Introduction

Social network analysis has been extremely successful in many academic disciplines. No doubt part of its success is due to its wide applicability. It is hard to think of a social phenomenon that is not capable of being analysed in terms of network theory.\(^2\)

However, up until recently network analysis has hardly entered ancient history.\(^3\) With some exceptions, the use of network concepts has been rather limited. Of course, the use of the word ‘network’ has increased dramatically over the past decades, but it is normally only used in a loose sense, often hardly extending beyond the idea that there exist connections between more than two persons that cover a social or geographical distance. In itself there is little against such usage, but the explanatory power of network theory clearly remains underexplored. The mere identification of social networks in the ancient world seems not enough: there is after all nothing remarkable to the fact that people created ties with each other. The neglect is remarkable, given that network theory is relevant for issues that are very high on the agenda of ancient historians, such as social structure and

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\(^1\) Draft as of February 7th, 2012; not to be circulated further or cited without written permission of the author. My thanks to Miriam Groen for comments. This working paper incorporates a small amount of material written for other occasions. It forms part of a wider project on migration to Rome, for which see http://www.hum.leiden.edu/history/research/projects-umw/moving-romans-urbanisation-migration-and-labour-in-the-roman-principate.html.

\(^2\) Borgatti e.a. (2009) 892.

\(^3\) For recent studies employing network analysis, see Eidinow (2011) 11-12.
social mobility, or the adoption and diffusion of cultural practices. The present workshop thus fills a gap.

Here, I would like to discuss the applicability of network theory for the analysis of Roman migration, focusing on long-distance migration from the provinces to the city of Rome under the Principate. Migration offers a useful case, because the study of Roman mobility and migration is in many respects a new field. Not only is there much discussion about the sources to study the subject, but it is also a relatively open field that is still in search of organizing concepts. Moreover, in studies of migration in other periods (including that of our own times) network theories of various forms have been used, and the question then is how these may be employed in the study of Roman migration.

But before embracing network analysis it is necessary to pause. Application of network theory in ancient history is not in all respects easy, and the present discussion only scrapes the surface of what is possible.

Some modern network theories use imposing and rather forbidding methodologies in which either mathematical principles or empirical data (or both) are subjected to rigorous quantitative analysis. Although in some cases data can be created for the Roman world, this nevertheless seems to inhibit any serious application to the ancient world, for lack of the requisite sources. This is a serious problem indeed, but it does not exclude all applications. It needs to be realised that there is an extremely wide variety of applications in the social sciences: there are not only many types of networks, but also many types of analyses, some of which are better suited to the Roman world than others.

It should also be qualified what is meant by ‘suited’. Independent of the question which type of network analysis is used, it is in the Roman case normally not possible to test a model in any rigorous manner on the basis of empirical evidence.

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4 Boyd (1989) for networks of family and friends.
In ancient history models normally have a different status: they sometimes are even used simply to fill in the gaps of our knowledge. This leads to a difficult balancing act between sources and model. Adopting a new theoretical framework does not lead to the disappearance of this classic problem. Nor are there easy solutions, except by being aware of the dangers involved and by taking a pragmatic attitude. The applicability of network theory is to be judged on the basis of its usefulness: how much of the evidence fits in, to what extent can it explain unresolved problems, and to what extent does it create a meaningful perspective?

Sources

Given the difficult balancing act between sources and network theory, something more needs to be said about the sources to study long-distance migration to Rome. Out of the many types of sources that can be considered, two stand out: inscriptions and the evidence from stable isotopes. Their status relative to each other is subject to debate, but both share a number of problems.

Inscriptions form the main written source for the study of migration. The epigraphic habit culminated under the high empire, with the result that tens of thousands of inscriptions survive from Rome. Most of them are epitaphs, many of them consisting of hardly more than a name, others more elaborate affairs. Some inscriptions directly testify to migration, by explicitly specifying the origin of the person named - one might call these DOC-inscriptions, Denominazione di Origine Controllata. Others give indirect clues; in particular names can hint at foreign origin.

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5 See in general on such issues Morley (2004), discussing the classic formulations by M.I. Finley and K. Hopkins.
The epigraphical material forms for more than one reason an excellent source for research. One is the simple fact that there are so many inscriptions, another that they circumvent a large part of the disadvantages of the literary sources, yet another that they offer more direct testimony of individuals.

