

Mortuary Behaviour in Subadults: Children as Social Actors in the Hunter- Gatherer Societies of Argentine Pampas

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Abstract

Children are scarcely represented in the prehistoric burial sites of highly mobile hunter-gatherers. Despite this situation, their visibility and presence in the archaeological record is highly significant for the understanding of patterns of residence, life ways, social hierarchies and mortality profiles. This issue is particularly important when considering their representation in cemeteries and associated mortuary behaviours. The Chenque I site is a prehispanic cemetery from Western Pampas in Argentina, where subadults are highly represented. In this paper, several archaeological topics are discussed from different analytical perspectives, including social hierarchies, mortality patterns and the social role of children in these groups. The representations of childhood in multiple burials, in which the cause of death was clearly related to interpersonal violence, are also analysed. Despite their biologically immaturity, it would appear to be the case that pubertal juveniles played active and important social roles in war and conflict during the Final Late Holocene in the Centre of Argentina.

Keywords: SOCIAL ROLES, CHILDHOOD STATUS, PREHISPANIC CEMETERY, WESTERN PAMPAS, SOUTH AMERICA

Introduction

Children are scarcely represented in the prehistoric mortuary record of highly mobile hunter-gatherers. However, the bioarchaeological information derived from this population sub-group is abundant and diverse from the Chenque I site in the La Pampa province of Argentina, a cemetery used for about 750 years during the Final Late

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Holocene (Berón *et al.* 2011a). A Minimum Number of Individuals (MNI) of 216 has been produced to date for the excavated area, and almost half of these are subadults. The mortality curve shows a high frequency of individuals buried in the first years of life (Luna 2008; 2010; 2011; Luna *et al.* 2009).

A high variability exists in the cultural record associated with these burials as well as in the manner in which the body has been treated. Most of the individuals are not accompanied by any ornaments, but some of the burials of male children¹ contain abundant and highly significant grave goods, including necklaces made with shell and stone beads, a dog, red ochre and leather packages (Aranda 2007; Berón *et al.* 2012; Cimino 2007; Luna and Aranda 2005; Prates *et al.* 2010). Moreover, some young individuals with arrow points embedded in the skeleton may have been warriors, which would suggest differences between the concepts of biological and social age (Berón 2010a).

From an ethnographic and ethnohistorical perspective, it is often found in indigenous populations that from a very early age, children of both sexes develop significant productive activities according to their physical capacity. These activities also provide socialisation experiences in the daily domestic tasks that facilitate the training of children in economic aspects of life (Barry 1996; Chapa 2003; De Miguel Ibáñez 2010; Kamp 2001; Politis 1998). Examples include hunting and gathering among the Wichí groups of the Chaco region in Argentina (Trincherro 1992), cattle farming among small herders in the Mapuche area of south-central Argentina and Chile (Radovich 2004), and the generation of material culture by Nukak children of the Colombian Amazon (Politis 1998; 1999; 2007). From an ethnoarchaeological perspective, it has been stated that children are 'social actors in the production and the consumption of material culture and the generation and the management of discards' (Politis 2007, 156). An ethnohistorical reference from the Mapuche area in the fourteenth century states:

Since children, they are raised at work and they exercise in fighting, jumping, running and testing of forces, and the main thing, in playing the spear and fire arrows, and their games are for this exercise, as the one of *chueca*, where everything is running after a ball that they lead from a place to another *a porfia* with some like decks (Rosales 1877, 184).²

A similar reference appears in Musters (1871; 1997, 205) in relation to the Tehuelches from Norpatagonia: 'creatures are usually entertained in imitation of the elderly: the boys play with tiny *bolos* and hunting dogs with small ties; and girls build little Indian tents to sit inside them ...'.³

The early productive involvement of pre-pubertal children is usually preceded by certain rites of passage. This ethnological concept, introduced by Van Gennep (1909; 1986), states that during their social development individuals must perform many transitions between youth and adulthood, between singleness and marriage and between belonging or not to a group. In non-industrialised societies, such transitions are an essential constituent of social life and are not held individually, but in a ritual and communal way. With regard to initiation rites, Van Gennep (1909; 1986, 78–9) states that: '... the physiological puberty and the "social puberty" are two fundamentally different things that only rarely converge', illustrating this statement with many different ethnographic cases.

