

Counting Land Transactions
*The Perils and Gains of Quantitative Approaches
to Late Medieval Land Markets, Tested on Wine-Growing
Villages Near Vienna, 1454–1513*

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Abstract: In order to evaluate activities and mechanisms pertaining to medieval land markets, numerous case studies have been conducted that collect and analyse quantifiable data – above all, transaction numbers. Such quantitative approaches have been subject to particularly rigorous discussion in the context of the land-family bond debate. Although originally focused on much broader questions, this extensive debate has exerted significant methodological influence on land market research. In this contribution, these methods are examined critically by applying them to a case study of three Lower Austrian wine-growing villages. This allows for an in-depth discussion of the challenges of their implementation as well as their methodological issues and potential. The assessment of manorial sources from the Klosterneuburg monastery reveals that the quantitative evidence of an active land market for the 15th and early 16th century is ambivalent. These results suggest a rather low tenurial continuity in the case of families, yet also some major uncertainties around this. The analysis further highlights theoretical and source-related reservations and methodological constraints.

Keywords: Late Middle Ages, Economic History, Manorialism, Land Market, Tenure, Transactions, Land-Family Bond

Studies on medieval land transactions and land markets are based on a broad range of methods. On the one hand, qualitative analyses of the regional institutional framework and the agricultural setting are considered central elements of investigation.¹ On the other hand, quantitative approaches have been of great importance in this

¹ Cerman, “Bodenmärkte”, p. 148.

field of research from the very beginning.² For the purpose of evaluating activities and mechanisms on land markets, quantifiable data – prices, but above all transaction numbers – have been collected and evaluated in numerous case studies. In order to include additional regions in the research, there has been an explicit call for quantitative reconstructions of land markets.³ By way of addressing this research gap, the project under which the present study is being carried out aims to provide case studies of quantitative evaluations of property transfer registers.⁴ In this contribution, I intend to approach this task with due caution. Quantitative approaches have been subject to particularly rigorous discussion in the context of the land-family bond debate. Although originally focused on much broader questions, the debate has exerted a significant methodological influence on land market research in its narrower sense. I will reflect on these methods in the context of the manorial sources of three Lower Austrian wine-growing villages by focusing on their quantitative analysis, taking into account both the possibilities and shortcomings of this.

Quantitative Methods and the Land-Family Bond

An obvious point of departure for the quantitative assessment of transactions and possible market integration would arguably be price movements. Such an approach was most prominently taken by Giovanni Levi, who used sources pertaining to a seventeenth-century Piedmont village. His conclusions were inventive and instructive. By interpreting prices, he did not establish an anonymous market, yet he discovered hierarchical relationships and reciprocities.⁵ Nevertheless, gaining reliable data and building comparable land price series for medieval times poses a formidable challenge due to frequently incomplete and ambiguous records. Even if land prices are properly declared in the source material – instead of being circumvented with phrases such as *a sum of money* –, the data does not usually allow comparison of the plots' values with re-

2 Looking even further back, cf. Razi, Smith, *Historiography*, pp. 1, 8–9 and 18, which mentions the innovative “systematic statistical analysis” of Frances Davenport in 1906 as having been “ahead of its time”; and the “quantitatively pioneering” work of Rosamond Jane Faith, including her study on the “family land-bond over the course of the late Middle Ages”, Faith, *Peasant Land-Market*, table 4, pp. 337–341; Faith, “Peasant Families”, chapter II, pp. 86–92. For continental Europe: Fossier, *La terre*, e. g. pp. 451–452; Genicot, *Art und Ausmaß*, also working towards a quantitative assessment of the mobility of land (cf. p. 269). – On the early historiography on medieval land markets at least since the 1960s and 1970s, cf. Smith, *Land, Kinship*; Razi, Smith, *Historiography*; Feller, *Quelques problèmes*, p. 21; Van Bavel, *Land Market*, p. 121; Dyer, *Peasant Land Market*, pp. 65–66.

