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Flohr, M.; Droß-Krüpe, K.; Ruffing, K.

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AN INSTITUTIONAL REVOLUTION? THE EARLY *TABERNAE* OF ROMAN ITALY

Miko Flohr

This paper is going to develop around three arguments. At a very general level, it will first argue that commercial facilities as architectural concepts should be seen as historical phenomena, meaning that their emergence in some form or another represents a development in the history of markets, and that architectural change constitutes a logical focal point for discussions about the history of markets. Second, more specifically, this paper will argue that this is particularly true for the Roman *taberna*, which becomes visible in our archaeological and textual record only at a relatively late point in Roman urban history, suggesting there may have been a preceding period in which this phenomenon did not play a role in everyday economic practice; indeed, it will be suggested that this period ended more recently than has commonly been assumed. Thirdly, this paper will argue that the *taberna* did not have any direct predecessors in the Greek world, as has sometimes been suggested, but was an innovation of Middle Republican Central Italy that at some point was picked up and further spread by both the Roman authorities and private investors. This innovation, it is argued, was so fundamental for the history of retail in Roman Italy that it should count as an ‘institutional revolution’: it profoundly transformed the rules of the game in everyday economic practice. Together, these arguments serve to make the point that, when discussing the economies of the market in the Greco-Roman World, ‘innovation’ should be a leading historical concept. That is to say, the subliminal message of this chapter is that debates about Greco-Roman economic history should not so much be primarily interested in how markets worked, and how this fits – or does not fit – with our conceptualizations about pre-modern or modern economies; rather, they should aim to explore how market institutions and market practices developed over time and adapted to changing economic realities. This position should be taken as opposing itself to approaches to the Roman economy that unduly privilege structural analysis over historical development, often in terms strongly opposing the Roman past to the modern world. As this paper will highlight, this obliterates many changes and developments *within* the Roman world.

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Innovation and the Market in the Greco-Roman World

Before discussing the early history of the *taberna*, it is first necessary to spend a few words on the idea of innovation more in general. Innovation remains a charged concept in the study of the Greco-Roman world, though perhaps slightly less so than used to be the case up to the turn of the Millennium: the mid twentieth century Finleyan consensus of ancient Mediterranean economies as traditionalist and stagnant has more-or-less definitively crumbled, and scholarship in general has become considerably more sympathetic to the idea that everyday economic practice in the Greek, Hellenistic and Roman world was susceptible of innovation and improvement.¹ As far as technology is concerned, the evidence-rich deconstruction of primitivist pessimism by people like Greene, Oleson and Wilson around the turn of the millennium has essentially remained unanswered, and the consensus is rather that innovation was a central aspect of Greco-Roman technological and economic history, even if it had a Malthusian relationship with economic growth, and cannot be understood in modern terms.² What is true for technology, is also true for other aspects of economic practice, and it is clear that, particularly in the Hellenistic world, there were significant institutional developments that enhanced the role of money in the economy, and made loans and other complex monetary transactions quite a bit easier than they had been before.³ This did not remove the physical and technological boundaries within which Greco-Roman economies by necessity had to operate, but it made sure that they could work much more efficiently *within* those boundaries.

Yet it could be argued that most approaches to innovation have, in a way, remained observationist in character: they have looked for and identified apparent innovations in the evidence, and have then gone on to conclude that, therefore, innovation must have been a force to be reckoned with in Greco-Roman economic history. Even if this is true, it has to be argued that there has been far less interest in the historical factors that actually drove this innovation – or offered space for it. Greene has framed technological innovation in the Hellenistic and Roman world terms of a ‘maturing’ of the Iron age technological system.⁴ Scheidel has argued that innovation in the Roman world essentially came down to a transfer of knowledge, with Hellenistic innovations almost naturally diffusing over a larger area as a result of Roman imperial hegemony.⁵ Arguably, neither position is satisfactory: both imply that innovation, and the diffusion of innovations were more-or-less spontaneous processes that occurred almost out of necessity whenever impediments were removed, according to the principle that superior knowledge drives out inferior knowledge. Reality was much more complex – there can be incentives to embrace innovations, or to actively seek them, as much as there can be disincentives that foster people to contin-

