

Digging photos and excavating sites.
A comparative exploration of material culture patterns
in Ethnographic photographs and Archaeological
sites of Shelk'nam, Yamana and Alakaluf peoples
from the Fueguian archipelago
(Southern South America, 16th to 20th centuries)

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Abstract

This chapter summarizes the results of systematic investigations which compare the archaeological and photographic records of three native societies of Tierra del Fuego (Shelk'nam, Yámana-Yagan and Alakaluf) in order to search for and analyse information about their material culture practices. In order to do so, we firstly analyse a corpus of 1131 photographs taken between the late 19th and mid 20th centuries by 44 photographers and we carry out a "visual archeology", through which we analyse the formation processes of the photographic record and study some of the native habits recorded in the photos. We then analyse a total of 25 Fueguian archaeological sites of the contact period (16th. to 20th. centuries): their formation processes are assessed and the artefacts (tools and objects) found in these are compared with those recorded in the photographs in order to check to what extent these records corroborate, complement or contradict each other. Given the differences of photographic visibility and archaeological visibility of many of the Fueguian artefacts, the resulting data are relevant to discuss the informative biases and potentials of both records and to shed light on the material culture patterns of each Fueguian society, their intra-society variability and inter-society similarities and differences.

Key words

Archaeology, photographs, Tierra del Fuego, Shelk'nam, Yámana-Yagan, Alakaluf, material culture

Introduction: photos, sites and material culture practices

The main aim of this paper is to present a comparative study of the material culture artefacts found in archaeological sites and visible in ethnographic photographs of the Fuegian archipelago in order to identify and contrast some of the material culture practices of three circumpolar native societies who inhabited this southernmost region of South America: the Shelk'nam, the Yámana and the Alakaluf. Such comparison is carried out with several specific aims:

a) to record and compare the Native and/or Western material culture items that were handled by each society in the photos and in the contemporary archaeological sites, which in turn are informative to discuss the degree of transculturation undergone by each group;

b) to record and compare the types of material culture artefacts, particularly tools and objects², that were handled by people in each society, which are informative about:

b1) the similarities and differences between each society, thus serving as relevant data to discuss patterns of material culture production, circulation and use;

b2) the different degree of representation and conservation of material culture artefacts in the photographic and archaeological records, due to their different formation processes, which affect their resulting photographic and archaeological visibilities.

The photographic and archaeological records are two windows that can be opened to take a glimpse of the recent past. While archaeology is a discipline that focuses on the study of past human actions through their material remains, ethnographic photographs can also provide information about such actions when studied systematically, since the habits and material culture practices of the photographed subjects are visible in the photographic record (Fiore 2007, Fiore y Varela 2007). In a previous paper (Fiore and Varela 2010), we explored the main material culture trends that emerged from the systematic study of the photographed

² In Archaeology, *artefacts* are broadly defined as human-made transportable material culture items (Renfrew & Bahn 1997). Out of these, we will study here: *tools* (a utilitarian piece of equipment used to make, repair or use another object or to carry out a certain task; e.g. a scraper, a harpoon, etc.) and *objects* (non-utilitarian artefacts used for social, symbolic and/or ceremonial purposes; e.g. dancing wands, ceremonial sticks, etc.). This paper will only focus on these artefacts and will not deal with other classes of material culture artefacts such as ornaments (necklaces, pendants, headbands, etc.) and clothing items (necklaces, capes, etc.).

structures and artefacts (tools, clothing, ornaments, etc.) handled and/or worn by individuals of each Fuegian society. Building from that background, in this paper we aim to compare those results with the material culture data found in the Fuegian archaeological record. In order to do so, we will compare the results of our "visual archaeology" project, carried out on a sample of 1131 photographs (see below), with the "traditional" archaeology published data, which has been generated by surveys and site excavations carried out in several regions of Tierra del Fuego (see below). Such comparison will show how much these two different records corroborate, complement or contradict each other (Fiore 2002). Their critical use as combined sources of evidence will shed new light on about the modes of life of the indigenous Fuegian peoples.

The Fuegian societies: ethnographic background

The Yámana-Yagan

The Yámana, also known as Yagan³, occupied the southern portion of Isla Grande de Tierra del Fuego and the remaining islands towards the south of the archipelago, up to Cape Horn. They were maritime hunter-gatherer-fishers and their mobility was based on the use of canoes (Orquera and Piana 1999a: 80). Their diet was based on the consumption of fur seals, birds, fish, shellfish and guanacos. They built dome-shaped huts with branches, covered by foliage (Gusinde 1986: 361). The Yámana wore little clothing: men and women wore short capes which covered them from the shoulders to the waist, and were made with skins of fur seals, foxes, or eventually guanacos. Underneath men were generally entirely naked and women wore a loincloth.

This native Fuegian society celebrated several ceremonies to mark special occasions such as: the girls first menstruation, weddings, individual mourning (*talawaia*), group mourning (*yamashemoina*), the initiation of new shamans, the initiation of youngsters of both genders to adulthood (*chiejaus*) and the initiation of male youngsters to male adulthood

³ While there is an ongoing debate regarding the uses of the terms Yamana and Yagan (see Piana in Fiore & Varela 2009), the term Yamana is widely used in academic publications in Argentina, and thus we will use it in this paper to simplify the text. However, we want to stress that the self-identification of the indigenous community of descendants currently living in Navarino Island (Chile) is Comunidad Yagan de Bahía Mejillones.

after passing the *chiejáus* (*kina*). Body painting was worn in many of these occasions (Bridges 1897, Cooper 1917, Lothrop 1928, Gusinde 1986, Chapman 1982, Chapman 1997, Orquera y Piana 1999b, Orquera and Piana 2009a, Fiore 2005a, Fiore 2009).

The Yámana subsistence was based on a gender division of labour by which women were in charge of rowing the canoes while men were in charge of handling the harpoons in order to hunt fur seals. Such division of labour was not confrontational but rather complementary, since one task was needed in order to carry out the other one. This complementary gender division was also pervasive in many other aspects of gender construction of the Yámana society: an example of this semi-egalitarian gender structure is the existence of a shared initiation rite such as the *chiejáus*.

