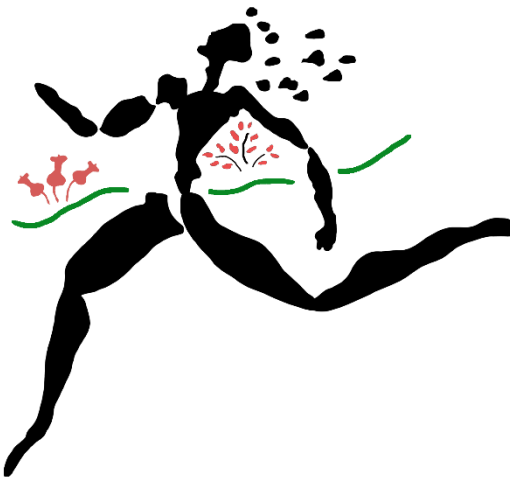


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INVESTIGATING BORDERS: APULIAN SETTLEMENTS BETWEEN LAND AND SEA

INTRODUCTION

Apulia is the “heel of the boot”, and therefore the most southern region of the eastern part of the Italian Adriatic coast. The topography of this region is marked by the so-called *tavolieri*, which are large plain plateaus particularly suitable for agriculture and pastoralism. This may be one reason why settlement activities in Apulia started quite early in the history – or better prehistory – of the Italian landscape.

The past 30 years have shown some interest in the exploration of the Apulian landscape. We owe the remarkable publication of the results of many fieldwork campaigns to archaeologists such as Alberto Cazzella and Giulia Recchia. The adjacent regions have recently been analyzed through geo-morphological surveys, mostly conducted by Dutch researchers like Peter Attema, Martijn Van Leusen and Ester van Joolen. I want to mention them explicitly because it is due to their professional work and editing that I had the opportunity to elaborate my thoughts related to this topic.

Research shows that the beginning of the 17th century BCE marks a pivotal point in the modalities of settlement activity in Apulia. The archaeological evidence confirms the establishment of long-term, sometimes fortified sites, which seem to start specializing in the production, processing and probably trade of particular goods. The most prominent among them: purple shells, amber, olive oil, possibly copper and salt.¹

Relating to one of the best excavated sites, my aim is to discuss 1.) The structure of these specialized settlements, 2.) The necessary conditions for the process of specialization itself and 3.) The relation between the often called “inland, subsistence driven settlements” and the “coastal, specialized settlements.”²

The location of these specialized settlements is surely not a coincidence. Along the coast with a rich hinterland, good protection, and easy access to the Adriatic Sea, the sites rise on strategic and nodal points between Italy (and Central Europe), the Balkan Peninsula and the Aegean regions. A close relation and influence between these areas is even visible in the archaeological record, for example in pottery, construction techniques and processing methods of luxury products. These are the reasons why it seems appropriate to talk about a region that does not even touch the Aegean Sea directly in a conference with a focus on the cultures of the Mediterranean Bronze Age.

APULIAN SPECIALIZED SETTLEMENTS: EVIDENCE AND FUNCTION

The settlements with evidence for dry-stone fortification walls, which date back to the 17th and 16th century BCE,³ are all located on the coast.⁴ Due to the restricted format of this paper, I want to focus on one of the most prominent sites, which lies in the northern part of the Apulian region: Coppa Nevigata. This site may only serve as a case study for now, for it is clear that an accurate analysis of the other specialized coastal settlements⁵ would offer much more information and arguments supporting – or criticizing – this thesis.

The field work directed by Alberto Cazzella and Giulia Recchia provides evidence for an elaborate dry-stone fortification wall⁶ that protected the settlement on the inland slope, while the coastal, naturally protected, side was not fortified at all. The dry-stone building shows already during the first construction phase of the Protoapennine period the presence of two semi-circular towers at the main gate and probably seven posterns.⁷ A similar construction can be found in Apulian fortified sites as well as in Sicily and Campania.⁸ However, apart from southern Italy, this phenomenon seems to be

unparalleled in other parts of the Mediterranean World in this period. This aspect led research to look for possible earlier models.