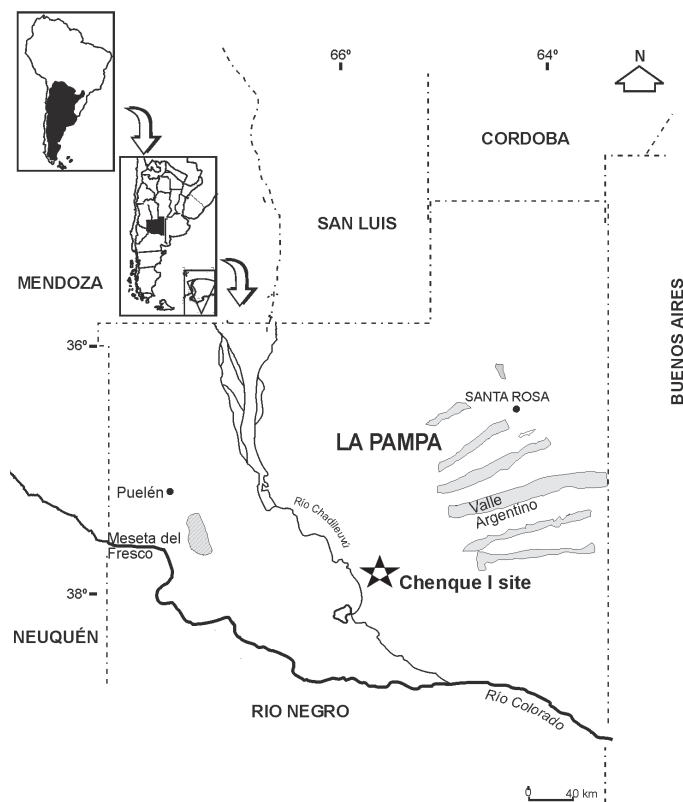


Figure 1: Location of La Pampa province and the Chenque I burial ground.

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One of the most distinctive rituals is the initiation that conveys the passage from childhood to adult status, from both a social and biological realm. For example, among the Mapuche, the *katan kawññ* ceremony consists of ear piercing for girls as they pass through puberty into a new cycle of fertility. This moment will be perpetuated with the delivery of silver *cawaj* (rings) for use after healing (Arriagada Rifo 2012; Fernández 2010). After a sacred ceremony of concentration and spiritual preparation a dress is also offered to the girls as a gift that will show their new status. Mothers are responsible for providing this change of clothes for their daughters.

These data denote the importance of children and juveniles in these hunter-gatherer groups. The purpose of this paper is to discuss the role of subadults in the context of forager social dynamics and to highlight discrepancies between biological age and social age.

Description of Chenque I

Chenque I is a prehispanic cemetery located in the Lihué Calel National Park, in the western Pampean region of Central Argentina (38° 00' S, 65° 38' W; Fig. 1). Hunter-

gatherer societies made use of this site for mortuary purposes at the end of the Late Holocene, c. AD 900–1650. To date, 49 m² have been excavated, constituting about 23% of the total burial area. Two stratigraphic units were defined, each of which displayed very different properties. The Superior Unit (0–30 cm depth) contains thousands of bone and dental remains with different degrees of fragmentation, commingling, arrangement and anatomic association, due to a systematic reuse of the site. In the Inferior Unit (below 30 cm), forty-three burial structures were detected, many of which were associated with sub-surface stone arrangements. The Inferior Unit is divided in two sections, named top and base. The Base Inferior Unit (BIU) corresponds to a pattern of deeper burials for whose interment it was necessary to dig structures into the limestone matrix and to add loessic sediments after the final internment of the bodies. The other pattern of burials, which corresponds to the Top Inferior Unit (TIU), is represented by burials deposited in the sedimentary matrix, considerably higher than the base level. This fact produced a differential preservation of the individuals buried in the BIU, since the carbonated matrix in which they were deposited minimised taphonomic deterioration (Berón and Luna 2007; Berón *et al.* 2002).

A great variability of inhumation modalities was recorded, including simple, multiple, primary and secondary burials, as well as a variant not previously encountered in Argentina, that has been called *disposition* (Aranda 2007; Berón 2004; Berón and Luna 2007; Berón *et al.* 2002; Luna *et al.* 2004). Disposition-type burials have not yet been recorded in other cemeteries of the region or country. It is defined as the situation in which the anatomical structure of the body is altered by human agents in the post-mortem period, close to time of death, and with a clearly intentional order. It occurs prior to skeletalisation, when soft tissues are still present. Different skeletal parts of the body (skull, trunk, appendicular skeleton, etc.) were disarticulated and re-ordered forming a funerary package, with definite limits (Berón and Luna 2007). For simple dispositions, sectioned skeletal parts have been set in a pre-determined array, which gives the whole assemblage the aspect of a burial package with defined boundaries. The arrangement of the remains, as much as the defined limits of the burials, is suggestive that some sort of wrapper, very probably leather, has been used (Berón 2004; Berón *et al.* 2002). This is completely dissimilar to any mummification treatment (such as that practiced by earlier Chinchorro societies in Northern Chile) because the principal aim is not long-term preservation but rather to facilitate transport and burial, beyond the symbolic connotations that this procedure could have involved.