1 Finley 1959; 1965; Pleket 1967; 1973.

2 Greene 2000; Wilson 2002; Oleson 2008. For a more cautious position see Scheidel 2009; Terpstra 2020. Cf. Flohr 2016.

3 On the development of financial institutions see Andreau 1999; von Reden 2010; 2012.

4 Greene 2000, 55.

5 Scheidel 2009, 69.

ue existing practices without alteration. That is to say, any discussion of innovation in the Roman economy has to start from an understanding of the factors that may have made it attractive for economic actors to embrace or seek new practices. Concerning markets, and their spatial configuration, one such factor is likely to have been the increasing urbanization, and the consequential growth of urban economies: the growth of cities and urban consumption, which is well-attested for the Hellenistic and the Roman imperial period, offered both an occasion and scope for all kinds of innovation.⁶ It offered an occasion for innovation because knowledge could spread more easily, and it offered a scope for the uptake of innovations because urbanizing markets develop towards having different sets of needs and priorities than their predecessors. Put differently: complex, differentiated communities in the larger urban centres that emerged as a result of urbanization developed consumer practices that diverged from those in smaller settlements. Thus, in very general terms, when discussing key economic institutions in the Greco-Roman world, it is worth raising the question of whether their emergence can be understood in the context of the waves of urbanization that characterized larger parts of the Mediterranean from the archaic Greek period onwards. This is certainly also true for the *taberna*.

The *taberna* as an Economic Institution

In what follows, the *taberna* will be approached as an ‘economic institution’ in the New Institutional Economics-sense of the word.⁷ While the *taberna* is not, strictly, a ‘rule of the game’, it is an architectural concept and its materializations can very well be seen as a ‘humanly devised constraints that shape human interaction’.⁸ Thus, even if they are not, strictly, ‘institutions’ as North would define them, *tabernae* very much behave like them as they facilitate, guide and impose limits upon everyday economic practices, albeit in a physical rather than a legal way. Arguably, therefore, aspects of the framework of New Institutional Economics can be used to study the role of the *taberna* in ancient economic history. Particularly, one could argue that the concept of ‘transaction costs’ can be used to consider the impact of the *taberna* on everyday economic practice in the communities where it emerged as a central phenomenon in the urban landscape.⁹

In order to be able to do so, however, it is essential to define the *taberna* for what it is – and to make clear what it is not. First and foremost, it is essential to distinguish the *taberna* as an archaeological phenomenon from the *taberna* that can be encountered in Latin literary texts and inscriptions. ‘*Taberna*’, in archaeological literature, refers to some

6 See on the Hellenistic and Roman Imperial waves of urbanism in antiquity Zuiderhoek 2016, 33–36.

7 On the use of the framework of New Institutional Economics in Greco-Roman Economic history see Frier/Kehoe 2007; Verboven 2015.

8 North 1990.

9 On ‘transaction costs’ as commonly understood in ancient history see esp. Frier/Kehoe 2007, 117–119.



Fig. 1. Pompeii: entrance of taberna IX 6, a with a grooved threshold (© M. Flohr)

kind of archaeologically recognizable spatial configuration: a ‘*taberna*’ is a modern interpretative label, that is tangentially related to the original Latin word, but the two are not completely identical.¹⁰ Second, the archaeologically identifiable *tabernae* are found in a large variety of contexts, and differ in many respects from each other, but they are united by one defining property: the fact that their entrance is so wide that it cannot be closed off by a regular double door, but needed a more complex closing system. In imperial period-contexts in cities like Ostia and Pompeii, this closing system has left clear remains in the form of grooved thresholds (fig. 1) – the give-away identification criterion – but it is relevant to point out that this threshold itself in fact may be a later innovation: there is no trace of it in the earliest identifiable *tabernae*, and few can securely be dated to before the imperial period.¹¹ The width of the *taberna* opening also meant that it was barely possible to cover it with a stone lintel, so either an arch would be needed, or, cheaper and easier, a large horizontal beam. Indeed, there is something to say for Cassiodorus’s hearsay report that the Latin word *taberna* emerged as a derivative of *trabs*, ‘beam’ – though if true, the

¹⁰ Cf. Holleran 2012, 99; 2017.