Given that the Yámana had a fluid mobility system in the Fuegian waters, and that their territory was mainly on the shores of the archipelago, they were prone to contacting Western voyagers as soon as they sailed in nearby waters and/or approached the coastline. Although canoe mobility also offered a means to escape from unwanted contacts, this kind of aquatic mobility, as well as the territorial location, seems to have fostered frequent interactions with Western populations, which in turn led to an early and fast process of transculturation of this native Fuegian society. Such transculturation was carried out by Anglican missionaries as well as Western settlers who annexed vast portions of Yámana land (Fiore & Varela 2009).

The Alakaluf

The Alakaluf occupied the western section of the Fuegian archipelago, as well as the southernmost shores of Patagonia. They were maritime hunter-gatherer-fishers, who, like the Yámana, moved very frequently, in canoes. Their diet was based on the consumption of fur seals, whales, fish and shellfish (Fitz Roy 1839; Gusinde 1991; Emperaire 1963; Vargas Ponce 1788: 342 in Bitlloch 2005: 114). Labour division was based on gender roles: men were in charge of hunting and fishing while women rowed the canoes and gathered shellfish and some plant species. Much like in the Yámana case, this division was quite complementary since women's rowing was essential to enable men's hunting with harpoons from the open sea waters. This society also celebrated an initiation

ceremony for both genders (*kálakai*) and another one only to initiate young males to adulthood (*yincihána*).

The Alakaluf wore short capes made of fur seal, guanaco, coipo or penguin hides which covered them from their necks to their waists, and covered their genitalia with a loincloth -particularly the women- (Escalada 1949: 96-106 in Bitlloch 2005: 54; Marcel 1892: 488-489 in Bitlloch 2005: 86-8; Ladrillero 1880 VI: 464-473 in Bitlloch 2005: 131; Gusinde 1991: 189; Empeiraire 1963: 136).

Contact with Westerners was facilitated by the use of canoes and by the coastal location of their territory, which in turn was a factor that might have speed up the transculturation process. Yet it is also clear that the use of canoes was a viable factor to retreat from unwanted contacts, which could thus be delayed for some time, though not avoided forever (Fiore and Varela 2009). Salesian missions and Western settlements of their lands were crucial factors in the deep transculturation suffered by this society (Gusinde 1991, Empeiraire 1963).

The Shelk'nam

The Shelk'nam inhabited the central and northern portions of Isla Grande de Tierra del Fuego. They were pedestrian hunter-gatherers and their diet was based on the consumption of guanacos, some rodents, birds and some edible plants. They built two types of huts. The windbreaker, which was an elongated structure without roof, made of vertical wood posts from which animal hides were hung. Windbreakers could be dismantled, packed and transported by women on their backs. The second type of dwelling was the conical hut, which was made of tree trunks. These were not transportable and were abandoned once their inhabitants moved to another zone, although they could be later reoccupied (Gusinde 1982).

The typical Shelk'nam clothing was the guanaco cape, which they wore with the wool facing outwards. Both men and women wore these capes, although men did not wear anything underneath while women wore a kind of hide apron and a loincloth. Men also wore a triangular headband over their foreheads.

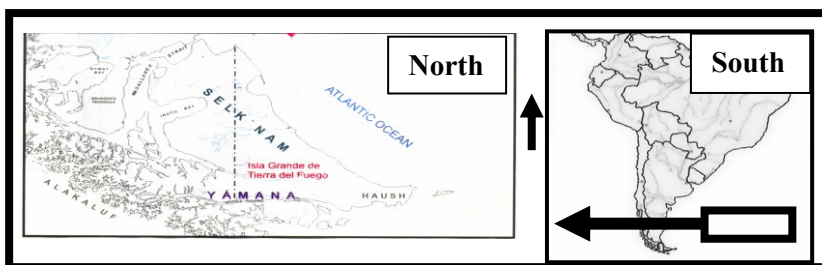
Body painting was worn in some everyday situations and for special occasions such as the first menstruation, weddings and the male initiation ceremony (*hain*) (De Agostini 1924, L. Bridges 1951, Gusinde 1982, Fiore 2005a, Fiore 2009).

The Shelk'nam socio-economic structure was clearly patriarchal (Chapman 1982: 40) and labour was based on a deep gender division: men were in charge of hunting, producing bows and arrows and taking care of dogs; women were in charge of gathering tasks, cooking, and other daily tasks in the domestic camps (L. Bridges 1951). Hunting and gathering products were shared with family and neighbours (*ibidem*).

Contrary to their Yámana and Alakaluf neighbours, the Shelk'nam men and women did not carry out essential tasks jointly, but rather carried out different tasks separately. Shelk'nam women carried out a fundamental role for the group mobility when they transported the packed windbreakers and other items from one domestic camp to the next, but unlike the Yámana and Alakaluf women (who enabled prey hunting in the water while rowing the canoes) the Shelk'nam women were not directly participating in the procurement of the main food staple: apparently this difference on the economic roles carried out by men and women was one of the factors that led to a deep gender difference in this society (Chapman 1982, Orquera and Piana 2009b, Borrero 1991 y 1997, Fiore 2002).

Also contrary to the Yámana attitude, the Shelk'nam were, for a long time, reluctant to having contact with Western peoples (Borrero 1991). One of the factors that may have influenced this strategy was that they lived in a fixed island territory and only had pedestrian mobility: this made it possible to retreat to land portions far away from the shores, but also made them more vulnerable to the impact of incoming populations since they had a limited land space where to retreat on foot. This seems to have fostered their self-preservation by avoiding contact with foreigners, which in turn led to a relatively slower process of transculturation (Fiore and Varela 2009). Yet such strategy had obviously a limited efficiency and the transculturation process did finally occur by way of the action of Salesian missions, military expeditions and the establishment of cattle ranches who annexed their lands and pushed away (or directly killed) the Shelk'nam inhabitants (Borrero 1991).

The Fuegian societies: three circumpolar case-studies



Map 1: Location of Shelk'nam, Yámana and Alakaluf societies in the Fuegian archipelago. **Map 2:** Location of the Fuegian archipelago in Southern South America.

