertight: many were altogether clubs and throwing sticks, and could also combine blunting and piercing functions.

Before tackling the question of the existence and the identification of weapons more specifically designed to combat, one must discard the situations ruled by "codes of conduct", which regulated certain fights and limited their lethal potential. We already alluded to the duels where stone knives were used. Another example comes from the

Brisbane area, although we are not informed of the exact field of application of this rule. When manufacturing the most common type of spears (*kannai*), after the tip had been hardened in fire, a part of the head was scraped and whitened in order for the spear to be better seen and dodged—an exercise in which Aboriginal people excelled (Petrie 1904: 101).

On a slightly unrelated issue, weapons with very specific uses must be mentioned. There was for instance, among the Nichol Bay district of Kimberley, a "formidable" barbed instrument that could be either a spear head or a dagger, designed exclusively to inflict a corporal punishment (Hardman 1889: 65).

We now come to our central question: is it possible to establish a correlation between the morphology of various weapons and their intended use—thus, opening the way to the identification of specific combat weapons? Davidson, at least for spears, acknowledged the existence of such a relationship, although he stressed its complexity:

> In Australia spears are employed for fighting individual combats, for war, for hunting, for fishing, and for ceremonies, and very often in certain tribes different spears are associated with one activity but not with another. It seems obvious upon a moment's consideration, however, that such a classification would be of little value except for each tribe, or possibly group of tribes, taken individually, for some tribes use the same spear for two or more activities whereas other tribes have different spears to serve the same function. (Davidson 1934: 47)

It seems possible, however, to draw out some trends. The multi-prong spear, for instance, was as a whole designed for fishing. Concerning the combat spears, except if we supposed that Aborigines were not concerned by the efficiency of their weaponry—but the whole ethnography points to the opposite—they had to face the specific constraints relative to their targets. The human being is a quite massive prey and, given the lack of poison, neutralizing it requires projectiles with a high kinetic energy. In somewhat anachronistic terms, humans must be hunted with either very fast or large caliber bullets. This does not impose every feature of the weapon: many solutions have been proposed to the same general problem, depending on cultural, local, or even individual considerations. It seems however that a general rule is that fighting spears, just as fighting clubs or throwing sticks, were chosen among the heaviest varieties. That was the argument of the Papuans of Muralug Island, near the tip of Cape York, who had relinquished their bows to adopt the Aborigines' spear thrower. They explained to Haddon that "it generally took three or four arrows to render a fighter *hors de combat*, whereas one javelin usually had that desirable effect" (1912: 331)—for a general discussion of the comparison between bow and spear throwers, and the possible explanations of the lack of bow in Australia, see Darmangeat and Petillon (2015).In the absence of any device able to improve significantly enough the speed of the trait, all Aborigines chose to use the heaviest spears for combat, even if that meant to throw them by hand (see among others Bennett 1927: 409; Dawson 1881: 87; Edge-Partington 1903: 38; Smyth 1876: 308; Stephens 1889: 485).

Conversely, we did not find a single example where heavy spears would have been excluded from martial use. Concerning throwing sticks, a general fact is that returning boomerangs were banned from fighting, probably altogether because their accuracy was too hazardous and their curved fly made them too slow. Actually, our reasoning on

this topic is impaired by the fact that if we dispose of quite abundant information on the morphology and uses of weaponry, which were collected by attentive western observers, we have very little information about the reasons why Aborigines explained their own choices. Yet, such information would be highly precious, as it is extremely difficult for who does not use such tools in the relevant conditions to reason without going wrong.

The data show however without any doubt the existence of offensive weapons mainly or solely designed to fighting. These weapons were improved in order to round the defenses or to inflict maximal damages, and they were favored in case of confrontations, even if they were possibly also used in other circumstances.