The contact between the Italian and Balkan coasts is an important fact since the 3rd millennium BCE, as Joseph Maran and others have suggested based on the presence of Cetina style pottery in Apulian settlements.⁹ The contact with the Aegean Sea seems to be a constant in the Bronze Age period, too. Since the early dating of the fortification walls, however, it has become questionable whether the hypothetical influence on the Apulian architecture could be related to Mycenaean seafarers. The adaptation of the Aegean and Italian chronologies for the Bronze Age is not without doubt. A recent analysis of scientific and stratigraphic data by Reinhard Jung suggests that the Italian Middle Bronze Age I covers the phases Middle Helladic III, Late Helladic I and Early Late Helladic II A of the Greek Mainland.¹⁰ If we consider the first fortification wall of Coppa Nevigata contemporary to the LH I period, some evidence of early Mycenaean contacts with the Apulian coast should have existed to prove their influence on the building technique. Until now, however, there is a total lack of Mycenaean pottery in the first construction phase of the site,¹¹ which challenges this hypothesis. It could be more likely that there existed a transmaritime exchange already with settlements dating to the Middle Helladic period,¹² which displayed a significant social and economic complexity. In fact, some similarities in the size and specialization of the settlements as well as the dry-construction of the fortification walls can be seen in the settlements of Kolonna (Aegina) and Ayia Irini (Kea).¹³ A similar, although probably earlier, piece of evidence can be found in Istria, in the site of Monkodnja.¹⁴

We can assume that an interest in transcultural exchange arose or grew stronger through these contacts. Therefore, it is not far-fetched to suggest that this was one of the triggering factors that led to a specialization of the settlements in the production of “prestige goods”. Evidence for olive oil extraction¹⁵ as well as the first attested processing of purple snails to dye in southern Italy were found in Coppa Nevigata.¹⁶ Traces of metal processing were found inside the fortification walls too,¹⁷ a fact that may suggest a role of Coppa Nevigata in the copper and tin trade route through the Apennines. These materials are essential for the production of the eponymous metal of this period. The role of the contact between this settlement and the inland sites, which were situated in proximity to the Apennines, will therefore be an important discussion point further on.

Returning to the specialized settlement on the Apulian coast, the importance of luxury goods was mentioned before: Being classified as such, these products do not provide the subsistence of a community. As subsistence I define the satisfaction of basic needs of an individual or a community. Determining what human basic needs are is a discussed matter. Usually the extraordinary aspects of culture tend to be in the spotlight of interest. But development and innovation are only possible when the vital condition of subsistence are fulfilled. In order to strengthen this argument, I want to relate to the psychological and anthropological theories of 1.) Abraham H. Maslow and 2.) Brian Hayden and T. Douglas Price (after Wills).

In 2013, Robert J. Taormina and Jennifer H. Gao published the results of their empirical studies concerning the “hierarchy of needs” theorized earlier by the psychologist Abraham H. Maslow.¹⁸ This hierarchy is organized in a so called “pyramid of needs”. From the bottom, we find 1.) The biological and physiological needs, as the satisfaction of the organism’s needs for water and food, 2.) The need for safety, as for example the chance of protected housing as a response to danger and 3.) The need for social relations as friendship, partnership and sexuality.¹⁹ These are also called “deficiency needs”, in contrast to the last steps of the pyramid, the “being needs” that

refer to human self-actualization, which can be achieved only if the deficiency-needs are satisfied.²⁰

I want to exemplify Maslow's theory through another one, which is closer to the archaeological world. Referring to the Neolithic revolution, Brian Hayden defines that a community destabilized by famine or unable to assure its subsistence is unwilling of taking the risk of using innovative techniques²¹. Hayden criticizes the idea that such a crisis would lead to a progressive stabilization of sedentariness and agriculture. While Price (relying on Wills) questions the adoption of farming "under conditions of nutritional stress".²²