¹¹ For the paucity of early grooved thresholds see the discussion in Ellis 2018, 200–202.



Fig. 2. Alba Fucens: taberna along the Via dei Pilastri (© M. Flohr)

trabes to which the word *taberna* refers would be the wooden beam used to span the wide opening rather than the beams covering the roof.¹²

Thus, even though scholars colloquially tend to refer to *tabernae* as ‘shops’, this is a simplification. Technically, what is significant, both historically, and in making sense of the archaeological material, is the door system – the way in which the room was connected to its direct urban environment. As a rule, the spaces behind this opening were large rooms, and as far as the evidence indicates functionality, almost all identifiable *tabernae* appear to have had a commercial function, but the key characteristic lies in the width of the opening (fig. 2). This door system appears to have been unique, and its introduction marked a significant architectural innovation. It is in understanding the socio-economic effect of this wide opening when it was first introduced, and in assessing why it could it become a success that the concept of ‘transaction costs’ offers a meaningful perspective. Arguably, the extended width of the door opening took away a physical barrier between the inside and the outside – between the private sphere of the retail space (or work room) and the public sphere of the street. Commercially, it removed the physical barrier between sellers and prospective buyers that exists in rooms with a door of regular width, or even a double door: it made the contents of the work room visible, and enhanced possibilities for

12 Cass. Psalm. 14.31: ‘Maiores nostri domos pauperum tabernas appellaverunt propterea quia tantum trabibus, non adhuc tegulis tegebantur, quasi trabernas.’

spontaneous interaction. This lowered transaction costs, particularly in the interaction between relative strangers. More importantly, the *taberna*-style opening also paved the way for subsequent innovations, such as, most prominently, the street-side shop-counters many of which have been found back archaeologically, and which have a fundamental and obvious relation to making transactions easier.¹³ You cannot build a shop-counter into the space of a double door – especially not if, as seems to have been the most common scenario in the case of commercial spaces equipped with double doors – the doors opened inwards.¹⁴

An Innovation of the Fourth and Third Centuries BCE

The *taberna*, thus, at the moment of its appearance, marked an architectural *and* an economic innovation. The logical next question, then, is when it appeared, and where it came from. Here, the traditional lack of interest in institutional innovation among scholars studying Roman retail backfires a bit: the question has not been seriously addressed. Most earlier scholars, and particularly archaeologists, have simply and quietly assumed that the *taberna* is an age-old institution that had always been around.¹⁵ Throughout the field there also has been a tendency to project the existence of *tabernae* backward in time. Thus, domestic buildings resembling Pompeian *atrium* houses in Marzabotto have been reconstructed with shops around their main entrance, even if evidence for floor levels and door openings is completely lacking in the site.¹⁶ Carandini has reconstructed the 6th century BC house on the Palatine with a row of six *tabernae* for which there is literally not a shred of evidence.¹⁷ He, and several other scholars have taken at face value the words of Livy, who projects the Late Republican *forum* with *porticus* and *tabernae* back into the regal period, despite his notorious unreliability when it comes to the period before the mid-fourth century.¹⁸

In reality, dateable evidence for the existence of *tabernae* does not go back much further than the mid-to-late third-century BCE: early textual sources, such as Plautus, credibly suggest the existence of *tabernae* around the Forum Romanum around this period.¹⁹

13 On the counters see Ellis 2004; Monteix 2010, 89–132; Ellis 2018, 152–167.

14 This is the standard scenario at Delos. Cf. Karvonis 2008, 186–187. Karvonis highlights how elsewhere in the Greek world, entrances were generally up to 1.5m wide, but not wider.

