A satellite photograph of the Mediterranean Sea, showing the surrounding landmasses of Europe, Africa, and Asia. The sea is a deep blue, and the land is a mix of green and brown. The Earth's curvature is visible at the top of the image.

*Being captain of a tuna trap: practice,  
knowledge, and skills for the sustainability of  
an age-old mode of fishing.*

David Florido del Corral. Department of Social Anthropology, U. Seville

**Food and trade in Early Modern Spain (2) From Early Modern to the  
present day: an Anthropological view of Tuna Fishing**

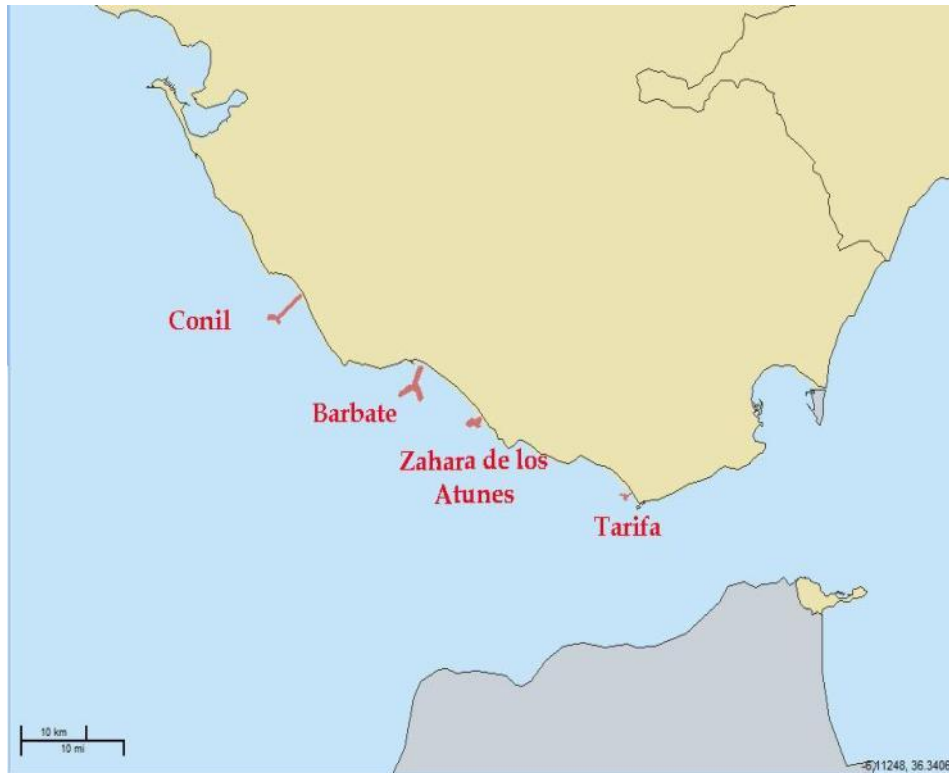
Third International Conference on Food History and Food Studies. Tours, 1-2 June, 2017

# Aim & Scope

- To highlight the key position of tuna traps captains, addressing their intellectual, sensorial and cognitive skills.
- To review the historic process of shift from mobile tuna traps (so called “vista o tiro”) to the modern fixed ones (“de buche”) (18th century onwards).
- To proposal a theoretical reflection on the traditional, vernacular knowledge and their technic, social and cultural functions.



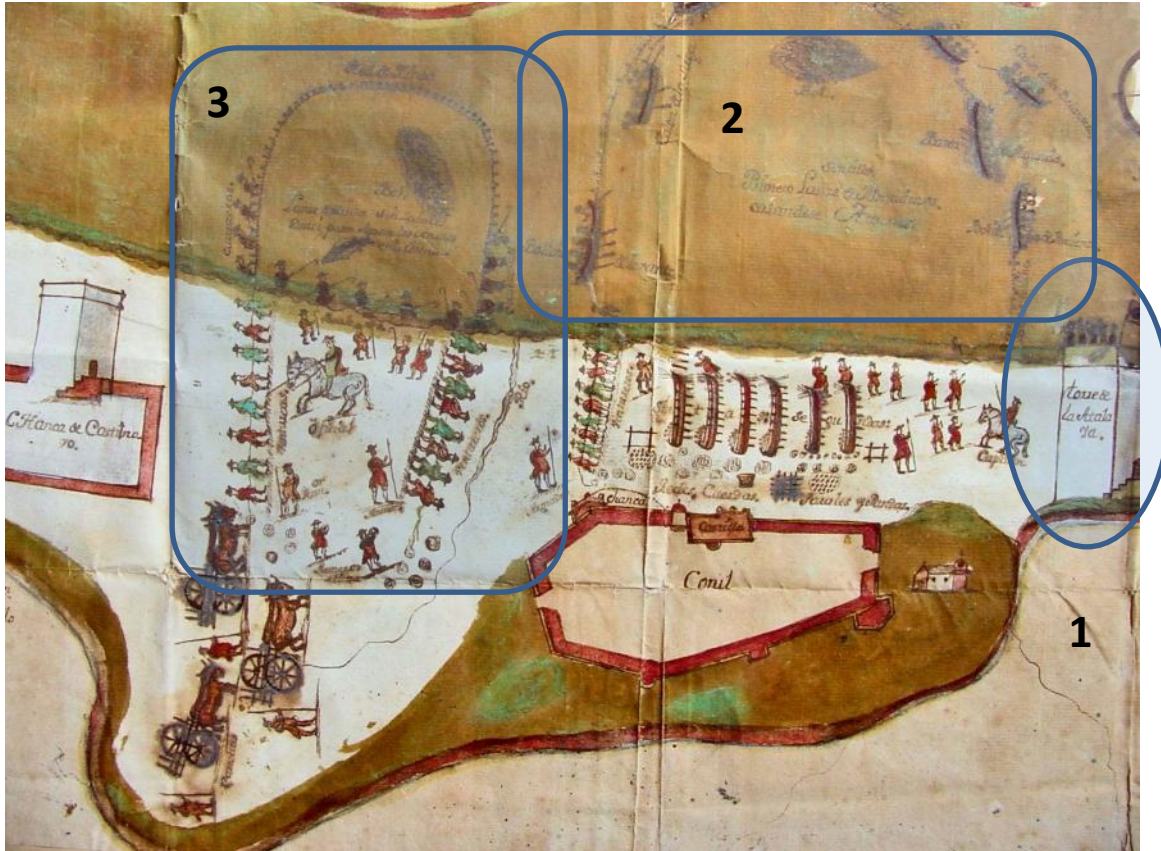
# Location of present-day tuna traps the at andalusian atlantic coast