Picturing the past: theoretical concepts used to combine the visual record and the archaeological record

Photographs have been the subject of much theoretical thought and debate. A great number of academics have produced numerous concepts and perspectives about what photographs are and about the information contained in them (Mead 1975, Sontag 1977, Gernsheim 1986, Barthes 1998). Photographs have often been conceived from two diametrically opposed standpoints: from a positivist perspective they have been considered as an objective record of reality and from a post-modern perspective they have been considered as a subjective creation far from reality and close to the interests of the photographer (Fiore and Varela 2009). The positivist perspective was the first one to emerge in the history of thought about photography: due to its optical, mechanical and chemical qualities, this technique was considered as a neutral, reliable and objective record of reality (Bourdieu 1977, Gernsheim 1986, Edwards 1992). Yet many authors have pointed out that photographers control what to depict, how it is depicted (type of framing, choice of lighting and focus, use of lenses, etc) and how the resulting image is manipulated (developed, copied, edited, etc.). Therefore, photography is neither an objective nor a neutral technique (Kossoy 2001, Edwards 1992, Alvarado 2004). In some occasions this latter position has been taken to an extreme, when some authors maintain that not only photography is not an objective record of reality, but that reality in fact does not exist (Fontcuberta 2008; see

discussions in Morphy and Banks 1997). This extreme standpoint denies any validity of the photograph as a document. Moreover, if the photograph depicts a person or group of persons, from this perspective such person/s do not have any possible influence over the resulting image. Their agency is completely denied, and only the agency that is taken into consideration as an active force in the formation of the photograph is that of the photographer.

A third perspective, which we call critical, is therefore theoretically possible and analytically useful: photographers have greater control in the photographic process, yet at least in some occasions, photographed subjects can have some influence over what is photographed -they may have some choice over their own bodily positions, the types of material culture they handle, the actions they perform in front of the lense, etc. Thus, although they have a comparatively lesser degree of control over the photographic process than photographers, photographed subjects can become active agents in the production of certain photographs (Fiore 2002, Fiore 2005b, Edwards 2002, Fiore and Varela 2009). And it is due to this factor that photographs have a deep potential to provide information not only about the photographers's intentions and biases, but also about the photographed subjects. As any other form of record about the past, photography is not objective: but this does not mean that it is not informative.

This informational potential of photographic artefacts is liable to its exploration through an archaeological gaze: the systematic search for the formation processes of the photographic record allows for the discovery of biases generated by both photographers and photographed subjects (see below). In turn, the systematic search for trends in the manipulation of material culture allows for a "visual archaeology" based on the analysis of photographs as artefacts that bear information about the recent past. In particular, we will focus here on the types of artefacts that were manipulated by the indigenous Fuegian peoples, which are indicative of many aspects of their modes of life, in order to search for potential similarities and differences between each neighbouring society. We will contrast those which appear in the photographs, with those which appear in the archaeological record of quasi-contemporary dates. While the photographs range from the 1880's to the 1950's, the archaeological record ranges from the 16th. to the 20th. century; thus both records are comparable since they deal with the contact period, which is characterised

by the increasing interaction between indigenous Fuegians and Western agents -voyagers, missionaries, militars, businessmen, ethnographers, etc.- (Cooper 1917; De Agostini 1924; Bridges 1951; Borrero 1991; Orquera and Piana 1999a; Fiore and Varela 2009).

To carry out this data-collection and analysis, it is necessary to develop a suitable method of data collecting and analysis, which we develop in the following section.

Materials and methods: from the field to the archive, from the archive to the database

The data-collection and data-analysis protocol of the photographic database

Our method of data collecting and analysis has included the following steps:

a) *Sample formation*: identification of photographs of Fuegian individuals in archives and publications. Ethnic ascription was done following a number of criteria: 1) physical aspect of the photographed persons, 2) material culture they manipulate, 3) landscape and/or structures with which they are photographed, 4) written information in published captions and/or in archive files. In the case that one or many of these criteria failed to provide an accurate ascription, we attributed the photograph to the most likely Fuegian society but noted that this ascription was doubtful; therefore, we did not use such information when carrying out data analysis and statistics.

b) *Sample control*: each new photograph was checked with the previous ones before entering it to the sample, in order to avoid repetitions which would increase the sample artificially. The different editions of a single take were taken into account in order to assess the image manipulations done by the photographer and/or the picture editor.

c) *Data recording*: record of the visible information in each photograph in a relational database at three different and complementary scales:

i-*photograph data table* including 15 fields: photo number, photographer, photo date, Fuegian group, place, photo visibility, context (ceremonial, domestic, “indeterminable”), number of individuals, presence/absence of Western structures, presence/absence of native structures, presence/absence of Western artefacts, presence/absence of native

artefacts, type of landscape (woods, shore, lake, mountain, etc.), different editions of the same photo, archive/s where the photo is kept.

ii-*photographed individuals table* (data per person) including 5 fields: photo number, individual number, individual's gender, individual's age, person's identity (if known).

iii-*material culture table* (data of each material culture item per individual) including 8 fields: photo number, individual number, artefact, ornament/clothing item number, type of artefacts handled by individual, types of clothing and ornament worn by the individual, types of structure.

d) *Data analysis*: inference of qualitative patterns and calculation of univariate and bivariate quantitative trends per photo, per individual and per material culture items, as well as links between these three different analytical levels. Trends per photo include, for example, the calculation of how many images of the Shelk'nam society show Native material culture items. Trends per material culture items include, for example, the identification of which items are more frequent in which society, which in turn indicates that they may be considered diagnostic of this Fuegian group.

e) *Results assessment*: analysis of the qualitative and quantitative results, combined with ethnographic information about each Fuegian society as well as with data about the formation processes of the photographic record. Such analysis is guided by the theoretical concepts synthesized above, and is particularly oriented towards finding patterns of material culture manipulation which can be diagnostic of each different Fuegian society, in order to search for the social agency of the native peoples beyond the biases of the photographic records.

