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The Roman rural exceptionality thesis revisited

Jeremia Pelgrom
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This paper critically examines the long-standing view that Roman rural organization differed fundamentally from that of the other polities of central-southern Italy, and that this difference somehow explains Roman imperial success. First, the intellectual history of this paradigm is examined, focusing especially on 19th century socio-evolutionary theory and on the role of landscape archaeology in the period following WWII. Then, recent archaeological studies on settlement dynamics and land division practices in ancient Italy are discussed. In light of these results, this paper proposes an alternative understanding of Roman-Italic rural development and land division practices and as such also questions the ancient topos which associates Roman imperial success with a specific form of peasant culture.

Roman Imperialism, socio-evolutionary theory, landscape archaeology, Roman colonies, limitatio, land division

INTRODUCTION

In any case the Etruscans did not keep pace with the Romans in developing into a hoplite polis, just as the Sabelli did not develop from a peasant state into a city-state; as a result both peoples were subjected by Rome’s disciplined hoplites.1

The Roman army was recruited from the younger sons of Roman yeoman [...] having no hope of an inheritance, they fought to win land for themselves and so gain the status of a full citizen. This was the secret of Rome’s conquering power.2

The passages of Max Weber cited above encapsulate aptly a powerful and ancient doctrine of Western social history: the view that the imperial success of Rome was rooted in its organization as a soldier-farmer city-state.3 In this view, the Romans were superior to the other polities of Italy because they had discovered a powerful societal formula that managed to incorporate the sober and disciplined moral of peasant societies within the new participatory political system of the republican city-state. While neighboring communities such as the Etruscans also established forms of city-state government, they lacked the culture based on egal-

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itarian rural values, which was necessary to create strong soldier-citizens. Other rivaling societies, like the Samnite tribes, possessed a powerful farmer-warrior ideology, but were unable to progress politically into proper states, and consequently lacked effective governmental tools to control a conquered territory and its people.

This view, that the secret of Roman imperialism involved a specific form of peasant culture, is not an invention of Weber, but a conviction that can be traced back to Antiquity and that has remained an important line of thought ever since. By late republican times this understanding was already an established topos, embraced by poets and academics alike who lamented the disappearance of rural values from Roman society. It remained an influential line of thought in Renaissance and Enlightenment intellectual circles, especially amongst those promoting social reform. However, a solid theory to understand the success of soldier-farmer societies in socio-evolutionary terms only matured in the second half of the nineteenth century. In this age of positivism, historians like Weber got increasingly entangled in sociological discourses on the evolution of societies and interconnected universal theories predicting the future of Western society. Particularly relevant is that these studies linked stages of societal development with different forms of property regimes, labor organization, and family structures.

The current paper will argue that these nineteenth century socio-evolutionary theories have strongly biased modern day understandings of Roman territorial organization during the Mid-Republican period. It will focus especially on the conviction underlying these studies that Roman rural organization differed fundamentally from that of the other polities of central-southern Italy, and that this difference somehow explains Roman imperial success. Moreover, it will address the linked theory that, as a result of the Roman colonization programs, the superior Roman societal model eventually was implemented in most regions of the Italian peninsula. Roman conquests were thought to have led to a reorganization of the landscape which fundamentally changed existing land tenure systems. This change is often implicitly understood as a progressive development, at least in economic and social terms, although the dramatic impact on indigenous communities is also emphasized.

This hypothesis on the role of Roman colonization, however, is increasingly challenged by the results of a growing number of field survey projects which suggest that in many regions of Italy structural changes in agricultural regimes predate Roman conquest, sometimes by centuries. Remarkably, thus far these results have not led to a serious revision of the paradigm that Roman colonization introduced a structurally new territorial and socio-economic organization in conquered territories. In part, this can be explained by the significant methodological concerns regarding the reliability of survey data and ceramic chronologies which could potentially corrupt our understanding of settlement trends; as well as by a more general skepticism amongst some historians concerning the validity of a methodology which uses broad rural settlement trends.


10. Interestingly, this is often true also for those studies criticizing socio-evolutionary theory (Lowie 1914). The romantic alternative to the evolutionary model typically perceives colonial intervention as a destructive force which terminates important cultural traditions, initiates processes of social fragmentation, individualism, loss of freedom, and so forth. However, questioning the colonial rule or evolutionary theory has hardly affected the belief that Roman conquest resulted in structural transformation of indigenous landscapes (Mattingly 2006, p. 3-21). In fact, by emphasizing the dramatic impact of colonization, these studies strengthen the idea that important differences existed between the colonizers and colonized, and, by associative analogy with contemporary colonial history, reinforce the view of Rome as the dominant modern culture threatening traditional ways of life.

11. Cf. below.

8. Important early socio-evolutionary studies include: Maine 1861; Fustel de Coulanges 1864 and Morgan 1877. Following these pioneer studies, the sociological historical approach became particularly popular in German academia. For a Marxist perspective see Engels 1884. For a good example from the so-called German historical school: Meyer 1884; Büchner 1893. For the use of evolutionary theory in archaeology in this period see Trigger 2006, p. 166-210; Cifani 2009.
to comprehend the effects of historical events on rural regimes.\textsuperscript{12} Furthermore, and arguably more importantly, in Roman studies more weight has been given to literary evidence for Roman rural reforms and to the physical traces of Roman land division practices still visible on aerial images of the modern landscapes, which appear to support the conventional Roman rural exceptionality thesis\textsuperscript{13}. The creation of geometrically ordered rural territories which were parcelled up regularly and distributed amongst colonists is generally believed to have had an enormous impact on indigenous communities not accustomed to such a form of landscape organization, fundamentally changing their cultural practices, socio-economic structures, and even their cosmologies\textsuperscript{14}. These impressively well-organized landscapes, moreover, expressed the exceptional power of a society based on the principles of discipline, order, and frugality\textsuperscript{15}. 

This general assumption that Rome was the prime agent in mid-Republican Italy to create such neatly divided landscapes, however, needs to be reassessed, especially in light of new settlement data. This paper evaluates the validity of the view which holds Rome responsible for the transformation of the mid-Republican Italian countryside through the practice of colonization and land division. As I will argue, this view is hardly supported by the literary and archaeological sources, but is more likely rooted in a belief that a particular type of socio-economic organization, based on the principles of private property and civic order, is naturally stronger than others\textsuperscript{16}. 

\textbf{THE INFLUENCE OF NINETEENTH CENTURY SOCIAL EVOLUTIONARY THEORY}

The influence of 19\textsuperscript{th} century social-evolutionary theory on our understanding of Roman colonial territorial organization is perhaps best illustrated by a well-known artist impression of a mid-Republican colonial settlement drawn in the mid-1980s for a scientific catalogue that complemented an exhibition in Modena on Roman land division techniques (fig. 1). The image captures perfectly the evolutionary understanding of a Roman colonial encounter that prevailed in that time and which has essentially persisted until today. The geometrically ordered and equally divided landscape of the colony is sharply separated from the chaotic, organic character of the un-colonized territory, where a small indigenous village is located. The dichotomy evoked in the image is one which associates colonial power with cultivation, rationalism, and dispersed, but very regular and dense rural settlement, while the native landscape is portrayed as being uncultivated, chaotic, and populated by village dwellers\textsuperscript{17}. What we see depicted are two different stages of economic and societal organization: the colony is depicted as more culturally evolved, while the native landscape is represented as closer to nature. To depict a colonial situation in this fashion sends a powerful subliminal message: it legitimizes and at the same time explains imperialism. The underdeveloped or unused native land clearly desires to be cultivated, to be modernized by the colonizing power. At the same time, the observer now understands why the

\textsuperscript{12} Cornell 1996 for a skeptical position. Discussion of this in Fracchia 2013; Roth 2013, p. 94-97.

\textsuperscript{13} The idea that traces of Roman land division practices, described in the literary sources, should still be visible in the modern landscape derives from Niebuhr 1838 [1812], p. 636-644. On this see also Tozzi 1985. For an excellent recent overview of Roman and Greek land division systems in Italy see Muzzioli 2010.

\textsuperscript{14} On the rationalizing effect of Roman imperial rule on conquered communities see Schiavone 1996, p. 7-8.


\textsuperscript{16} Recent discussion in Pelgrom – Stek 2014, p. 29-32.

\textsuperscript{17} A clear example of such a view is Haverfield 1913, p. 14 who regards regularity «[...] the marks which sunder even the simplest civilization from barbarism. The savage, inconsistent in his moral life, is equally inconsistent, equally unable to ‘keep straight’, in his house-building and his road making [...] Whenever ancient remains show a long straight line or several correctly drawn right angles, we may be sure that they date from a civilized age.»
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Romans were so successful in conquering other societies: they unmistakably were more advanced. In other words, conquest is shown as a logical consequence of evolutionary forces and as morally justified as it brings higher forms of civilization to underdeveloped people.

Important elements of this view, such as the association of colonial power with egalitarianism and geometric order, have a long history and date back at least to the period of the Enlightenment. However, the translation of this view into a proper socio-historical reconstruction of Roman-Italic territorial strategies only matured in the nineteenth century. Particularly relevant is that the paradigm is placed in a clear temporal frame in this period, which allows a precise historical reconstruction of its development over time. Moreover, the paradigm is enriched with theory on property arrangements, kinship structures, and settlement customs that allowed Roman and Italic societies to be compared empirically and measured in socio-evolutionary terms.

Within the emerging socio-evolutionary studies of the nineteenth century two rather different ideological and methodological trajectories can be recognized: one largely materialist and anthropologically oriented and a second more idealist and philological in nature. A key-publication in the former tradition was Lewis Morgan’s *Ancient Society*. This study offered a well-designed and universal classification of human societies in evolutionary stages that

18. See Krabbe 1996 on the crucial differences between older Enlightenment studies and the approaches of the nineteenth century Historical school. Enlightenment theory focused on an order that was supposed to appear, not on the historical development of progress in which each period had its own value (Krabbe 1996, p. 3-4).

19. The differences, however, should not be exaggerated. For example Lewis Morgan’s study, although it includes a lot of new anthropological data, is also based strongly on classical sources (although he does not engage in detailed philological discussion). Max Weber (see below), on the other hand, was certainly also interested in non-Western cultures and was surely influenced by the new anthropological studies of the time. In his early work, however, which is particularly relevant for this paper, Weber adopt a strongly philological approach. See Honigsheim 1949, p. 181 for a differentiation between the socialistic evolutionism of for example Engels and the liberal evolutionism of Maine.

20. Morgan 1877.
provided clear indicators for measuring progress. Particularly relevant for the study of Roman-Italic society was that his study outlined clearly the conditions that separated tribal societies (in his scheme labeled as the upper status of barbarism) from civilized states. The main difference between these crucially different stages of societal development was identified by Morgan in their property regimes and kinship structures. While tribal societies have communal property systems that are controlled by extended kinship groups, civilized states are based on the principle of private property that is possessed by mononuclear families.

In more general terms, Lewis considers tribal groups to be structured according to personal relationships (he labels such an arrangement societas), while a state (civitas) is founded upon territory and property. Turning back to fig. 1, we can now clearly understand the evolutionary difference depicted in this landscape: the Roman colonial territory is clearly marked out and individual allotments are carefully delineated. This is undoubtedly a territorial community that is concerned with property registration and thus easily identifiable as a civilized state. This is further supported by fact that we can see that the colonists live in isolated farms, representing the mononuclear family. The native landscape, on the other hand, lacks any sign of territorial awareness or of property demarcation. The people inhabiting this area must have worked the land collectively. Moreover, they dwell in nucleated villages, most likely together with the other members of their kinship group.

Morgan describes Roman societal transition in three separate chapters in which he, based on a rather uncritical reading of the sources, concludes that Rome reached the status of civilization in the period between the reigns of Romulus and Servius Tullius. His analysis focuses on Roman society and he is not concerned with identifying differences in evolutionary development between Rome and the other polities in Italy. This is in line with his unilineal view on human societal development, which does not need external agents to explain cultural change. Instead, Morgan points at internal developments, especially in the material and political domains, to explain why societies progressed from one evolutionary stage to the other. The view that Rome was in some way responsible for the societal progress of Italic communities, is thus rooted in a different academic tradition.