The first that comes to mind is the "death spear", already mentioned, with which Westerners got quickly acquainted, as this projectile pierced in 1790 John McIntyre, one of the members of Governor Phillip's staff. The head of these weapons was covered with gum and embedded with small cutting elements, whether shells or stone flakes. This process aimed a double effect: on the one hand, to increase mechanically the severity of the injury by tearing the flesh up, and on the other hand, to cause infections, the extraction of the spear leaving foreign objects inside the wound. By the way, the Aborigines were not slow to understand how the glass brought by the Westerners could be an excellent alternative to quartz or shells which, in many tribes, were not easily secured:

> In Queensland and South Australia they interfere seriously with telegraphic communication, by stealing the glass insulators as material for spear-heads. And when the white man appeared in Kimberley, and brought his inevitable brandy-bottle, it was quickly utilized, as shown in the specimens here exhibited. (Hardman 1889: 61)

Wherever it was present (mainly on the south perimeter of the continent), the "death spear" was used for fighting. But it could also, in certain cases, be used for hunting. Other types of spears were also manufactured for a martial and lethal use. The most common was the barbed one, where barbs were carved directly into the wood. We already mentioned the tribes of Queensland who whitened part of the head of their spears to make their dodging easier. But the same informant notes that there was another spear, called *pi-lar*, which was solely used at close quarters because of its weight, and whose head was kept black in order to maximize its efficiency. Moreover, "sometimes these spears were notched almost through at the point, and then thrown at a special enemy with the hope that they would hit and break off, leaving the end stuck in the wound." (Petrie 1904: 102).

Spears were not the only weapons of which certain specimens were designed especially for fighting. Eyre, for instance, states that among the tribes in the North of Adelaide, the two-edged wooden sword *kata twirris* was "a formidable weapon, used (…) exclusively for war" (Eyre 2014).

But there is another weapon on which we have an exceptional document, belonging to the very rare testimonies that stem directly from Aborigines: Waipuldanya, already mentioned, reports the numerous warlike episodes which punctuated the tribal life of the Alawa before the coming of the Whites, giving several captivating details:

> The Djingali, the Waddaman and the Mudbra tribes fought with a fearsome hooked boomerang, the *warradulla*, which was as superior to the conventional weapons as the hydrogen bomb is to TNT. A shield, used as a portable tree, and later the *nulla-nulla* [club], which was both a weapon of defense and offence, were satisfactory answers to the early boomerangs, but they were useless against the model with a hook on the end. The simple theory of the *warradulla* was that the very act of stopping it with a shield or *nulla-nulla* caused the hooked end to fly off at tremendous speed, decapitating or seriously injuring its victim. Perhaps it was the original secret weapon. (Lockwood 1996: 98)

The above survey deals with offensive weapons. But there were also defensive ones, whose existence has often been rightly stressed as a strong evidence in favor of martial confrontations. Yet, in theory, one cannot dismiss the possibility that a given defensive weapon could solely be used in a regulated context, in which rules prevent too severe wounds—such as the metallic mask of the modern fencer, or as a protection against animals, during hunt or dressage. Australia lacked apparently every kind of armor, unlike various other populations of hunter-gatherers, notably in North America (for a painstaking survey of pre-contact weaponry on this continent, see Jones 2004). Shields, by contrast, were an emblematic piece of every male adult's equipment, and were used exclusively in confrontations between humans. This not, however, an ultimate proof that it was also the case in the past (although one does not see, on this continent, any wild animal against which it could have been a benefit), and even less elsewhere in the world.

To conclude on this point, the investigation on Aboriginal weaponry shows not only that fighting entailed the use of specific weapons but that, in many tribes, these weapons were differentiated enough to be subject to a specific manufacturing process and bear a specific name. If, in certain contexts, the choice and use of weapons followed rules which limited potential damages—just as in our societies, governments are not supposed repress street demonstrations with weapons of war—, such situations were not the sole framework of armed violence. Everywhere, in certain circumstances, one sought to inflict casualties. Offensive fighting weapons always included those with the greatest lethal potential, which were improved as far as possible. Conversely, there were defensive weapons—mainly, the shield—which could also be used in codified contexts, but which, in other circumstances, helped their bearers to protect their lives.