I think that his theories can be translated to the Middle Bronze Age, too: The inability of ensuring a permanent subsistence with a surplus of production, could definitively not have permitted the investment of labor energy and time in craftsmanship activities and therefore in the specialization of the settlement.²³

A MATTER OF SUBSISTENCE

As a consequence of the above line of thought, we must ask the question of whether the coastal, specialized settlements were autonomous in their subsistence or not. For this purpose, we have to take a look beyond the fortification wall, because the internal cultivation and processing of cereals and other suitable crops is impossible with an intramural settlement size of between 2 and 5 ha.²⁴ Even if we consider the (probable) cultivation of patches inside the fortification walls, this still would not be sufficient to guarantee the subsistence of an assumed population of a few hundred.²⁵

For this kind of analysis, we must first, however, discern what kind of cultivation was in fact possible in Bronze Age Apulia: 1.) Which are the most suitable crops? 2.) What kind of terrain allows the cultivation of this kind of crops? 3.) Where is this kind of terrain traceable in Apulia? 4.) How much effort would the cultivation require?

Let us start with the types of crops, which are confirmed for the Middle Bronze Age in Apulia. Emmer, barley and different types of wheat (as bread wheat and einkorn)²⁶ are considered to be the basic pillars of the Mediterranean alimentation. We must remember, however, that the cultivation of these cereals is not always as simple as we might think. For Bronze Age Southern Italy there is only scarce evidence of ploughs, which suggests simple wooden constructions.²⁷ A change towards a more robust and resistant tool, whose metal share facilitated the labor on the field, seems to take place only with the beginning of the Iron Age. We might consider the usage of simple symmetrical ploughs (ards), similar to the ones which were found depicted or even physically preserved (the Lavagnone plough) in Northern Italy. Apulia is a region with high levels of clay in the soil, which make the clods of earth heavy, and according to van Joolen an ard would not be able to break the earth, but only to scratch the soil, that needed to be prepared in advance.²⁸ Therefore, spade, hoe and digging stick also must have played an important role for Apulian farmer communities.²⁹ This fact slows down the whole process of cereal production and requires, in fact, a much higher labor effort. As these cereals are also sensitive to climatic conditions, their cultivation seems to afford particular attention, time and dedication.³⁰ Accordingly, for the aspect of subsistence one might take into account also the importance of legumes and other vegetables with high crop yields and lower risk.

Concerning the role of the other two products missing in the "Mediterranean triad", wine and olive, the answer is not given easily. For example, it is difficult to identify an organized production of wine for this period. Moreover, we must remember that the final product is a prestige good. Wine itself does not provide for the subsistence of a community.

However, there is some evidence for olive tree cultivation in Southern Italy, the oldest example can be found in the Calabrian site of Broglio di Trebisacce.³¹ The large number of olive pits found there was analyzed, and the dimensions are relatable with domesticated rather than wild plants.³² This is, however, an exceptional case. The archaeobotanical record in Coppa Nevigata does not allow such a clear differentiation. During the Middle Bronze Age the percentage of olive tree pollen highly increased compared to the previous period,³³ at the same time there is a large amount of olive pits in these layers. Unfortunately, there is no further information concerning the analysis of these seeds, thus making it very difficult to support or deny the claim of an active arboriculture or an organized exploitation.³⁴

At this point we should shortly discuss, what kind of terrain the aforementioned crops need for cultivation and where we can trace the best soil conditions in the Apulian region. According to the geomorphological surveys in Apulia and Calabria, Bronze Age agriculture found its place on the foot of the slopes³⁵ that lay between the coast and the Apennines. This is the region where the soil shows the best balance for cultivation.³⁶ The low ground water levels suggest that the communities were relying on dry-farming, which is even more likely considering the lack of evidence for irrigation systems in Bronze Age Apulia.³⁷ For adjacent regions like Calabria not only agriculture but even settlement in the coastal plain is hardly probable, due to the dry climatic conditions during summer and its marshy landscape.³⁸