15 See esp. Ellis 2018, 129–133. See also Gassner 1986, 88–89.

16 Mansuelli 1963, 62. See for criticism on the traditional interpretation also Bentz/Reusser 2008, 101

17 See, for both the reconstruction and the underlying remains, Carandini/Carafa 2017, 62.

18 Liv. 1.35. See e.g. Musti 1990; Filippi 2017, 154. On Livy's account of Rome before the mid-fourth century see Bispham 2007, 36–37.

19 Plautus, *Curc.* 480.

Similarly, the oldest excavated *tabernae* in places like Ostia²⁰, Pompeii²¹ and Paestum²² appear to date to, roughly, the third century. Only for the Forum Romanum, one can perhaps realistically assume the existence of *tabernae* as early as the late fourth century BCE.²³ Yet, it should be pointed out that there is an external factor that makes it very hard to assume the existence of large numbers of *tabernae* throughout the Italian peninsula before the late fourth century: the relative absence of coins. If *tabernae*, as an institution, could become successful because they brought down transaction costs between relative strangers in everyday economic practice, they have no role to play when such transactions did not play a meaningful role in the economy. While the early history of the monetary economy in the Italian peninsula is heavily debated, especially as far as the smaller denominations are concerned, scholars seem to broadly agree that coinage only began to play a central role in the third century BC.²⁴ This would suggest that the oldest *tabernae* that can be identified in the archaeological record, in time are rather close to the earliest possible emergence of the phenomenon.

The *taberna* as an Italian Phenomenon

Scholars who discussed the origins of the *taberna* have generally entertained the idea that the *taberna* had – like so many other Roman things – origins in the Greek world.²⁵ It is true that, by the time the earliest identifiable *tabernae* of Italy were built, Greek architecture had already developed two types of facilities which at least potentially had a commercial character. The first of these is found in places like Olynthus and Priene, where sets of small units were constructed at the short ends of city blocks, alongside the main roads.²⁶ These units simply consisted of one room, were unconnected to any other buildings, and only accessible from the street. They have generally been interpreted as ‘shops’, but on closer inspection, this identification is not so straightforward, as they tend to be dark and

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- 20 The oldest *tabernae* at Ostia were constructed outside the walls of the castrum in opus quadratum and have been associated with the third century BCE by Calza/Becatti 1953, 98. Reliable and precise dating information is, however, lacking.
- 21 The earliest known *tabernae* at Pompeii were those excavated by Maiuri underneath the portico of the Building of Eumachia. Cf. Maiuri 1973, 53–63. Maiuri dates the *tabernae* earlier, to the fourth century BCE, but this seems too early.
- 22 The construction of the *tabernae* around the Forum at Paestum has been dated to the second half of the third century 230 BCE. Cf. Torelli 1999, 33–34.
- 23 There has been debate about the moment at which the *tabernae lanienae* on the edge of the Forum Romanum were transformed into *tabernae argentariae*, as mentioned by Varro (ap. Non. 532). Some (e.g. Andreau 1987, 337–340; 1999, 30) have argued this had already happened by 310 BCE; Others have suggested a later date, e.g. 260 BCE (Barlow 1978, 16). In the latter case, however, it is also likely that the *tabernae* themselves had been constructed before or around 300 BCE.
- 24 On the monetization of Italy in the Republican period see von Reden 2010, 47–55, with earlier references.
- 25 Gassner 1986; Ellis 2018.
- 26 See, for Olynthus, Cahill 2002. For Priene, see, still, Wiegand/Schrader 1904.



Fig. 3. Priene: presumed shop along the West Gate Street (© M. Flohr)

relatively small spaces. In any case, it is clear that these units were fundamentally unlike *tabernae*: they had a much narrower entrance, with a double or even just a single door, were much darker, and much less contact-friendly (fig. 3). They are also found in different architectural contexts than the earliest Roman *tabernae*, and are never directly associated with house façades. Most importantly, there were relatively few of these units: they were not as successful a phenomenon as *tabernae* were.