## **Strait of Gibraltar, Province of Cadiz.**

- Tuna traps are also set at: Portugal (Algarve), and North coast of Africa
- Planned tuna traps for the next years: Huelva and Cadiz.

# Mobile Tuna Traps

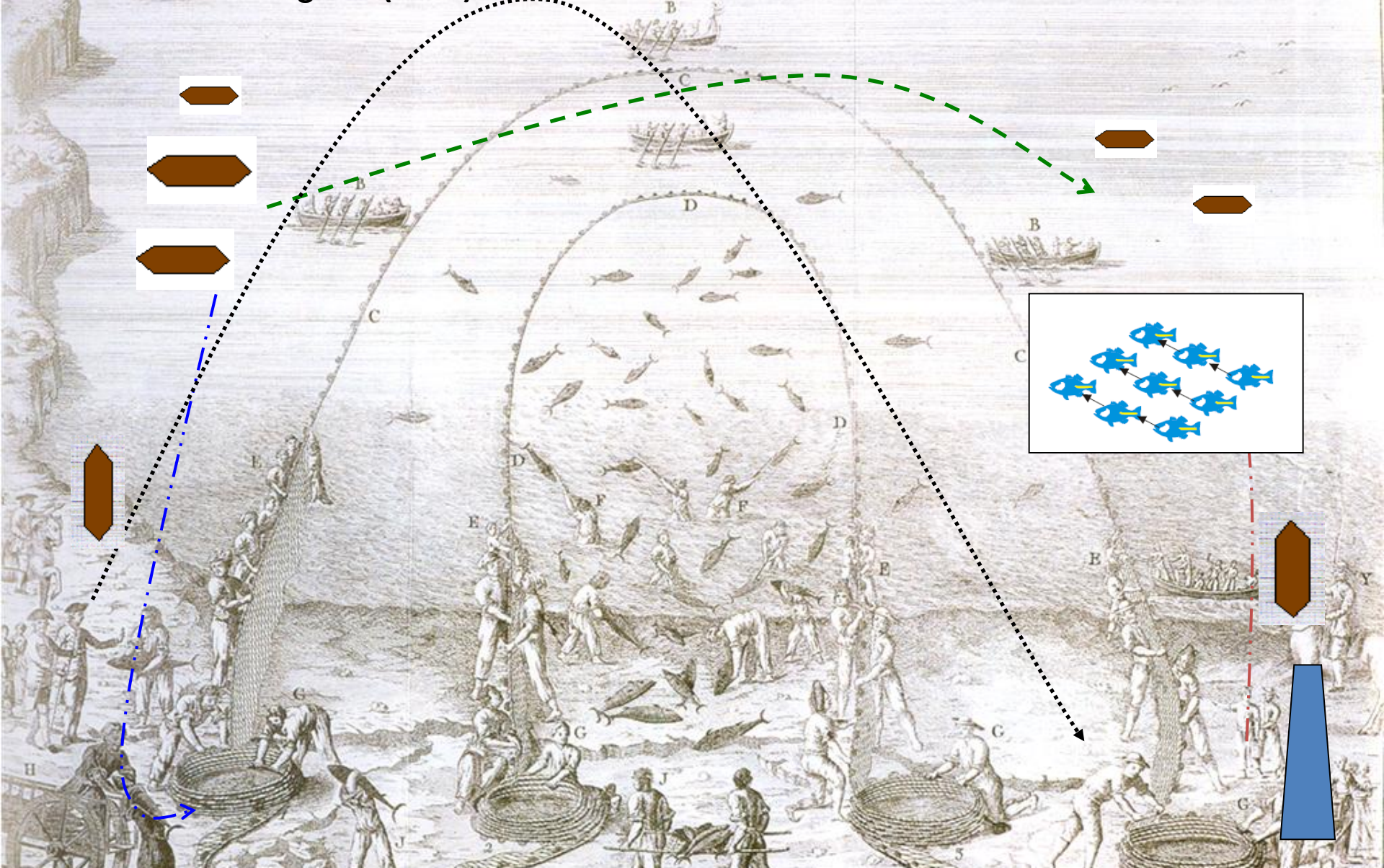


Plan of the Conil mobile tuna trap, 1765. (Detail). Source. A.D.M.S.

1. the initial sighting of the tuna schools by the so-called spotters, the *torreros* or *atalayas*, who give the order to the boats,
2. Following signs from the *torreros*, the boats would round up the tuna in *boles*.
3. The tuna are are hauled ashore in another, thicker net, called the *cinta*, to be clubbed to death there and sent off for their subsequent processing.