3 Van Bavel, “Organization”, p. 46.

4 FWF project no. P 26071, Abstract: “(...) Die Teilprojekte werden sich vordringlich mit einer quantitativen Auswertung von Besitztransferregistern beschäftigen, die Rückschlüsse auf die Häufigkeit und Typen von Landtransfers sowie auf die beteiligten Individuen erlaubt. (...)”.

5 Levi, *Das immaterielle Erbe*, pp. 75–105.

gard to soil and crop quality, location and area. Thus, it is also difficult to contextualise the documented transactions.

Laurent Feller expressed a rather pessimistic view of the potential of medieval land price analysis: “(...) établir le prix de l’unité de surface pour un lieu donné à une période donnée est une véritable gageure et la construction d’une courbe représentant l’évolution des prix semble une entreprise vouée à l’échec”.⁶ Transaction numbers have therefore often been used instead of prices as a means of interpretation in pre-modern quantitative land market research.

Such approaches have been extensively discussed in the context of the vigorous land-family bond debate. While the interpretation of the figures as indicators for families’ emotional attachment to land and the further application of this idea has raised much scepticism,⁷ the debate has contributed significantly to the methodological question of assessing land transactions in general. Rarely have specific source issues been so assiduously identified and discussed. This gives rise to the question of whether these methods are actually applicable to the present case study of land transactions in late medieval wine-growing villages in Lower Austria. Are the methods still useful? And which questions are they actually able to answer?

The debate

In 1978, Allan Macfarlane argued that the transformation of English society from feudalism to capitalism was already underway in late medieval times. He identified English society not as a peasant society but as an individualistic one. Besides primogeniture, the practice of written wills and mortgaging to non-kin, one of his main arguments for his claims was his observation of weak “sentimental connections between kin and land”.⁸ In effect, Macfarlane based his conclusions on the existence of an active land market indicated by frequent alienation of land out of the family.⁹ “Property was very mobile and there seems to have been no strong attempt to ‘keep the name on the land’ as in some other agrarian societies”.¹⁰ In contrast to this, Eastern Europe (Russia and Poland) constituted the antithesis of England for him. He described communities in Eastern Europe in which heirs had strong rights to their land and where the current owners were only “temporary managers” of the holdings.¹¹ In ‘classical’ peasant socie-

6 Feller, *Quelques problèmes*, pp. 22–23.

7 Smith, *Some Issues*, p. 59: “(...) there are great difficulties in inferring emotional attitudes or ideals from structures or actions”. See also French, Hoyle, “English Individualism”, pp. 620–621.

8 Hoyle, “Land-Family”, p. 151; French, Hoyle, *Character*, pp. 17–19. – Cf. Macfarlane, *Origins*, pp. 123–124.

9 *Ibid.*, pp. 86–87 and 93.

10 Macfarlane, Harrison, Jardine, *Reconstructing*, p. 158.

11 Macfarlane, *Origins*, pp. 18–20.

ties such as these, no relevant land market existed, and mortgaging was considered to be socially unacceptable.¹²

However, both theories postulated by Macfarlane have been contradicted in more recent studies: researchers have actually found that the land-family bond in England had various strengths, and that peasantry on the continent was not uniform, either.¹³ Moreover, the connections between land-family bonds, active land markets and peasant societies have been questioned on a more fundamental level. Jane Whittle, for instance, concludes that individualism and the land-family bond were never actually opposites at all.¹⁴ On the one hand, staying on the same plot of land may have been based on a rational choice that went beyond the emotional reasons associated with familial bonds to land;¹⁵ on the other hand, selling land may have been inevitable, despite emotional ties to the property. Furthermore, observed throughout the centuries, the development of land markets does not appear to have led to a higher proportion of alienations and weaker land-family bonds. It was rather prices and availability that provided the incentives for retaining land.¹⁶

In summary, it can be concluded that the emotional attachment of families to their land cannot solely be measured by counting transactions merely based on evidence from medieval manorial sources. However, even though the interpretation of such numbers may not be as far-reaching as once suggested, the methods behind the measures and key figures used to approach the land-family bond have still been applied to the evaluation and comparison of characteristics, patterns and activities of land markets in a narrower sense. In the following section, I aim to identify the methods and accompanying key figures and examine how these were developed in the scientific discourse over time. This evaluation illustrates where the approach's essential concepts originated and how they impacted on land market research.