Abundant cultural materials showing different degrees of association with the burials have been identified in both stratigraphic units. Most of these are beads manufactured in a variety of raw materials, such as mollusks, bones or stones, but other kinds of ornaments have also been found, including a prehispanic copper pendant and a silver brooch. Associated lithic artefacts include several types of tools, cores and debitage, with a predominance of the latter. Among the tools, there are un-stemmed projectile points, end and side-scrapers, notches, bifaces and some pecked and polished tools such as active and passive milling artefacts (Berón 2003; Velardez 2011). No European elements were found, as Spanish conquerors had not yet arrived to the area, providing a complementary criterion for the temporal position of the assemblage.

Multiple inhumations bundled in organic packages, the cremation of the bones and



Figure 2: General view of a portion of the Chenque I burial ground.

the application of ochre were all identified at the site (Berón and Luna 2007; Berón *et al.* 2007). Because of the multiple kinds of evidence recovered and the large amount of bioarchaeological information obtained, the Chenque I site is one of the most important hunter-gatherer mortuary sites in Argentina, and it represents the largest assemblage of burials in the La Pampa province (Fig. 2). Considering the Minimum Number of Individuals (MNI) identified for each Unit, the preliminary MNI value is 216 (127 in the Superior Unit and 89 in the Inferior Unit), including males and females of all age categories, surpassing any estimation known in the Pampean region. Given that the societies that generated this cemetery had a hunter-gatherer organisation, which involved high levels of mobility, this provides a remarkable case in terms of the continuity of use of this place for mortuary activities (Berón 2003; 2004; Berón and Luna 2007; Berón *et al.* 2002; 2007; Luna 2003; 2008).

The Role of Subadults at Chenque I

Demographic Characteristics

In previous papers specific protocols have been developed to obtain information about subadult sex and age from the Chenque I site (Luna 2008; Luna and Aranda 2005). Following the proposals commonly applied, age-at-death was estimated on the basis of dental calcification, long bone length and the degree of obliteration of the

epiphyses and apophyses (Scheuer and Black 2000; Ubelaker 1982). One of the most controversial aspects of palaeodemography relates to the possibility of obtaining reliable results concerning the sex of immature individuals. The general opinion states that it is hardly possible to generate valuable information since the methods used do not usually provide high degrees of reliability (Bass 1987; Ferembach *et al.* 1980; Scheuer and Black 2000; Ubelaker 1974; Villadóniga García 2005). As a counterpart to this point of view, several studies have been developed that attempted to offer solutions to this problem. In the case of the Chenque I site, it was considered that subadult individuals over fifteen years of age displayed high levels of skeletal sexual dimorphism so that morphological features of the skull and coxae used for adult sex determination were applied (Bružek 2002; Buikstra and Ubelaker 1994; Ferembach *et al.* 1980). For younger individuals, sex determination was based on the analysis of several variables of the coxal bones (the angle, depth, index and maximum depth of the greater sciatic notch, the composite arch, the curvature of the iliac crest and the auricular surface elevation) and the mandible (the protrusion of the chin region, the shape of the anterior dental arcade, the eversion of the gonion region, the mandibular angle and the mandibular body shape) (Fazekas and Kosa 1978; Holcolm and Konigsberg 1995; Loth and Henneberg 2001; Mittler and Sheridan 1992; Molleson *et al.* 1998; Schutkowski 1993; Weaver 1980). The combined application of these techniques was considered to have enabled reliable results to have been obtained. Some of the variables (the curvature of the iliac crest, the auricular surface elevation, the mandibular angle and the mandibular body shape) provided ambiguous results, while others, especially those located around the greater sciatic notch, appeared to have offered reliable and concordant results (Luna 2008; Luna and Aranda 2005).