An overview of the photographic sample and the formation processes of the Fuegian photographic record

Following the methodological steps outlined above, we were able to gather a sample of 1131 photographs taken by 44 photographers, found in 16 archives⁴ and in 64 publications. Out of the 1131 photos, 679 are

⁴ 1- Museo del Fin del Mundo – Ushuaia – Tierra del Fuego (Argentina); 2- Asociación de Investigaciones Antropológicas – Buenos Aires (Argentina); 3- PACB – Laboratorio de Antropología – CADIC – Ushuaia – Tierra del Fuego (Argentina); 4- Museo Marítimo de Ushuaia – Ushuaia – Tierra del Fuego (Argentina); 5- Archivo General de la Nación –

published while 452 are unpublished. From the total sample, we were able to attribute 136 to the Alakaluf society, 446 to the Shelk'nam society and 401 to the Yámana society, while the rest are of uncertain ethnic origin.

Given that photography is not an objective record of reality, it is likely to find biases in the construction of the visual records of any society. The Fueguian cases were not an exception to this rule. A number of biases generated both by the photographers and by the photographed subjects have been identified along our research process (Fiore and Varela 2009). These constitute clear examples of the numerous formation processes of the Fueguian photographic record, which shed light on the fact that the visual information contained in the photographs cannot be taken at face value.

The following cases are some examples of these formation processes:

- a) poses controlled by the photographer (see photo 1);
- b) discomfort shown by the photographed subject (see photo 2);
- c) nudity sought by the photographer and negotiated by the photographed subject (e.g. Shelk'nam men got naked while their *hain* initiation ceremonies while Shelk'nam women did not agree to fully undress themselves for the camera; see photo 3);
- d) edition of a photograph in order to publish it cutting out Western material culture items, with the aim of representing a (fake) pristine ethnographic state (see photos 4 and 5);
- e) edition of a photograph in order to publish it presenting a (fake) image of traditional Native clothing (see photos 6 and 7);

Buenos Aires (Argentina); 6- National Museum of Ethnography – Estocolmo (Sweden); 7- Royal Geographical Society – Londres (United Kingdom); 8- Colección Luis. A. Borrero (Argentina); 9- Phototèque du Musée de l'Homme – Paris (France); 10- Anthropos Institut – Saint Augustin (Germany); 11- Museo Nazionale della Montagna Duca degli Abruzzi – Turin (Italy); 11- Dartmouth College Library, Hanover, New Hampshire (United Kingdom); 12- Archivo Histórico de la Armada – Valparaiso (Chile); 13- Archivo Salesiano – Buenos Aires (Argentina); 14- Museo Etnográfico Juan B. Ambrosetti – UBA – Buenos Aires (Argentina); 15- Museo de La Plata – La Plata (Argentina); 16- Museo Municipal de Río Grande – Río Grande – Tierra del Fuego (Argentina). Some of these archives were visited by the authors of this chapter while other materials were generously handed to us by Margarita Alvarado (Pontificia Universidad Católica de Chile) and by Ernesto Piana (CADIC-CONICET). The whole set of images is now part of the ARC-FOT-AIA, Archivo Fotográfico de Imágenes Etnográficas de Fuego-Patagonia held in the Asociación de Investigaciones Antropológicas, Buenos Aires, Argentina.

- f) publication of sections of a photograph without acknowledging that they belong to a single take (see photos 8, 9, 10 and 11);
- g) transculturation photographically documented by ethnographers but avoided in the publications in order to convey the sense of “ethnographic purity” (see photo 12);
- h) transculturation photographically documented by religious missionaries and published in order to use it as propaganda of their actions (see photo 13);
- i) the same native Fueguians appear in some photos wearing native clothing and in others wearing Western clothing: this both indicates that the photographers had different interests in recording them as “exotic” peoples or as “civilised” individuals, but also indicates that the photographed subjects agreed to negotiate these situations and still had access to their native clothing in spite of the transculturation process they were undergoing (see photos 14 and 15).

Photo 1



Photo 1. Front and profile of Halimink, a Selk'nam man.
Gusinde (1918-1923)

Photo 2



Photo 2: Skottsberg 1907 (Semi-naked Alakaluf woman, covering part of her body with a piece of cloth which was clearly not part of her usual clothing items).

Photo 3



Photo 3: Gusinde 1923 (Semi-naked Shelk'nam women).

In relation to these semi-naked Shelk'nam women (Photo 3), with half of their bodies painted during the hain ceremony, this situation was fostered by the photographer since by 1923 it was no longer a habit among Shelk'nam women. Conversely, full-body nudity and body painting during the hain ceremony was still a habit among Shelk'nam men (see photos 4 and 5).

Photo 4



Photo 4: Gusinde 1923.

Photo 5



Photo 5: Bridges 1951.

Photo 4 shows two naked and painted Shelk'nam men during a male ceremony. This photograph has been edited in order to eliminate a third person who was wearing a Western hat.

Photo 5 is the original version of the same Shelk'nam photograph, in which a third person appears wearing a Western hat.

Photo 6



Photo 6: De Agostini 1909 (Alakaluf man dressed with traditional clothing through photographic edition).

Photo 7



Photo 7: De Agostini 1909 (Original photo of Alakaluf man dressed with traditional clothing; his clothing was used to edit photo number 6).

Photo 8



Photo 8: Barclay 1926 (Original photograph of Shelk'nam group: "Caushel and his family")

Photo 9



Photo 10



Photo 11



Photos 9, 10 and 11: Gallardo 1910 (Scraps of photo 8 published without acknowledging that they belong to the same photograph).

Photo 12



Photo 12: Gusinde 1918-1923 (Yámana persons wearing Western clothing. Photos such as this one were usually not published since they did not convey the idea of “pristine” native societies desired by Gusinde).

Photo 13



Photo 13: Veiga 1887-1898 (Two Shelk'nam men wearing Western clothing. The photo was published in a Salesian book; its caption indicates that these men are currently working on a ranch -“estancia”- and comments on this as a positive factor).

Photo 14



Photo 15



Photo 14: Gusinde 1923 (Shelk'nam family in front of their hut, wearing Native clothing. The adult man is Tenenesk). **Photo 15:** Gusinde 1918-1923 (Shelk'nam group wearing Western clothing. Tenenesk is the first man standing on the left. This indicates that the same people who were already acculturated and thus wore Western clothing, still had access to their traditional clothing, as noted in the previous photograph).