To recapitulate: Cereals and crops in general demand much labor and time, as well as specific climate and terrain conditions. As a result, some regions could be designated as unsuitable for agriculture, for example the coastal zones. This fact is underlined by the lack of evidence for agricultural activity in the direct hinterland of the specialized site.³⁹

With this argument comes the challenge: How can we detect agricultural activity with certainty? Archaeological remains of agricultural fields are notoriously hard to find and there is still some work to be done on surveying the rural landscape of Apulia. According to the excavators, however, there is only scarce evidence for further settlements outside the enclosure of Coppa Nevigata,⁴⁰ so that the claim of part of the community living and working as farmers outside the settlement cannot be supported. Living next to the fields is considered common in antiquity, as a daily exhausting movement to and from the fields would be a high waste of time and effort, and therefore not a sustainable economic strategy. But it is clear that this, too, is a supposition, as we cannot exclude the possibility that the farming population of Coppa Nevigata lived inside or close to the fortification wall.

What would be the consequences this scenario? Agricultural work requires manpower for the most part of the year, especially if we consider an eventual double cropping strategy. The manpower for agriculture must have therefore been available in the settlement, taking into account that such a major employment would occupy the person's time and effort almost entirely. The demography of Coppa Nevigata has been estimated around a few hundred people, "about a quarter being males able to manage weapons and impose their power by force".⁴¹ According to Cazzella and Recchia the effective number of men able to carry out a stressful occupation would be between 50 and a maximum of 150 individuals.⁴² Even if we consider the help of other parts of the population (women, children and possibly elderly people) for certain types of work on the field (for example sowing and harvesting), the distribution of available manpower between farming, craftsmanship and trade seems uneven. Beyond that, work in the maintenance of infrastructure, household and social organization has to be taken into account as well.

Finding an explanatory model for how the community of Coppa Nevigata functioned is difficult, as may have become clear through the numerous speculations in the last paragraph. Nonetheless we must try to explain on what basis a community of "a few

hundred” was able to specialize. In order to ensure the subsistence of the community we either must assume a settlement outside of the enclosure but still near the site – which though should be visible in the archaeological record⁴³ – or widen our focus. At this point I would like to suggest the possibly fundamental role of the inland settlements as sources for the alimentary subsistence of the specialized coastal sites.⁴⁴

THE RELATION BETWEEN COAST AND INLAND

The few inland sites that have been detected through surveys in the past years⁴⁵ appear quite different from each other. Even though most of them are “clustered” in some points of the foothills, some seem to be long-term settlements, whilst others show a short-term persistence.⁴⁶ Not much has been published about these sites, which makes it difficult to analyze the features of the settlements. They seem, however, to have a pronounced rural function, while they lack signs of specialization like in Coppa Nevigata. Still, there are some objects such as a few amber and metal finds⁴⁷ that suggest exchange activities with settlements that produced or processed these kinds of material.⁴⁸

The role of the Apennines must be mentioned here: The mountainous landscape has been of crucial importance for the development of an economic network in and around the Apulian region. Starting with the inland communities, we must remember that pastoralism has always been a fundamental part of rural life next to agriculture. Paul Halstead suggests that we must reject the idea of a total separation between pastoralism and agriculture. However, a movement between the lowlands and the mountains surely took place in form of local, short-term pastoralism.⁴⁹ With movement comes the chance of encounter and connection: The Apennine route is indeed considered to form a connecting link between the northern part of Italy (and Central Europe) and the Mediterranean. So why should the inland settlements of Apulia be excluded from the interaction of people, goods and information?

Insisting on the mentioned arguments, I believe that we have to reject the possibility that coastal sites like Coppa Nevigata, with an intramural extent between only 2 and 5 ha and a supposed population of a few hundred, were able to develop subsistence strategies, specialized craftsmanship, warfare techniques and a trading market entirely on their own. My aim is to suggest an active as well as indispensable contact with the hinterland settlements, which therefore required “good blood” between the two sides.