At the same time the epigraphic material is hardly free from problems.

The first point is the lapidary (literarily!) character of the texts: they normally testify to individual movement only, by mentioning that someone originates from elsewhere, without providing any further information. One can usually only guess at the motivation for the move of place. As individual attestations in themselves have little value, the natural response is to analyse inscriptions in series. This is certainly justified, but the problem is that epigraphy is just as much about self-representation as about objective historical recording. The erection and contents of epitaphs, which form the main type of epigraphical sources, is dependent on patterns of commemoration, and it is well-known that type of burial, the putting up of a written record and what was recorded on it were all heavily dependent on cultural preferences. To be somewhat more specific: one fundamental problem in the study of Roman sources on migration is that identity was not expressed primarily in ethnic terms: legal and social status were considered more important. It seems that there were no hard and fixed rules in what contexts people decided to mention their origin. In many inscriptions that lack a DOC-designation there are hints that people came from outside, yet it is also clear that these hints should not be confused with facts. The case of Greek cognomina serves as a sufficient warning: they were not only used for people originating from the Greek East, but subject to construction. The natural response among epigraphers has been to employ hard criteria to establish who is a migrant and to exclude all uncertain cases.\textsuperscript{6} The approach is understandable, but by limiting oneself to the certain cases, a great deal of that other material is left out of account.

\textsuperscript{6} E.g. Wierschowsky (1995) 24-29.
In analysing inscriptions in bulk, scholars make themselves vulnerable to the hazards of patterns of epigraphical recording and surviving. Given the biases in the epigraphic material creating statistics is at best not fruitful, and consists of pseudo-science at worst. The point has often been made, but requires repetition, as this type of analysis seems to continue unperturbed. We know that the sources are biased, but the simple fact remains that it is impossible to establish with any exactitude in what ways the biases run. In creating statistics there is also the additional problem of small sample size: despite appearances the number of attestations relative to the total number of inscriptions (let alone to the underlying population) is extremely small.\(^7\) Moreover, breaking the epigraphic material down into smaller subsets almost invariably leads to small-number statistics that are even within the data-set itself meaningless.\(^8\) Statistics thus have only meaning within a sample, of which we know that it is skewed in ways that are beyond reconstruction. They might perhaps help to understand the nature of the sample, but certainly not that of the underlying population.

The second type of source stems from skeletal remains. Analysis of stable isotopes is quite likely to become the main source of new information in the near future. It is based on the principle that during the growth of teeth and bones the food and water that is consumed produces a chemical profile that is geographically specific. By comparing ratios of stable oxygen or strontium isotopes in teeth and bones it is possible to establish the extent of homogeneity within a sample. Individuals with a markedly different profile can be assumed to have been grown up elsewhere and hence to be immigrants.\(^9\) With the help of a reference population (either ancient or modern) or a hydrological profile of

\(^7\) For example, in case of Gaul, Wierschowski (1995) works with 640 inscr. containing 659 persons documenting 680 Mobilitätsfallen. This may seem a high number, especially in view of the general paucity of ancient sources. But the estimated total number of epigraphically documented names from the same area is ca. 13,000, and the population is estimated at 5 million.

\(^8\) I note in passing that statistical tests of significance are hardly ever applied.

\(^9\) Killgrove (2010a) 48.
specific regions, it is in some cases possible to add specificity and determine the origin of the immigrants.

Isotopic analysis is extremely important, and bound to become ever more prominent in studies of Roman migration. It is exciting, because it is new, it seems to work, and seems not all too costly or time-consuming. One of the major advantages is that the analysis can be conducted on basis of already excavated material in museum collections. But it would be naïve to expect too much of it and it would be a grave mistake to take it as hard factual evidence that speaks for itself. Apart from technical problems in the analyses (some incidentally quite formidable) major interpretative issues are raised. In fact some of the problems are remarkably similar to those of the epigraphic sources.