Given these considerations, it could be established that approximately 45% of the individuals buried at Chenque I are subadults. The mortality curve shows higher frequencies of individuals with an estimated age-at-death of between birth and one year old, which implies a value of about 25% of the total subadults represented in the sample (Table 1 and Fig. 3; Luna 2008; 2010). In addition, there are clear sex differences in the frequency of individuals within that age range, with a predominance of females ($N_{\text{Male}}=7$, 3.24%; $N_{\text{Female}}=18$, 8.34%), which appears to show the existence of social attitudes towards subadult males which are detrimental to girls (Table 1; Luna 2008; 2010; 2011). It is therefore possible that the higher percentage of very young female subadults is indicative of a higher mortality of young girls that may have been due to cultural constraints and the occurrence of preferential care for boys. The social practice of indirect infanticide (Harris 1977; 1991; Harris and Ross 1987) may have had a very significant impact on the demographic dynamics of this population.

The age ranges of life beyond one year show decreasing percentages of cases with increasing age-at-death. For the range 1.1–3 years, the mortality rate is about 10%, while between three and sixteen years, the total values, considering both sexes, are less than 5% (Table 1; Fig. 3). This profile matches the characteristics commonly found in mortality curves for other hunter-gatherer societies (e.g. Blakely 1971; Johnston and Snow 1961; Kamp 2001; Lovejoy *et al.* 1977; Mensforth 1990).

The frequencies are lower between ten and sixteen years, suggesting that individuals of these age ranges may have been preserved from activities that would put them

Age (years)	Males		Females		Total	
	N	%	N	%	N	%
0-1	7	3.24	18	8.34	25	11.58
1.1-3	9	4.17	11	5.1	20	9.27
3.1-5	5	2.31	5	2.31	10	4.62
5.1-7	6	2.78	2	0.92	8	3.7
7.1-10	7	3.24	3	1.39	10	4.63
10.1-13	3	1.39	3	1.39	6	2.78
13.1-16	0	0	2	0.92	2	0.92
16.1-20	11	5.09	8	3.7	19	8.79
Total Subadults	48	22.22	52	24.07	100	46.29
20.1-30	31	14.37	14	6.48	45	20.85
30.1-40	18	8.33	23	10.66	41	18.99
40.1-50	12	5.55	8	3.7	20	9.25
50.1-60	3	1.39	2	0.92	5	2.31
60 +	3	1.39	2	0.92	5	2.31
Total Adults	67	31.03	49	22.68	116	53.71
Total	115	53.25	101	46.75	216	100

Table 1: The Minimum Number of Individuals (MNI) for the Chenque I burial ground (extracted from Luna 2010).

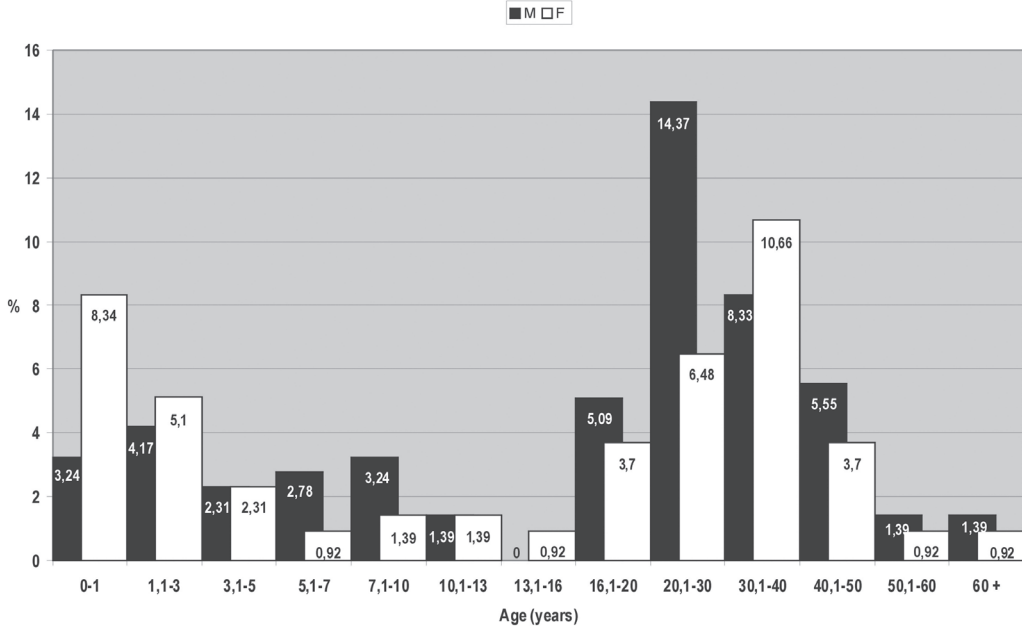


Figure 3: Mortality curve for the Chenque I population group (Luna 2010; data extracted from Table 2).

at risk of dying. The higher-risk activities would have been carried out regularly by those older juveniles who were incorporated in the global production process of the society and the dynamics of working adults, such as hunting or warlike activities. In this sense, for the range 16–20 years old, a significant increase in the number of individuals, especially among males ($N_{\text{Male}}=11$, 5.09%; $N_{\text{Female}}=8$, 3.70%; Table 1), is recorded. This situation is anomalous because it does not correspond to expectations related to theoretical attritional profiles, in which the frequencies of individuals of that age are usually very low (Luna 2008; 2010).