# The fishing process: from the signals of spotters to the tuna catching

Figure: Tuna Trap of Conil represented in the *National Dictionary of the Art of Fishing* of A. Sáñez Reguart (1791)



## The accurate perception of “spotters” (atalayas, torreros)



“These fish come by the sea close to the shore and, before they arrive at the place where the boats are positioned, **a man placed as a lookout atop a tower near the water espies them. And that man’s knowledge is such that** when the tuna are a league or more away, **he perceives their approach, and espies them beneath the water by dint of the movement and duskiness of the water, and can almost say how many they are in number,** and when they draw near to the boats, the lookout makes a sign with a cloth or a bonnet to those on the boats”

(Pérez de Messa, D. 1595, *Primera y segunda parte de las cosas memorables de España*. Alcalá de Henares)

# Mobile traps represented by corographers (16 th century) (1)

Anton Van den Wyngaerde (ca. 1570). Zahara de los Atunes, Cádiz.



# Mobile traps represented by corographers (16 th century) (2)

G. Höfnagel (ca. 1570). Conil



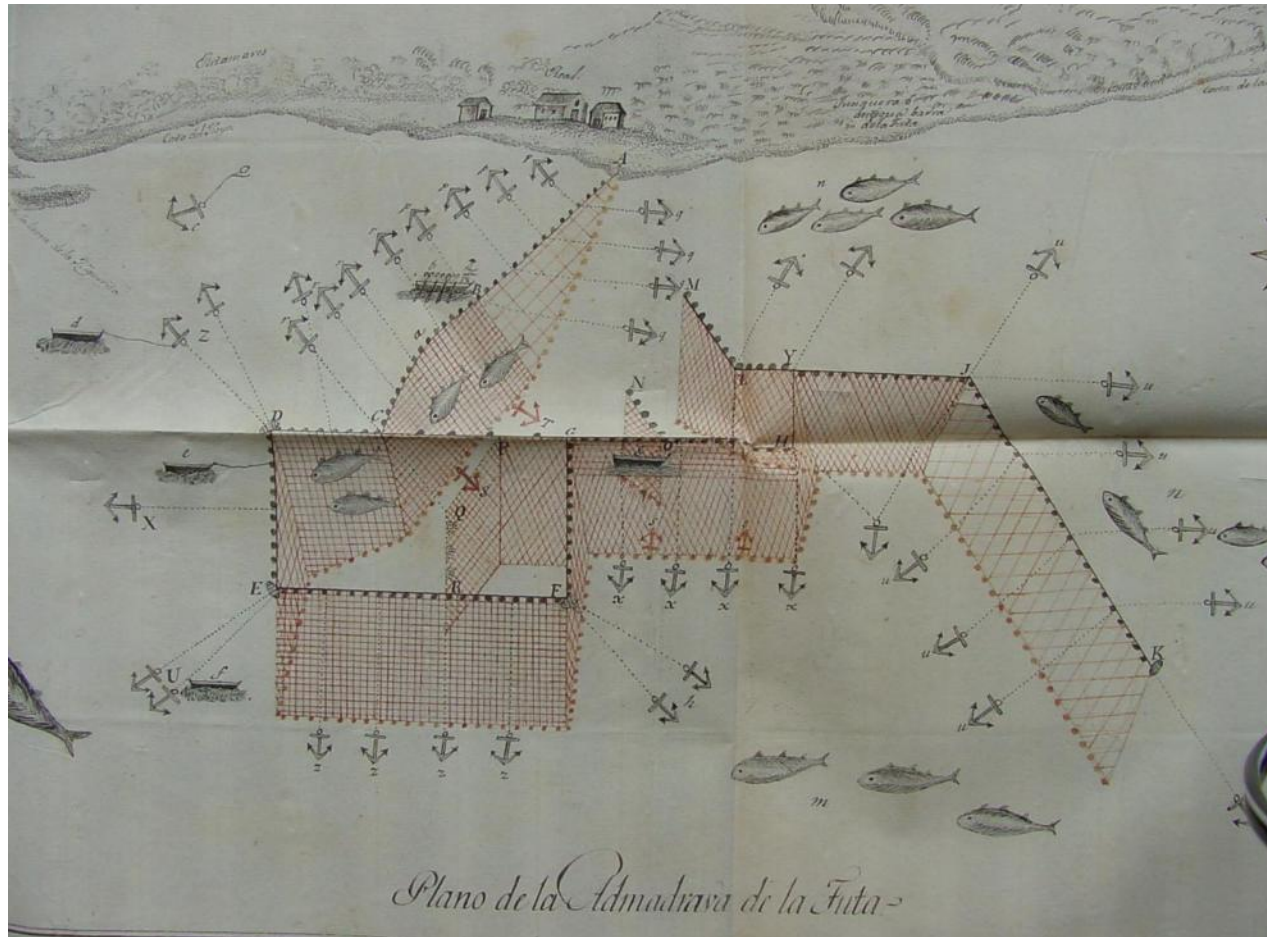


# Mobile traps represented by corographers (16 th century) (3)



G. Höfnagel  
(ca. 1570).  
Cádiz.

# The “modern” fixed tuna traps

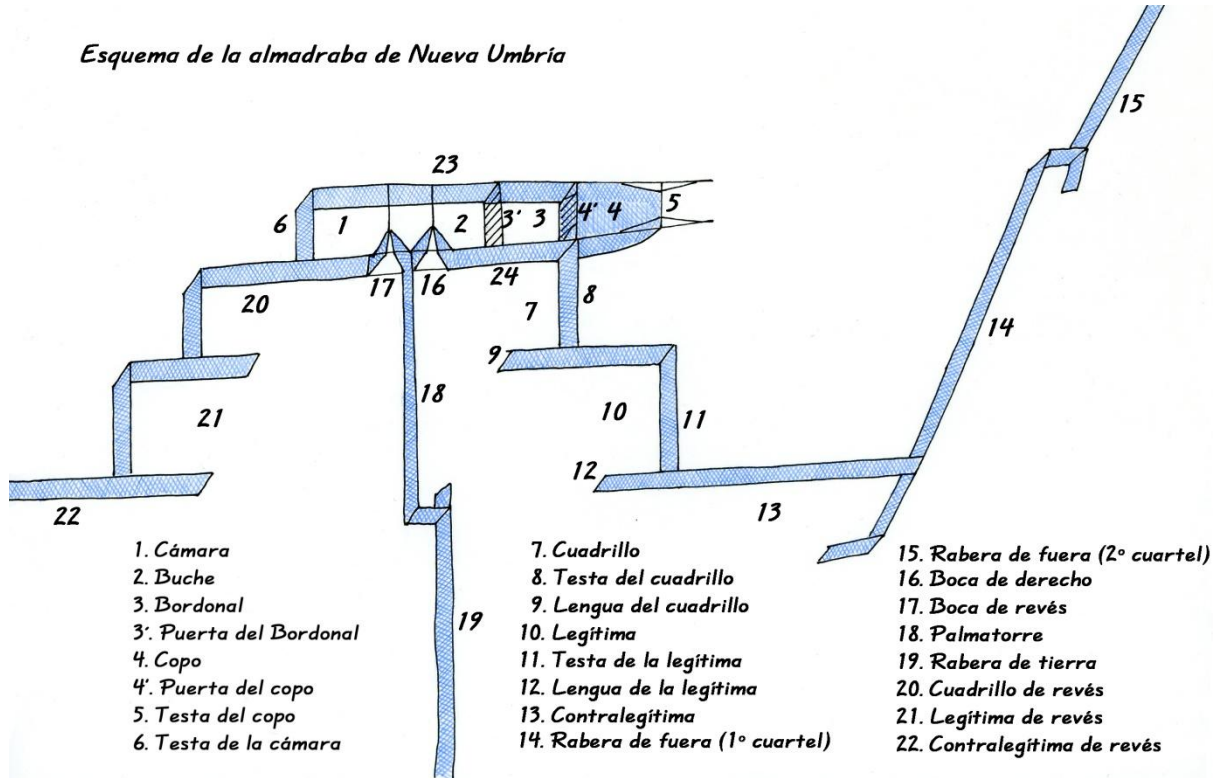