At present there are relatively few isotopic studies available, and only two that are directly relevant for the study of migration to the city of Rome. But publications increase at such a speed that that problem is likely to be overcome in the near future. What nevertheless cannot be remedied is the scattered nature of the data: all studies concern very specific samples based on a couple of tens of specimina. It remains therefore difficult to generalize from the samples and move beyond the simple observation that migration was quite normal – a nice corroboration of what we thought already, but no more. Furthermore, the outcome of the technical analysis is not as straightforward as one would think: foreignness turns out to be a matter of degree rather than something absolute. A sample produces a spectrum of isotopic values whose outliers are considered to be immigrants, but this leaves at least potentially room for ambiguous cases. In addition, the method is much better at determining the presence of outsiders than at establishing where the migrants actually came from, as widely dispersed regions might share the same isotopic

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10 I hasten to say that the isotopic studies themselves invariably display a great awareness of the limitations of the research, and tend to address the problems in a rigorous manner. For what follows see also Bruun (2010).

profile. In the absence of full information, the choice of a reference population (ancient or modern) remains a hazardous affair. And again, as with all studies based on burial sites, cemetery populations show biases (few infants and young children, fewer women than men) of which it is impossible to determine whether they also occurred in the population or are the product of culturally determined preferences in burial. Lastly, in the city of Rome under the Principate many if not most people were cremated rather than inhumated. Although this certainly does not mean that skeletons are unavailable for analysis, the representativity of the findings for establishing patterns of the general population is severely limited. For example, the *columbaria*-populations that are so well-known from epigraphy, cannot be analysed through isotopes.

There is in sum no shortage of sources, but all the sources are skewed. Both inscriptions and isotopes show problems that are in fact very similar. The fundamental problem is that in the absence of knowledge about the underlying population there is no way to determine in what direction the sources are biased. These problems do not imply that the sources should be discarded - rather the reverse. But we have should not depend solely on them for our analysis, and all sources should be treated with care. They need a theoretical framework to be understood. It is here that the difficult balancing act starts.

A weak sense of community

It is undeniable that Rome at the time of the Principate was full of immigrants. We may define immigrants for our purposes as people (slave, freed, free) who were born outside the city of Rome and settled in the city on a permanent or semi-

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12 The subject would need more research; for some comments see Hope (2009) 81-82: shifts from inhumation to cremation (dominant in Rome by the 1st cent BC), back to inhumation (from the early 2nd cent AD onwards, till it was universal in the Roman empire in the third century.).

permanent basis. We do not know their numbers, but it seems safe to say that a large part of its population originated from elsewhere. They came from Italy and from the provinces, they comprised of men, women and children of all social statuses, from senators to destitute peasants; and people of all legal statuses, from Roman citizens to peregrini to slaves. Rome had become, in every sense of the word, a cosmopolis.  

According to a traditional argument, immigrants in Rome lived clustered in their own communities. So, La Piana, in his massive study of immigration to Rome could write in 1927:

It is to-day, and has always been everywhere, the natural tendency of a body of immigrants from the same nationality in a foreign city to live together as much as possible in the same district, where they can reproduce the main characteristics of the social and religious life of the country from which they came. They form sections of their own, separate to a certain extent from the rest of the population, and keep their own language and customs at least as long as the current of immigration remains active. This is a universal phenomenon, of which we have evidence on a large scale in the numerous communities of immigrants from Europe and Asia in the large cities of America. There are reasons for believing that the foreign populations of ancient Rome were no exception to this rule, and that they yielded to this tendency so far as the social and economic conditions of the city allowed them to follow this instinctive need.  

Dated though it is, La Piana’s statement is useful because it explicitly and concisely summarizes a type of argument that still pervades the scholarly literature. The existence of closed immigrant communities implied a lack of integration: people stuck to their own cults, languages and customs.

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14 Noy (2000); more briefly Dresken-Weiland (2003); Killgrove (2010a).
15 See Edwards and Woolf (esp.) (2003), esp. the paper by N. Morley.
16 La Piana (1927) 204.
17 Traces can be found in for example MacMullen (1993) and Noy (2000) 152 (though both with much more caution and sophistication). The radically positivistic
Migration to Rome was substantial, but at the same time, it is clear that migration patterns differed significantly from those of La Piana’s (or our) days. In the case of Rome, a significant part of the migration was forced. Slaves obviously had no free choice of residence and their basic point of reference was their *familia*. Migration was diffuse: we do not see migration waves or chain migration. Migration was also socially rather heterogeneous: it certainly was not confined to the poorer segments of society who left home in search of a better life. Instead, many of the free migrants might be described as stakeholders in the empire: they went to Rome because they had an interest in being in the centre of the empire. For many migrants, Rome, as capital of the empire, will have formed familiar territory even if they had never been there before.