The data-collection and data-analysis protocol of the archaeological database

The archaeological database of hunter-gatherer sites of the contact period of the Fuegian archipelago was created by recording data of each published site found in the regions that cover the Shelk'nam, Yamana and Alakaluf territories -see map 1-, as defined by Bitlloch (2005); Gusinde (1982, 1986); Chapman (1986); Borrero (2001); Orquera and Piana 1999a). The inclusion of each site in the database implied the following criteria (Fiore 2002, Saletta 2010 and 2014):

- a) hunter-gatherer sites of the Fuegian region pertaining to the contact period;
- b) sites which have been dated by radiocarbon or dendrochronological methods;
- c) in case there are no dates, sites that include Western (European or Criollo) material culture items and/or fauna introduced after 1520, which provide relative dates linking them to the contact period;
- d) surface finds were only accepted when the association between the artefacts and the dates has been well established by the researchers and authors of the publications (e.g. cases of artefacts produced using indigenous technology but with foreign- Western raw materials);

e) sites are only included if some type of archaeological material (artefacts, archaeofauna and/or human remains) have been found in them; dated test-pits with no finds are not included in the database;

f) data are quoted from archaeological sites published in journals, books and congress proceedings⁵.

The archaeological database contains a total of 23 fields (Saletta 2014), including:

1) *site table* (data for the whole site): site name; date/s; layers; geographical location; seasonality; environment; territory/indigenous society; excavated surface (m²); function/s of the site (e.g. domestic, funerary, ceremonial, etc.); presence/absence of local fauna; presence/absence of foreign fauna; presence/absence of artefacts; total number of artefacts; presence/absence of artefacts of local raw material; presence/absence of artefacts of foreign-Western raw material; presence/absence of artefacts of local morphology; presence/absence of artefacts of foreign morphology; presence/absence of human remains; types of structures (e.g. rockshelter, open air site, shellmidden, etc.);

2) *artefacts table* (data for types of artefacts per site): type of artefact; raw material; morphology; number of artefacts of each type in the site.

The completion of this database led to the identification of a total of 29 published archaeological sites with relevant absolute or relative dates falling within the contact period in the Fuegian archipelago (Saletta 2014); of these, 25 are relevant for the case-studies analysed in this paper.

An overview of the archaeological sample and the formation processes of the Fuegian archaeological record

The archaeological sample under study in this paper is formed by 25 published archaeological sites⁶, which are regionally distributed as follows:

⁵ The only two exceptions are Vidal (1985) and Borrero (1985), which are two unpublished theses (Licenciatura in Vidal's case and Doctoral in Borrero's case), which contain relevant information for this database. The first one is available in the library of the Asociación de Investigaciones Antropológicas (Buenos Aires); the second one is available in the library of the Facultad de Filosofía y Letras, University of Buenos Aires (we have permission to quote both).

⁶ We provide here the basic quotations of publications in which the main data of these sites can be found; further details about the whole bibliography per site may be consulted in Saletta 2014.

- 1) 6 sites in Yamana territory⁷;
- 2) 2 sites in Alakaluf territory⁸;
- 3) 17 sites in Shelk'nam territory⁹.

Out of these 25 sites, 16 have been dated with radiocarbon dates, 2 with dendrochronology and 7 with relative dates (Saletta 2014). These data indicate that the number of sites for the contact period in Tierra del Fuego is clearly uneven. Such differences may be attributed to a number of factors, including:

a) that the regions have different sizes (the Shelk'nam region is larger than the other two; hence, in statistical terms, under the same conditions, it is more likely to find more sites in this region than in the other regions);

b) that the survey and excavation strategies may have differed between regions and between researchers (e.g. the comparison of the published data shows that the excavations of sites in the Beagle Channel region (Yamana territory) and Otway Sound region (Alakaluf territory) are fewer in terms of the number of excavated sites, but each excavation is greater than 40 m² -they range from 40 m² to 92 m²-; while the excavations in Northern and Central Tierra del Fuego (Shelk'nam territory) are greater in number of sites, but each excavation has covered a smaller surface -ranging from 30 m² to 1 m²-. In turn, such sampling strategies are also related to the actual size of each site, of which normally only a percentage is uncovered in an archaeological excavation; however, such details are usually not included in the publications.

⁷ The sites excavated in Yamana territory are: Lancha Pakewaia; Tunel VII (Orquera and Piana 1999b); Lanashuaia I (Piana, Estévez Escalera and Vila Mitjá 2000); Acatushun 1; Acatushun 2; E. Harberton-ch95 (Piana, Tessone, Zangrando 2006); see details in Saletta (2014).

⁸ The sites excavated in Alakaluf territory are: Cueva de los Niños (Legoupil et al. 2004); Punta Baja (Legoupil 1989); see details in Saletta (2014).

⁹ The sites excavated in Shelk'nam territory are: Tres Arroyos 7, Tres Arroyos 14 A N°89; Tres Arroyos 14 B N°88 (Masone 2010); Ewan 1; Ewan 2 (Mansur and Piqué 2012); Puesto Pescador 1 (Suby, Santiago and Salemme 2008); Punta María 2 (Muñoz 2004, Borella 1996, Scheinshon 1993-94); Chacra Pafoy 3; San Pablo 1 (Borrero 1985, Scheinshon 1993-94); San Genaro 2 (Horwitz 1995); San Julio 1; San Julio 2 (Horwitz, Borrero, Casiragui 1993-1994); Ea Dos Marias and Florentina LA 12 (Masone et al. 2003); Tres Arroyos 1 (Borrero 1979); María Luisa 5 (Muñoz and Belardi 2011, Borrero and Lanata 1988); El Aleph (Muñoz and Belardi 2011); Close To The Site 2 (Muñoz and Belardi 2011); see details in Saletta (2014).

Finally, another crucial point regarding the formation processes of the archaeological record is that regarding the issues of the materials conservation. It is widely known that, in general terms, organic materials have a lower chance of conservation due to their higher rate of decay in comparison to inorganic materials (Cronyn 1996). This entails that, when focusing on material culture, according to the raw material on which artefacts have been made, those produced using lithic resources or glass will tend to have a better conservation and higher chances of being archaeologically recovered than those made on bone, wood, bark, leather, etc. (idem). However, under certain conservation conditions, which are influenced by sediment humidity and acidity which affect bacterial activity and organic decay (among other factors), some artefacts made with organic materials can survive in the archaeological record -e.g. in very dry environments, waterlogged sediments, neutral to alkaline sediments, etc.- (idem).