*“this is a type of fishing that is both cunning and interesting and as of this time its equal has not been seen that is able to go as far as the fishing industry has achieved on an observant practice (Sáñez Reguart, 1791, I, p. 11).*

**Plan of the Tuta (Huelva province) static tuna trap ca. 1820. Source. A.D.M.S.**

# Modern fixed traps

*Esquema de la almadraba de Nueva Umbria*




Source: Ruiz, JM, Fernández, J y López, JA (2012), *Capitanes de almadraba. Isla Cristina, Huelva, Thunnus Ediciones.*

“A maze to get it in your head, and you can’t take a book to sea, you have to do it all on the fly. That’s a real headache; if you really want to learn, you can. There’s no school here. I’ve been doing this all my life, since I was 18 or 19; my father was a second officer, I started by being his assistant, and that’s how you learn” (Barbate Second Officer).


# The “modern” fixed tuna traps

## The multidimensional functions of Captains:


Accurate knowledge on location: depth, slope, type of sea bottom, dominant winds, frequency of storms, etc.




consummate knowledge of the material characteristics of the gear: the materials used, the size, types of net, the balance between the types of float



To apply this set of knowledge about the gear to a specific location: “letting the trap get the feel of the water”



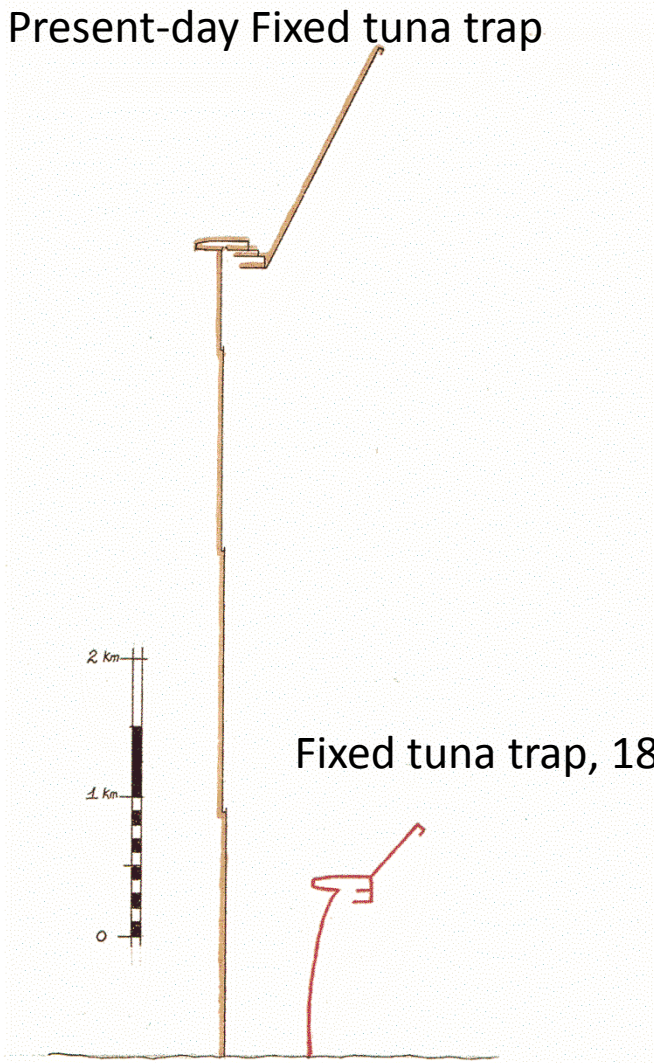
The hoist (“levantá”): knowing the dynamics of tides, adjudging the numbers of fish, sensing the fishes beneath the water, to carry out synchronically the hoist