There are on closer inspection many reasons to believe that (with the notable exception of the Jews) Rome’s immigrants had only a weak sense of community. To the extent that we are able to see, dispersed rather than clustered residence was the norm.¹⁸ Migrants did not occupy specific economic niches by monopolizing specific trades or jobs. Ethnicity did not function as a primary marker of identity: epitaphs show a much greater propensity to record social ties, occupation, or legal status than origin. Foreign cults did not serve as local community centres for migrants.¹⁹ Migrants can be assumed to have had at least a rudimentary knowledge of Greek or Latin. Although the status of Greek is a complicated one, the crucial point is that linguistically migrants will have been able to interact with others. It is unlikely that immigrants will not have stood aloof from the rest of the urban population.

¹⁸ Approach of Lampe (2003) is squarely based on the assumption of clustered migrant communities. For a critique to the ‘ethnicity forever’ approach in modern migration studies, see Lesger, Lucassen and Schrover (2002) 45.
The question then is to what extent network theory helps in understanding the position of immigrants in Rome. There are three major issues that lend themselves to analysis: the nature of their mobility, the form of their community, and the question to which they were integrated in society.

**Long-distance migration**

The first issue is the nature of the mobility. Network theory brings two major advances to the analysis of physical streams of migration: it introduces a systems approach to migration, and it points to the importance of networks in sustaining mobility. These two phenomena are related.

First some background. In a highly influential article published in 1978, Tilly created a typology of migration based on what he called the social organisation of the move. He distinguished between four forms of migration: local migration, circular migration, chain migration, and career migration.\(^{20}\) The major benefit of Tilly’s typology was simply its wide use, which enhances possibilities of comparison. At the same time, it should be realised that his categorisation is based on the application of multiple criteria: it is partly the type of move, partly the geographical space within which someone moves, and partly the motives for movement that determine its type.\(^{21}\) It is therefore not surprising that there exists overlap between the various categories, and that some forms of migration can be categorised into more than one type. Specific types of migration can also mutate from one form to another: a circular system can become a chain once a substantial number of people decides to stay at the place of destination.\(^{22}\)

\(^{20}\) Tilly (1978). As the typology did not cover all the major distinctions (as Tilly (1978) 56 himself already remarked), some migration historians have subsequently added two further types: colonization and coerced movement - see Page Moch (2003)\(^2\).

\(^{21}\) See likewise Lesger, Lucassen and Schrover (2002).

\(^{22}\) Tilly (2005) 167.
In the Roman case, the use of Tilly’s typology is limited. It is clear that all of the four types of migration occur can be found in one form or another. Nevertheless, many of the known forms of migration can only with difficulty be classified into one of these types for the simple reason that too little is known about them: mostly we see people at the point of destination, rather than on the move.\(^{23}\) It may be of some consolation that related problems occur in later periods. As Tilly himself observed: ‘[t]he sorts of administratively produced evidence we have concerning European migration do not permit us to distinguish easily among local, circular, chain, and career migration’.\(^{24}\) Be that as it may, in the Roman case the cost of application is larger than its benefits: too much energy will have to be devoted to classification, on the basis of too little knowledge.

But the problem with the typology goes deeper. It is bound up with the problems inherent in defining migration, Roman or otherwise. Migration forms part of a wider spectrum of geographical mobility. Geographical mobility is the term that covers all movement in space, including short trips, random visits, travel, and tourism. It covers an extremely wide spectrum. Migration concerns the more permanent parts of the spectrum, forms that consist of patterned movement and/or prolonged stays. The question than is how this permanency is defined. Formulated in a different way, any demarcation of migration within the spectrum is bound to be to some extent arbitrary and to create boundary cases.

In order to circumvent these problems of classification and definition, in recent years migration scholars have changed tack. They have started to advocate what they call a systems approach. They have moved away from a static approach of migration as a one-time event and have emphasized the interdependency between various forms of mobility instead.\(^{25}\) A systems approach offers several advantages over an approach that focuses only on a part of the system (i.e. the destination). Fawcett lists the advantages:

\(^{24}\) Tilly (1978) 56.
\(^{25}\) Boyd (1989) 641.
1. It directs attention to both ends of a migration flow, with a corresponding necessity to explain stability and mobility in each location.