This long but necessary survey highlights the considerable gap between the importance of this weaponry (compared to the general level of material production of these societies) and the very tenuous vestiges it left in the archeological record. This gap is explained by the two factors previously mentioned. The first, trivial but devastating, is that almost all this weaponry was made of organic substances: wood, fibers, tendons, ray stings, etc. If we put stone knives and axe heads aside, which use in combat seems to have remained very limited, the only pieces of armament which were prone to be preserved in the long run were the stone spear heads, whose use was confined in the north-west area. Probably the rarity to efficiency ratio was evaluated to be too low for this material to be adopted elsewhere but, once again, it is only possible to speculate in the absence of any direct information from those who made this choice. In any case, the result is the virtually complete lack of weapons in the archeological record—exceptional circumstances are required for organic materials to be preserved through

centuries and millennia, and Australia is globally short of them: for all combined periods, less than 100 of wooden artifacts have been found so far. Admittedly, among them are the most ancient boomerangs in the world, dating from about 12,000 years BP (Langley *et al*. 2016). But the shield, so common in the equipment of Aborigines before contact, is totally lacking and there is no specimen older than the eighteenth century. Archeological invisibility of weaponry is therefore almost complete and one must stress how unwise, not to say biased, is the idea of an "emergence of war" during the Bronze Age on the grounds that it is only from this period that weapons are found, which we associate with warfare, such as swords and shields. Yet, as ethnography shows it clearly, many people deprived of metallurgy, including foragers, manufactured such implements. By the way, it is remarkable that if many scholars are ready to accept a very early onset of the bow on the basis of a scanty evidence (Lombard 2005; Lombard and Phillipson 2010; Shea 2006), the possible, or probable, existence of wooden shields and dedicated offensive weapons is almost never considered. In any case, writing, as one so frequently does (Demoule 2017; Lehoërff 2018; Patou-Mathis 2013) that fighting weapons (and therefore, war) "appear" with the Bronze Age, is failing to specify that this appearance relates only to the archeological record and that there are very solid reasons to think that it should be attributed to a change in the materials and not to the novelty of a social activity. This "appearance" or "emergence" of fighting weaponry forms potentially, if not probably, the basis of as mistaken as common a perspective.

The other problem is the difficulty to infer the purpose of an offensive weapon found in archeological context. One can admittedly suppose that every weapon suitable for hunting large game can be of martial interest. But from necessary to sufficient condition, there is a step which it is hard to see how it could be taken. Even by supposing boldly that the artifact shows traces of use against human beings in the same way as Ötzi's dagger contained remains of DNA, there would be no possibility to know whether they would result from an accident, an individual murder, a ritual or judiciary context, etc. In modern societies, technical progress has generated weapons inflicting damages on large areas, and whose purpose can therefore hardly be questioned. Among all foragers, or almost all, offensive weapons intended to kill humans could also be used for hunting. If people possibly make a difference and assign a given weapon, exclusively or mainly, to a specific use, the archeologist is at loss to identify this use on the sole basis of the morphological characters of the object.

It is however possible to provide partial explanation of the choices pertaining to weaponry, particularly the reasons for which a weapon can be dedicated to fight, to hunt, or both. The human being is not only large game, but it is also potentially armed and dangerous. One can thus safely suppose that the most lethal weapons are always assigned to martial uses—a statement supported by Australian data. Yet, even if this is not a strict rule proceeding from an imperative logical necessity, the most lethal weapons are very often the most complex, whose manufacturing and maintenance require the greatest efforts. Concerning spears, Threlkeld already noticed for the Awabakal tribe that "in the preparation of war-spears the utmost pains are taken" (Gunson 1974: 68)—war spears were the only ones to be embedded with pieces of quartz. Smyth writes that "great skill, patience, and care are necessary so as to fashion the barbs of the *Nandum* neatly and to keep them whole", repeating a few lines further that "carving barbs (…) is a difficult and tedious business" (1876: 305). For Western