Childhood Social Adscriptions

Females and males of all age spans were buried with different offerings. Most of them correspond to adults; however, some exceptional structures which contain subadults between birth and three years old, with outstanding offerings, have been recorded. Several multiple burials were built up as funerary packages with a high representation of subadults. In three cases (Burials 16, 38 and 40) there is clear evidence for the presence of a container or bundle, probably made of guanaco (*Lama guanicoe*) leather, adorned with a large quantity of valve beads. These beads would have been sewn on to the container and painted with ochre. This pattern of bundles with bead and ochre decoration is observed only in burials that included several subadults (Berón 2004; Berón and Luna 2009). In these cases, the quantity of beads is substantially higher than those identified in other burial modalities: 227 beads in Burial 16, 1037 beads in Burial 38 and 404 beads in Burial 40, with five, three and four subadults present in each case respectively.

For the purposes of studying mortuary behaviour, a qualitative and quantitative analysis of the variability in burial patterns was developed by Aranda (2007). The analyses focused on sex and age differences and included the type of burial (single, double and multiple), the mode of burial (primary, secondary and disposition), the quantity of offerings (abundant, regular and low) and the nature of the associated stone structure. Information concerning the health status of individuals was also considered, and involved an evaluation of a variety of skeletal and dental indicators, including porotic hyperostosis, cribra orbitalia and enamel hypoplasia. Information relating to health status can make an important contribution to the analysis of the diversity of mortuary practices, since it enables comparison to be made between an individual's health status and the form of burial accorded to them. It is then possible to explore alternative explanations for the associations obtained between the two forms of data. The main aim of the study was to gain insights concerning the social organisation of these groups of hunter-gatherers. The set of information obtained was considered within the entropy model originally proposed by Tainter (1978), comparing the properties of the archaeological record with two theoretical patterns of the burial structure, named *perfect paradigm* and *perfect tree*. The term *entropy* refers to the degree of variability or heterogeneity of the mortuary sample analysed, and is negatively correlated with the term *redundancy*. A very low variability was identified in subadult burial patterns, because the variation in body treatment is much more restricted than in adults. In general, primary burials have very low frequencies of offerings. A special case of

differential mortuary pattern (Burial 18), suggested that differences may have existed in male social adscriptions at Chenque I. This male subadult appears to have received special treatment, on the basis of the biological information derived from the individual and the quantity of cultural elements associated with him. The offerings associated with Burial 18 included 204 valve and bone beads located around the skull and neck (Aranda 2007).

Another burial of a male subadult was also recovered (Burial 41) which showed abundant and highly significant adornment. Burial 41 is strongly ritualised because it contains a subadult male of only 2–3 years old, provided with a necklace made of 223 beads (178 of bone, forty-two

of copper mineral, probably chrysocola, and three snails) and appeared to have been carefully associated with a domestic dog. The animal is located opposite, and partly above, the subadult. This is the first reliable finding of a prehispanic burial of *Canis familiaris* associated with a human skeleton in Argentina (Fig. 4). Moreover, the subadult skull displays red ochre and the presence of a green stain on the right humerus is suggestive that a copper artefact had been located adjacent to the boy's upper arm (Berón 2010b; Prates *et al.* 2010).

Dental and skeletal metabolic stress indicators of some subadult burials from Chenque I site were also analysed. They were identified only in two immature individuals, a male and a female (Burials 5 and 14 respectively), which had no offerings. On the contrary, it is noteworthy that Burial 18, associated with a large number of cultural elements and with the application of ochre on the skull, had no stress indicators, probably showing a good health status until death (Aranda 2007).

In summary, the various strands of information obtained from the mortuary context of these two subadult burials with offerings (Burials 18 and 41), denotes an explicit preoccupation in its ritualisation. It is proposed that this was related to the existence of an inherited status and social hierarchy since childhood within the groups that used the cemetery, which prioritised only *some* male subadults.

