Finalese (Western Liguria) and Prehistoric exchanges between Mediterranean and Continental Europe

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Summary
The Authors, following the discussion of recent international studies and personal observations on the subject in question, analyse the importance of the zone of Finale Ligure (Savona Province, Western Liguria, Italy), as crossroad of culture and commerce between distant regions of the Mediterranean area, Italy and Transalpine Europe during prehistoric ages.

Introduction
Finalese is a “unicum” in geological, palaeontological and palaethnological terms. It extends, in inland direction, from the coastline to the current route of the Highway n° 10 and, along the coast, from Noli Cape to Caprazzoppa Cape. Geologically is characterized by a rocky formation of Miocene bioclastic origin, known as Finale Stone, formed in the Miocene (from 20 million to 10 million years ago) in a warm, calm waters of a lagoon, between Capo Noli and Monte Carmo di Loano. Within a few million years, river sediments, sand, gravel, calcareous skeletons and shellfish were gathered in the central eastern part of the basin, forming the bioclastic limestone of the Finale Stone (Photo 1).

![Photo 1](image)

With the withdrawal of the sea, a large peneplain remained. The Finale Stone was then subject to intense karst phenomena, both surface (epigeal), and underground (hypogean), with the formation of fossil valleys, red earth deposits, caves and hypogean complexes rich waters.
Currently, the main watercourse of Finalese are: Pora, Aquila and Sciusa.
The intensity of karstification, with the formation of natural cavities, favoured, since ancient times (350,000 years ago), the human presence. The discovery of “bifaces” from Manie Plateau and Caverna delle Fate settlements dates back, in fact, to the presence of Homo Erectus. The same Caverna delle Fate and Arma (a Ligurian term to indicate a Cave) delle Manie, also returned skeletal remains of Homo Neanderthalensis, who lived during the Middle Palaeolithic (120,000 to 38,000 years ago). About 38,000 years ago, in the Upper Palaeolithic, during the last Great Ice Age that marked the extinction of Neanderthals, Homo Sapiens appeared. In Arene Candide Cave were found many graves, among which the best known is that of the "Young Prince" (dating back to 24,000 years ago), so named for the rich outfit that accompanied this person, died prematurely, probably for a traumatic event. With the Neolithic Age (which developed, in Liguria, from 5800 to 3600 BC) man, nomadic hunter and gatherer, became rancher and farmer. The greater control of natural resources, made man sedentary, involved an increase in population with the simultaneous change of social organization and the introduction of "property" concept. In less than 2000 years, man's life is changed more significantly than during the 2 million years earlier: a radical change known as "Neolithic Revolution", although the process of Neolithization was rather gradual and differentiated for the different cultures and geographical areas. In Western Liguria, these changes set out, according to recent observations, for the presumable migration of new populations from Southern and Central Italy (5), (7), (8), (15), (30), (32), (38). The archaeological finds from Arene Candide, Pollera Cave and, quite recently, from Pian del Ciliegio Rock Shelter (Manie Plateau) date, for the most part, to the period of the "Impressed Ware Culture" (Ancient Neolithic: from 5800 to 5000 BC) and to the "Square-Mouthed Pottery Culture" (Middle Neolithic: from 5000 to 4200 BC), related to cults and rituals that developed in the Mediterranean area, to propitiate reproduction, growth of plants and animals. The discovery of statuettes of feminine features would seem, in fact, tied to propitiate the fertility of the land and flocks (8). The radiocarbon datings (8), (15), performed at Pian del Ciliegio for levels of the "Square-Mouthed Pottery Culture", dating back to the fifth millennium BC (about 4700 and 4300 BC). Archaeometric investigations (8), carried out with optical microscopy and XRPD (X-Ray Powder Diffraction) of samples belonging to “Square-Mouthed Pottery” and “Impressed Ware” Cultures, suggest different sources of materials and production techniques. The nature of the mineral inclusions indicates, in all cases, local or maximum distance of about 10 Km production. The mixtures of Square-Mouthed Pottery contain, in fact, elements that can be referred to the Palaeozoic metamorphic rocks outcropping in the area (with calcite inclusions) having typical characteristics of other productions of Neolithic pottery from contexts of other Caves in the studied area. In contrast, the Impressed Ware, even if it was found in more limited quantities, shows a large variability as regards to its composition and the origin area. In fact, besides several local mixtures (with inclusions of metamorphic rocks and the presence of variable amounts of calcite), were found also pastes with ophiolitic (coming, probably, from Tuscany) or volcanic inclusions (originated, with all probability, from Central, Southern and Insular Italy). These data confirm and complete those of the nearby archaeological sites of Arene Candide and Pollera: during the Ancient Neolithic was, presumably, a long distance movement by sea of people and goods (including ceramics). The recovery of a cylinder of clay (8), (15) with series (5 × 12) of linear incisions, on its surface, perpendicular to each other, forming 60 square boxes, is of considerable importance. It is probably a "Token": term that can means "printed sign", "printed mark", but in archaeology indicates a system of digital recording. The artifact presents, in 8 of 60 boxes, a point, imprinted before cooking and, most likely, it would be a very old numbering system. Similar findings were found in archaeological sites, of contemporary age to the site in question,
located, especially, in the Middle East: this object is unique among the finds Italian Neolithic and could demonstrate the breadth of cultural influences and trade relations with peoples and remote areas of Eastern Mediterranean, in turn, linked to more distant populations than hitherto considered (Figure 1).