Thus, in spite of the above mentioned sampling and conservation biases, the information provided by the archaeological record has a key importance for its comparison to the photographic record, since: a) in some cases, due to the conservation biases of the archaeological record and its effects on the *archaeological visibility* of some activities and material culture products, only parts of artefacts will be found, while the photographic record may help in showing the appearance of the entire object (e.g. it is expected that entire arrows are visible in photographs, while only the lithic/glass arrow tips are found in the archaeological record, since the wooden shaft is likely to have a higher rate of decay); b) in other cases, the archaeological record will provide data about artefacts of low *photographic visibility* due to their low interest for the photographers, to the low frequency of their use and/or to their small size (e.g. lithic artefacts are often much more visible in the archaeological record than in the historical-ethnographic photographic record). Thus, given the differences in the formation processes of these two records, their comparison can provide complementary evidence that cannot be obtained solely from one of them. The next section explores some of the results of this comparison.

Photographed and excavated artefacts: trends in the manipulation of Fuegian material culture

The *situations* represented in the photographs can be broadly divided into: every day life situations (which depict quotidian actions), ceremonial situations (which show special occasions in which groups gathered to celebrate initiation rites of different kinds, mourning ceremonies, etc) and “indeterminable” situations (which cannot be classified for lack of visual and/or written data about them). It is noticeable that in the three societies, the most frequent category is that of “indeterminable” cases: this is due to the fact that the Fuegians were often pictured in “empty poses”, as exotic objects, out of real situations, sometimes standing in front of a screen which deleted the real background. The second most frequent category, in the three societies, is that of ceremonial situations: this clearly shows that the photographers determined which situations were photographed, since these ceremonies were clearly not the most frequent situations but were usually more relevant to their ethnographic/documentary interests. In contrast, everyday life situations, which were obviously the most frequent ones, are the less photographed (see table 1).

Table 1: Situations represented in the photographs

	Shelk'nam	Yámana	Alakaluf
Everyday life	31	14	12
Ceremonial	60	63	25
Indeterminable	312	278	111

Photo 16



Photo 17

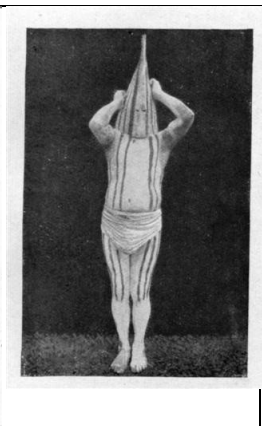


Photo 18

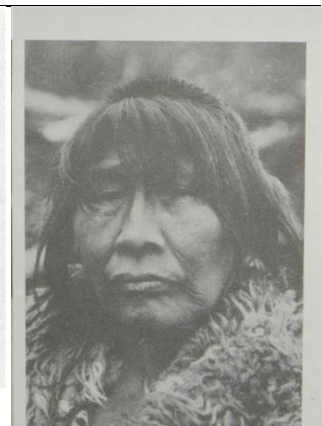


Photo 16: De Agostini 1909-1923 (Shelk'nam man posing as hunting with bow and arrow). **Photo 17:** Gusinde 1922 (Yámana man wearing mask and body painting for kina ceremony). **Photo 18:** Gusinde 1918-1924 (Shelk'nam woman in unknown situation).

Although the photographed situations are not directly comparable to the activities carried out on each site (because many photos can be taken of a single event, while one site often accumulates many occupation events), it is interesting to compare them in order to check for their potential similarities or differences. Following the data and interpretations of the researchers quoted above, the inferred main functions of the archaeological sites can be summarised as follows (Saletta 2014):

Table 2: Main functions of published archaeological sites in Tierra del Fuego.

Society	Domestic	Funerary	Ceremonial	Logistical (guanacos hunting station)	Indeterminate	TOTAL
Yamana	3	3	0	0	0	6
Alakaluf	1	1	0	0	0	2
Shelk'nam	9 + 3 potentially domestic	1	1	2	5	21

The comparison between both data sets shows that while ceremonial situations predominate in the photographic record, domestic (everyday life) sites predominate in the archaeological record (tables 1 and 2). This reflects an interest of the photographers on depicting ceremonies, which may have been seen as more "exotic" and "typical" than everydaylife situations. In turn, the archaeological record provides data about other situations which do not appear in the photos, such as funerary sites and logistical sites, thus giving more information about the variety of activities carried out by the Fuegian societies.

Regarding the *material culture* represented in the photographs, this can be broadly identified as Native (i.e. indigenous), Western (i.e. foreign, of European, Criollo or other origins) or Native and Western (both in the same picture). Data show that in the Shelk'nam case the photographs record a greater frequency of Native *artefacts*, while in the Yámana case the highest frequency of photos is that of Western artefacts, and in the Alakaluf case the proportions between photos showing Native and Western artefacts is more even (see table 2). This suggests that the Shelk'nam were more resilient to transculturation and even when undergoing this process they had greater access to their own indigenous material culture. Contrarily, the Yámana and the Alakaluf photographs indicate that these societies had been subject to a deeper and/or faster process of transculturation.

Table 3. Types of material culture visible in the photographs

Society	Only Native	Only Western	Native + Western
Shelk'nam	347	49	46
Yámana	109	148	118
Alakaluf	61	64	22

Photo 19



Photo 19: Gusinde 1918-1924 (Shelk´nam. Halimink and his family, wearing Native clothes and handling Native artifacts -ie. bow and queaver-).

Photo 20



Photo 20: De Agostini 1910-1920 (Shelk´nam. Ángela Loij learning to use a sewing machine next to a nun in Candelaria mission, Río Grande).