The second architectural element with a potentially commercial character were back rooms of stoas. This is a problematic category: it seems beyond reasonable doubt that the earliest stoas with back rooms had a function in civic life and did not serve economic purposes. At least, this is true for the fifth century South Stoas at both Athens and Corinth – in these stoas, back rooms were designed to contain beds, suggesting they were used for banquets (fig. 4).²⁷ More complicated is the picture with larger stoa complexes like those at Pella and Miletus – both dating to the late fourth or early third century.²⁸ In these cases, it is arguably likely that some of the back rooms assumed, or were built for, commercial functions, and for Pella it is even attested, though not necessarily also for the third century BCE.²⁹ Still, however, a direct historical link with the *taberna* is

²⁷ South stoa in Athens: Camp 1986. Corinth: Broneer 1954.

²⁸ For Miletus see von Gerkan 1922.

²⁹ Dickenson 2017, 59–62.



Fig. 4. Corinth, South Stoa: back room (© M. Flohr)

problematic. Not only were these complexes almost contemporary to the first *tabernae* of Roman Italy, they differed from them in two crucial aspects. First, the back rooms in these complexes all had single or double doors and lacked the *taberna*-style broad opening. Secondly, and more importantly, while these complexes look like the *porticus* with *tabernae* that came to dominate Roman *fora* in the later Hellenistic period, the earliest *tabernae* in Italy – whatever Livy tells us – were built without *porticus*.³⁰ Essentially, thus, nothing connects the earliest *tabernae* of Republican Italy with these Greek and early Hellenistic stoi.

Thus, even if there is reason to assume that there were, in the Greek world, developments towards a commercial architectural vocabulary in the Classical and Hellenistic period, these remain unconnected to the earliest *tabernae* and were much less radical in breaking down the boundaries between commercial facilities and their urban surroundings. Arguably, therefore, the *taberna* should most logically be seen as an innovation that emerged in the Italian peninsula, at some point in the mid-Republican period.

³⁰ For Livy see above, p. 425.



Fig. 5. Paestum: mid-Republican tabernae on the forum (© M. Flohr)

Tabernae in Middle Republican Italy

It is also relevant to consider where in Italy the *taberna* emerged. There are several options. Of course, it is possible to imagine that the *taberna* started off as a purely Roman phenomenon, and spread subsequently over larger parts of the Italian peninsula. An argument in favor of this could be that a great deal of the earliest *tabernae* are to be found in a context that suggests direct involvement of the Roman authorities. This is true not only for the Forum Romanum, but also for the earliest *tabernae* at Ostia, which were constructed on public ground directly against the outer castrum walls, and certainly also for the *tabernae* around the *forum* of Paestum, which were constructed as part of one major building project that also involved the comitium and other the public buildings.³¹ The same may have been true for the *forum* at Falerii Novi which has not been excavated but on architectural and historical grounds seems closely associated with the *forum* at Paestum and potentially dates to the same decade – the 230s BC (fig. 5).³²

On the other hand, it is also clear that the *taberna* as a phenomenon was widespread in third century BCE Pompeii, which at that time was not yet politically integrated into

³¹ Cf. Torelli 1999

³² The forum was made visible through geophysical survey and shows, in its design, close parallels to the forum at Paestum. Cf. Keay/Millet 2000.



Fig. 6. Pompeii: third century BC house (I 4, 8–10) with *tabernae* around its main entrance (© M. Flohr)

the Roman realm. At Pompeii, there were public *tabernae* alongside the *forum*, but at the same time, it seems that the *taberna* also had already found its way into domestic architecture, even though the dating of Pompeian houses before the second century BCE is incredibly complex: several houses that can be dated to the third century BCE on the grounds of their building techniques had *tabernae* alongside their main entrance (fig. 6).³³ While it is theoretically possible that these *tabernae* reflect an indirect influence from Roman innovations on architectural practice in Campania, there is nothing in the evidence excluding the possibility that the influence was, actually, the other way around, and that the Romans adopted the *taberna* into their architectural vocabulary when they came across it in the cities of Campania, and *then* began to build them in greater numbers in some of their colonies and foundations. For this scenario, the early history of Roman coinage can be used as an analogy: around the second quarter of the third century BC, the Roman authorities embraced a practice that had emerged in the cities Campania, slightly tweaked it to their needs, and then began to spread it over their network.³⁴ Around almost precisely the same period, something rather similar may have been happening with the *taberna*.