New studies, based on the observation of sea currents of the Northern and Central Tyrrhenian also could trace routes heading, counterclockwise, from coasts of Campania, Latium and Southern Tuscany, to Northwest by touching Central Tuscany, Corsica, Eastern and Central Liguria, until reaching Finalese, Albenganese and coasts of Provence. Recent data on Pian del Ciliegio and Arma di Nasino (located in Albenga inland, 20 km from the coast and about 30 km, as the crow flies, from Finale Ligure), allowed to expand, both to south, and west, with respect to Finale, the route already suggested on the basis of the findings from previous studies of Arene Candide (5), (8).

In addition, by navigation were created social and cultural ties between Neolithic peoples of Mediterranean.

Pottery and even perishable goods contained in clay artifacts may, therefore, be counted among the objects that were conveyed by sea since the beginning of the seventh millennium BC. In this time also developed further overland trades.

Through the Passes of Finalese hinterland, also known to the present day with the current names of Melogno Pass, Madonna della Neve (or Giogo di Rialto), Colla (i.e.: Pass) di San Giacomo (connected to Colla di Magnone, who put her in communication with Ponci Valley), from Finalese valleys, peoples and merchandises could reach Bormida Valley and, hence, Po Valley (Figure 2).
Figure 2

From fourth millennium BC, the man increased knowledge concerning the processing of metalliferous minerals (14), (16), (34), (41). Following the development of metallurgy, the communities were organized into increasingly complex structures, with true hierarchies. Hillforts (27), (31) known as Castellieri or Castellari, were built in high places. In Finalese have been well studied: Hillfort of Verezzi, Castelliere delle Anime on Rocca di Perti, Sant’Antonino, Monte Sant’Elena above Bergeggi.

Distinct ethnic identity were defined, linked to quite different geographical areas. In North Western Italy and in Southern France, between the Middle Bronze Age (about 1,600 BC) and early Iron Age (about 900 BC) appeared the characters of a new people: the Ancient Ligurians.

Between Alpine watershed to North, Po River to South, Serio River to East and Sesia River to West, developed the so-called Golasecca Culture.

This civilization takes its name from the village of Golasecca (Varese Province, on the banks of Ticino river), where, in the early nineteenth century, abbot Giovanni Battista Giani carried out the first discovery, believing that findings were evidence of the battle that took place, during the second Punic War, between Hannibal and Scipio, thesis already previously supported by Carlo Amoretti, a learned traveller of the eighteenth century.

In 1865, Gabriel De Mortillet, finally, attributed these findings to an independent pre-Roman civilization (17).

The Celts, probably at the origin of this culture, were peoples of Indo-European descent. Arrived in Europe in several waves from Central Asia, between 3,500 and 1,500 BC, through the Caucasus and the Middle East. The first signs of the Celtic culture development were, in fact, the area of Golasecca in 12th-10th century BC, the mining area of Hallstatt (Upper Austria), where they created a particular culture that grew up around 8th century BC, and the site of La Tène (Canton of Neuchâtel, Switzerland), where reached the highest artistic, social and spiritual expressions in the sixth and fifth centuries BC (24). They spread also in the entire Austria and Switzerland in the South-Eastern Germany, France, Belgium, Northern Italy, Central and Eastern Europe, Northern Spain, Balkans, British Isles, Ireland and in the Central Anatolian peninsula. With regard to Golasecca area, it can be assumed that the adopted social structure was hierarchically structured and that the population was divided into villages near found necropolises. Agriculture, weaving and farming that allowed to produce meat and cheese, were practiced. The wide circulation of
Golasecca artifacts to North of Alps is closely related to the growth and trade increase of Padan Etruria. Golasecca settlements were of great strategic importance, as they were along routes that allow to reach the Alpine crossings of San Bernardino, Gotthard and Simplon. Since the discovery of various ornaments can be deduced that the Golasecca traded with the Etruscans, Greeks, Central-Southern Italy and Mediterranean islands, also acting as intermediaries with the Northern Celtic settlements: Hallstatt and La Tène. The trade network included Cornwall, Brittany and Galicia, regions from which came the Tin, necessary together with Copper, for the Bronze production. The Amber came from Baltic regions (24).