Youth and Conflict

A subject to be discussed is the social role of juvenile individuals among hunter-gatherers, and especially in circumstances of social stress such as war (Boccara 1998; 1999; 2009). The involvement of such individuals in warfare is discussed in certain chronicles:



Figure 4: Burial 41, a 2–3 year old male subadult associated with the burial of a domestic dog.
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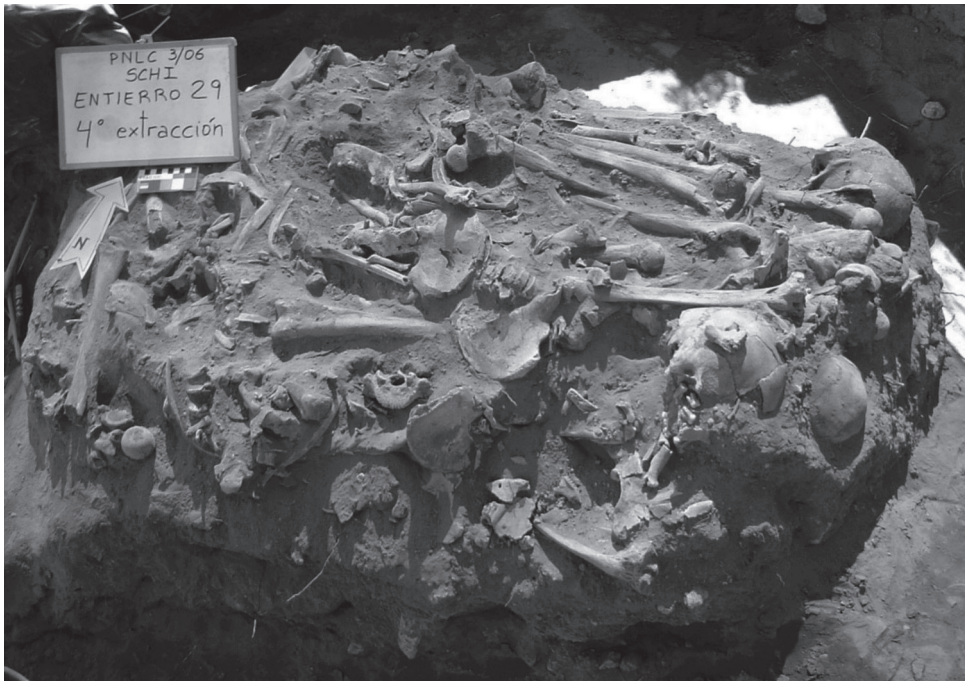


Figure 5: Burial 29, a multiple interment which probably occurred as a consequence of a palisade or a front line battle.

The boys learn soon to use weapons, and as many males as women learn to ride rather than to walk; it is unusual for children accompany their parents in the hunt before having ten or twelve years and not take part in the fighting but when they have about sixteen years (Musters 1871; 1997, 210).⁴

Several inhumations with multiple signs of violence, including numerous projectile points inserted into, or associated with, the human bones, were recovered – in several cases they were the cause of death of both adults and subadults (Table 2). The most important case of group violence is Burial 29 (Fig. 5), a multiple interment with an MNI of seventeen individuals, most of them juvenile (16–20 years) in the biological sense (juveniles: $N_{\text{Male}}=7$, 41.5%; $N_{\text{Female}}=3$, 17.50%; young adults: $N_{\text{Males}}=3$, 17.50%; $N_{\text{Female}}=0$; mature adults: $N_{\text{Male}}=2$, 11.75%; $N_{\text{Females}}=2$, 11.75%; see Table 1). This burial is probably the consequence of a palisade or a front line battle because many of the individuals had died from arrow injuries. A total of forty-one arrow points were recovered, but from different locations (Table 2). This situation reflects inter- or intra-group violence and a difference between the concepts of biological age and social age, since many of the juvenile males already appear to have been active warriors (Berón 2007; 2010a; Berón and Bosio 2008; Berón *et al.* 2011b; Luna 2010).