Such a line of thought can be recognized, albeit rather implicitly, in a more philologically orientated socio-evolutionary discourse which developed chiefly in German academic circles, most notably in the context of the so-called historical school. Amongst these more idealist orientated academics, a subtle line of socio-evolutionary thought crystallized which was not unilinear, but which was sensitive to cultural differences and traditions. Starting from the assumption that humans are predominantly shaped by cultural systems of knowledge, these scholars analyzed social progress, as well as explanations for change, predominantly within well-defined cultural frameworks. More importantly, these studies point to changes in the mental realm as explanation for change, and in particular to the introduction of specific socio-juridical principles. This particular perspective, although it accepts the idea of social evolution for understanding progress within a society, tends to turn to migration or diffusion theory to explain the dissemination of a specific cultural custom or a technology in regions formerly inhabited by people of different cultural traditions.

21. E.g. Morgan 1877, p. 28 «[the monogamian family] is pre-eminently the family of civilized society, and was therefore essentially modern». See also Morgan 1877, p. 469-492, who emphasizes the importance of monogamy and equality between sexes as the indicators of progress on a family level. The connection between family structures and types of land-ownership is central to the work of Engels 1884.

22. Morgan 1877, p. 6-7.

23. Morgan 1877, chapters 11-13, although he acknowledges that some tribal elements remain in later Roman society.

24. His theory that societies were forced to change their social structures predominately as a result of internally driven developments in the technological realm became influential, particularly under Marxist orientated scholars like Engels 1884 and Sereni 1955. A discussion of Marxism and early evolutionary theory in Bloch 1983.


26. From that perspective, an understanding of the socio-economic nature and future of Western Society was best reached by analyzing Western-European history, and especially Classical Antiquity as the supposed cradle of European society, and not by studying the customs of ‘primitive’ people living in far-away exotic places as, for example, Morgan did.

27. E.g. Maine 1861, v-vi for the clear connection between Law and the history of ideas.
An interesting example of a study in this tradition is Max Weber's *Agrarverhältnisse im Altertum*, which he published initially as a very long lemma for the third edition of the *Handwörterbuch der Staatswissenschaften*. Although this study is scarcely cited in recent studies, the general framework he outlines illustrates how the merging of idealist socio-evolutionary paradigms with liberal views on the importance of individual autonomy, private property, and ancient theories on farmer-soldier societies created a powerful paradigm to understand Roman imperial success. It is important to stress, however, that this was not the main aim of Weber, whose chief concern was to analyze how ancient societies developed in socio-economic terms, and thus to engage in the discourse on the nature of the ancient economy and the rise of capitalism. Nevertheless, the socio-economic evolutionary scheme Weber developed, which placed Rome at the top of the societal ladder of the Italic peoples, provides a robust conceptual model to understand Roman military successes and the smooth integration of the Italic people in the Roman commonwealth.

Although it is likely that Weber knew Morgan's seminal study on the evolution of human societies, he does not cite him, nor does he adopt his evolutionary framework based on the distinction between *Savagery, Barbarism, and Civilization*. He uses a more refined one, better suited for understanding the socio-economic organization of the Ancient World. He defines seven stages of socio-economic organization in Antiquity (see tab. 1), which were «recapitulated by all peoples in Antiquity from Seine to the Euphrates among whom urban centers developed».

The seven stages are ideal types, which function to analyze societies in a comparative perspective, but which are never fully realized. Therefore, in his description of the rural histories of the various ancient communities, Weber adopts a more narrative style in which classification of societies in stages of development is often implicit and does not always neatly follow the scheme he set out at the start of his book. The Roman Republic, for instance, is described principally as a period in which Roman society gradually developed from an aristocratic, clan-based society into the hoplite polis which in turn transformed into the democratic citizen polis. In the pre-hoplite city-state world of the Regal and Early Republican period, the different societal stages are described in a rather mixed way and are not separated into clearly definable chronological phases or societal classes. Elements of the peasant society, such as the institutions of the *vici* (villages) and *pagi* (rural districts) mentioned in the sources, occur in early Roman society together with characteristics of the different kingdom and aristocratic societies. This rather fuzzy image, he explains, is partly the result of the quality of the source material available for this period which is notoriously fragile and does not allow a precise reconstruction of societal structures and dynamics of that period. What is visible, however, is how this society gradually liberated itself from archaic clan-based socio-economic structures.

One of the most important contributions of Weber’s study is that he places these sociological theories in a detailed historical framework, thus allowing us to date the evolutionary changes that occurred in Roman society rather precisely and moreover to establish what actions triggered these changes. Weber divides his analysis of Roman social organization during the Republic into two sections. The first, titled «the city-state» covers the

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28. Weber 1909. This 136 pages long lemma is a reworked and much expanded version of an earlier lemma he wrote for the 1897 and 1898 editions of supplement series of the *Handwörterbuch der Staatswissenschaften*. The 1909 paper was republished after his death in Weber 1924, and translated into English in 1976, and was reworked and reprinted several times (e.g. Weber 2013).


31. See Honigsheim 1949 on Weber’s position within rural evolutionary theory. Also Marra 2002, p. 8, 42, who emphasizes the importance of socio-evolutionary thought in Weber’s work.

32. This in contrast to for example Engels 1884 (esp. chapter 1), who mentions Morgan as his main source of inspiration and also adopts his tripartite evolutionary scheme to analyze the evolution of family structures. On Marxist influences on Weber see Wiener 1982; Nafissi 2000 with further references. The latter argues that Weber was introduced to ‘Marxist’ theory and evolutionary classification especially through the work of Bücher 1893, who shared some views with Marxism and who in any case knew Engels’ work very well.


34. Although he explicitly rejects the hypercritical approach to the sources of Pais 1898/ 1899, he does admit that it is impossible to extract clear and reliable information from the sources for this period (Weber 2013, p. 262-263).
phase leading up to the period of Roman imperial success. This is the period during which Rome executed the fundamental changes which would eventually make the rise of the powerful Roman state possible. In line with idealist-liberal theory, Weber considers legal reforms aimed at emancipating the lower classes to have been fundamental in the progress of Roman society.

According to his reconstruction, the key moment in Roman history was the institution of the laws of the Twelve Tables in the mid-fifth century B.C. These laws secured private property for the plebs and as such constituted the crucial variable that triggered societal progress. However, they did not immediately end all archaic aristocratic control mechanisms. The emancipation of the plebs was a gradual process that covered the entire Mid-Republican period and ended in 287 B.C. with the Lex Hortensia. According to Weber, it was especially Rome’s continental wars in the fourth and early third centuries B.C. which made the rise of the plebs possible. Rome’s exposed

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36. According to Weber 2013, p. 294 Appius Claudius temporarily stopped Rome’s development towards the democratic polis.

position in the plain and the advance of mountain people such as the Volscians and the Samnites forced Rome to radically change its conduct and to adopt the disciplined infantry tactics which are central to the hoplite city-state model. The large amount of conquered land in turn could be used to provide the lower classes with the necessary independent economic base, without disrupting existing property claims in the old Roman territory. Weber thus dates the full implementation of the successful Roman societal model to the late fourth/early third century, in concordance with or immediately preceding the miraculous imperial successes of the Romans in the third century B.C.

Although Weber does not analyze the social structures of Italic societies, it is clear that he believed Rome was unique and in any case progressed more rapidly than the other peoples of Italy. This difference in pace explains early Roman imperial success in his theory. As regards to the distribution of this successful societal model over the Italian peninsula, Weber points predominately to Roman land division practices. In this view, colonial and viritan land division programs transferred jointly held properties to individual ownership, and as a consequence advanced areas which knew aristocratic modes of societal organization to proper city-states: «Everywhere what had once been characteristic of aristocratic ownership only, the private farm (villa) becomes the dominant form of property».

Land division in this scenario becomes the main vehicle for social progress in Italy. Interestingly, when describing the impact of Roman centurization, the emphasis is mostly on its destructive effects, in the sense that it terminated old land use patterns: «It destroyed the village communities and made all peasants ‘manor-owners’ [...] it aimed at destroying all obstacles to the free exploitation of the land».

In accordance with the more idealist lines of reasoning, this scenario adopts migration theory to explain the spread of this socio-economic model throughout Italy. It implicitly perceives Roman agents, in the form of migrating colonists and land surveyors, as responsible for the implementation of this technology and associated socio-economic regimes in new territories. Then again, Weber does not suggest that Italic and Roman cultural and technological systems were fundamentally different from each other. The Mommsenian School, to which Weber in a sense belonged, considered the Italic people, including Rome, all part of a single cultural entity that was only internally divided and waiting to be united. The Roman faction of this imaginary nation was the first to execute the necessary transformations to become the leading party in this process of unification.

What is interesting to note from Weber’s list of evolutionary stages, is that he also connects them with settlement customs and property arrangements, just as Morgan did. This attention to settlement forms, however, Weber owes to his teacher and Privy Councilor professor August Meitzen, the author of the seminal book Siedlung und agrarwesen der Westgermanen und Ostgermanen, der Kelten, Römer, Finnen und Slawen. In this pioneer study of modern geography Meitzen studied rural history from a landscape perspective, and analyzes rural history specifically in terms of settlement organization and field systems. Unlike his teacher, Weber was not so much interested in assigning ethnic labels to specific forms or rural organization (i.e. the village

39. A clear example is the quote at the start of this paper (Weber 2013, p. 261). Morgan 1877, p. 278 classifies the Sabellians, Oscans, and Umbrians as advanced in the middle status of barbarism, who already reached the highest status of barbarism at the time of the first historical notices. At that point they thus were «near the threshold of civilization». Morgan is not concerned with the societal differences within the Italian peninsula and does not emphasize a specific Roman influence in the evolution of these people.
41. Weber 2013, p. 308. Elements of this view he already expressed in his Habilitationsschrift (Weber 1891, esp. chapter 2), and further developed using Adolf Schulten’s theories on Roman rural settlement organization (Schulten 1894; 1906). Although Weber disagrees with Shulten’s view that the villa stood at the beginning of Italic-Roman rural society, he accepts his thesis that Roman land division programs fundamentally changed Italic societies and were used intentionally as an instrument to «abolish the old rural communities and villages root and branch» (Weber 2013, p. 268). On this see also Capogrossi Colongesi 1987: 2002, p. 95-129. It is clear that Weber’s view is influenced strongly by the effects of the Prussian rural reforms of the early nineteenth century had on ancient German rural settlement structures (cf. Marra 2002, p. 44, 63-71).
being a typically German type of settlement, while the scattered farm was characteristic for the Celtic world. In his framework, the different types of settlement organization are instead connected with different stages of societal organization: the isolated farm is characteristic for higher forms of societal organizations such as the hoplite city-states\textsuperscript{43}, while the village is the main indicator for tribal societies\textsuperscript{44}. \textit{Latifundium} in this paradigm becomes the element to represent concentration of wealth, slave-economy, decadence, and eventually feudalism.\textsuperscript{45}

The theory that important socio-economic differences existed between Italic and Roman societies of the 4\textsuperscript{th} century B.C. has persisted in later scholarship and repeatedly surfaces in many different variants in modern studies on societal organization in the ancient world\textsuperscript{46}. Its resilience as a conceptual model to understand Roman impact on ancient Italian society is rather striking, considering the fragile evidential basis it has. In fact, several recent studies have showed convincingly that the assumed connection between village and primitive Italic societal modes is a modern construction which is not supported by a close reading of the literary sources\textsuperscript{47}. According to these new reconstructions the \textit{vicus}, at least as an institutional entity, was a fundamental component of Roman territorial organization\textsuperscript{48}.