2. It examines one flow in the context of other flows, or one destination in relation to alternative destinations.

3. It highlights the diverse linkages between places, including flows of information, goods, services and ideas, as well as people.

4. It suggests comparisons between places, thus calling attention to the disparities and imbalances that are a source of energy in the system.

5. It brings into focus the interconnectedness of the system, in which one part is sensitive to changes in other parts.

6. It reinforces the view of migration as a dynamic process, a sequence of events occurring over time\textsuperscript{26}

Even before the systems approach began to be advocated, in one form of Tilly’s typology the analysis of networks was already very prominent. Chain migration is a phenomenon where moves are induced by people already at the destination who give aid, information and encouragement.\textsuperscript{27} In this form of migration, networks play a prominent role. The greater the distance and the cost of the moves, the more reliance on help of people who live already at the point of destination; chain migration is a way to combat the costs involved. As the way information traverses through the chain is crucial, networks form an integral part of this form of migration.\textsuperscript{28} There is usually a large number of experimental moves, and, in consequence, much return migration. Chain migration can lead to very particular combinations of origins and destinations separated by a great distance: people from one particular village might end up in one specific quarter of a specific city at the other side of the globe. As people already at the destination help with housing and jobs, there is a strong tendency to the formation of clusters at destination. This is often accompanied by economic niche formation: the monopolisation of particular trades.

\textsuperscript{26} Fawcett (1989) 672-673, based on earlier work of the same author.
\textsuperscript{27} Lesger, Lucassen and Schrover (2002) 29-30 for some historiography.
\textsuperscript{28} Boyd (1989) 639.
As further studies showed, networks were not only crucial to chain migration, but for other forms of migration as well.\textsuperscript{29} Networks that transmit objects, information and people through intermediaries are in fact essential. Interpersonal trust plays a very large role, engaging ‘their members in webs of rights and obligations’.\textsuperscript{30} Examples where people move in a vacuum, all on their own, are limited, and usually concern cases where people have already an idea what to expect at destination. A related finding is that migration is a often a process of stages. People normally move in more than one move through the settlement hierarchy rather than directly. Moreover, many people move in both directions, and rather than regarding return mobility as failed migration, it is central in sustaining mobility.

Combining the two contributions, migration streams can than be taken to consist of various interlocking networks at several levels – a network of networks, as it were. The important implication for the study of long-distance migration is that the attention is redirected from the destination (Rome) to various stages in the process. We should also look for emigration out of Rome, for forms of smaller scale mobility, and investigate the question how people move through the settlement hierarchy. We need to look beyond – say – the Egyptians attested at Rome, to Romans in Egypt, and to people moving within Egypt.

\textbf{Community formation}

The second subject to discuss is community formation. In the previous sections, scepticism was expressed about the extent to which immigrants in Rome can profitably be described as a migrant community. The notion is based on the

\textsuperscript{29} The fact that Lesger, Lucassen and Schrover (2002) felt the need to emphasize that there also forms of what they call non-network migration shows how dominant networks are to current thinking about migration.

\textsuperscript{30} Tilly (2007), quote at 12.
incorrect assumption that closed migrant communities are natural phenomena. If anything, the sources rather suggests a weak sense of community among migrants living in Rome. Does network theory enable us to move beyond that idea and probe deeper?

In traditional studies of Roman social structure the exclusivity of social groups forms a major issue. Access is studied by looking at criteria for membership and possibilities for social mobility. Such an approach seems more useful to study groups that have relatively well-defined boundaries (as in the case of elites, where such boundaries are institutionally defined through membership criteria). As migrants form by contrast very ill-defined groups, the approach is bound to lead into a blind alley. Network theory seems better suited because it focuses on the structure of the network and the nature of the ties rather than on by and large invisible group boundaries.

With regard to these, a number of basic principles have been formulated in network analysis that seem useful. It is especially Granovetter’s Strength of Weak Ties (SWT) model that is relevant. Its attraction for our purposes is that it works with simple binary opposites that are good to think with and obviate the need for sophisticated data.