³³ Early examples include house I 4, 8–10, and I 6, 13. Cf. Peterse 1999, 162–163.

³⁴ Cf. von Reden 2010, 51.

Discussion: an Innovation and its Impact

Thus, this paper argues that the *taberna* should be seen as an innovation in architectural practice that emerged in Italy in the later fourth or third century BCE and spread after being adopted by the Roman authorities. The question remains, of course, what this exploration of the origins of the *taberna* tells us about the economic history of markets in Middle Republican Italy. First and foremost, of course, this chapter arguably has highlighted that the third century BCE, with both the emergence of the *taberna*, and the emergence of coinage, was of fundamental importance in shaping the range of institutions that played a role in the economy of the Italian peninsula: both coinage and *tabernae* would be central elements in economic practice throughout the later Republican and Imperial period, and both would experience a substantial boom in the second century BCE. Framed in this way, the early history of the *taberna* can be seen as part of an ‘institutional revolution’ that took place in Italy in the third century BC. This is not to say that by the end of the third century *tabernae* were omnipresent – they were not, and there are places where they remain exceptional throughout the second century as well; key examples include relatively well-known places like Fregellae and Norba, where no *tabernae* can be identified.³⁵ Yet, as an institution, the *taberna* had become firmly anchored in Roman and Italian building practice by the later third century BC.

Moreover, the early history of the *taberna*, and the contemporary and parallel, but ultimately different developments in late Classical and early Hellenistic Greece also suggest that there were broader developments in this period that created ideal circumstances for new economic institutions to conquer a place in everyday practice. In Italy, it is clear that the emergence of the *taberna* profited enormously from the fact that it was embraced by the Roman authorities and was constructed, in considerable numbers, in cities that were built or controlled by the Roman republic. It could be argued that the *taberna*, in Rome’s growing Italian imperium, offered an ideal instrument in strengthening the nodes in the economic network, and turning central places – *fora* – into hotspots that attracted and to a considerable degree monopolized urban commercial life.³⁶ At the same time, it is also clear from recent studies by, for instance, Jamie Sewell, that the later fourth century brought a marked increase in urbanization anyway, creating larger urban communities with more complex local economies increasingly developed around transactions between relative strangers.³⁷ In this development, the *taberna* became a relevant tool, both for local authorities – as we can see at the *forum* of Pompeii – and for private persons – as can be derived from the smooth integration of the *taberna* in domestic architecture.

Thus, when discussing the *taberna*, one of its most valuable contributions to broader debates about markets in the ancient world lies not in its commercial use or in its spatial embedding, but in the historical background of its emergence in the first place. By ap-

35 See esp. the detailed discussion of houses from these two sites in Battaglini/Diosono 2010; Carfora et al. 2010.

36 Flohr 2020.

37 Sewell 2016.

proaching the *taberna* as an economic innovation – which *by definition* it once was – it can become an instrument in studying the historical development of markets, as it points to a complex of economic innovation in Mid-Republican Italy associated with increased urban complexity. In this way, the more general point of this paper is that innovation and change should be leading concepts in the study of ancient markets, both the physical ones and the immaterial ones.