These important revisions of the role of villages in Roman territorial strategies, however, have only partially undermined the old paradigm. While the \textit{vicus} is no longer exclusively associated in these studies with primitive, or native, territorial strategies, the idea that early Roman expansion profoundly transformed the Italian countryside remains largely unchallenged\textsuperscript{49}. The Roman land division programs which are conventionally linked to private property systems, small peasant landholdings and the emancipation of the lower classes are still seen as the main catalyst of this transformation\textsuperscript{50}. To attribute such an important role to Roman colonial land division programs in the structural transformation of the Italian countryside implicitly assumes that the conquered territories, before the Roman intervention, were organized according to a very different logic. Hence, such views subtly support the paradigm that Roman expansion disseminated and intensified a specific type of socio-economic organization, based on private property and small-scale intensive peasant farming, throughout the Italian peninsula.

Surely, one cannot deny that Roman expansion and colonization had a profound impact on conquered territories\textsuperscript{51}. And it may also seem plausible to assume that large-scale land division programs resulted in the formation of peasant landscapes in conquered areas. However, it is much less obvious that Rome was the only, or even the most important agent in central-southern Italy to stimulate the advance of these landscapes. Crucial in this respect are the questions of when precisely Rome started its large-scale and rigid land division

\textsuperscript{43} A clear example of the connection between Roman colonial organization and isolated farmsteads is Weber 2013, p. 309, «they had something like an American character. The American farmer lives on his single family farm, outside any village. His property is defined by ‘section lines’, surveyors’ boundaries which run at right angles over mountains, valleys, forests, and hills. Just so- in theory, anyway- his Roman counterpart lived on his villa».

\textsuperscript{44} In economic terms the two settlement realities signal respectively more collective land tenure systems and private property regimes centered on the family (Rodbertus 1865; Bücher 1893). Modern discussion in Finley 1985; Schiavone 1996, p. 52-53. See, however, Marra 2002, p. 50-53, who explains that for Weber the village is not indicative of absolute collective ownership structures (as it was for Marx and Engels); some form of private property also existed in village communities.

\textsuperscript{45} Weber 1896. On this also Lo Cascio 1982; Gabba 1977; Rosafio 1991. It is interesting to note here that nineteenth century sociological theory was aware of the ambiguous role private property plays in society; while it is the main indicator of progress, it is at the same time a major threatening force to the stability of humanity (Morgan 1877, p. 552). For a long time, the Roman Empire has been considered the archetypal example of how the unmanageable power of private property can destroy a civilization. It is this force which corrupted the Roman peasant society after the Second Punic War and which initiated the process of decline that eventually would lead to the fall of the Empire. However, Morgan is not convinced that modern European empires will have to suffer a similar fate. He trusts that evolutionary forces will eventually correct this unbalanced situation (Morgan 1877, p. 552).

\textsuperscript{46} Sereni 1955, p. 305-441, who arrives at these conclusion following a predominantly Marxists scholarly discourse.

\textsuperscript{47} Capogrossi Colognesi 2002.

\textsuperscript{48} Tarpin 2002; Stek 2009. p. 107-123. An early example is Sereni 1955, p. 404-409, who, however, retains their importance in indigenous forms of settlement organization.

\textsuperscript{49} Capogrossi Colognesi 2014, p. 105.

\textsuperscript{50} Capogrossi Colognesi 2002, p. 2-7.

\textsuperscript{51} But see Bispham 2006; Bradley 2006; Pelgrom 2008 for nuancing views.
programs and how Roman rural organization differed from contemporary agricultural practices of other Italic societies. Although there is a fair amount of literary evidence on the emergence of private property in Roman society, this evidence does not allow us to reconstruct clearly when Rome established its famous colonial land division policy or to compare it with contemporary trends in other Italic communities for which literary and epigraphic evidence is virtually non-existent. Actually, according to an ancient tradition the practice of *limitatio* was of Etruscan origin and was also known to the Oscan world at quite an early time in history. The hypothesis that Rome was particularly quick to embrace radically new rural exploitation strategies and consequentially exported those through the practice of colonization thus needs to be corroborated by other evidence. The most promising external source to provide this external confirmation is archaeology. In fact, several scholars have claimed that archaeological evidence has already validated this course of events. The validity of this claim will be analysed in the next section.

**LANDSCAPE ARCHAEOLOGY AND THE ROMAN PEASANT CITY-STATE MODEL.**

The idea that archaeological evidence corroborates the 19th century model of Rome as the progressive socio-economic force in Italy crystallized in the first decades after WWII. In this period, archaeologists started to employ new archaeological methods on a large scale, most notably aerial prospection and field survey. These developing disciplines quickly produced large amounts of important new evidence which confirmed the existence of large-scale land division grids and evenly settled landscapes in Republican Italy. As such, this evidence seemed to substantiate the view that Roman conquest had in fact radically transformed the Italian landscape by implementing new property regimes. However, the interpretations of these discoveries have been strongly influenced by the same conceptual model these new evidences were supposed to corroborate. Essentially, the main bias is that documented changes and developments in the Italian landscape in the Classical-Hellenistic periods have been uncritically connected to the early years of Roman colonial interventions. An important factor favoring this predisposition is the fact that, at the time, archaeological findings could not be dated precisely, and typically were dated using chronological bands that covered multiple centuries. As such, these data could be easily skewed into already existing historical models of Italian landscape transformations.

Illustrative in this respect is the phenomenon of rural settlement intensification which is generally connected to the emancipation of the lower and middle classes and to the introduction of private property as a structural principle of socio-economic organization. Most survey teams working in Central and Southern Italy have recorded high numbers of small rural sites which contained pottery datable to the Hellenistic period (late 4th-1st century B.C.), especially black gloss pottery. Since rural sites containing Iron Age and Archaic ceramics are generally rare, the marked increase of Hellenistic sites was reasonably interpreted to reflect a radical shift in land use strategies and settlement preferences in this period. Initially, the most appealing explanation for this drastic rural reorganization was Roman expansion in Italy (also 4th-1st century B.C.) and the connected programs of land distribution.

However, this apparent correlation between archaeological findings and Roman imperial history is now convincingly refuted by more recent studies that profited from improved knowledge of ceramic chronologies. These studies clearly show

52. Var., *L.L.*, 7, 7; Front., *De limit.*, 9, 28-9 Campbell; Hyginus 2 (135, 8-17 Campbell), Discussion in Fabricius 1927, p. 674 and La Regina 1999. More detailed discussion below.
53. Capogrossi Colognesi 2012.
55. Roth 2012; Stek 2014, p. 34.
56. Critical discussion in Witcher 2006a and 2006b. See also Zuchtriegel 2014, who offers a critical discussion of the supposed relationship between dispersed settlement and democratization. He argues that in Greek territories ruralization trends are more likely connected with oligarchic and tyrannical rule.
58. Roth 2007; Di Giuseppe 2012.
that the phenomenon of rural settlement intensification is unconnected to Roman conquest, and already started in the Archaic period, principally in Magna Graecia and in the coastal areas of Latium, Campania, and Etruria\textsuperscript{59}. Thus, for the most part, in areas which at that time were well outside Roman colonial influence sphere\textsuperscript{60}. After a dip in the second half of the 5\textsuperscript{th} century, a second wave of rural infill is recorded for the second half of the 4\textsuperscript{th} century to 3\textsuperscript{rd} century B.C. This time the intensification was more marked, and also occurred in the inland, mountainous landscapes of Southern and Central Italy\textsuperscript{61}. Although for some regions the late 4\textsuperscript{th} century B.C. also coincides with the period of Roman conquest and colonization (eg. Pontine plain, northern Campania), it is clear that the phenomenon cannot be considered to be the result of Roman conquest alone. For most areas, the process of rural infill occurred independently from Roman interventions and often predates the conquest by decades\textsuperscript{62}.

More importantly, these recorded settlement trends are not restricted to Italy, but correspond with rural changes that characterize large areas of the Mediterranean world in this period\textsuperscript{63}. It is beyond the scope of this paper to analyze in detail the causes that might have triggered these widespread shifts in rural exploitation strategies. But it is significant to note that recent studies tend to point to macro-economic developments such as the introduction of new agricultural practices to explain this trend\textsuperscript{64}. Especially the cultivation of high revenue crops such as vine and olive which require intensive labor to produce are generally considered responsible for the shift to dispersed forms of settlement which allow farmers to live close to their lands\textsuperscript{65}. Such intensive farming strategies, however, require considerable investment and time before they become profitable and are therefore not particularly suitable for pioneer colonial communities that settle in newly acquired territories upon which they are dependent for their immediate survival. Indeed, recent studies show that isolated farms are unexpectedly rare in early Roman colonial territories, and that nucleated or clustered forms of settlement organization prevailed in these landscapes\textsuperscript{66}.

It is clear that Rome played a significant part in the socio-economic transformations that remodeled the Mediterranean basin in the second half of


\textsuperscript{60} A well-known example is the Chora of Metapontum (Carter 2006; 2011), but similar trends have also been recorded in all the other investigated Greek poleis of Italy (Osanna 2000) and in the Tyrrhenian coastal areas of Latium and Etruria. Although in the latter case the process seems to have started somewhat later (Di Giuseppe 2008; Perkins 1999, p. 28-40; Carandini et al. 2002; de Haas 2011).


\textsuperscript{62} For many areas known to have been conquered or colonized by the Romans a reversed trend is recorded: one of decline of rural site numbers. This is true especially for the Greek territories of Metapontum (Carter 2011), Croton (Carter – D’Annibale 1993) and Taranto (Burgers – Criclaard 2011); but also for the more inland areas such as the Sinni river valley area (published in 10 volumes by Quilici and Quilici Gigli, see for an introduction: Quilici – Quilici Gigli 2003).


\textsuperscript{64} Lentjes 2013, p. 197-217; Goodchild 2013. For recent studies on productivity and innovation of Roman farming see Forni 2006; Marcone 2006; Kron 2008. However, we know from the literary sources that these Mediterranean-wide economic developments are linked with radical changes in the socio-political realm, characterized principally by a stronger involvement of lower and middle classes in society which became institutionalized in participatory political systems such as the republic and democracy (see the various contributions in Hammer 2015). For this phenomenon in Italian context see Cifani 2002; 2009, p. 285-287 (with references).

\textsuperscript{65} See Foxhall 2007 for a critical view of the idea that middle and lower classes were the driving force behind olive cultivation in Greece. She argues this was predominately an elite-business. Significantly, the excavated examples of Archaic-Classical Etrusco-Roman farms also suggest elite, rather than lower-middle class enterprises (Terrenato 2001; Cifani 2009, p. 280-281; Carandini – D’Alessio – Di Giuseppe 2007).

\textsuperscript{66} On the missing colonial sites see: Rathbone 2008; Pelgrom 2008; 2013. Evidence for clustering: Pelgrom et al. 2015; Stek et al. 2015; Casarotto – Pelgrom – Stek 2016. For alternative economic strategies of early Roman colonial communities see Stek 2017. Interesting in this context is also Osanna 2000, p. 210 who sketches an evolution of Greek colonial settlement strategies, which initially was characterized by nucleated forms of settlement organization (often colonists would settle in (former) indigenous settlements) and only gradually became more dispersed.
the 1st millennium B.C. However, the evidence of survey archaeology on rural settlement dynamics now convincingly shows that there is little reason to believe that Rome fulfilled a crucial role in the diffusion of new agricultural and socio-economic strategies throughout Central-Southern Italy as the conquering peasant city-state model presumes. The Mediterranean was a strongly interconnected region well before the rise of Rome as imperial power and far-reaching networks of communication and mobility were already in existence for a long time. These could easily have facilitated the rapid diffusion of new ideas and technology throughout the various Italic communities.