Australia, Clement states that the war spears "have numerous barbs on one, two or more rows, whilst hunting spear-heads have only one barb" (1903: 5). The most detailed description of the amount of work required by the barbs is perhaps provided by Fraser, who reports for New South Wales:

> Many days must our black man labour till his spear is fit for use. (…) The tedious labour begins when he proceeds to shape the jags on the end of it. There may be as many as a dozen of these all on one side, or half a dozen on each side of a double-barbed spear; each of these jags must be so made that they will not easily break off when the spear is in use. To avoid this labour, and also to use up a straight piece of material, the spear-maker cuts a groove in one or both sides of the point of his plain wood, and in these grooves he fixes sharp chips of hard stone, which are as efficacious as barbs. From the northern territory of Australia come some beautiful spears, with heads and points of basalt and quartzite, eight or nine inches long. These heads have been formed by careful chipping, and anyone who sees such a spear can estimate the care and patience which the workman must use who wishes to make a successful spear-head." (1892: 72; see also Worsnop 1897: 126–128).

It is therefore not absurd to postulate that fighting, where death is risked, always justifies the use of the most efficient weapons, whatever their cost. Hunting, in contrast, gives rise to an arbitration between the investment induced by the complexity of manufacturing and the expected return, the resulting choice being prone to differ from one group to another, even under similar conditions. This idea is consistent with the conclusions of P. et A.-M. Pétrequin about the arrows used by the Dani villagers in New Guinea:

> In hunting, one looks above all the arrow point which is quick to manufacture and which cause large and deep injuries, whereas in war one prefers armatures that allow an accurate shot at long range, or those that inflict deep and complex wounds, prone to infection, even if the investment in manufacturing time is significantly greater for these complex arrows. (1990: 492)

By the same token, it has also been suggested that the development of the barbed points during the Magdalenian could be due to their martial function, the data showing no correlation with a specific hunting game (Pétillon 2008). Of course, no conclusive evidence can be provided, and one cannot hardly go beyond mere presumptions. Conversely, it would be spurious, under the pretext that it is impossible to prove that a weapon was designed, or even used, for fighting, to conclude that it did not. In a foraging society such as Aboriginal Australia, the warlike activity, as salient as it could be in the light of the ethnological record, becomes virtually impossible to establish on the ground of the archeological analysis of the material equipment.

Bodies

There is one category of evidence left, which one could reasonably expect to be more conclusive, as it represents the most direct consequence of armed confrontations: the

traces of trauma on the bodies of the protagonists. Yet, once again, hopes are seriously dashed, the relationship between the two phenomena being far from simple. On the one hand, every trauma, even when possibly inflicted with a weapon, does not result from combat—let alone a collective one. Accidents, judicial punishments, or even self-inflicted wounds in sign of mourning, etc. can be many other causes. On the other hand, every physical aggression, even lethal, does not necessarily leave a trace on bones: a slit throat, a wound in the abdomen, or a blowgun shot, for instance, will remain undetectable. It can be supposed, however, that a place where a significant number of human beings are found with signs of lethal injuries very likely results from a collective conflict. The key issue, as in the case of weapons, is to know, in the absence of evidence, to what extent it should be assumed that such conflicts did not happen. But there is another pitfall, on which "doves" rightfully draw attention to: even when attested, combat does not necessarily mean war. Finding trauma, even at a high occurrence, is not a sufficient condition to conclude to a warlike activity, which supposes at least two other features: the deadly and the collective character of the fight.