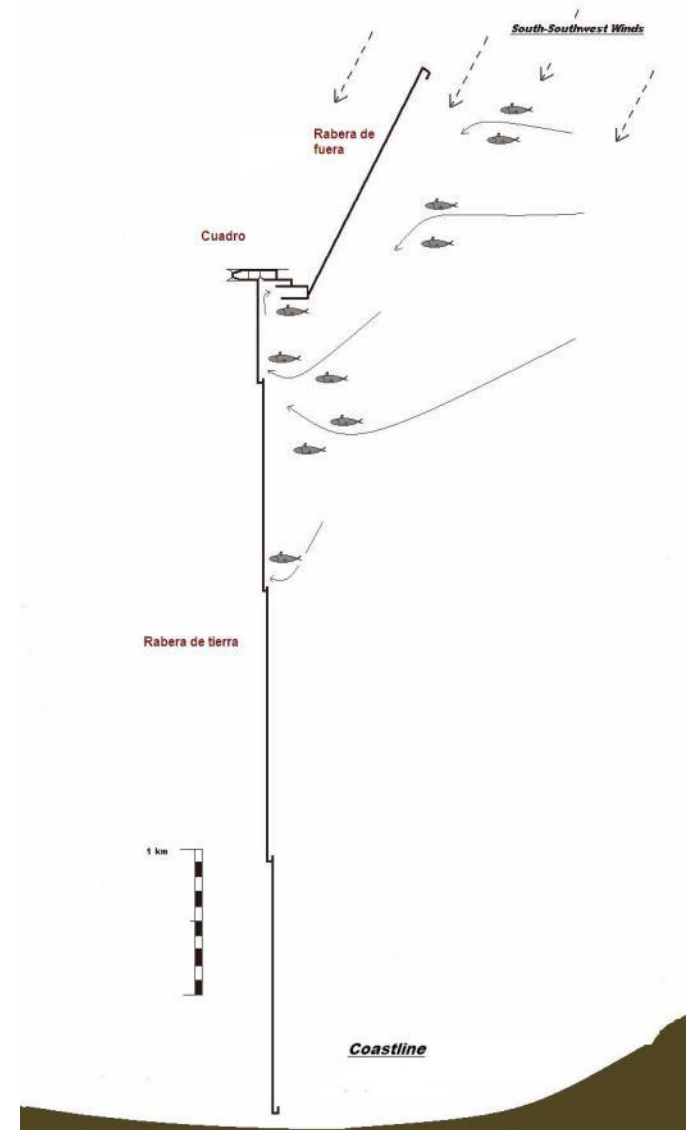
To manage the relationships with and among technicians, workers, and the company (socio-laboral role)

# Historic evolution: size

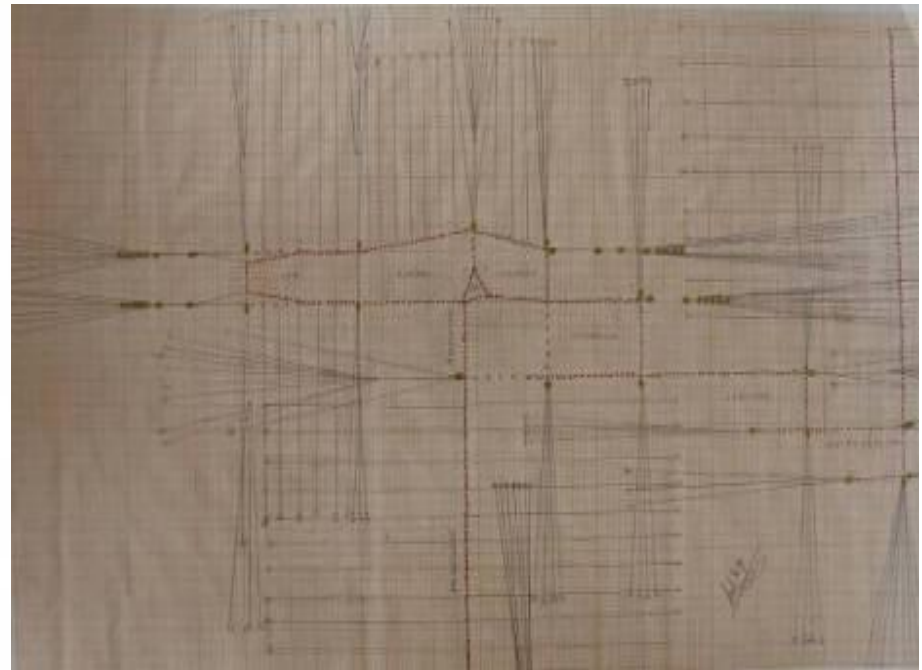
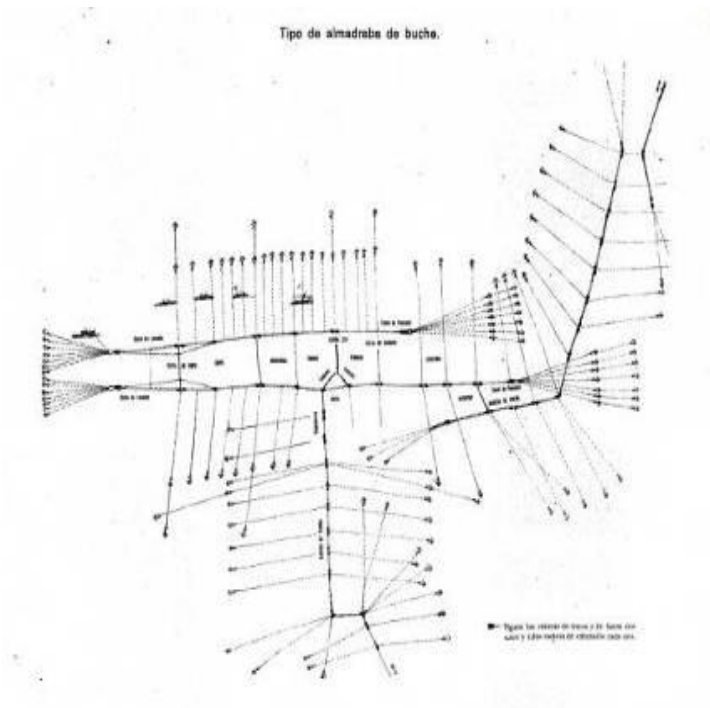
Present-day Fixed tuna trap