LIMITATIO AND THE ROMAN RURAL EXCEPTIONALITY THEORY

The fact that survey archaeology suggests a trajectory of rural settlement change in Italy which was unrelated to Roman expansion also requires us to reanalyze the evidence of land division lines. More than the phenomenon of rural settlement intensification, these lines are believed to express the values of private property, civic order, rationalism and technological progress, which are so fundamental to socio-evolutionary models of the late nineteenth century. Indeed, the view which holds Rome responsible for the creation of such rigidly divided landscapes in Italy continues to be reproduced. As I will illustrate below, this accepted view is not based on solid evidence, but is strongly determined by aprioristic assumptions derived from socio-evolutionary paradigms. Actually, for a long time, most scholars agreed that the practice of *limitatio* was of Etruscan origin. This view was firmly rooted in Roman antiquarian sources that explicitly attribute this practice to Etruscan rites. These same sources also allude to the existence of Sabine and Umbrian land division techniques which were based on a different 100 feet measurement system, known as the *worsus*.

A key figure in the alteration of this conventional understanding was Ferdinando Castagnoli, whose studies profoundly shaped modern understanding of the origin and development of land division practices in Italy. In two fundamental papers, published in the mid-1950s, Castagnoli discusses the results of his studies of the aerial imagery and cadastral maps of Mid-Republican colonial territories. His systematic survey showed that traces of land division systems can be recognized in most colonies founded by Rome after the Latin War. The earliest examples are the Latin colony Cales (334 B.C.) and the citizen colony Terracina (329 B.C.). The fact that traces of land division could not be recognized in the territories of earlier colonies suggested that the Roman subjugation of the Latin and north-Campanian communities in the second half of the fourth century B.C., had important consequences for Roman colonial practices, surveying knowledge reached Rome via the Etruscans. E.g. the Greek *γνώμων*, reached Rome via the Etruscan *cippus* and became *Groma* (already Schulze 1905, p. 709; cf. Dilke 1971, p. 66).

67. Front., De limit., 10, 16-19 Campbell; Var., R.R., 1, 10. For this view already Niebuhr 1838 [1812], p. 629-630. Important epigraphic evidence to corroborate this was recognized in the *cippus* of Abella, mentioning *limites* and the reference to *decamani* on the tables of Agnone (v. 47 *dekmannio*). Both these Oscan texts proved these practices reached the Italic world at a rather early moment in history (cf. La Regina 1999). Moreover, a creative reading of the writings of the Roman land surveyors also prompted the theory that these Italic systems had distinctive morphologic characteristics. While the Etruscans and Romans used perfect square grids to divide their lands, Italic people adopted rectangularly shaped systems of land division (Voigt 1872, p. 64-54). Voigt connects the Italic systems with a technique described by the Roman *argimensores* as *scamnatio* and *strigatio*. Weber 2008, p. 33 accepts this thesis partially. Although this ethnic distinction, in his view, might have been correct in early Roman and Italic history, these different survey techniques were quickly applied to mark different legal statuses of Roman land: *scamnatio* was used on public lands that were sold or rented out, while *centuriatio* was used for areas that were allocated to individuals as private property under Roman law. For a recent discussion of *scamnatio* and *strigatio* see Campbell 2000, p. Ix-Ixii.

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70. The Roman rural exceptionality thesis revisited

71. Front., De limit., 10, 16-19 Campbell; Var., R.R., 1, 10. For this view already Niebuhr 1838 [1812], p. 629-630. Important epigraphic evidence to corroborate this was recognized in the *cippus* of Abella, mentioning *limites* and the reference to *decamani* on the tables of Agnone (v. 47 *dekmannio*). Both these Oscan texts proved these practices reached the Italic world at a rather early moment in history (cf. La Regina 1999). Moreover, a creative reading of the writings of the Roman land surveyors also prompted the theory that these Italic systems had distinctive morphologic characteristics. While the Etruscans and Romans used perfect square grids to divide their lands, Italic people adopted rectangularly shaped systems of land division (Voigt 1872, p. 64-54). Voigt connects the Italic systems with a technique described by the Roman *argimensores* as *scamnatio* and *strigatio*. Weber 2008, p. 33 accepts this thesis partially. Although this ethnic distinction, in his view, might have been correct in early Roman and Italic history, these different survey techniques were quickly applied to mark different legal statuses of Roman land: *scamnatio* was used on public lands that were sold or rented out, while *centuriatio* was used for areas that were allocated to individuals as private property under Roman law. For a recent discussion of *scamnatio* and *strigatio* see Campbell 2000, p. Ix-Ixii.


74. Already recognized by De La Blanchère 1884, p. 51; Lugli 1926, c. 13, p. 329.
orthogonal grids of parallel lines only, while others have genuine orthogonal grids\textsuperscript{76}. Moreover, the spacing between the division lines does not always correspond to the rounded figures of the Roman \textit{actus}, but instead conforms with known Italic measurement units of the Oscan \textit{ norsus} or Greek \textit{plethron}\textsuperscript{77}. Despite these irregularities, Castagnoli concludes they are all constructed in the early Roman colonial period. The morphological differences between presumed coeval colonial land division systems he explains by the diverse political and legal statuses of the various colonial territories. His analysis suggests that land division systems consisting of parallel lines prevail in Latin colonies, while orthogonal systems seem typical for citizen colonies and virilite settlements. In his view, this pattern reflects legal differences between Latin colonies and citizen colonies\textsuperscript{78}. Since Latin colonists lost their Roman citizenship, Rome was not particularly interested in defining and recording their properties meticulously or in a durable manner and therefore opted for less ridged techniques to divide the land. On Roman territory, precise planning was necessary as the amount of property every colonist received directly affected his political power in Rome, and thus this required a more elaborate system of property registration\textsuperscript{79}.

According to Castagnoli the Romans learnt the skills to divide conquered territories from the Greeks, who used similar technology to organize the hinterlands of their south Italian colonies\textsuperscript{80}. He excludes, however, the possibility that the variousItalic communities which lived close to these Greek settlements, or who had regular trading contacts with them, had acquired this technology before they were colonized by the Romans\textsuperscript{81}. In his view, the first to recognize the potential of these land division techniques were the Romans, who came into contact with this technology in the fourth century B.C. when they started their expansion to the south. After a short experimental phase, they quickly improved this practice and invented the perfect orthogonal grid, commonly known as centuriation. Rome in this scenario is thereby the true and only heir of Greek rural culture in Italy, which it further improved, \textit{con importantissimi aspetti di originalità}\textsuperscript{82}.

This emphasis on originality is not casual, but is a conscious statement of Castagnoli to assert his position within the wider debate on the unique-

81. Castagnoli categorically dismisses the references in the sources to early Etruscan and Italic systems as antiquarian inventions (e.g. Castagnoli 1958, p. 25; 1968, p. 125; Castagnoli 1974, p. 443; Castagnoli 1985, p. 38). More detailed studies of these texts confirmed this conclusion and explained the emphasis on the Etruscan roots of Roman culture as an erudite response to dominant Hellenistic origin paradigms (Guillaumin 2005, p. 16-18; Le Gall 1975, p. 303). Already Brugi 1897, p. 44 and Weber 2008, p. 33 expressed doubt about the Etruscan origin. Furthermore, careful reading of the literary sources revealed these texts only suggest that the ritual practice of \textit{limitatio}, as part of the soothsaying rituals of the \textit{harsepices}, was of Etruscan origin. In this view, the Romans were the first to use this ritual practice of delimiting quadrangular spaces in the context of large-scale land division projects (Gaba 1985; Gargola 1995, p. 42-44 both of whom, however, do not agree with the thesis that the Romans stripped the practice of \textit{limitatio} from all religious connotations). See also Traina 1990, p. 32-33 who argues that the emphasis on Etruscan origin developed in an anti-Italic (e.g. Samnite) discourse of the late fourth century B.C. Excellent recent discussion of this debate in Rampazzo 2012, p. 12-22.

82. Castagnoli 1968, p. 125. See also Castagnoli 1974, p. 443. This emphasis on originality we also find in Weber, who however, believed that the Roman practice of land division distinguished itself from the Greek, not so much in design, but in purpose: «to consciously destroy obstacles to the free exploitation of the land» (Weber 2013, p. 308). Weber believed, that unlike in the Roman world, in Greece the village continued to be a structural element of the rural landscape. Also Brugi 1897, p. 49-50 argued that the main difference between Roman and Greek land division practices was that the Romans combined this practice with a matured legal system (also Capogrossi Colognesi 2009, p. 243). Sereni 1961, p. 47-50, instead, argues that the main difference between Roman and Greek/Etruscan land division practices is quantitative, not qualitative.

76. On this difference see also Castagnoli 1964, p. 1380.
77. E.g. those of the colony of Cales. Other examples are discussed below.
78. The view that connects different land division practices with different legal statuses of land has roots in nineteenth century theory (e.g. Weber 2008 [1891], p. 22-23). On this see Capogrossi Colognesi 2009. See also below for Castagnoli’s view that orthogonality is a typical Roman invention.
80. Castagnoli 1968, p. 123; 1974 and 1984, p. 242-243. In the late 1950s the land division lines of the territory of Metapontum were discovered (Schmiedt – Chevallier 1959).
ness of Roman society in respect to Greek culture\textsuperscript{83}. In a series of articles that discuss the introduction of regular city-planning in Italy, Castagnoli sets out to show that the Romans, although they borrowed the concept of the regular urban grid from the Greeks, quickly developed an original and improved urban model based on axiality and on the perfect rectangle\textsuperscript{84}. According to an older theory, the rectangular city developed from an ancient Etrusco-Italic cultic tradition, linked closely to the religious concept of the augural templum\textsuperscript{85}. Castagnoli rejects this cultural-historical theory and argues against the existence of a distinct Italic urban form and the influence of religious concepts on Roman city planning\textsuperscript{86}. In his view, the rectangular urban model, which is further defined by the intersection of two main streets crossing in the center at a perfect 90 degree angle, is a genuine Roman invention, that developed in the context of Roman military policies of the late fourth century B.C. and which found its first manifestation in the maritime colonies that were built according to the castrum principle\textsuperscript{87}.

In his analysis of land divisions practices, Castagnoli thus adopts the same paradigm he uses in his studies on ancient urbanism: the Greek invented a regular scheme based on parallel axes which was improved, without any influence from Etrusco-Italic culture, by the Romans who operated autonomously following a strict military logic. Surprisingly, however, while he accepts that Greek regular city-planning was occasionally copied by the Etruscans in the lay-out of settlements like Marzabotto\textsuperscript{88}, he does not seem to accept a similar scenario for land division systems. The introduction in Roman-Italic territories of land division systems based on parallel axes, as well as those that form perfect rectangles, Castagnoli dates to the late fourth century B.C. and he exclusively connects them to post Latin-War Roman colonial activities\textsuperscript{89}.