12 Macfarlane, *Origins*, p. 23.

13 Cerman, "Bodenmärkte", p. 129, note 15.

14 Whittle, "Individualism", p. 26: "the absence of land markets (... was) the result of tenurial restrictions rather than the emotional attachment of peasants to 'family land'"; and on p. 62: "market involvement (... was) compatible with peasant society"; "(...) when individual choice is available it can be used to keep land in the family, as well as alienate it" – Summarising Whittle's position: Clarke, "Land-Family Bond' in East Sussex", pp. 341–342.

15 Remaining on familiar land, where every corner and every stone is well known, saves transaction costs. Buying new land, on the other hand, meant paying transmission fees, and implied information asymmetries. Those costs and risks could be reduced if land circulated within the established household.

16 Ghosh, "Rural Economies", p. 268.

Methods and key figures

Decades before this debate started, Frances Davenport introduced a quantitative approach to compare the number of “conveyances” of custom land properties over time in her study of a fifteenth- and sixteenth-century manor in East Anglia. In so doing, she noticed an “unusually active land market” in the early fifteenth century. She also discussed the statistical weight of the numbers compared over time and attempted to differentiate sales from “transfers of property to the heir or near kinsman”.¹⁷ Thus, Davenport had already introduced essential methodological ideas which would later become crucial arguments in the debate. While Richard H. Tawney first introduced the issue of a “weaken(ing ...) connection between the family and the holding” back in 1912,¹⁸ the “pioneering” impact of quantitative research on land markets in general and on the land-family bond in particular was attributed to Rosamond J. Faith.¹⁹ In her dissertation published in 1962 and in a subsequent article from 1966, she compared the ratio of *family* to *non-family* land transactions in different manors from the thirteenth to the fifteenth century. Faith utilised those numbers to investigate the changing importance of inheritance, which she distinguished from the land market itself.²⁰

Some ten years later, researchers laying the foundation for the land-family bond debate attempted to measure “land transmission patterns”²¹ using essentially these same methods. Not long before Macfarlane published his famous book, he and his colleagues Sarah Harrison and Charles Jardine presented a preview of their study of two English communities.²² I identified three main quantitative approaches depicted in their work which then recurred again in the later controversy: In order to prove that the “land market was fully developed” in the aforementioned communities, they identified (i) a high *transaction frequency*, illustrating the mobility of properties by assessing the number of turnovers in a given time span; (ii) a low *share of transactions between kin*, by contrasting transfers by inheritance with sales and surrenders; and (iii) little *tenurial continuity* – or in other words, a “rapid turnover of family holdings” – by measuring the proportion of properties held by the same family after a given period of time.²³

17 Davenport, *Economic Development*, pp. 79–80, with fn. 2 and p. lxxvii (appendix XII). The historiography of research on court rolls is meticulously reviewed by Razi, Smith, *Historiography*, on p. 8.

18 Which he saw as a consequence of increasing opportunities for transacting land. Tawney, *Agrarian Problem*, p. 137. Tawney’s approach was not a statistical one, though. His work and impact are referred to by Razi, Smith, *Historiography*, p. 12.

19 Cf. *ibid.*, p. 18.

20 Faith, *Peasant Land-Market*, i. e. p. 118, table 4 on pp. 337–338; Faith, “Peasant Families”, pp. 88–91 for the numbers and *ibid.* p. 88 for the distinction: “In spite of a brisk land market in odd acres and single messuages, family inheritance, and the expectation of it, dominated the transfer of holdings”.