Granovetter introduced in 1973 a principle that did not so much concern the structure of networks but rather the nature of the ties between members. The starting point formed a distinction between strong and weak ties, expressed in degrees of social relation: a crucial distinction between friends (strong ties) and acquaintances (weak ties) was made. The higher the prevalence of strong ties, the more overlap in the network: participants tend to befriend each other’s friends. Put differently, network density is much higher. The weaker the ties, the less dense the network becomes. Networks consisting of close friends show much

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overlap, and therefore are more closed, whereas networks consisting of people who know each other vaguely are bound to be more open.

The crucial concept in Granovetter’s model is that of a bridge. Bridges are defined as ‘a line in a network which provides the only path between two points’. Given the overlap in strong ties, the latter are normally not bridges. Bridges are normally weak ties, though not all weak ties are bridges. Removal of weak ties does therefore more harm for the transmission of ‘whatever it is that is diffused’ than removal of strong ties. As Granovetter clarified in a later article:

The argument of SWT implies that only bridging weak ties are of special value to individuals; the significance of weak ties is that they are far more likely to be bridges than are strong ties.33

Granovetter’s argument was that paradoxically a network with weak ties performs in some respects much better than a well-integrated network of strong ties. A network with many weak ties is better at diffusing knowledge and adapting itself.

Granovetter’s insight is that ties that are weak in the relational sense—that the relations are less salient or frequent—are often strong in the structural sense—that they provide shortcuts across the social topology. Although casual friendships are relationally weak, they are more likely to be formed between socially distant actors with few network “neighbors” in common. These “long ties” between otherwise distant nodes provide access to new information and greatly increase the rate at which information propagates, despite the relational weakness of the tie as a conduit.34

Granovetter’s focus was initially clearly on the weak ties. In a later explanation, he offered some more thoughts about the counter-part, the strong ties.

32 Granovetter (1972-1973) 1364. Next to this, Granovetter developed an argument about local bridges, which is not relevant here.
33 Granovetter (1983) 208.
34 Centola and Macy (2007) 704.
Weak ties provide people with access to information and resources beyond those available in their own social circle; but strong ties have greater motivation to be of assistance and are typically more easily available. I believe that these two facts do much to explain when strong ties play their unique role.\textsuperscript{35}

Granovetter’s model has been highly influential, not only in modelling networks, but also in understanding social relations. In particular, there is a close connection between Granovetter’s SWT-model and the concept of social capital and hence even with the general notion that establishing and using connections is central to the way societies are structured.\textsuperscript{36} It therefore hardly comes as a surprise that the model has had resonance in migration studies, where community formation is one of the central issues. At the same time migration historians (and others) have added a number of refinements.

Granovetter himself already observed that the distinction between networks with weak ties and strong ties might be class-specific: lower-class networks have a higher propensity to rely on strong ties, and the insulated nature of such groups helps to explain why it is difficult to escape from poverty.\textsuperscript{37} This distinction has also been applied to understand variations between different migrant groups in contemporary society.\textsuperscript{38} Better-skilled/educated migrants have less propensity to rely on fellow-countrymen. A crucial factor is of course language-acquisition: better-educated migrants are inherently more likely to speak the language of their host country. One may add that higher up in the social hierarchy status tends to override ethnicity. Sometimes there is even a deliberate choice to stay aloof from co-patriots.\textsuperscript{39}

\textsuperscript{35} Granovetter (1983) 209.
\textsuperscript{36} Borgatti e.a. (2009) 893.
\textsuperscript{37} Granovetter (1983) 210, 213-214, though the class-specificity does not always hold. The difficulty with the distinction is that some elite groups may also be characterised by strong ties.
\textsuperscript{38} Gill and Bials (2011) 243, though again the distinction does not hold always.
\textsuperscript{39} Gill and Bials (2011) 245-246.
The class-distinction also coincides with a different use of institutions. Higher-status migrants tend to make more use of formal institutions, including those of the host country. Lower-status migrants tend to pool resources informally. Crucial information like job openings is usually passed informally rather than through official institutions.\footnote{See also Boyd (1989) 652: in contemporary illegal immigration informal networks are vital.} In the case of Poles living in British cities, their network also functioned as an informal skill pooling system – ‘one knew a bit of English, another did something else. And so one helped another. And then I helped fix their car because I am a mechanic. You know, you helped one another out.’ This exchange formed a sort of barter system.\footnote{Gill and Bialszi (2011) 245.}