This point is particularly sensitive in Pardoe's work (2014), which constitutes the most comprehensive and recent study on Aboriginal skeletons and, as such, deserves particular attention. Pardoe compares the traces of violence in several areas of Australia, discussing in particular the patterns of the various trauma and their repartition between men and women. His survey leads to four main observations. First, it shows the overall very high incidence of trauma among Aborigines, far before colonization. Second, most of these are fractures of the skull and of the left arm (a wound which can easily be interpreted as resulting from the parrying of a blow). Third, a very large number of those wounds healed before the death of the individuals. Finally, even if proportions vary greatly from one place to another (but so do the size of the samples), in almost every area, women are more affected than men when it comes to skull and arm fractures. Although Pardoe advocates a "territorial conflict" hypothesis that could have led to a specific bellicose pattern in the Murray basin, he must confess that "none of this, though, could be inferred from the archaeological record" itself (2014: 128), adding that the main, if not only, particularity of the Murray area is the high global prevalence of trauma. The core problem is that if the studied material shows clear evidence of interpersonal violence, it is most doubtful that it displays the remains of a true warlike activity. As the ethnographical data indicates, the skull and parrying fractures are typically inflicted by domestic fights or by regulated duels or battles. For one reason or another, those—especially men—who died by the spear during a raid, an ambush, or even a fierce pitched battle, were simply not buried in the common cemetery.

It is striking that if the Australian record is filled with proof of interpersonal violence, it is totally lacking of any case indicating a single collective deadly battle. Up to now, no mass grave resulting from collective armed violence has ever been found, and the first discovery of an ancient skeleton whose death, about 4000 years ago, can be imputed to spearing—with a barbed weapon—was made only 12 years ago (McDonald et al. 2007). And this is only a single individual, who was more probably victim of an "ordeal" than of a collective conflict.

Concerning warlike activity, this continent forcefully highlights the contrast between the relatively numerous instances recorded in ethnography and the almost complete lack of archeological traces. Such a hiatus is easy to explain among foragers, where two

main factors contribute to this result. The first in the small numbers of people involved. The second is the funeral practices—first and foremost, the paucity of graveyards, even if some existed in certain areas (Pardoe 1988). It is obvious that sedentary populations (whether cultivators or not), who were far denser and who buried their dead or preserved some parts of their bodies, enhanced dramatically their archeological visibility. By the way, one can wonder to what extent the increase of the violence traces observed in the Neolithic does not result, at least partly, from a mistaken perspective: this increase could well result far less from social reality than from the conditions in which it left its mark in the archeological record. Traditionally, some emblematic sites such as Talheim, Schöneck-Kilianstädten, or Asparn-Schletz contributed to locate the first collective conflict in this period. More recently, however, the discoveries of Djebel Sahaba or Turkana came to support the idea that such episodes could have happened before the emergence of sedentariness—although we do not know exactly if the societies in question were mobile or already settled and marked by wealth inequalities. Aborigines, like most foragers, seldom buried their dead. Their funeral practices were very diverse (Meehan 1971) but, most often, reduced considerably the probability of a later discovery—starting with the cases where the bodies of the losers were simply abandoned on the spot.

Even if our information remains scanty on this point, it appears furthermore that, at least in certain parts of the continent, victims of collective confrontations were dealt with in a particular way which accentuated this phenomenon: they were, partially or totally, eaten. On this point, the ethnological information is particularly problematic to interpret. To the eyes of Westerners, cannibalism was charged with a strongly negative connotation. The possibility cannot be ruled out that, in many cases, they sought to identify the custom at any cost, even if the facts did not especially support its existence. The attitude of the Aborigines, who often condemned such practices with horror and attributed them by hearsay to foreign tribes—one blatant instance can be found in Meggitt (1962: 43–44)—seems quite opaque: was this repulsion an intrinsic value of their culture, or was it only displayed in order to bluff the Westerners, which opinions on this matter were well-known?

Overall, the idea that armed expeditions might have been driven by cannibalistic motivations was seldom advocated—the major exceptions being Lumholtz (1889) and Bates (1938)—and seems highly unlikely.