Fixed tuna trap, 18th century



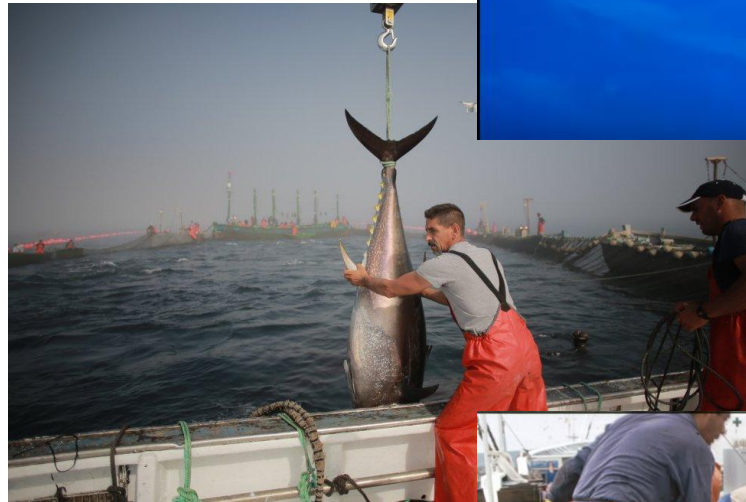
# Historic evolution: Continuity of the structure



Plan of tuna trap: Conil: 1923-2010

## Historic evolution: recent innovations

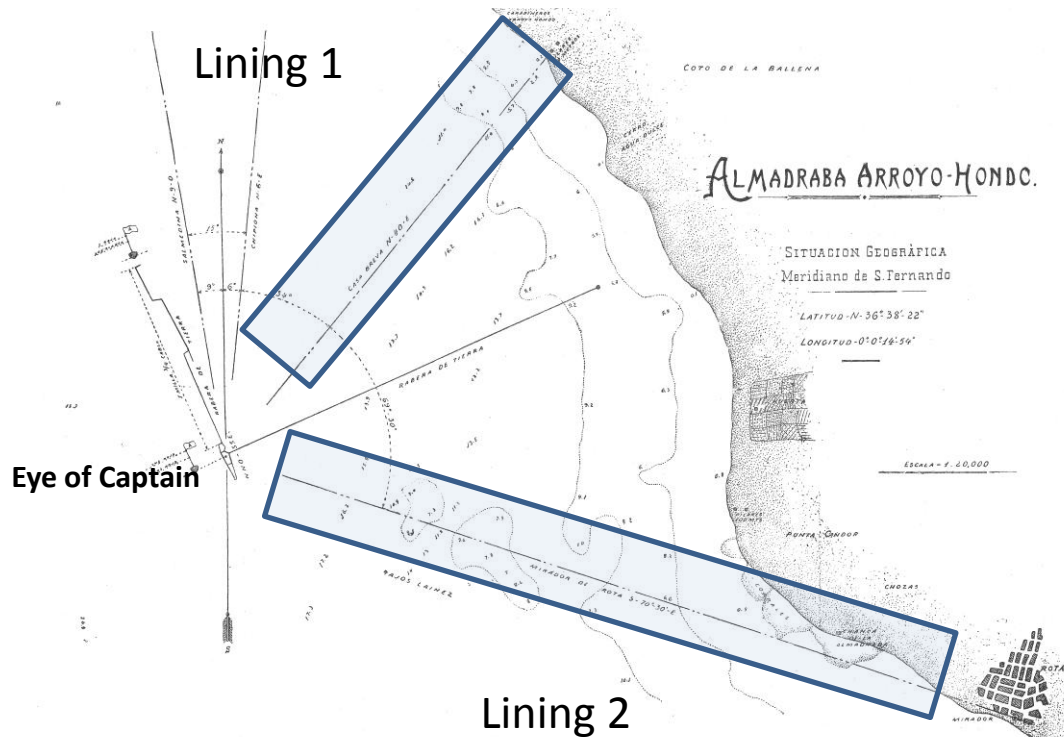
- The significant role of “frogmen”
- New materials and mechanized devices.
- New ways of fishing (according to demand) and killing tuna: “luparas”.
- Fresh market through “Deep-freezing”