I now want to introduce the last piece of evidence for this paper, which is a series of postholes arranged in a circle.⁵⁰ They are probably related to a silo, which contained burned seeds and was dated back to the 16th century BCE.⁵¹ During the next two centuries more of these structures seem to appear in proximity of the inner wall of the fortification. However, they are not connected to single households.⁵² It would be interesting to consider the socio-economic behaviour of the settlement relating to a potential collective storage strategy.⁵³ Were the subsistence goods received from the hinterland stored and consumed as a community?

If we accept an active exchange network between the coastal and inland sites, we would expect supporting evidence in both settlement types. If the silos are considered evidence for trade towards the coastal sites, what kind of evidence can we find in the inland settlements? Is there an increasing circulation of craft and prestige objects in the inland communities? Tracing the circulation and function of these products could allow for a better understanding of the socio-economic structure of the settlements and eventual changes due to their role of actors within the new network.

The combustion traces that indicate a destruction of the fortification wall of Coppa Nevigata in the early Apennine period, led researchers to assume a rivalry between the “inland, subsistence driven settlements” and the “coastal, specialized settlements.”⁵⁴

Based on the line of arguments here, there are reasons to overthink why the inland communities should have been interested in running down the coastal sites. The tools and the organization skills needed for destroying a defended fortification seem difficult to find in these clustered rural settlements. There are, however, actors that did not come on stage yet: the other specialized, fortified settlements of the Apulian coast. Concerning warfare ability and economic motives, they could have played the role of the “villains” even better than the inland communities.

CONCLUSIONS

A relational approach to the Apulian region during the Bronze Age encourages some new perspectives on the interaction between settlement and landscape. Concentrating on the prominent site of Coppa Nevigata, this paper starts asking under which circumstances a specialization in craftsmanship could have developed. The importance of a subsistence strategy is stressed as a basic condition. Taking into account the landscape features and the settlement organization, we might question the possibility that a site like Coppa Nevigata, was able to face subsistence strategies, specialized craftsmanship, warfare techniques and trading activities completely on its own.

This paper suggests an active and significant role of the inland sites in the supply of subsistence goods as well as in the exchange of prestige goods and information. These communities would therefore represent a connecting link between the Apennine and coastal environment. To obtain a better understanding of how this network functioned, a larger number of coastal and inland sites has to be analyzed. This has the potential to shed light to the unsolved case of the destruction of Coppa Nevigata.

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¹ Cazzella 2009, 297.

² Cazzella and Recchia 2013a, 55.

³ This absolute chronology was suggested by Cazzella and Recchia 2013, 46–47 based on radiometric and ¹⁴C-analysis in the settlements of Coppa Nevigata and Masseria Chiancudda, as well as the comparison of their fortification features with other fortified settlements located on the Apulian coast.

⁴ The distribution is well shown in Cazzella and Recchia 2013a, 46, fig. 1.

⁵ Other settlements that would be interesting to compare with Coppa Nevigata are Masseria Chiancudda, Roca, Porto Perone and Scoglio del Tonno, as well as Tufariello in Campania, s.Cazzella and Recchia 2013a, 47–9.

⁶ For an accurate documentation and reconstruction see: Cazzella and Recchia 2013a, 48, fig. 3.

⁷ Cazzella and Recchia 2013a, 46–47, 49–51.

⁸ Cazzella and Recchia 2013a, 49–51.

⁹ Maran 2007 with earlier literature.

¹⁰ Jung 2017, 638.

¹¹ Jung 2013, 243.

¹² Cazzella and Recchia 2013a, 46.