A similar situation occurs with respect to the age of the warrior in Burial 17. This is

Burial number	Mode of burial	Type of burial	MNI	Sex	Age (years)	Embedded arrow points	Associated arrow points	Present arrow points	Total arrow points
17	Primary	Simple	1	M	17-19	1	1	-	2
19	Primary	Simple	1	M	40-49	1	-	-	1
21/23	Disposition	Multiple	5	M	20-29	5	-	-	5
					30-39				
					40-50				
					> 60				
					Ad.				
27	Primary	Double	2	M	40-49	1	-	-	1
28/31	Secondary/ Disposition	Multiple	ND	ND	ND (adults and subadults)	1	3	1	5
29	Secondary/ Disposition	Multiple	17	4 M	16-17	28	9	5	41
					17-20				
					20-30				
					35-39				
					Ad.				
					18-20				
35	Secondary	Double	2	F	15-18	-	-	1	1
					Mat. Ad.				
					ND				
							Total	arrow points	56

Table 2. Arrow points related to violent events from the Chenque I burial ground. Key: MNI = Minimum Number of Individuals; Embedded arrow points = those which puncture bone elements; Associated arrow points = projectile points not inserted in bone but in soft tissues; Present arrow points = those points present in the matrix of the burial; ND = Not determined; Ad = Adult; Mat. Ad. = Mature adult.

a special case due to the nature of the grave offerings and the values of stable isotopes that indicate a trans-Andean provenience of the young warrior (Berón *et al.* 2012). The individual was a 17–19 years old male with two arrow points lodged in different areas of the body. One of them had entered from the front, towards the sternum, and was inserted between the fourth and fifth thoracic vertebral bodies. The arrow point was made from a siliceous chert and had a longitudinal apical break. The other point was recovered in close contact with the body of the left scapula, and would have presumably been embedded within the trapezius muscle. It was made from chalcedony and is broken, with a medial oblique fracture. Moreover, this individual had an interesting offering comprised of various types of personal adornment – five copper beads and three valve beads, all situated in the neck area, and the most prominent element, a copper ring located at the left temporal (Berón and González 2006; Berón and Luna 2007; 2009; Berón *et al.* 2011b).

Final Remarks

The understanding of the health of subadults, their roles and social relations in daily family and communal activities, and adult attitudes toward children, improves our knowledge of past human societies and promotes the analysis of new issues concerning the dynamics of prehispanic social systems (De Miguel Ibáñez 2010; Kamp 2001). The evidence described in this paper would tend to suggest that children actively participated in the social life of the hunter-gatherers of the Western Pampas of Argentina. These human groups, involved in a process of increasing social complexity, established hierarchies from the early ages of life, reflected both in the material record and in the biological profile. The cases analysed also suggest the existence of a discrepancy between the concepts of biological age and social age, because juvenile males less than 20 years old were already active warriors. In this case, some male juveniles were included in war roles which, following Barry (1996), may have been surely desired by them, as a form of getting adult privileges:

Frequent participation by children in adult activities has several advantages. Children can contribute needed labor. Family cohesion may be strengthened by participation of children. Children usually desire adult privileges, such as sharing enjoyable experiences with adults (Barry 1996, 352).

Dental and skeletal metabolic stress indicators (cribra orbitalia, porotic hyperostosis and enamel hypoplasia) of the individuals from Chenque I site were also analysed, which were identified only in some subadult females, but not in any subadult males. Together with the differences in sex frequencies, this would imply that subadult males may have been subject to less stress due to a better social care during the period of growth and development. Moreover, the information obtained through the different lines of analysis, summed up to the mortuary context associated of the subadult burials, confirms the importance of subadult roles as social actors in daily life.

The mortality profile offers information about the age ranges from which male individuals may have begun to fulfill social roles and activities characteristic of adults. In general, youths and adolescents are often prioritised in biosocial learning necessary to meet the following requirements of adult life, but sometimes individuals begin to

play key roles for social reproduction (Luna *et al.* 2009). For the range 16–20 years old, the relatively high frequencies of individuals, and the presence of numerous cases of violent death, clearly show the inclusion of youths in predominantly adult activities, such as war. This trend contrasts with that observed for the preceding age group (13.1–16 years old), in which the percentage of individuals is very low and there are no cases of interpersonal violence (see Table 1; Fig. 3). Moreover, the over-representation of males also helps to strengthen the idea that mainly individuals of this sex were recurrently incorporated into intergroup violence systems, developing typically adult roles. This process was in addition associated with a special valoration of male roles, incorporating into the social system individuals who had not reached physical maturity but who nevertheless contributed significantly to enhance warlike activities for the purposes of controlling access to resources, goods, information and people (Berón 2007; 2010a; 2010b; Luna 2008; 2009; 2010; Luna *et al.* 2009). It is in this sense that a discrepancy between biological age and social age is identified (social puberty and biological puberty in terms of Van Gennep 1909; 1986), that means, a difference between maturity explained in a purely biological sense and compliance in roles characteristic of adult social life. Childhood, youth, adolescence and adulthood are always cultural constructs used to denote age categories (Kamp 2001). As stated by Kamp (2001, 3):

although it is true that specific biological changes occur as an individual matures, the cultural meaning imposed on these changes is to a large extent arbitrary. Thus, both gender and age categories have relationships to biological characteristics, but neither is determined by biology. Not unexpectedly, the way that age categories are defined and operationalized varies across both time and space.