By contrast, the same case study found that high socio-economic status migrants (...) display relative independence both from kinship ties and loose co-ethnic associational ties, but may be viewed as more institutionally dependent.\footnote{Gill and Bialszi (2011) 246.}

A second addition to Granovetter’s SWT-model is the notion that networks are highly dynamic. Especially in the case of migrants, networks are created very quickly:

the necessity to build up one’s support network for a lower socio-economic status migrant is imperative in functioning and adapting in the host community.

Because of this necessity, networks must be created very quickly.\footnote{Gill and Bialszi (2011) 246.}

Networks are easily formed, but also easily dissolved.\footnote{Gill and Bialszi (2011) 246} They are ‘are often highly localised, and formed and disbanded relatively quickly’, as Gill and Bialszi emphasize:
Recent work in migration and transnational studies emphasises the ways in which migrants’ networks change upon arrival in their destination countries (...). A range of empirical work has demonstrated that migrant networks are by no means static, and that ties both to origin countries and to fellow migrants change once larger migrant communities are established and migrants themselves begin to settle in their destination countries.\textsuperscript{35}

Especially when class-specificity and the dynamic nature of networks is factored in, the SWT-model seems a good way to approach the immigrants of Rome. We may envisage their networks to be quickly formed, but also to be quickly dissolved. Upon arrival migrants suddenly find themselves to originate from the same nation, and this may temporarily override distinctions of status. But ties to compatriots quickly give way to ties to others. SWT helps to understand the weak sense of community among the immigrants, which can then be described as a group characterised with a low network density and a significant number of bridges to others living in Rome. The immigrants that stem from somewhat higher strata of society have a propensity to make use of formal institutions rather than to rely on self-help. It is here that we also might locate that quintessential Roman institution that so far has not been mentioned: patronage.

\textbf{Integration}

The last topic to be discussed is the question of integration. Acculturation remains crucial to the study of migration, but it also remains the most difficult subject to conceptualise. It is perhaps best to approach the issue not from the receiving side of the host society, but rather from the point of view of the immigrants. We may then look at what has been somewhat awkwardly described as ‘successful and

\textsuperscript{44} Gill and Bialsì (2011) 242.
\textsuperscript{45} Gill and Bialsì (2011) 241.
unsuccessful place-making processes: a wide variety of strategies that may but need not necessarily lead to integration into the host society.

With regard to the Roman Empire, acculturation theory of the past two decades has offered a model in which people constructed their identity through selective appropriation of elements of available cultural repertoires. Scholars have emphasised that the outcome of such cultural dialogues might lead to rather hybrid results rather than to purely Roman products, and that well-demarcated cultural repertoires should be regarded as analytical categories rather than as existing in reality. What is also important is that this type of cultural interaction was highly asymmetrical: Roman culture formed the dominant force. At the same time Roman culture was fundamentally open: it could be joined by outsiders, and it could be redefined in the process. In a presumably deliberately circular definition, Woolf has defined Roman culture as

the range of objects, beliefs and practices that were characteristic of people who considered themselves to be, and were widely acknowledged as, Roman.

But what counted as ‘Roman’ changed over time.

Becoming Roman was not a matter of acquiring a ready-made cultural package, then, so much as joining the insiders’ debate about what that package did or ought to consist of at that particular time.

Although this model of cultural interaction has not explicitly been applied to the city of Rome, the process of becoming Roman must have been just as important in the heart of the empire as it was elsewhere. Arguably it was even more important, for the city was one of the crucial places where Roman identity was defined. Of course, not everyone will have participated to the same degree, and

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46 The somewhat awkward term used by Gill and Bialsi (2011) 241.
migrant identities were certainly not completely obliterated. But the power of Roman culture will have been alluring. Migrants might have been involved to greater or lesser degrees in becoming Roman, but at the same time this process changed what was considered to be Roman. At the heart of the empire, Roman culture became cosmopolitan.