Trade with Greece, Central and Southern Italy and Mediterranean Islands departed, in all probability, from the Greek colony of Massalia (now Marseille), crossed Finalese (5) and easier passes of the Ligurian Alps and the Apennines. This is confirmed by the discovery of pottery vessels with black-figures, in Attical style, of the more recent Golaseccian graves (19), (20). The local clay artifacts were obtained by using of the "primitive" lathe or shaped by hand (19), (20). Metal objects were instead made by casting or rolling from raw materials mined locally and/or imported (3), (14), (16), (34). Similarly, between 1550 and 1450 BC, during the Middle Bronze Age, flourished in Northern Piedmont, between Ivrea and Biella, the so-called Viverone Culture. Archaeometric analyses conducted on Bronze finds, led to the conclusion that such materials are the result of exchanges, through the Great St. Bernard Pass, with transalpine populations. These businesses, similar to those entered into the Golasecca area, have intensified the relations between Central Europe and Mediterranean peoples (19). During Iron Age, with the development of La Tène Culture, it was possible to see a progressive “Celtisation” throughout North-Western Italy, including Liguria (40).
The procurement of Iron and Bronze fibulas in this area, as well as representations of “antenna swords” (Hallstatt and La Tène type) on stele statues, can no longer surprise, considering the intense commercial and cultural ties that Ligurian world always kept with Celtic-Golaseccian and Transalpine areas (40). Since the end of fifth millennium, at the end of the third millennium BC (a period covering the Neolithic and Bronze Age), developed a civilization related to the cult of the stone. Megalithic buildings were erected: single and/or aligned Menhirs, Dolmens and Cromlechs (megalithic fences). The presence of such structures is often related to areas of engraved rocks, believed to be contemporaneous with each other. The significance of this proximity, could be explained as a sign of the presence of the "sacral" (22). In this regard, the engraving of "prayers" confirm this hypothesis. Cups and gutters, may be, instead, have been used as containers and liquid collectors (organic and / or meteoric) for ritual purposes (9), (10), (11), (12), (13). The "cruciforms", may be, on the other hand, signs of Christianization and, as such, be ascribed to more recent times. This would confirm the attendance of these sites even in Roman, Medieval and, perhaps, even more recent Ages, with purposes (hunting, animal breeding, agriculture) that differed from the originals. With the Iron Age (in Liguria developed between 900 and 180 BC) the stele statues (or anthropomorphic steles) made their appearance: these standing stones with engravings are well represented in the Lunigiana (Eastern Liguria). Currently, the only example, found in the Finalese area, of this artifact is the rudimentary stele of Pila delle Penne (Photo 2).

In Finalese astronomically oriented structures are present: "Observatory" of Bric Pianarella, Menhir and Dolmen of Verezzi, Dolmen of Monticello, Rocks, and other Altar tables present on the highest peaks of the area (Altars of Monte Cucco, Rocca degli Uccelli, Bric del Frate, Arma Strapatente, Bric di Sant'Antonino).

All these megalithic structures, as previously described, are in close proximity to engraved rocks widely known: Ciappu de Cunche (i.e. Ciappo delle Conche. The term "Ciappo", in the Finale, shows a large slab of stone), Ciappu de Cunchette (i.e. Ciappu dei Cexi or Ciappo dei Ceci), Ciappu du Sá (i.e. Ciappo del Sale), Ciappo Pianarella (Photo 3), Ciappo della Valle dei Frassini - to name only the largest - with the presence of prayers, crosses, cups and gutters.
The dating of these archaeological remains is not unique. The existence of other similar structures in the European area, is well known. We remember, in fact, what has reported in numerous studies that refer to the sanctuary of Panoias, (Northern Portugal). Here, beside a large rock with ponds, canals and cups, there is the following Latin inscription dating from the third century AD (13):

"HUIUS HOSTIAE QUAE CADUNT HIC IMM(ol)ANTUR EXTRA INTRA QUADRATA CONTRA CREMANTUR - SAN(gu)IS LAC(i)CULIS (iuxta) SUPERFU(ndi)TUR".

(i.e. "Here the slaughtered victims are consecrated to the Gods: their entrails are burnt in the square ponds and their blood is diffused along the surrounding small ponds").

Large rocky outcrops, with characteristics similar to those described for the sanctuary of Panoias, in the Finale, could, at least for a certain period, have had a similar function.