Castagnoli does not really provide firm evidence for the supposed early colonial date of the different systems he recognized\textsuperscript{90}. The fact that they are located in territories known to have been colonized in the Mid-Republican period suffices as proof. For example, in the case of Terracina (329 B.C.), he explicitly states that the orthogonal land division grid, which is still clearly visible on the aerial images, must be of early colonial date unless proven otherwise\textsuperscript{91}: this despite the fact that the divided area is considerably larger than the amount of land that, according to Livy, was allocated to the early settlers\textsuperscript{92}. The theoretical possibility that this

83. I thank Gabrielle Cifani for pointing this out to me. In general on this discourse see Barbanera 2008.
85. The seminar paper is Nissen 1869. Also Müller 1961. In this line of thought a cultural continuity was recognized between the Bronze Age Terremare culture, the romulean $\textit{Roma Quadrata}$ and the Roman $\textit{castrum}$ (Haverfield 1913; von Gerkan 1924). Haverfield, however, is hesitant to connect the Terramare culture to Italic urbanism (p. 60, but see p. 72). A good discussion of this tradition in Castagnoli 1956, p. 7-11. For recent discussions see Sommella 1988; Sewell 2010; Mogetta 2014.
86. The cultural-historical paradigm that connected cultural traits to specific ethnic groups became unpopular after WWII. In his fierce rejection of the Italic urban tradition, Castagnoli is reacting against this line of thought.
87. Castagnoli 1976. See, however, Sewell 2014, who demonstrates convincingly that the $\textit{castrum}$-settlement was not an original Roman invention, but a copy of Macedonian settlement forms (e.g. Olbia).
88. Castagnoli 1956. He, however, tries to downplay the importance of this phenomenon by arguing against the old interpretations that the regular grids of cities like Paestum, Pompeii and Capua had been created by Oscan people. In the case of Marzabotto he explicitly states that the plan is an exact copy of a Greek city, thus without any originality (p. 50). Recent studies now convincingly show that regular city-plans were recurrent in Latin and Italic contexts (e.g. Mogetta 2014). Even in inland Samnite-site as Monte Vaiarono regular grids have been uncovered (de Benedittis 2013, p. 93-95).
89. It is especially in this conviction that I see the strong influence of the Weberian conquering peasant city-state paradigm.
90. In general on the method used by Castagnoli see Muzzioli 2010, p. 9-16.
92. Liv., 8, 21. The centuriated area is more than twice the size needed for the distribution of 2 $\textit{luga}$ plots to the 300 colonists. For a possible explanation see Longo 1985. The view that the origin of $\textit{centuratio}$ is connected to the maritime colonies also depends on the rectangular lay-out of the $\textit{castrum}$-like fortifications that have been identified at several of these colonial sites (Luzzatto 1963; Castagnoli 1968; Brandt 1985). Apart from the fact that a small square-formed fortification does not proof the existence of a land division system, it is also significant that such a fortification has not been identified at Tarraacina, (or at Antium, the other maritime colony that was founded in the aftermath of the Latin War). The examples Castagnoli used to support his theory are Minturnae and Ostia. Minturnae is a colony from the early third century B.C. and although the foundation date of Ostia is much debated (ranging from the Regal period to the late fourth century B.C.), the archaeological evidence seems to support a late fourth-early third century B.C. date for the construction of the $\textit{castrum}$ (Martín 1996;...
system might date to earlier or later moments in history, is not seriously considered. The example is representative for Castagnoli’s overall approach to the study of early land division systems: division lines which are located in colonial territories, unless proven otherwise, are considered to pertain to the period of the foundation of the colony. Although it might seem sensible to assume that the settlement of a colony required some sort of territorial reorganization, Castagnoli’s methodology is problematic as it aprioristically accepts a course of events this data was actually supposed to validate.

Another such predisposition in the work of Castagnoli we find in his accounts on the impact of Roman land division practices on conquered Italic communities:

penetrando così nel vivo della struttura delle regioni e realizzando una assimilazione e una trasformazione profonda, ciò che costitui la base dell’unificazione morale e culturale, oltre che politica, dell’Italia e, in proporzioni diverse, dell’impero».

discussion in Zevi 2002). Moreover, a recent study by Alessandro Jaia and Maria Cristina Molinari shows that almost identical castrum-like structures were built in the same period to fortify various cultic sites of coastal Latium (Jaia – Molinari 2012). As colonial land division programs at these sites seems implausible, this study seriously undermines the castrum-centuriatio connection. Since all these structures seem to date to the early third century B.C., the authors plausibly suggest they belong to a single defensive plan, possibly to be connected with the First Punic War.

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The fact that the recorded 2 iugera allotments fit nicely in a centuria (100 heredia of 2 iugera fit into 1 centuria), and might even explain the term (Gabba 1985), does not allow the conclusion that the practice of centuriation was invented at the time of the foundation of Tarracina. According to this rational, centuriation should have been invented by Romulus (the first to have handed out allotments of this size according to Var., R.R., 1, 10, 2) or at the time of the foundation of Labici in 418 B.C., when Livy records for the first time colonial allotments of this size (discussion in Gabba 1978). The fact that for other colonies of this period also allotments of 2,5 iugera (Satricum in 385 B.C.) or 3 iugera (Ager Externus in 339 B.C.) are recorded which do not fit easily into a centuria, might suggest that other mechanism were used to organize land distribution in this period (cf. below).

Castagnoli 1958, p. 34. For a critical view on the idea that centuriation resulted in unification see Chouquer 2008.

This emphasis on the dramatic impact of centuriation on indigenous territories that apparently had previously been organized according to very different principles cannot be deduced from the aerial images, but is simply taken for granted. The point to stress here is not so much that he might be wrong in his assumptions, but rather that he is uncritically reproducing long held views.

For example, the emphasis on the moral and unificatory qualities of Roman rural organization might derive from Plinio Fracarco who was one of the strongest advocates of the Roman peasant-state model during the interbellum. Fracarco strongly idealizes the accomplishments of Republican Roman society and stresses especially their high moral standards which he connects with their rural mentality and military discipline. He considered this rural-military morality the most important Roman legacy for Italy and Western society at large. Interestingly, such an understanding of the emancipatory qualities and rationalizing effects of Roman land division practices also found its way into contemporary Italian debates on how to reform the Mezzogiorno, and resulted in the creation of rural landscapes incredibly similar to the territorial organization of the idealized Roman republican peasant-state (compare figs. 2a-b with fig. 1).

This comfortable match between Castagnoli’s findings and theories of Roman rural exceptionality was first seriously challenged by an important, but much criticized study by Focke Tannen Hinrichs. Based mainly on a study of the writings of the agrimensores and the discovery of a few new land division grids, he argued that land division systems based on parallel lines only were not, as Castagnoli had claimed, limited to Latin colonies, but also characterized the territorial organization of early citizen colonies and territories of virilane settlement. Moreover, such systems could also be found in areas which had not been colonized by the Romans.

93. See also Castagnoli 1958, p. 11, for an outline of his methodology, in which he states that regular systems are a typical characteristic of Roman systems, which distinguishes them from post-Roman initiatives.

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95. Castagnoli 1958, p. 34. For a critical view on the idea that centuriation resulted in unification see Chouquer 2008.

96. Compare with Weber 2013, p. 268, who emphasizes the dramatic impact, but not the moral and cultural impact of Roman land division.

97. Fracarco 1956, p. 44.

98. Mecca 2012.


100. Hinrichs 1974, p. 29-40, which he connects to systems mentioned in the writings of the Roman land surveyors as strigae and scamna. According to Castagnoli 1964, p. 1380 the land division systems based on parallel lines only are not the same as the land divisions described as strigae or scamna.
at all. He concludes that the various types of land division systems were not coeval, but represented various phases in Italic land division history.

According to his evolutionary scheme, the irregularly shaped systems are the oldest, and might even date to pre-Roman times. Between the late fourth and second century B.C., however, these embryonic systems became increasingly more regular under Roman rule. This process of refinement ended after the Second Punic War with the establishment of the orthogonal 20 x 20 actus

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102. Hinrichs theory is not a simple return to the old model of Voigt (cf. above). In his view the various systems are not in the first place connected to ethnicity, but rather the result of evolutionary forces.
103. Hinrichs 1974, p. 40 and 46. Hinrichs evolutionary scheme has unilineal tendencies. It does not assume that a particular cultural agent was responsible for the implementation and development of this technology as, for example, Castagnoli implicitly does.
104. He does not accept the early date of the orthogonal grid of Terracina (Hinrichs 1974, p. 52-56) which he believed initially consisted of parallel lines only. This theory is accepted by Chouquer, et al. 1987, p. 106-108, who recognized a system of strigae in the area that eventually centuriated. This two-phase solution is rejected by for example Longo 1985; Cancellieri 1990.
centuriation grid, which remained the standard for Roman land division from that time onwards\textsuperscript{105}. The scheme Hinrichs proposed was initially warmly accepted and further supported by new studies; especially by a group of French researchers who systematically studied the territories of Campania and Latium for traces of land division systems in the early 1980s\textsuperscript{106}. In a particularly robust article, François Favory showed how the origin and development of ancient land division systems must be understood from a long-term perspective starting as early as the Neolithic period. Such an approach clearly revealed that Roman centuriation was just one, and a rather late, stage of a long history of Italian experiments with land division practices\textsuperscript{107}.

After ten years, however, Castagnoli responded to Hinrichs proposed revisions in print. In a long book review, Castagnoli argued that Hinrichs was wrong when he claimed that systems consisting of parallel lines also occurred in Italic contexts before Roman rule and that regularly shaped, orthogonal land division systems developed only relatively late in Roman rural history\textsuperscript{108}. His main arguments to undermine Hinrichs’ scheme are methodological in nature. He especially questions the reliability of Hinrichs’ methodology to identify early land division systems by arguing that several of the early grids he identified are actually early modern constructions\textsuperscript{109}. Moreover, Castagnoli also introduces new evidence for early land division into rectangular units recognized in the Pontine plain\textsuperscript{110} and in the territory of Cures Sabini\textsuperscript{111}, which he dates to the late fourth and early third century B.C. respectively\textsuperscript{112}. As such, he reinstalled the doctrine that Rome possessed a fully developed and unique system of territorial control before it started its successful conquest of Italy; a view which is crucial to the paradigm which holds rural reorganization largely responsible for the subsequent imperial successes over the Italic peoples. Rome in this now updated model did not only differ from the Italic communities by its advanced property regime, but also from the Greeks by means of the orthogonal grid, symbolizing rationalism, discipline, and order.

After the publication of his review, only a few attempts have been made to reestablish Hinrichs evolutionary model; all of which met fierce criticism and became rapidly marginalized. A good example of this is the final publication of the Besançon group who discreetly retained their earlier position that the systems which are based on the \textit{vorsus} might indicate a pre-Roman date of construction, and moreover, doubted Castagnoli’s theory that the Romans invented the orthogonal grid as early as the late fourth century B.C.\textsuperscript{113}. However, their reconstruction of the evolution of land division practices in ancient Italy, was promptly undermined by critical reviews of especially Italian scholars\textsuperscript{114}. Arguably, the most direct critique was voiced by Lorenzo Quilici. In 1994, in a synthetic study on the evidences for land division systems in central Italy, he excludes the monumental work of the French team on the grounds that their work was methodologically unsound\textsuperscript{115}. By drawing attention to some grids that were newly discovered by Italian scholars which seem connected to the construction of Roman consular roads in the late fourth and early third century

108. Castagnoli 1984. Also Gabba 1985 is critical about the Italic origin or early land division practices. He agrees with Castagnoli that those should be connected with Latin and Roman colonization.
110. The centuriation was already recognized by De la Blanchère 1884. See especially Cancellieri 1985; 1990, p. 70-71; Schubert 1996, p. 44-46; de Haas 2011 for good recent overviews of the history of its discovery and study.
112. Interestingly, these two orthogonal grids are not based on a 20 x 20 actus module, but on 10 x 10 actus units (the technical term is \textit{laterculus}), which according to Castagnoli must be considered the original module of orthogonal Roman land division systems.
113. Chouquer, et al. 1987, p. 29, 155 and the table on pages 88-90. In all cases, however, they leave the possibility of a Roman colonial date of construction open. Illustrative of their hesitance to attribute pre-Roman dates to systems recognized in Roman colonial territories is the case of Cales. Castagnoli had recognized a system based on a 16 \textit{vorsus} module (Castagnoli 1953/1955, p. 4-5), but they claim it is actually based on a 13 \textit{actus} module (Chouquer et al. 1987, p. 191). Their dating methodology also strongly depended on Roman historical sources and consequently was biased towards Roman colonial interventions.
115. Quilici 1994, p. 130-131. Lorenzo Quilici adopts a similar argumentative strategy to undermine the validity of the French school as Castagnoli had taken in his review of Hinrichs. He focusses on general methodological weaknesses that, once identified, legitimize a complete dismissal of the theory that the French team had advocated without much further discussion.
B.C., he rejects any further doubt about the uniqueness of Roman land division policy that, in his view, was clearly superior to indigenous forms of rural organization and even to nature itself\textsuperscript{16}. In his emphasis on rationality and socio-technological supremacy over indigenous and natural landscapes, as well as in his categorical denial of a possible pre-Roman origin of any of such systems, the echoes of Castagnoli and the long intellectual history that preceded him are clearly noticeable.