Bibliography

- Andreau 1987 = Jean Andreau, *La vie financière dans le monde romain: les métiers de manieurs d'argent*, Rome 1987.
- Andreau 1999 = Jean Andreau, *Banking and Business in the Roman World*, Cambridge 1999.
- Barlow 1978 = Charles Barlow, *Bankers, moneylenders, and interest rates in the Roman Republic*, Chapel Hill 1978.
- Battaglini/Diosono 2010 = Giovanna Battaglini/Francesca Diosono, *Le domus di Fregellae: case aristocratiche di ambito coloniale*. in: Martin Bentz/Christoph Reusser (Hrsg.), *Etruskisch-italische und römisch-republikanische Häuser*, Wiesbaden 2010 (Studien zur antiken Stadt), 217–232.
- Bentz/Reusser 2008 = Martin Bentz/Christoph Reusser, *Marzabotto, Planstadt der Etrusker*, Mainz 2008.
- Bispham 2007 = Ed Bispham, *Literary Sources*, in: Nathan Rosenstein/Robert Morstein-Marx (eds.), *A Companion to the Roman Republic*, Oxford 2007, 29–50.
- Broneer 1954 = Oscar Broneer, *The South Stoa and Its Roman Successors*, Princeton, NJ 1954.
- Cahill 2002 = Nicholas Cahill, *Household and City Organization at Olynthus*, New Haven.
- Calza/Becatti 1953 = Guido Calza/Giovanni Becatti, *Topografia Generale*, Roma 1953 (Scavi di Ostia).
- Camp 1986 = John Camp, *The Athenian Agora: Excavations in the Heart of Classical Athens*, London 1986.
- Carandini/Carafa 2017 = Andrea Carandini/Paolo Carafa, *The Atlas of Ancient Rome. Biography and Portraits of the City*, Princeton/Oxford 2017.
- Carfora/Ferrante/Gigli 2010 = Paola Carfora/Stefania Ferrante/Stefania Quilici Gigli, *Edilizia privata nell'urbanistica di Norba tra la fine del III e l'inizio del I secolo a. C.*, in: Martin Bentz/Christoph Reusser (Hrsg.), *Etruskisch-italische und römisch-republikanische Häuser*, Wiesbaden 2010 (Studien zur antiken Stadt), 233–242.
- Dickenson 2017 = Christopher Dickenson, *On the Agora. The Evolution of a Public Space in Hellenistic and Roman Greece (c. 323 BC–267 AD)*, Leiden 2017.
- Ellis 2004 = Steven Ellis, *The distribution of bars at Pompeii: archaeological, spatial and viewshed analyses*, *Journal of Roman Archaeology: an International Journal* 17 (2004), 371–384.