The fact, moreover, that the "altar-stones" are built on high ground indicates, probably, the desire to choose an appropriate site for have a sort of visual inspection of the land below, also in relation to the sacredness of the hill stations and mountain peaks, typical of the Ligurian-Celtic populations (29). Dolmens and Menhirs are not, therefore, unrelated to the Finalese (39) and sub-alpine (35) cultural area, as it was thought until a few decades ago. It believed, in fact, that the megalithic culture had been arrested in the Alps region, without crossing the Alps only exception was the Pugliese area (Southern Italy), where dolmens, menhirs, specchie (i.e. mounds of stones) were attributed instead to the influence of people from the Balkan Peninsula, across the Adriatic Sea, while in the rest of the Mediterranean basin, the megalithic is well represented. The work of Puglisi: "La civiltà appenninica. Origine delle comunità pastorali in Italia" (36) in 1959 and the discovery, a few years later, of the Neolithic necropolis of Saint Martin de Corléan, in Aosta, proved the unfoundedness of this thesis (6), (9), (10), (11), (12).

Very recently (35) have been described findings of possible megalithic interest also in Val Ceresio, such as menhirs, dolmens, megalithic streets, stone carvings (photo 4).
The affected zone is little known by the archaeological point of view, although part of Golasecca Cultural Area. With due caution, the dating of these artifacts can be tracked back to Neolithic and Bronze Age, by pre and/or protoceltic peoples. Further explorations could show other remains, unknown to date. The evaluation of the described sites with recent techniques such as GPR (acronym for Ground Penetrating Radar, also called GPR), which uses radio waves to outline the structures and the layers of soil below the surface of the ground, which is even able to construct three-dimensional images, ERS (Electrical Resistance Survey, or Geoelectric Detection), which measures the resistance of the different layers of the soil to the electric current (the archaeological remains may, in fact, have resistance less than or greater than the soil around them and be thus highlighted), the Differential Magnetometer (or Gradiometer), which uses magnetic sensors (magnetometers) for detecting magnetic properties significantly different from those of the surrounding ground (can be identified with greater ease archaeological formations such as wells, tombs, deposits of materials, roads, ditches, walls), may identify additional artifacts buried with the opportunity to study them in greater depth, even before excavation. A further technique used is represented by Metal Detector: a tool that uses electromagnetic induction to detect the presence of metals. Very promising results were also obtained with LiDAR (Light Detection and Ranging or Laser Imaging Detection and Ranging), which can provide data with the laser scanning of forested areas, from which you can remove, in digital vegetation. Recent studies, based on new methods of ICP/OES or AAS (Acronyms for Induced Coupled Plasma/Optical Emission Spectroscopy and Atomic Absorption Spectroscopy) have shown that metallurgy was practiced already in the Middle Bronze Age (1600 - 1350 BC) and the local mining was also well-known in adjacent sites of the Valley itself (14), (15), (16), (20), (24). Val Ceresio would, therefore, since the Bronze Age, the streets of exchange of metals between the Mediterranean, the Po Valley and Transalpine Europe (20).

Discussion
The megalithic culture is penetrated, therefore, also in North-Western Italy, presumably through the Alpine passes of Great St. Bernard, Simplon, Gotthard and San Bernardino, to Po Valley. From here and from Provence, including by sea, Liguria, where, in the second half of the 80s of the last century, have been identified two circular burial mounds to the north of San Remo (Imperia Province). One of these, studied with stratigraphic methods by the local branch of “Istituto Internazionale di Studi Liguri” could be attributed to the final phase of the Bronze Age (1). Consequently, even other Ligurian artifacts, especially in the area of Finale Ligure (25), (26), (27), (28), (29), (30), (31), (32), (33) such as menhirs and dolmens of Verezzi, until then attributed, though with reservations, to the recent rural culture, took on a different meaning and the lack of megalithic remains in Italy, differently from transalpine regions (especially the North-Western and islands), might be explained by the greater turnover of civilizations in the course of time, that would have dramatically transformed the appearance of the area, resulting in the loss of many of these artifacts (9), (10), (11), (12), (21), (37).

Conclusions
The presence of Megaliths, can therefore be regarded as a marker of the links, since Neolithic times, between the Mediterranean, North-West Italy and Transalpine Europe. In this perspective, Liguria and particularly, Finalese area (thanks to the described geological, palaeontological and palaethnological peculiarities), may represent crossroads for these commercial and cultural exchanges, already widely documented for later prehistoric and protohistoric ages. The spread of the Impressed Ware and Square-Mouthed Pottery Cultures in Northern Italy and in the rest of Continental Europe, although with different methods of application, could demonstrate the active commercial and cultural exchange between the examined geographic-cultural areas. For a further validation, the discovery of the "Token" of Pian del Ciliegio proves cultural and commercial relations, from the Early Neolithic, with Middle Eastern regions, such as Phoenicia and Mesopotamia.
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