Even without going into the thorny question of whether the critique on the French research methodology is correct\textsuperscript{17}, it remains unsatisfactory that no convincing theory is offered by the Italian topographic school to explain the strong variability between the supposedly early Roman colonial land division systems, several of which are laid out using the Oscan-Italic \textit{urus}s as measurement unit. Such diversity obviously sits uneasy with a view that a single, well organized governmental body was responsible for their creation. Of course, one can argue that the Romans had adopted different modules and measurement systems to organize their conquered territories\textsuperscript{18}, but one should expect some clear arguments to defend this rather unexpected situation\textsuperscript{19}. For Castagnoli it was unconceivable that this diversity could reflect different cultural actors at work, so he explained these variations as resulting from the different allotment sizes the colonists received\textsuperscript{20}.

However, while the hypothetical necessity to create allotments of different sizes might explain differences in the spacing between lines\textsuperscript{21}, this necessity does not explain the use of entirely different measurement units in the creation of these systems. In a provocative paper, Adriano La Regina, therefore proposed that the systems based on the \textit{urus}s might be better understood as Samnite colonial land division systems, created during their expansion into the Campanian and Daunian plains\textsuperscript{22}. This theory, however, has found little support and the vast majority of scholars continue to view these systems as the exclusive result of Roman colonial activities\textsuperscript{23}. The almost complete marginalization of La Regina’s theory is all the more surprising if one looks at the distribution pattern of the different measurement units used in the construction of these systems (fig. 3). This geographic pattern, agrees more comfortably with a map of Oscan expansion in the 5th-4th centuries B.C. than with one showing the progress of Roman conquest in Italy\textsuperscript{24}. If one would want to maintain

117. See for a response to this critique Chouquer – Favory 1999; in general for a good discussion of the different approaches used to analyze land division systems see Franceschelli 2015.
118. According to Lugli, in Archaic Rome the Oscan-Italic foot length of 0.275 m was used. However, from the fourth century B.C. the Romans used a longer foot length of c. 0.297 m. (Lugli 1957, 189-193; Quilici 2000, 75.). The Romans adopted a foot length of 0.308 m after the Gallic raid (which corresponds to the Attic foot) and only took on the classical Roman foot length of 0.296 in the 2nd century B.C. Recent studies, however, convincingly show that the different foot lengths were used by the Romans in the Archaic to Mid-Republican period (Cifani 2008, p. 239-240).
119. A rare attempt to clarify this conundrum is Manacorda’s study of the complex land division systems of Luceria (Manacorda 1991, with further references). The grid was first detected by Bradford 1950 and subsequently studied by Jones 1980 and Schmiëdt 1985. The grid has 4 different spacings (Sectors A-D). Manacorda rightly pointed out that the distances between the lines are not measured using the \textit{actus} as the previous researched had suggested, but fit better with a module based on the \textit{urus}s based on a foot length of 0.296 (which is similar to the Greek \textit{plethron}). Although he briefly explores the possibility that the land division systems might have been the result of pre-Roman land surveying activities (Manacorda 1991, p. 58-60) he quickly abandons this option (Manacorda 1991, p. 62-64) and concludes that they must be of Roman colonial origin (but see Pelgrom 2008).
120. Also Quilici 1994, p. 127; Manacorda 1991.
121. Note, however, that there is no literary tradition referring to differently sized colonial allotments in Latin colonies founded in this period (see table 2 and Pelgrom 2008, p. 358-367).
122. La Regina 1999.
123. E.g. Muzzioli 2010. No reference is made to La Regina’s study. Only the systems found in the Greek territories (p. 46-48) are discussed separately and interpreted as Greek (i.e. non Roman colonial origin). This is entirely in line with Castagnoli’s views.
124. For the systems recognized in Central Italy see Chouquer \textit{et al.} 1987, esp. the table on p. 88-90 and the map on p. 88; for an updated bibliography see Muzzioli 2010, p. 18-24 and Pelgrom 2012, p. 96-120. For the systems recognized in southern Italy see Volpe 1990; with updated bibliography in Muzzioli 2010, p. 24-27 and Pelgrom 2012 p. 96-120. For the systems recognized in Latin colonies see Pelgrom 2008, p. 358-367 (with references). See also Giafossi 2003, p. 457-478 for important new studies on several early Roman land division systems. For almost all the recognized systems different reconstructions of the used module exist. Nevertheless, the available data strongly suggests that different measurement systems were used for creating the land division systems (consisting of parallel lines only) of south Italy and Campania, than for
the view that these systems are constructed in the context of the Roman colonization, this pattern can only be sensibly explained by assuming the Roman colonists employed local engineers to conduct the land survey. Such a scenario, however, implicitly accepts that the technology to build these systems existed in these indigenous communities; a view which of course conflicts with the Castagnoli model and also raises the question where the indigenous land division systems are.

Recent studies convincingly show that the know-how to construct such systems certainly existed in pre-Roman Italic communities. Systematic excavations in various Etruscan territories have unearthed traces of land division systems dating to the Archaic and Classical periods\(^\text{125}\). Although some of these aligned ditch systems are rather unsystematic, others are surprisingly regular, and in terms of morphology and extent, are similar to those found in early Roman colonial territories. An excellent example is formed by the systems recognized in the territory of Pontecagnano. A series of linear ditches spaced at a 210 meter distance were discovered there, covering the lands to the east of the town. Although initially this system was believed to date to the period of the Roman conquest and colonization of this area\(^\text{126}\), recent excavations convincingly show the grid was created much earlier, between the 6\(^{\text{th}}\) and 5\(^{\text{th}}\) century B.C., and thus was most likely created by the Etrusco-Italic community that inhabited the settlement in this period\(^\text{127}\).

In the late fifth century B.C. Tyrrhenian Campania was invaded by Oscan speaking people.
We know from textual sources that the Greek polis of Poseidonia was controlled by Lucanians in this period, and for Pontecagnano epigraphic and archaeological evidence attests of the presence of Oscan people in the town from the early fourth century B.C onwards. The arrival of these new ethnic groups, however, does not seem to have dramatically altered rural organizational strategies. In the case of Pontecagnano, most of the old land division grid remained in use, and large tracts of new territory were parcelled up in the late fourth century B.C. using a similar spacing, but with a slightly different orientation of the limites. Similarly, in the nearby territory of Poseidonia new lands were divided up in this period using parallel division lines. Although one can debate the precise dating of these recovered systems, it seems safe to assume from this evidence that the Oscan speaking people that settled in these Greek and Etruscan territories of Campania had become familiar with the concept of limitatio at a fairly early moment in history; in any case before they were conquered by the Romans.

These examples not only undermine the classical paradigm that assumed rural regimes based on the principles of private property and orderly administration developed in Italic areas exclusively under Roman colonial rule, but also question the presumed Roman-ness of the early land division systems identified by Castagnoli in Latin colonial territories. As most of these colonized areas had been previously populated by Italic (proto-) urban communities, it can no longer be excluded that these people created the land division systems Castagnoli identified and dated to the Roman colonial period. In light of the new archaeological discoveries, at for example Pontecagnano, such a mono-causal approach, exploring the meaning and chronology of these systems exclusively from a Roman colonial perspective, is unconvincing.

### Alternatives for the Limitatio-Colonization Paradigm

With the current state of research it remains difficult to determine when the various recognized systems were precisely constructed and if they are the result of Roman or Italic agency. However, the analysis of the discourse shows that the presumption that these recognized systems date to the early Roman colonial period is grounded chiefly in the assumption that Roman colonization required drastic landscape transformations, and therefore is the most likely force to explain the presence of division lines in colonized territories. This widely held view is more fragile than it would seem at first, and implicitly accepts an unproven old theory that the conquered landscapes were unorganized before the Romans arrived, or at least lacked solid arrangements to define property boundaries and/or large-scale reclamation systems the Roman settlers could adopt.

Although it might seem plausible to assume that the settlement of large groups of new people in newly conquered territory required an effective allocation procedure, this does not necessarily lead to the conclusion that this was achieved by the construction of large-scale and regularly laid out land division systems. The Romans had a long history of colonial enterprises, starting long before the putative introduction of large-scale orthogonal land division grids in Roman colonial society. Evidently, other mechanisms existed to manage such events that did not require drastic landscape transformations. As the sources do not inform us about how these early colonial enterprises were organized, we can only speculate about how this was achieved. Nevertheless, the much later writings of the Roman land surveyors do hint at archaic forms of Roman territorial organization of freshly

130. Gasparri 1989, 1990 and 1994, who, however, argues the system is of Roman colonial date. See however, Crawford 2006, p. 65 who argues they are likely constructed under Lucanian rule.
131. La Regina 1999; Longo et al. 2015.
132. Potentially, stratigraphic excavations of these division lines could resolve this dispute. However, thus far such attempts have not provided data that allows us to date these systems accurately enough to clarify who was responsible for their creation. See for an illustrative example the discussion surrounding the excavated land division lines in Paestum (Gasparri 1989; 1990 for a Roman date, but Crawford 2006; Pelgrom 2008 for doubts).
conquered lands, which might help us to envision alternative colonial strategies. Perhaps the most interesting scenario is the process described by the Roman land surveyor for an old mechanism of territorial control known as *ager arciﬁnius* or *arciﬁnalis*.

According to a tradition that goes back at least to Varro, these unsurveyed lands were controlled by a procedure in which settlers would occupy a piece of land as large as they could cultivate and defend within a clearly deﬁned territory. As there is a maximum of 4 to 5 hectares a farmer can cultivate without additional labor, such a self-regulatory process in theory could result in an agricultural landscape in which most farmers had holdings of roughly the same size. Moreover, in case the Roman government would want to have more control over the sizes of allotments, a simple line in the colonial statutes stipulating a maximum amount of land a colonist could claim in this way would sufﬁce. This hypothetical scenario assumes a more active role of the colonists in the organization and control of the conquered territory, which we may assume happened under the supervision of Roman ofﬁcials who mediated in conﬂicts between the colonists themselves and between colonists and indigenous dwellers. One could further imagine that for practical considerations the large colonial body was divided into sub-sections, possibly the enigmatic colonial vici we read about; each of which was assigned a speciﬁc area of the territory to exploit and control. Of course, this hypothetical scenario leaves a lot of questions unanswered, especially as this passage is usually interpreted as referring to exploitation strategies on public land only. However, the point to stress here is that alternative mechanisms to organize colonial enterprises certainly existed. Unless one argues that orthogonal land division system are as old as Roman colonization and were invented by Romulus himself, we need to accept that other colonization strategies once existed in Roman society.

If one agrees that geometrically organized landscapes are not a necessary condition for colonization, the questions thus become when and why the practice of dividing landscapes was introduced in Roman society. As we have seen, according to Castagnoli’s theory this happened in the late fourth century B.C. in the aftermath of the wars against the Samnites and Latins. In this view, the annexation of vast new territories and the dissolution of the Latin League required the Romans to reconﬁgure their territorial control strategies, which they realized by mimicking and improving rural organizational practices of the overpowered Greek communities of northern Campania. Although it does seem likely that the Roman imperial successes of this period prompted the development of new imperial strategies, it is not at all clear whether this also included a radical change of colonial land allocation strategies.

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134. Siculus Flaccus (104, 24-40 Campbell), translation Campbell 2000, p. 105. Also Weber believed that early Roman colonization (before the laws of the twelve tables) was organized according to this principle. On this see Marra 2002, p. 80.

135. Frontinus (*De limit.,* 2, 21 Campbell) refers to Varro as his source.

136. Lintott 1992, p. 32, for the view this might represent an ancient strategy of the Romans to ensure that newly conquered land did not fall back in enemy hands.


138. Our sources suggest that in reality and especially in the course of time this practice resulted in a very unequal division of landed properties. This was enhanced by a clause that was added to the regulation at an unknown moment in time that stated that a farmer could occupy the amount of land *he intended* to cultivate in future (Siculus Flaccus, 104, 31 Campbell).