- Ellis 2018 = Steven Ellis, *The Roman Retail Revolution. The Socio-Economic World of the Taberna*, Oxford 2018.
- Filippi 2017 = Dunia Filippi, Region VIII. Forum Romanum Magnum, in: Andrea Carandini/Paolo Carafa (eds.), *The Atlas of Ancient Rome*, Princeton/Oxford 2017, 43–192.
- Finley 1959 = Moses Finley, Technology in the Ancient World, *The Economic History Review* N.S. 12,1 (1959), 120–125.
- Finley 1965 = Moses Finley, Technical Innovation and Economic Progress in the Ancient World, *The Economic History Review* 18,1 (1965), 29–45.
- Flohr 2016 = Miko Flohr, Innovation and Society in the Roman World, Oxford Handbooks Online, Oxford 2016.
- Flohr 2020 = Miko Flohr, Fora and commerce in Roman Italy, in: Miko Flohr (ed.), *Urban Space and Urban History in the Roman World*, London 2020, 198–220.
- Frier/Kehoe 2007 = Bruce Frier/Dennis Kehoe, Law and Economic Institutions, in: Walter Scheidel/Ian Morris/Richard Saller (eds.), *The Cambridge Economic History of the Greco-Roman World*, Cambridge 2007, 113–142.
- Gassner 1986 = Verena Gassner, *Die Kaufäden in Pompeii*, Vienna 1986.
- von Gerkan 1922 = Armin von Gerkan, *Der Nordmarkt und der Hafen an der Löwenbucht. Milet*, Berlin 1922.
- Greene 2000 = Kevin Greene, Technological innovation and economic progress in the ancient world: M.I. Finley re-considered, *The Economic History Review* 53,1 (2000), 29–59.
- Holleran 2012 = Claire Holleran, *Shopping in ancient Rome: the retail trade in the late Republic and the principate*, Oxford 2012.
- Holleran 2017 = Claire Holleran, Finding commerce: the taberna and the identification of Roman commercial space, *Papers of the British School at Rome* 85 (2017), 143–170.
- Karvonis 2008 = Pavlos Karvonis, Les installations commerciales dans la ville de Délos à l'époque hellénistique, *Bulletin de Correspondance Hellénique* 132 (2008), 153–219.
- Keay/Millet 2000 = Simon Keay/Martin Millet, Falerii Novi: a New Survey of the Walled Area, *Papers of the British School at Rome* 68 (2000), 1–93.
- Maiuri 1973 = Amedeo Maiuri, *Alla ricerca di Pompei Preromana*, Napoli 1973.
- Mansuelli 1963 = Guido Mansuelli, La Casa Etrusca di Marzabotto, *Mitteilungen des Deutschen Archäologischen Instituts Römische Abteilung* 70 (1963), 44–62.
- Monteix 2010 = Nicolas Monteix, *Les lieux de métier: boutiques et ateliers d'Herculaneum*. Rome 2010.
- Musti 1990 = Domenico Musti, La Tradizione Storica sullo sviluppo di Roma fino all'età dei Tarquini, in: Mauro Cristofani (ed.), *La Grande Roma dei Tarquini*. Catalogo della Mostra, Rome 1990, 9–15.
- North 1990 = Douglas North, *Institutions, Institutional Change and Economic performance*. Cambridge 1990.
- Oleson 2008 = John Peter Oleson, *Oxford Handbook of Engineering and Technology in the Classical World*, Oxford 2008.
- Peterse 1999 = Kees Peterse, *Steinfachwerk in Pompeji*, Amsterdam 1999.

- Pleket 1967 = Harry Pleket, Technology and society in the Graeco-Roman world, *Acta Historiae Neerlandica* 2 (1967), 1–25.
- Pleket 1973 = Harry Pleket, Technology in the Greco-Roman World: a general report, *Talanta. Proceedings of the Dutch Archaeological and Historical Society* 5 (1973), 6–47.
- von Reden 2010 = Sitta von Reden, Money in Classical Antiquity. Key Themes in Ancient History, Cambridge 2010.
- von Reden 2012 = Sitta von Reden, Money and finance, in: Walter Scheidel (ed.), The Cambridge Companion to the Roman Economy, Cambridge 2012, 266–286.
- Scheidel 2009 = Walter Scheidel, In search of Roman economic growth, *Journal of Roman Archaeology* 22 (2009), 46–70.
- Sewell 2016 = Jamie Sewell, Higher-Order Settlements in Early Hellenistic Italy: A Quantitative Analysis of a New Archaeological Database, *American Journal of Archaeology* 120,4 (2016), 603–630.
- Terpstra 2020 = Taco Terpstra, Roman technological progress in comparative context: The Roman Empire, Medieval Europe and Imperial China, *Explorations in Economic History* 75 (2020), 101–300.
- Torelli 1999 = Mario Torelli, Paestum Romana, Paestum 1999.
- Verboven 2015 = Koenraad Verboven, The Knights who say NIE. Can Neo-Institutional Economics Live up to Its Expectation in Ancient History Research?, in: Paul Erdkamp/Koenraad Verboven (eds.), Structure and Performance in the Roman Economy. Models, Methods and Case Studies, Brussels 2015, 33–58.
- Wiegand/Schrader 1904 = Theodor Wiegand/Hans Schrader, Priene: Ergebnisse der Ausgrabungen und Untersuchungen in den Jahren 1895–1898, Berlin 1904.
- Wilson 2002 = Andrew Wilson, Machines, Power and the Ancient Economy, *The Journal of Roman Studies* 92 (2002), 1–32.
- Zuiderhoek 2006 = Arjan Zuiderhoek, The Ancient City. Key Themes in Ancient History, Cambridge 2016.

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