If it was not a normal rationale for armed violence, cannibalism was yet its by-product. Many testimonies, often very detailed, agree on the fact that the victims of collective combats were subjected to a specific disposal, being eaten in various ways. Without being the result of a systematic research on this point, the data which we have been able to gather advocate a breakdown between two main areas.[3] In the first, which mainly covers Victoria, the meridional part of the New South Wales and the North-West, the eaten bodies were those of enemies killed in battle (see for instance Fison 1890: 51–52; Helms 1895: 400). In the other area, which extends from South Australia to Queensland, this fate was restricted to friends and parents (Fison and Howitt 1880: 223–224; Lang 1861: 356–357; Roth 1897: 166). In both cases, the ingested parts

[3] These observations are available in an online interactive map, including the bibliographical references for each marker, which can be seen at URL: http://cdarmangeat.ghes.univ-paris-diderot.fr/australia/anthropophagy-map.html.

varied from one group to another, and one finds mentions of muscles, fat, or skin. Both areas seem not to overlay: following the general rule observed worldwide, these customs were thus mutually exclusive, probably in accordance with a rationale specific to symbolic logic (Glowczewski 1991).

In addition to the above, enemy bodies, where they were not eaten, were often mutilated so as to remove the kidney fat. Among the numerous available descriptions of this custom, the following one, provided by Haydon, is particularly eloquent:

> The contest generally occupies but a few minutes, and the unfortunate wounded, who are still perhaps alive (sic), are assailed with blows and spears. (…) the dead bodies are savagely lacerated and the kidney fat torn out, large slices of flesh are cut from the legs, and every conceivable indignity offered to bodies so lately tabernacles of living souls. (…) Portions of their flesh are roasted and eaten on the spot, and the remainder of the mangled bodies are left as food for carrion crows, eagles, etc. (Haydon 1846: 108)

Let us grant that cannibalistic practices produce contradictory effects on the bones. As Leroi-Gourhan already noticed (2015: 50), the extraction of flesh and marrow probably helps preservation. When bones are treated as leftovers of ordinary food, chances to identify cannibalistic usages are greater—but not necessarily the way of killing, and still less its circumstances. It should be recalled, however, that these generalities are drawn from the particular case of European Paleolithic, where a majority of remains come from shelters, which introduces an additional bias. Actually, the study of Aboriginal remains, be it from the Murray graveyards or from the rest of the continent, show very few evidence of cannibalism.

To conclude, let us dare a joke: if the Aborigines had wished to trick archeologists by removing every evidence of their fights, they could hardly have done better. Until an improbable (but not impossible) discovery of a mass killing, due to exceptional conditions of preservation, Aboriginal collective conflicts, although salient in the ethnological record, have literally vanished when considering the archeological point of view.

Conclusion

At first glance, the argument developed in this article seems to lead to a rather pessimistic conclusion. If, as we advocate, even a salient warlike activity leaves so few archaeologic marks among foragers, then the book of their past is forever closed: we will be forever unable to know if the absence of collective armed conflict in these societies is a reality or a mere illusion—and the truth might well be very different from one society to another. Nevertheless, we think that this skepticism is not as unproductive as it may seem. A good doubt is always better than a bad certitude. Knowing that the lack of evidence is not conclusive on that issue is, in a sense, a step beyond the belief that it represents a reliable indication of the pacifism of the concerned societies.

There is, moreover, some reason to believe that all hope to reach a better knowledge on this issue is not lost. Of course, new discoveries could bring decisive elements in favor of a past warlike activity—the possibility that one or more "Turkana-like" sites

will be found in Australia in the future, although weak, is not equal to zero. But, apart from this, a significant (although more modest) breakthrough will probably require a careful examination both of the archeological and ethnological record of the other foragers around the world. It is reasonable to suppose that some useful lessons are still to be drawn—in particular, on the factors which could explain the seemingly huge diversity in the levels and the forms of interpersonal violence among these societies. Identifying such factors would be a way to improve the solidity of our hypothesis concerning the past.

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