Apart from the fact that the sources do not mention an increased concern in Roman society with property delimitation which was inherently connected to political power in the comitia centuriata (cf above). This explanation, however, is unconvincing. For one, there is no literary evidence to suggest the Romans became more interested in controlling colonial allotment sizes in this period. References to the distribution of equally sized plots of land to Roman citizens starts well before 338 B.C., while for Latin colonies a tradition to record allotment sizes is only attested for the colonies that are founded after the Second Punic War (see table 2); a period in which the organization of the centuriate assembly was also significantly altered (Pelgrom 2008). Moreover, in order for land division systems to function effectively for property registration, they need to be accompanied by an efficient administrative system which would have kept records. According to a study of Claudia Moatti, Rome did not have such a system of property registration before the second century B.C. (Moatti 1993, p. 79-98, but see Gargola 1995, p. 31. See also Castagnoli 1943). Moreover, only very few colonists of the late fourth century B.C. had voting rights in Rome. Surely, Rome did not need to design a complex property registration system to control the voting power of the few hundred settlers of citizen colonies that in theory could travel to Rome to vote. The corpus agrimen- sorum explicitly states that formae did not exist for various maritime colonies (Hinrichs 1974; Moatti 1993). What is more, the freedom of these colonists to travel was seriously restricted (Broadhead 2001; Erdkamp 2011, p. 115).

144. Cic., Leg. Agr., 2, 73.

the prerequisite for the development of well-organized landscapes and for labor-intensive reclamation programs exist for the hinterlands of Rome, but not for the colonial territories where apparently there was more than enough land already.

It is therefore not a coincidence that all recorded virítane land division programs concerned lowland areas close to Rome, such as the Pontine plain (see fig. 4 and tab. 2). Intriguingly, for the pre-Punic War period, the sources only mention the sizes of the allotments allocated to virítane settlers and to colonists in a few awkward colonies located in these same fertile parts of the immediate hinterlands of Rome, and for which scholars have argued they might more properly refer to virítane distribution as well. For all the colonies Rome founded outside this catchment area, no information on allotment sizes is ever transmitted. This pattern seems to reflect the same restricted geographic focus of the Roman administration which was interested in controlling landed property claims in its direct hinterland, but adopted less rigid control mechanisms for the organization of conquered areas further away.

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146. In fact, Capogrossi Colognesi 2009 argues that after the laws of the twelve tables the legal circumstances to develop a system of property recording for land under Roman law existed and might even have triggered the practice of centuriatio. See also Castagnoli 1985 who argues that the fact that no land division systems have been found on aerial images to connect to these early land division programs might be due to the fact that in this period the Romans used rigores (imaginative lines marked only on certain points by cippi or other land marks) instead of proper limites (in his view roads, walls, channels etc.).


149. On this also Capogrossi Colognesi 2009.
## Table 2 – Land distribution and allotment size according to the literary tradition.

<table>
<thead>
<tr>
<th>Year B.C.</th>
<th>Place</th>
<th>Type</th>
<th>Nr. recipients</th>
<th>Size of allotments in iugera</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regal</td>
<td>-</td>
<td>Viritane</td>
<td>each citizen</td>
<td>2</td>
<td>e.g. Var., R.R., 1, 10, 2</td>
</tr>
<tr>
<td>504</td>
<td>River Anio</td>
<td>Viritane</td>
<td>5,000 Sabine families</td>
<td>2 (plethra)</td>
<td>Plut., Publ., 21</td>
</tr>
<tr>
<td>418</td>
<td>Labici</td>
<td>Colony</td>
<td>1,500 coloni ab urbe</td>
<td>2</td>
<td>Liv., 4, 47</td>
</tr>
<tr>
<td>395</td>
<td>Volscian frontier</td>
<td>Colony</td>
<td>3,000 Roman citizens</td>
<td>3 7/12</td>
<td>Liv., 5, 24</td>
</tr>
<tr>
<td>393</td>
<td>Veii</td>
<td>Viritane</td>
<td>each plebeian</td>
<td>7</td>
<td>Liv., 5, 30</td>
</tr>
<tr>
<td>389</td>
<td>Veii</td>
<td>Viritane</td>
<td>-</td>
<td>4 or 28 plethra</td>
<td>Diod., 14, 102, 4</td>
</tr>
<tr>
<td>385</td>
<td>Satricum</td>
<td>Colony</td>
<td>2,000 Roman citizens</td>
<td>2.5</td>
<td>Liv., 6, 15</td>
</tr>
<tr>
<td>383</td>
<td>Ager Pomptinus</td>
<td>Viritane</td>
<td>plebeians</td>
<td>-</td>
<td>Liv., 6, 21</td>
</tr>
<tr>
<td>339</td>
<td>Ager Latinus/ Ager Privernas</td>
<td>Viritane</td>
<td>plebeians</td>
<td>2+ ¾</td>
<td>Liv., 8, 11</td>
</tr>
<tr>
<td>339</td>
<td>Ager Falernus</td>
<td>Viritane</td>
<td>plebeians</td>
<td>3</td>
<td>Liv., 8, 11</td>
</tr>
<tr>
<td>329</td>
<td>Anxur</td>
<td>Roman colony</td>
<td>300</td>
<td>2</td>
<td>Liv., 8, 21</td>
</tr>
<tr>
<td>290</td>
<td>Sabinum</td>
<td>Viritane</td>
<td>-</td>
<td>7</td>
<td>e.g. Val. Max., 4, 3, 5; Colum., 1 praef 14</td>
</tr>
<tr>
<td>232</td>
<td>Ager Gallicus and Picenum</td>
<td>Viritane</td>
<td>Roman citizens</td>
<td>-</td>
<td>e.g. Polyb., 2, 21</td>
</tr>
<tr>
<td>201</td>
<td>Samnium and Apulia</td>
<td>Viritane</td>
<td>veterans</td>
<td>2 for each year of service</td>
<td>Liv., 31, 4 and 49</td>
</tr>
<tr>
<td>193</td>
<td>Copia</td>
<td>Latin colony</td>
<td>3,000 (ped.) 300 (equi.)</td>
<td>20 (ped.); 40 (eq.)</td>
<td>Liv. 35, 9</td>
</tr>
<tr>
<td>192</td>
<td>Vibo Valenta</td>
<td>Latin colony</td>
<td>3,700 (ped.); 300(eq.)</td>
<td>15 (ped.); 30 (eq.)</td>
<td>Liv. 35, 40</td>
</tr>
<tr>
<td>189</td>
<td>Bononia</td>
<td>Latin colony</td>
<td>3,000</td>
<td>50 (ped.); 70 (eq.)</td>
<td>Livy., 37, 57</td>
</tr>
<tr>
<td>184</td>
<td>Potentia</td>
<td>Roman colony</td>
<td>-</td>
<td>6</td>
<td>Liv., 39, 44</td>
</tr>
<tr>
<td>184</td>
<td>Pisaurum</td>
<td>Roman colony</td>
<td>-</td>
<td>6</td>
<td>Liv., 39, 44</td>
</tr>
<tr>
<td>183</td>
<td>Mutina</td>
<td>Roman colony</td>
<td>2,000</td>
<td>5</td>
<td>Liv., 39, 55</td>
</tr>
<tr>
<td>183</td>
<td>Parma</td>
<td>Roman colony</td>
<td>2,000</td>
<td>8</td>
<td>Liv., 39, 55</td>
</tr>
<tr>
<td>183</td>
<td>Saturnia</td>
<td>Roman colony</td>
<td>-</td>
<td>10</td>
<td>Liv., 39, 55</td>
</tr>
<tr>
<td>181</td>
<td>Aquileia</td>
<td>Latin colony</td>
<td>3,000+</td>
<td>50 (ped.); 100 (cent); 140 (eq.)</td>
<td>Liv. 40, 33</td>
</tr>
<tr>
<td>181</td>
<td>Graviscae</td>
<td>Roman colony</td>
<td>-</td>
<td>5</td>
<td>Liv., 40, 29</td>
</tr>
<tr>
<td>177</td>
<td>Luna</td>
<td>Roman colony</td>
<td>2000</td>
<td>51, 5 or 6, 5</td>
<td>Liv., 41, 13</td>
</tr>
<tr>
<td>173</td>
<td>Ager Gallicus</td>
<td>Viritane</td>
<td>Roman citizens and allies</td>
<td>10; 3 for allies</td>
<td>Liv., 42, 4</td>
</tr>
</tbody>
</table>
In line with what happened in the direct hinterlands of the Greek poleis and some urban centers of Oscan speaking people, we might expect the gradual expansion of land division grids and reclamation systems in the fertile areas surrounding Rome during the Archaic and Republican periods. Thus far, however, traces of regular land division systems are surprisingly rare in the suburbium of Rome and the few recorded cases most likely date to much later periods. Instead, in the fertile volcanic tuff plateaus of northern Latium and southern Etruria complex drainage systems consisting of underground channels cut into the tuff-bedrock have been documented (known as cuniculi) which typically date to the 6th-3rd centuries B.C. The specific geological properties of the Roman hinterland thus seem to have instigated other reclamation strategies that are difficult to detect on aerial photographs, and which are less useful for cadastral purposes. In fact, in the south-eastern part of Latium, which has a very different geological character consisting of mostly alluvial deposits, systems of parallel land division lines based on the Roman actus do seem to occur (see fig. 3). Although none of these have been properly dated, it seems at least possible that some of these systems were constructed in this early period of Roman history.

Apart from these primeval parallel systems, very extensive orthogonal grids, based on a 10 x 10 actus module, have also been recognized in these territories close to Rome. These systems too have been connected with late fourth-early third century viridate land division programs, and colonial foundations of Roman citizens. As we have seen, these perfect geometrical systems which strongly evoke military values of order, equality, and the capacity to control, have been interpreted as clear signs of Roman cultural and technological supremacy in this early phase of Rome’s imperial expansion. Although we cannot exclude this course of events, it is worth exploring the

150. For orthogonal systems in the hinterlands of Rome see Lugli 1939. But see Castagnoli 1958, p. 13 who questions the Roman chronology of these grids. Also Chouquer et al. 1987, p. 92-98 recognize various large land division grids close to Rome which they date to the late Republican-early Imperial periods. See, however, Muzzioli 2010, p. for a critical note (with references), and p. 30-32 for the lack of such systems in southern Etruria.


152. Whether this means that ridged land division systems did not exist in these areas, or that the Romans in this period used less monumental techniques (eg. rigores) cannot be deduced from this evidence.


154. The examples are Cures Sabini (Muzzioli 1975); the Po plain (Cancellieri 1985,1990; de Haas 2011, 2017b); Setia (Chouquer et al. 1987, p. 100-102); Privernum (Chouquer et al. 1987, p. 103-104); Terracina (cf. above); Reate (Camerieri – Manconi 2010; Camerieri – De Santis – Mattioli 2009).