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- ¹³ Cazzella and Recchia 2013a, 46.
- ¹⁴ Cazzella and Recchia 2013a, 46; Mihovilić et al. 2013.
- ¹⁵ Cazzella and Recchia 2005, 140.
- ¹⁶ Cazzella 2009, 297; Cazzella and Recchia 2013a, 46.
- ¹⁷ Cazzella 2009, 295.
- ¹⁸ Maslow 1977, 76–77; Taormina and Gao 2013.
- ¹⁹ A clarified definition of Maslow’s needs was given by Taormina and Gao in their publication of 2013, s. Taormina and Gao 2013, 165–74.
- ²⁰ The classification of the satisfaction of "Maslow's needs" was confirmed by an empirical experiment lead by Taormina and Gao 2013, 165–74.
- ²¹ Price 1995, 143 (after Wills 1992); Hayden 1990, 35.
- ²² Price 1995, 144 (Definition after Wills 1992).
- ²³ Cazzella and Recchia 2013b, 199; Price 1995, 145; Renfrew 1986, 8-9, 131.
- ²⁴ Cazzella and Recchia 2013a, 55.
- ²⁵ Price 1995, 143; Cazzella and Recchia 2013a, 55.
- ²⁶ Primavera et al. 2017, 87; van Joolen 2003, 104.
- ²⁷ de Grossi Mazzorin 2001, 323–30.
- ²⁸ Attema et al. 2010, 89; van Joolen 2003, 106–09; Halstead 1987, 84–85.
- ²⁹ Van Joolen 2003, 107–10; Halstead 1987, 84.
- ³⁰ For the risks and variability of agriculture in Antiquity s. Halstead 1987, 85.
- ³¹ Van Joolen 2003, 105.
- ³² Van Joolen 2003, 104.
- ³³ Primavera et al. 2017, 89.
- ³⁴ Van Joolen 2003, 104-05, 132; Barker 2005, 65; Primavera et al. 2017, 89.
- ³⁵ Attema et al. 2010, 82, 87 and 91; van Joolen 2003, 102.
- ³⁶ Attema et al. 2010, 91–92; Barker 2005, 60.
- ³⁷ Barker 2005, 64; van Joolen 2003, 103, 132; Primavera et al. (2017, 91) also suggest an increasing aridity during the 16th century BCE.
- ³⁸ Attema et al. 2010, 91–92; Forni 2002, 198.
- ³⁹ Cazzella 2009, 303; Cazzella and Recchia 2013a, 55–56.
- ⁴⁰ Supra n. 39.
- ⁴¹ Cazzella and Recchia 2013a, 55: The estimation depends on the relation with ethnographic contexts with a dense settlement fabric. A major problem in Coppa Nevigata is the lack of a necropolis clearly associated with the site, which makes an assumption of the demography according to the burial context rather difficult.
- ⁴² Cazzella and Recchia 2013a, 55–56: The researchers however assume a total of ca. 50 individuals with these characteristics in Coppa Nevigata
- ⁴³ That means that either the researchers are right in the assumption that there was no settlement outside the fortification or more prospections are needed to shed some light on the question.
- ⁴⁴ Attema et al. 2010, 110; Barker (2005, 61–62) suggests similar ideas for the settlement of Fratessina.
- ⁴⁵ For a mapping of these settlements see: Cazzella and Recchia 2008, 138, fig. 18.1.
- ⁴⁶ Cazzella and Recchia 2008, 139.
- ⁴⁷ Cazzella and Recchia 2008, 142.
- ⁴⁸ Cazzella and Recchia 2008, 142.
- ⁴⁹ Halstead 1987, 79. This is in contrast to longterm, seasonal transhumance.
- ⁵⁰ For the documentation of the archaeological record see: Cazzella and Recchia 2013b, 199, fig. 2.
- ⁵¹ Cazzella and Recchia 2013b, 198.
- ⁵² Cazzella and Recchia 2013b, 198–99.
- ⁵³ Cazzella and Recchia 2013b, 198.
- ⁵⁴ Attema et al. 2010, 110; Cazzella and Recchia 2013a, 55, 60.