Photo 21

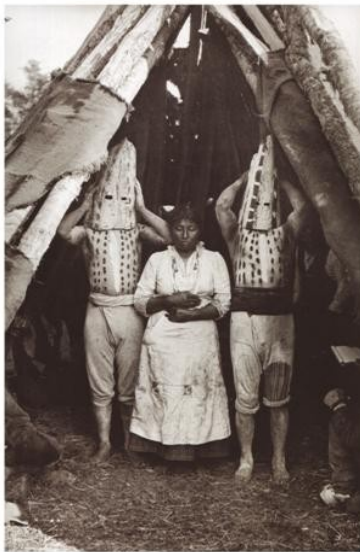


Photo 21: Published by Koppers, 1922
(Yámana people with Native and Western artifacts and clothes, during *kina* ceremony)

Photo 22



Photo 22: De Agostini 1924 (Shel'nam. Pa-chiek and his family in a Native hut. Note the bow and arrows handled by him and those placed on the side of the hut).

Photo 23



Photo 23: Furlong 1907-1908 (Alakaluf group of women in the Salesian mission, San Rafael, Dawson island).

The native *artefact types* recorded for each society are notoriously diagnostic of the inter-society differences between the Shelk'nam, Yámana and Alakaluf: while bows, quivers and arrows are clearly more frequent in the Shelk'nam case (which is consistent with their terrestrial hunting techniques), harpoons are more frequent in the Yámana case (which is consistent with their maritime hunting techniques). Paddles are recorded both in the Yámana and Alakaluf cases, which is consistent with their use of canoes. Ceremonial sticks only appear as a Yámana feature: this coincides with the written descriptions of these artefacts during their initiation ceremonies (Gusinde 1986).

Spindles are a Western material culture item which appear photographed in five Shelk'nam cases and one Alakaluf case: this is one example of the introduction of the weaving technique by the Salesian Missionaries, as part of the process of transculturation suffered by both native peoples (tables 4.1; 4.2; 4.3).

The comparison between the photographed artefacts and the archaeological artefact of each society also shows very interesting tendencies. In the Shelk'nam case (table 4.1 and photos 24 and 25) it is noticeable that some artefact types appear only in the photographic record, both of native origin, such as bags, baskets, bows, queavers, slings, packed windshields, and of Western origin, such as spindles, spinning wheels,

thread balls, and even a sewing machine. Most of these are very unlikely to appear in the archaeological record due to their organic composition. Conversely, some artefact types appear only in the archaeological record, such as lithic end scrapers, side scrapers and flakes; bone awls, harpoons, wedges and beads; glass end scrapers and flakes; iron chisels, disks and nails; etc. These archaeological materials evidence that the Shelk'nam were producing/using a variety of tool types and handling local and Western raw materials that are not documented in the photographic record. Finally, a key artefact type that is documented by both records is the arrow point: the photographic record documents them more frequently (but a single arrow may have been photographed more than once), while the archaeological record provides details about their raw materials (lithic, glass and bone), which have very low photographic visibility.

Table 4.1: Shelk'nam society: artefact types recorded in the photographic and archaeological records

Artefact types	N cases in photographic record	N cases in archaeological record
arrow (lithic; glass; bone)	91	18 (lit) + 10 (gl) + 1 (bn)
artefact indeterminate type (pottery)	0	3
artefacts indeterminate type (bone)	0	5
artefacts indeterminate type (iron)	0	36
artefacts indeterminate type (lithic)	0	230
awl (bone; iron)	0	6 (bn) + 1 (iron)
bag (leather?)	12	0
basket	10	0
beveled tool (bone)	0	1
bow	278	0
chair	3	0
chisel (iron)	0	1
core (lithic)	0	2
discs (iron)	0	2
end scraper (lithic; glass)	0	6 (lith) + 8 (gl)
flakes (lithic; glass; bone)	0	145 (lith) + 4467 (gl) + N not published (bn)
harpoon (bone)	0	5 (single barbed) + 1 (straight)
loom	1	0
mug (metal; pottery)	2 (metal)	3 (pottery)
nail (iron)	0	1
needle	1	0
packed windshield	12	0
pigments	0	139
polisher (lithic)	0	1
quack (lithic)	0	1
queaver	92	0
saddle + rein	2	0
sewing machine	1	0
sharp artefacts (bone)	0	3
side scraper (lithic)	0	67
sling	2	0
spindle	8	0
spinning wheel	5	0
thread ball	11	0
tool indeterminate type (glass)	0	5

Regarding the comparison of Yamana material culture documented in both records (table 4.2 and photos 26, 27 and 28), it is interesting to note that, again, a number of organic artefacts appear only in the photographic record: bags, baskets, ceremonial ropes, ceremonial sticks, canoe paddles, painting rods and a toy canoe, all of them of indigenous origin; plus chairs of clear Western origin. Conversely, a number of artefacts appear only in the archaeological record, including lithic anvils, bolas, flakes, hammers, knives and scrapers; bone awls, chisels, flakes, spatulas and wedges; and mollusc knives, all of indigenous origin; plus glass scrapers, side scrapers and flakes, of Western raw material and local manufacture. Two artefact types appear documented in both records: lithic arrow points and bone harpoons -single barbed with detachable base and multibarbed with fixed base-; these artefacts have been typologically defined through archaeological studies (Orquera and Piana 1999b) and are clearly visible in the photographs (Fiore 2014)-¹⁰.

Table 4.2: Yamana/Yagan society: artefact types recorded in the photographic record and in the archaeological record

Artefacts	N cases in photographic record	N cases in archaeological record
anvil (lithic)	0	2
Arrow	1	75 (lithic)
awl (bone)	0	34
bag (leather?)	2	0
bark remover (bone)	0	1
Basket	9	0
bow (wooden)	1	0
ceremonial rope	7	0
ceremonial stick	72	0
Chair	9	0
chisel (bone)	0	2
Cigarette	1	0
drinking tube	1	0
Firearm	1	0
flakes (lithic; bone; glass)	0	361 (lit) + 3 (bn) + 1 (gl)
hammer (lithic)	0	2

¹⁰ The good conservation of the bone harpoons (and other bone artefacts) has been favoured by their deposition in shellmiddens, which due to their shell components have middle-alkalinity -pH 7- (Orquera and Piana 1999b).