155. Several scholars have connected the creation of the Pontine grid with viridate land division schemes of the late fourth century B.C. making this the oldest example of a large-scale orthogonal grid based on a 10 x 10 actus module (cf. Castagnoli 1984; Cancellieri 1985, 1990; Coarelli 2005; de Haas 2011, 2017b). On this view, the grid is created together with, or slightly before the construction of the via Appia (312 B.C.) and is further connected with the creation of the tribus Oufentina in 318 B.C. However, the sources do not record any viridate land division project of the Pontine Plain in this period. A viridate division of the Pontine area is recorded for 383 B.C. (Liv., 6, 21), which is, however, usually located in the north-western part of the Agro Pontino: the area near Satricum (recent discussion in Mandatori 2016, p. 73-114). Livy also records a viridate land division program of the Privernate territory in 340 B.C. (Liv., 8, 1.3. describes the confiscation of the territory in 341; Liv., 8, 11. 14 the division of land in parcels of ¾ iugera). According to Festus (212 L.) the Oufentina tribe was located on the territory of Privernum and most scholars agree that this is likely the area around the Ulens river (Rooselaar 2010, p. 300-304; see also the maps in Carafa 2014, fig. 4-5) which is precisely the area where the 10 x 10 actus grid is recognized. However, as the distributed allotments of ¾ iugera (sometimes amended in 2 ¾ iugera) do not fit easily into the 10 x 10 iugera grid (this would result in 66,67 allotments per block) this early viridate land division project is not easily connected with the orthogonal grid. The view that connects the grid with the construction of the via Appia and the Decennovium channel (de Haas 2017b, p. 473), however, is also not without problems (Pelgrom 2012, p. 99-105; Mandatori 2016, p. 99-114). Although the Decennovium channel seems to provide a reasonable terminus a quo for the grid it does not allow the conclusion that the construction of the grid is connected with a viridate land division project of the late 4th century B.C. As I shall discuss below other incentives might have stimulated the construction of these orthogonal landscapes. See also Uggeri 1997, who suggests that the Decennovium tract of the via Appia and the channel that flanked it, might have been built under P. Claudius Pulcher (Aedilis Curulis 255-253 B.C.) who is mentioned on an early milestone found nearby Ad Medias (Buonopane 2011). If correct this would further undermine some arguments used to support the late 4th century B.C. date for the grid. See, however, Humm 1996 who opts for a late fourth century B.C. date of the channel (based mostly on a medieval text that connects the channel with Appius Claudius). Pékáry 1968, instead, argued for a second century B.C. date for the milestone and the connected tract of the via Appia (counter arguments in Coarelli 1988).
validity of another scenario suggested by Siculus Flaccus who seems to suggest that the practice of delimitating equally sized plots of lands in a durable manner, using *limites*, developed first in the context of the sale or lease of public land in Sabinum\textsuperscript{156}. One can debate the reliability of this source, or its precise meaning, but what is exciting is that Flaccus’ passage opens up a plausible scenario worth examining\textsuperscript{157}. Surely, the selling or leasing of land on a large-scale to private individuals required clear procedures and might have stimulated the development of more durable and rigid property delimitation techniques\textsuperscript{158}. In such a situation, the time and energy invested in the creation of these systems was easily compensated by the money the Roman State acquired in return. The fact that Flaccus mentions specifically the sale of Sabine lands in this context might suggest these lands were the first to have been merchandized in this way, thus suggesting the practice started in the third century B.C. at the earliest\textsuperscript{159}. By this time Rome was the uncontested hegemonic power of central-southern Italy and it is not hard to imagine the Romans would be able to control and reorganize Sabine lands, especially those closest to Rome.

It is clear from the sources that from the third century B.C onwards Rome experimented with different strategies to make profit from the selling or leasing of its most fertile public lands\textsuperscript{160}. We know for example that an unknown amount of public land in a radius of 50 miles around Rome was privatized in the late third century B.C. in compensation for money that individuals had lend the Roman state in 210 B.C. (*ager in trientabulus*). This in theory could well have included the public and partly unreclaimed land in the Pontine plain land as well as that of the Reate plain\textsuperscript{161}. Additionally, the sources also mention for this period a practice of leasing public land, known as *ager censiorius* that was land which was being taxed. Although it is impossible to securely connect these practices to any of the known early orthogonal grids individually\textsuperscript{162}, it is significant that the literary sources

\begin{itemize}
  \item \textsuperscript{156} Siculus Flaccus (103, 34-104, 4 Campbell). See also Siculus Flaccus (118, 25-35 Campbell) for a similar description of *agri quaeatorii* which in his time were difficult to identify as the markers had mostly disappeared. Confirmed by Hyginus (1) 82, 23-30 Campbell, also *Lib. Col.*, II, 192, 19-27 Campbell. The reference to a *partitio* in the earliest times could be considered to refer to the archaic system of *partitio per bina iugera* (De Nardis 2009, p. 209), and as such allude to *centuratio* as well. However, it seems significant that the establishment of *limites* is only mentioned in the context of selling/leasing land.
  \item \textsuperscript{157} For a critical view of these texts see De Nardis 2009.
  \item \textsuperscript{158} Also Weber 2008, p. 22-33 makes this point. He, however, argues that the Roman state used *scannatio* for the territories they rented out or sold. Land that was distributed as private property under Roman law did not need to be registered on a *forma*. Proof of ownership was achieved by showing papers documenting sale.
  \item \textsuperscript{159} The statement that captured land was sold does not necessarily imply it was put up for sale immediately after the capture of the Sabine territory in the early third century B.C., but the fact that Livy (28, 46) reports the selling of land in Campania by *quaestores* in 205 B.C. makes it likely that the land near Cures, which is presented as the classical example of quaestorian land, was sold soon after its conquest in 290 B.C. (Muzzioli 1975, p. 226-22). Muzzioli refutes an older theory that advocated that Sulla sold the land around Cures.
  \item \textsuperscript{160} Rooselaar 2010.
  \item \textsuperscript{161} For the Pontine Plain convincing archaeological evidence now exists that demonstrates that the areas close to the via Appia were settled by small farmsteads already by the end of the fourth- early third century B.C. (de Haas 2011: 2017b). Whether these farms can be connected to the large 10 x 10 *actus* grid is not yet established beyond doubt. It is tempting to correlate these rural settlements with the grid on the basis of the argument that habitation in this area was only possible after the construction of this large-scale reclamation system that drained the marshes. This theory is certainly appealing, but only works if we can exclude that other and earlier systems of drainage were used to make the land arable and that would allow the Appia to cross the area. As we know from Livy that the area was distributed to virítime settlers already in 340 B.C. in parcels that do not fit easily into the 10 x 10 *actus* grid (see discussion above) there is reason to doubt this hypothesis. Since we also know that Roman magistrates in later periods were actively involved in reclaiming the Pontine marches (e. g. Cetheghus in 160 B.C. [*Liv.*, *Per.*, 46.] and possibly P. Claudius and C. Furius in the middle of the third century B.C.: cf. above), it remains possible that the large orthogonal grid (or at least part of it) belongs to these, or other unrecorded, later initiatives. In that case the larger grid would thus partly overlap with an area of earlier land division. The phenomenon of overlapping division systems is well-known and is also referred to as *renormatio* (Muzzioli 2010, p. 48-49; Francheschelli 2015, p. 179 with references). Mandorati 2016, p. 99-114 even suggests that the 10 x 10 *actus* system might post-date the Roman period as many reclamation attempts have been recorded in the early modern and modern period. The problem with this theory is that these more recent initiatives seem to have adopted another orientation (de Haas 2017b); one that is perpendicular to the via Appia.
  \item \textsuperscript{162} None of these systems have yet been securely dated by stratigraphic excavation, but it seems indeed plausible they were constructed during the mid-Republican period. Nonetheless, for most cases a Late Republican date cannot
provide us with a general image of a Roman State experimenting in the third and second centuries B.C. with different forms of selling and renting public land to individuals. It is not difficult to see how this situation might have triggered new ways of organizing and recording property claims.

The conclusion of this analysis is that the Roman sources support a view which sees a preoccupation with property registration which is restricted to fertile lowland areas relatively close to Rome. Starting from the late fifth/early fourth century B.C. those areas were used for viritiane land distribution programs, offering the plebs very small parcels of land in private ownership. If these programs were also accompanied by reclamation projects and/or monumental land division systems cannot yet be firmly established based on the available information. Moreover, the literary evidence suggests other incentives might also have contributed significantly to the improvement of land division strategies and reclamation works, such as selling and leasing activities of the state. The prospect of having good returns might have stimulated the state to invest money and energy in such labour intensive projects. That these profitable lowlands required a lot of energy to reclaim and maintain is clear from the fact that Livy records as a key achievement of the consul Cethegus in 160 B.C. the drainage of the Pontine plain. This passage may be taken to imply that parts of the Pontine marshes were reclaimed only in this period, but it could also refer to an initiative to restore an earlier system that was not functioning properly anymore in this period. In both cases, the passage underlines an important aspect of these lowland landscapes, namely that they require serious investments to reclaim.

Similar practises of viritiane distribution and selling activities, albeit on a smaller scale, might also explain the formation of reclamation systems and cadastration activities in the hinterlands of other Italic polities, and even in the colonial territories. The point is, however, that these systems are not necessarily connected directly with the colonization phase of these lands, but were either already constructed by the pre-Roman communities living in the areas, or developed later on when socio-economic necessity demanded it and the organizational capacity of the colonial community could handle taking on such infrastructural works.

CONCLUSION

The theory that connects the origin of dispersed and well-organized peasant landscapes in Italy to Roman colonization processes is particularly resilient and has been the prime argument to date isolated farmsteads mapped during field surveys and land division lines recognized on aerial images. This understanding of Italian rural history, albeit rooted in a long intellectual tradition, is unconvincing as it aprioristically assumes that Italic societies were fundamentally different from Rome in terms of their socio-economic organization. As I have argued, this conviction is not based on a critical analysis of the available evidence, but is more likely the fruit of an ancient topos that was armored in modern times by socio-evolutionary theory that presupposes a causal relationship between imperial success and a specific, more advanced form of socio-economic organization. This belief naturally required Rome, as the successful imperial society par excellence, to have been the most developed socio-economic polity and also needed to date the birth of this effective form of socio-economic organization to the period before Rome started its astonishingly successful conquests.

This paper has shown the problems of this theory and has explored other scenarios that might explain the formation of well-organized peasant landscapes in Italy during the Classical and Hellenistic periods. The archaeological evidence deriving from field surveys as well as from paleo-botanic studies strongly suggest that the introduction of intensive agricultural farming strategies in Italic societies, in most cases, predates the Roman conquest phase. Whether this process is the result of new socio-eco-
nomic regimes, based on more equal distribution of land and with more secure property claims for the lower classes, cannot be deduced from this data. However, what this data does suggest is that Italic societies fully participated in the dynamic socio-economic developments that characterized the Mediterranean region in the Classical and Hellenistic periods. From this perspective, we need to scrutinize the view which has exclusively connected land division systems with Roman colonial strategies. More likely these systems are created by a wide range of Italic polities with the aim to improve the agricultural revenues of their territories. The little archaeological information we have suggests these land division lines were irrigation and drainage channels, which we might assume, could also, but not necessarily, function to record property claims more effectively. Furthermore, the excavations seem to indicate these systems were constructed by well-established communities, rather than colonial pioneers whose resources and energy more likely were invested in safeguarding tactics and economic survival strategies that did not required risky long term investments.

In any case, in the course of the third and second century B.C., Roman territorial control and exploitation strategies unquestionably followed a different trajectory from those of the other communities living in Italy in this period. This, however, was the result of Roman imperial success, and not a precursor for it as the conquering peasant state paradigm assumed. With regard to the land division strategies, it is clear that Rome in this period adopted strategies that in terms of scale and skill were unique in Italy. The vast territories in the Po-valley that became centuriated in this period are a clear example of this. Interestingly, however, the incentive to start framing landscapes in orthogonally laid-out grids might initially not have come from colonization activities, but was possibly developed in the context of the selling, leasing, or viritane distribution of public land.

Of course, it would be naïve to replace the limitatio-colonization paradigm with a moncausal model of commercial exploitation of public lands to explain and date all recognized land division grids. It is clear that orthogonal land division systems at some point during the Republic became important tools for organizing colonial resettlement programs. However, the point to stress is that colonization might not have been the phenomenon that triggered the introduction of this practice in Roman society. The location of the identified «early» orthogonal systems, which are predominantly situated in fertile, but potentially marshy areas close to the important consumer market of the city of Rome, fits with an image of profitable agricultural entrepreneurship. For agricultural investors, possessing fertile land close to Rome must have been attractive, while the Roman State could legitimize the massive time and energy investments needed to reclaim and reorganize these lands by the prospect of good returns. In theory, the reclamation function of these land division systems could be combined with colonial resettlement programs, but this is surely not restricted to such enterprises. Reclamation of land is first and foremost a strategy to increase agricultural potential without the need for territorial expansion. As such, it is rather an alternative or complementary strategy to colonization; one that enhanced economic and demographic growth through innovation rather than through exploitation of newly conquered lands.

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