# Defining the precise location of “enclosure”: “land-marks”

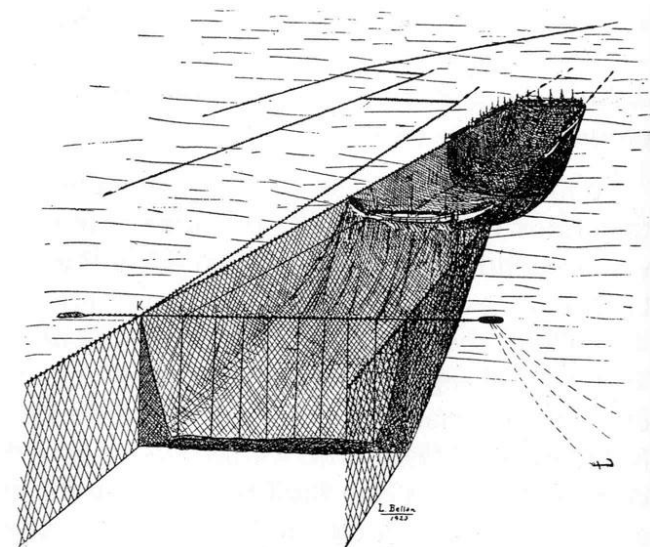
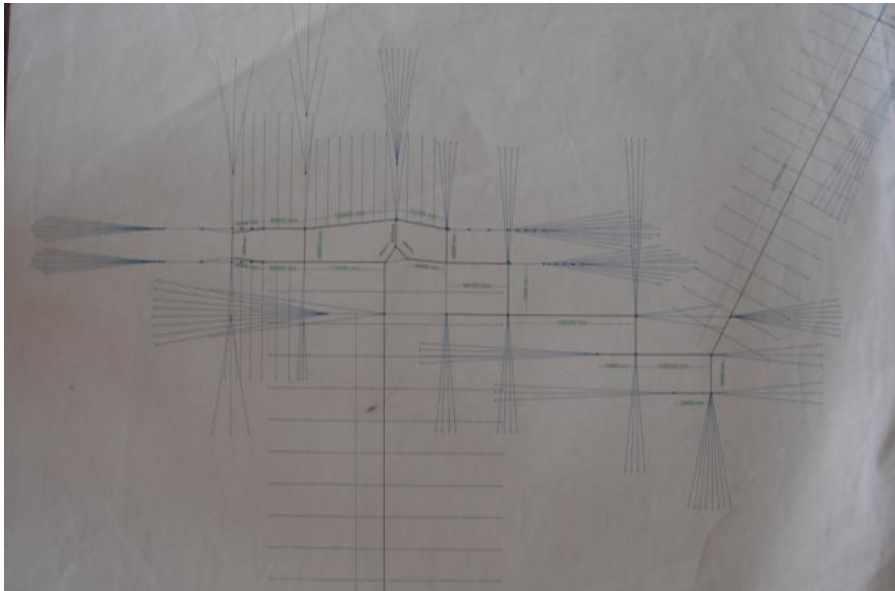
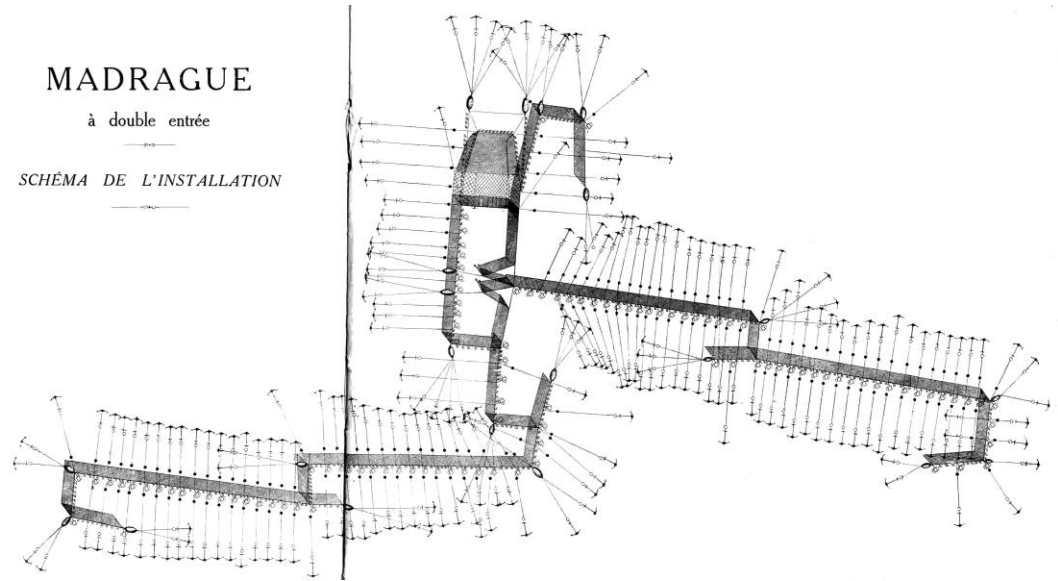
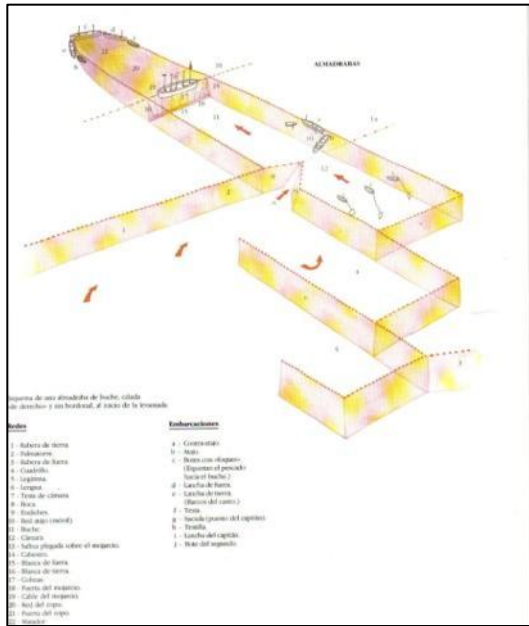
Importance of the sense of sight to put the enclosure in place: “land marks”

Points on land that are very evident, are at different distances and which are lined up **by eye from the sea** (“Linings”-“enfilaciones”).