There can be little doubt that this model of acculturation is of great help to understand what went on in the city of Rome. But a general problem remains, concerning choice and motivation. In an attempt to restore agency to the participants that was denied to them in older versions of the romanisation-paradigm the participants were turned from passive recipients of Roman culture into something that might be characterised as shoppers in a cultural supermarket. They are assumed to create an identity by making highly selective choices from the cultural repertoires that are available. But what, then, governs their choices? The model of selective appropriation is in danger of being confused with free choice. Given the fact that the outcomes are relatively homogeneous, individual decision-making is surely not the best way to describe the process.

It is here that network theory offers help. In the first place, the adoption of certain practices and behavior might be described as ‘contagious’.

much of what we know is not independently discovered; rather, we obtain the information from others. It is the same with collective behavior. Strikes, fads, social norms, and urban legends do not usually become widespread because individuals independently and spontaneously come up with the same idea or belief. We adopt the idea from someone else who is acting on it and then pass it on to others. Behaviors, like diseases, can be contagious.

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49 For the construction of identities in the context of networks, see also the description of the work by Harrison White by Eidinow (2011).
50 Centola and Macy (2007) 705.
The second point concerns a central axiom of network theory, which is that the nature and the structure of the network matters for diffusion.\textsuperscript{51} This may seem obvious, but it is not.

Whereas traditional social research explained an individual’s outcomes or characteristics as a function of other characteristics of the same individual (e.g., income as a function of education and gender), social network researchers look to the individual’s social environment for explanations.\textsuperscript{52}

A network perspective helps to avoid the dangers of an ‘undersocialised view’ (i.e. free choice) and an oversocialized view (i.e. passive recipients).\textsuperscript{53}

When it comes to diffusion, it is again Granovetter’s SWT-model that has dominated the discussion. Scholars of diffusion have emphasised that networks having weak ties (or perhaps better: bridges) have many advantages in increasing the speed of whatever it is that is diffused.

Studies of diffusion dynamics have demonstrated that the structure (or topology) of a social network can have important consequences for the patterns of collective behavior that will emerge (..). In particular, “weak ties” connecting actors who are otherwise socially distant can dramatically accelerate the spread of disease, the diffusion of job information (..), the adoption of new technologies (..), and the coordination of collective action (..).\textsuperscript{54}

The SWT-model helps to understand processes of acculturation in Rome by placing emphasis on the weak ties in the immigrant’s networks. If we assume that immigrants were only loosely organised along ethnic lines and had many ties connecting them to the rest of the urban population, rapid adaption to the new society becomes understandable.

\textsuperscript{51} Borgatti e.a. (2009) 893.
\textsuperscript{52} Borgatti e.a. (2009) 894.
\textsuperscript{54} Centola and Macy (2007) 702-703.
Conclusion

If we want to take network analysis seriously, we should try to move beyond the mere identification of networks in the ancient world. Instead, we should try to define to what extent network theory helps to understand ancient society or contributes to the formulation of new questions. At the same time, we should not expect too much of it. The approach should be utilitarian and pragmatic: network theory offers a toolbox, not complete solutions.

I argue that network theories offer important contributions to the understanding of Roman migration. In the case of the analysis of migration streams, a systems approach combined with the notion that almost all forms of migration are dependent on networks offers a good alternative to an exclusive focus on long-distance migration. In the case of community formation, Granovetter’s SWT-model offers a good way to describe the weak sense of community that seems to prevail among Rome’s migrants. When it comes to the issue of their integration into the society of Rome, a network perspective is helpful to circumvent the vexed problem of agency and describe processes of quick diffusion.

Network theory thus helps for each of the three subjects. But it does so in different ways. A systems approach to migration has close affinities to network theory, but the idea that various forms of mobility are interrelated and form a dynamic whole is normally not subjected to more rigorous analysis in network terms. The weak sense of community can very well be described in the terms of the SWT-model. In the case of acculturation, there is already a model available to describe what went on in the Roman world, but here network theory helps to solve a particular problem and understand the nature of the process. Perhaps the largest contribution of network theory is that it points to the fact that the three issues are closely related to each other.
Network theory, then, matters for the conceptualisation of Roman migration. This is of real importance, because we are entering by and large uncharted waters. Before jumping head-first in the pool of our highly deficient sources, we’d better learn to swim first.

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