harpoon (bone)	12	26 (single barbed) + 1 (multibarbed)
knives + side scrapers (lithic; glass; mollusc)	0	416 (lit) + 1 (gl) + 2 (moll)
Loom	1	0
Paddle	46	0
painting rod (wooden)	2	0
scraper (lithic; glass)	0	99 (lit) + 3 (gl)
spheroid and sub-spheroid (lithic)	0	8
spatula (bone)	0	16
tool indeterminate type (bone; glass)	0	5 (bn) + 1 (gl)
tool indeterminate type (lithic)	0	22
toy canoe	1	0
wedge (bone)	0	20

Similarly to the other cases, in the Alakaluf case (table 4.3 and photos 29 and 30) a number of material culture artefacts only appear recorded in the photographic record: baskets, feathers (single feathers used in ceremonial situations), a net, canoe paddles, slings, toy bow and arrow, and toy canoes, all of indigenous origin; plus chairs, a hoop game, a ladder, a spin, and a swing, of Western origin. Conversely, certain artefact types appear exclusively in the archaeological record: lithic arrow points and polishers; bone awls and baguettes; and mollusc knives of indigenous origin. Interestingly, metal pieces -which may have been part of more complex metal tools or raw materials to produce them- are also found in the archaeological record: iron plates (of Western origin) and copper plates (of uncertain origin, either local or foreign).

Table 4.3: Alakaluf society: artefact types recorded in the photographic record and in the archaeological record

Artefacts	N cases in photographic record	N cases in archaeological record
arrow (wood; lithic)	1 (wood toy)	48 (lithic)
awl (bone)	0	12
baguette (bone)	0	19
basket	5	0
bow	1 (wood toy)	0
chair	4	0
copper plate	0	2
feather	6	0
flake (lithic)	0	presence (N not published)
harpoon	1	41 (single barbed)
hoop game	1	0

plate (iron)	0	8
knife (mollusc)	0	2
ladder	1	0
net	1	0
paddle	19	0
pigment	0	presence (N not published)
polisher (lithic)	0	3
sling	1	0
spin	1	0
swing	1	0
toy canoe	2	0

Photo 24



Photo 24: Gusinde 1918-1924
Two Shelk'nam men handling bow, arrow and quiver.

Photo 25



Photo 25: De Agostini 1910-1920
Shelk'nam family wearing Native clothes: cape, headband and carrying Native material culture artefacts; note the folded windbreaker –tent- carried by the woman on her back and the bows carried by the man and the child behind him.

Photo 26



Photo 26: J.L. Doze and E. Payen 1882-1883 Athlinata, a Yamana man, holding a multibarbed fixed-base harpoon. This harpoon type was also found in the archaeological record.

Photo 27



Photo 27: A. Sánchez de Caballero; *circa* 1910. Yamana-Yagan man and women in a canoe, manipulating paddles and harpoons. Note the single-barbed harpoons of detachable base, just like the ones found in the archaeological record. Detachable harpoons were firmly tied to the haft by tying their bases to the tip of the haft with a cord; they were detached from the haft when hitting the prey. Both positions -tied and detached- are visible in the image.

Photo 28



Photo 28: Gusinde 1918-1924 (Yamana people with ceremonial sticks and ceremonial rope (note also the feather headbands, body painting and Western clothing).

Photo 29



Photo 29: Gusinde 1918-1924

Alakaluf boy handling a wooden bow and arrow toy. Interestingly, there are no photographic records of bows and arrows being used by adults in this society in spite of the fact that lithic arrow points are the most frequent artefact in the contemporaneous archaeological record of this region.

Photo 30



Photo 30: Gusinde 1918-1924

Alakaluf woman posing while weaving a basket

Conclusions: a comparative exploration of Fuegian native cultures through the combined use of the photographic and archaeological records

A number of conclusions can be drawn from the analysis of the data presented in this paper. Due to space limitations, we will only point briefly here to some of them:

a) photographers did control more stages of the photographic process, yet the photographed subjects were active agents who did have some influence on the resulting images: for this reason it is possible to distinguish different inter-society trends in the manipulation of material culture items, which are diagnostic of each Fuegian group;

b) the photographic record and the archaeological record have different formation processes, with their own informative biases and potentials. As shown in our case studies, these may entail the conservation and visibility of different types of material culture. This is particularly noticeable when comparing both records of the three societies, since, for example, bags, baskets, slings, canoe paddles, toy canoes and bows appear only in the photographs but do not have any archaeological visibility in the surveyed sites due to their fragile organic materials, which have a high decay rate. Conversely, several lithic artefacts (e.g. end scrapers, side scrapers, flakes) and bone artefacts (e.g. awls, chisels, spatulas, wedges) have a high archaeological visibility but null photographic visibility. This points to the *complementary* nature of both records, which in the mentioned cases tends to increase the information about the variability of the material culture manipulated by each society. In a few cases, both records *corroborate* each other: for example both show evidence of arrows in the three cases under study, though in the photographs the entire artefact is visible (arrow point plus shaft) but the raw materials used to make the points have a low photographic visibility; while in the archaeological sites only the points are visible because the shafts decay much faster, but the raw materials used to make the former have a high archaeological visibility. The same goes for the harpoons: in the Yamana and Alakaluf cases even the same sub-types of harpoons -single barbed and multibarbed- are visible in both records (though with different frequencies), showing how pervasive was the use of this tool in the recent past of these Fuegian societies. In turn, in the Shelk'nam case the lack of photographic records of persons handling harpoons contrasts with their scanty presence in the quasi-contemporary

archaeological record, and begs the question about how infrequent were these items in this society.

In sum, the tools and objects discussed in this paper contribute to the characterisation of specific material culture trends generated by the accumulated actions of members of each society, and shed light on their intra-society variability and inter-society similarities and differences. This shows that the Fueguians' agencies not only dwell on the items excavated in the archaeological sites from the contact period, but also in the numerous photographs taken to them from the late 19th. to mid 20th. century. Thus, the combination of data provided by the archaeological and photographic records of the Fueguian indigenous societies helps to open new insights into their material culture practices, broadening the available knowledge about the cultural variability of each one of these groups. Further analyses will shed new light on these old images.

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