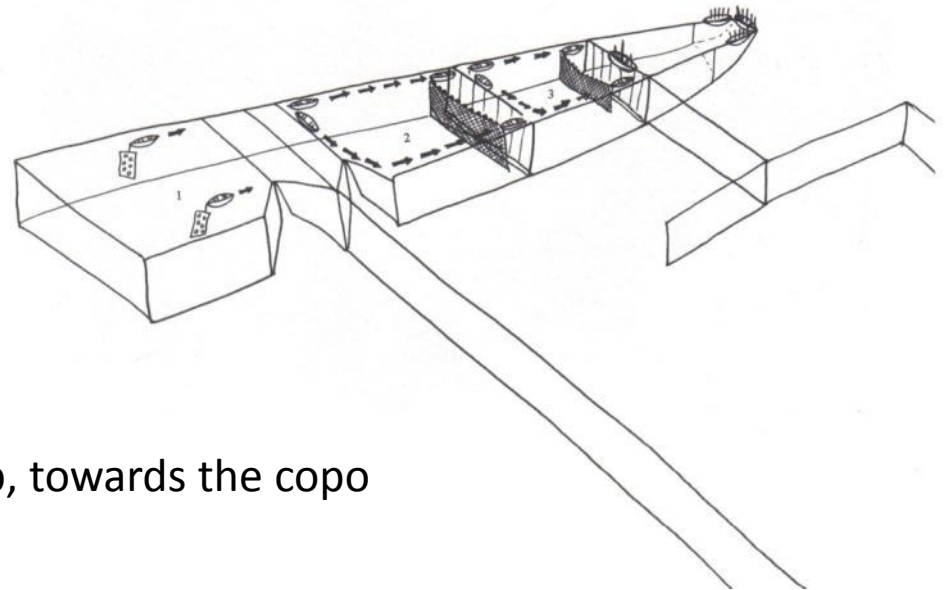
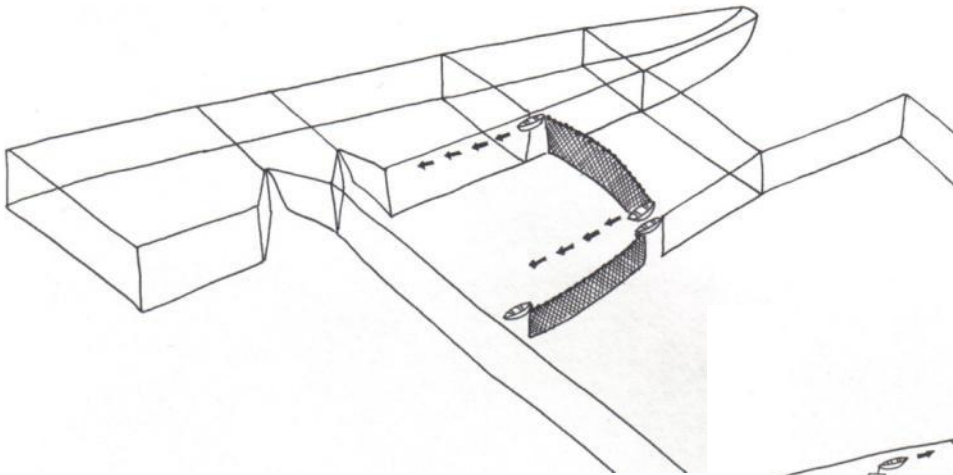
# Ideal trap design



# Functioning trap (1)

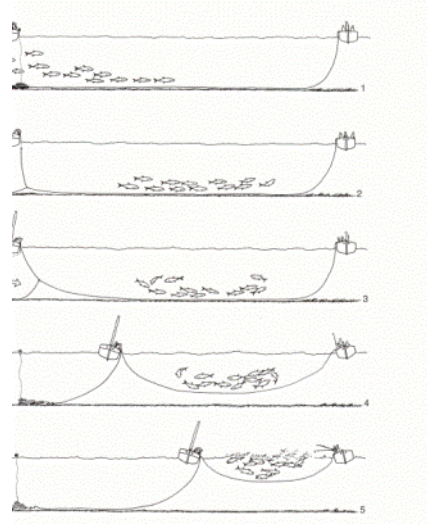
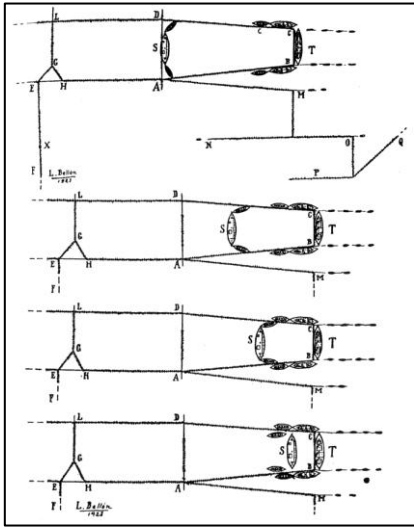
---

Enclosing the tunas in the trap



Approaching the tunas, inside the trap, towards the copo

# Functioning trap (2): the hoist



# Functioning trap (3): the hoist



# Final reflections about vernacular knowledge

- Moving knowledge: transfer of knowledge between different socio-ethnic groups. The Sicilians -Spanish eastern (Mediterranean) coast- Portugal and Huelva province- Strait.
- *Incorporated* knowledge
  - “It got **into me, took over my whole body**, I really liked seeing the trap on the water. And the first thing I did was go down on the beach with a stick, and I started to sketch out a trap. I must’ve been 16 or 17” (José Fernández “El Pelao”, Lepe tuna trap captain).

# Final reflections (2)

- Pragmatic and phronetic (Aristotle) dimensions of knowledge.
  - Sensorial, phisycal and ethical qualities
- *Habitus* (Bourdieu): Cultural forms inherited unconsciously that have to be put in play by the social actors, responding to the environment.
- Direct learning and continuous improving: learning by doing.

*I got passionate about the tuna trap as a kid and now it's my life. I'm always thinking, 'now I'm going to do it this way, and I'm not going to do it that way, and last year this turned out bad, so now I'm going to do it right'" (Vicente Zaragoza, Benidorm tuna trap captain).*

# Final reflections (3)

- Presumptive paradigm (Ginzburg)

*“construct from apparently insignificant experimental data a complex reality that could not be experienced directly. Also the data are always arranged by the observer in such a way as to produce a narrative sequence”*

(Ginzburg, 1999: 144).