The proposal for a special valoration of only a few male individuals, seen clearly through the mortuary record at Chenque I, is closely associated with theoretical considerations which consider the ritual to be closely scheduled by ideology. As they seek to ensure the continuity of power relations and legitimate the interests of part of the population they constitute an expression of ideal, rather than real, relationships. This means that the dead are manipulated to legitimise the present and that mortuary practices are discourses generated by society about itself (Dillehay 1995; Huntingdon and Metcalf 1979; Parker Pearson 1982; 2002; Shanks and Tilley 1982). Social practices included in funeral rites act as a transmission mechanism, whereby the intention is to maintain a series of concepts to control the experience and take a position about the dynamics of social and power relations. Thus, the manifestation of the ritual and material culture that is manipulated into it, and sustains it, preserves the social life as seen from the perspective of the actors (Barceló 1984).

Van Gennep (1909) mentions that, in the case of males, the type of passage ceremonies to be performed depends on the profession they intend to develop (e.g. hunter, warrior etc.) and that each juvenile begins to develop them the day he/she dreams of an element related to it (for example an arrow or a canoe), which occurs usually between twelve and sixteen years of age. He describes puberty ceremonies in which 'nothing indicates the case of a physical puberty, but on the contrary ... shows that this is a "social puberty"' (Van Gennep 1909; 1986, 82). The presence of certain features in the mortuary structures function as a transmission mechanism for a particular way

of seeing the social world and to denote social positions with respect to other groups. They are not necessarily a passive reflection of social organisation, but may be the result of elections and active personal and social strategies. Because they can idealise, reverse or mask everyday social relations, they may reflect the way a society sees the world, not its actual organisation (Barceló 1984). In this case, the presence of subadult males accompanied by a large number of shell beads and with arrow points inserted in bones as signals of participation in war helps, from another perspective, to support the idea that some cultural practices that gave special importance to male social roles would have been developed among these hunter-gatherer societies (Aranda 2007; Berón 2010a).

Subadults are often under-represented in the archaeological record, for different reasons, ranging from taphonomic to biological and sociocultural (Bello *et al.* 2006; Guy *et al.* 1997; Johnston and Zimmer 1989; Kamp 2001; Lewis 2007; Luna 2008; Saunders *et al.* 1995; Walker *et al.* 1988) and their social role has been usually undervalued in the research of hunter-gatherer societies, as has been denoted by Politis (1998; 1999; 2007). Throughout this research the large amount of information available from this subgroup of the population has been highlighted. By using different forms of analysis it is possible to delineate explanatory models of cultural processes from an archaeological perspective. Moreover, the data collected demonstrate the social importance of subadults and the active role they played in the social dynamics of the late hunter-gatherers of central Argentina. Children that were living in these hunter-gatherer societies were not only immersed in a period of enculturation and learning but also were active in the construction of daily social dynamics.

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Notes

- 1 In order to ascertain subadult sex from skeleton, several discrete and metrical variables were studied in the ilia and mandible (Luna 2008; Luna and Aranda 2005), following the methodological proposals stated by Fazekas and Kósa (1978), Holcolm and Konigsberg (1995), Loth and Henneberg (2001), Molleson *et al.* (1998), Schutkowski (1993) and Weaver (1980).
- 2 'Desde niños se crian en el trabaxo y se exercitan en luchar, saltar, correr y hazer pruebas de fuerzas, y lo principal, en jugar la lanza y disparar flechas, y sus juegos son para ese exercicio, como el de la chueca, que todo es correr tras una vola que lleban de unas partes a otras a porfia con unos como mazos' (Rosales 1877, 184).
- 3 'Las criaturas se entretienen, por lo general, en imitar a las personas mayores: los muchachos juegan con boleadoras diminutas y cazan perros con pequeños lazos; y las muchachas construyen tolditos para sentarse dentro de ellos' (Musters 1871; 1997, 205).
- 4 'Los muchachos aprenden en breve a servirse de las armas, y tanto los varones como las mujeres aprenden a cabalgar antes que a caminar; es raro que los hijos acompañen a sus padres en las cacerías antes de tener diez o doce años y no toman parte en los combates sino cuando tienen unos dieciseis años' (Musters 1871; 1997, 210).

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