21 Macfarlane, Harrison, Jardine, *Reconstructing*, p. 158.

22 *Ibid.*

23 *Ibid.*, p. 158. – For the manor of Earls Colne, the following numbers were presented: (i) within “the five-year period 1589–93, some 51 parcels were surrendered” to be transferred. (ii) Thereof “just

During the debate, these three basic methods proposed for measuring the quoted *land transmission patterns*, as well as the degree of development of land markets and of ‘bonds’ between land and families, were revised, adapted, and their application improved. Zvi Razi was among the first to criticise Macfarlane and other English studies. He emphasised that intra-familial transfers are structurally underestimated, giving two reasons: first, because genealogical reconstruction will always miss some connections; and second, because the area of plots transferred between family members were usually larger than those sold to strangers. Consequently, Razi suggested weighting transactions by area instead.²⁴ Govind Sreenivasan advanced these methods further. While he considered the “proportion of land transfers that take place between kin” (ii) “a rather crude measurement of the strength of the land-family bond”, he evaluated the third approach – assessing the tenurial continuity (iii) – as more promising.²⁵ However, Sreenivasan criticised the manner in which this third approach had been previously used, highlighting how it had been superficially applied, only comparing holdings and tenants using data from two temporally distinct rentals. This, he argued, had failed to uncover relevant information on kinship relations inherent in the transactions in between, and this had had a distortive effect on the figures. He therefore proposed a comprehensive reconstruction of the actual retention periods for every property from a certain point in time, going forwards and backwards.²⁶ Later contributors further advanced the debate by elaborating on these quantitative methods. In particular, Henry R. French and Richard W. Hoyle refined the attempt at weighting and provided a more comprehensive view of the retention periods.²⁷ In addition, researchers came to emphasise context and demographic aspects. They also differentiated the concept of the

under half, were transfers by inheritance between kin.” Hence, they found that only about 47 % of the transacted parcels in the said five years were handed over to relatives. (iii) “Of the 274 pieces of property in the two Earls Colne manors in a rental for 1677, only 23 were held by the same family (female links included) two generations earlier in 1598”. Hence, only 8.4 % of the properties were still with the same family after 79 years, while the second example shows that after a shorter period of 40 years, 28 % of the holdings were still with the same families. “Comparing two rentals for Earls Colne manor in 1549 and 1589, we find that of the 111 pieces of property listed at the earlier date, only 31 pieces were in the same family some forty years later (...) even if we trace the inheritance of property through women”. – The figures led the authors to the conclusion that “(t)his was not a simple ‘peasant’ society with families holding on to ancestral plots for generation after generation”, but rather that “(p)roperty was very mobile and (that) there seems to have been no strong attempt to ‘keep the name on the land’ as in some other agrarian societies”. (The last sentence perhaps refers to Faith, “Peasant Families”, pp. 86 and 92; see also Macfarlane, *Origins*, p. 96, criticising Faith for not having gone far enough in her interpretation.)

24 Razi, *Erosion*, p. 296.

25 Sreenivasan, “Land-Family Bond”, p. 11: “Macfarlane is on more solid ground with his (...) statement that only 8.4 per cent of the pieces of property listed in the 1678 (sic) rental were held by the same families two generations earlier in 1598. Or is he?”

26 *Ibid.*, p. 12.

27 French, Hoyle, “English Individualism”, pp. 600 and 608–611.

family, distinguishing between the nuclear family and distant relatives.²⁸ Definitions of what constitutes a *family* are a central aspect of the debate. How these definitions were handled in the literature depended on the researchers' varying objectives. Some researchers were cautious and chose a definition of family that would not undermine their argument. Razi, for example, intended to show that the land-family bond was stronger than previously assumed. He chose a narrow definition of family by considering husband and wife as non-family, even though his results would have been more significant if he had chosen a broader definition.²⁹ Sreenivasan, on the other hand, was criticised for choosing too broad a definition of family, one which indeed favoured his argument.³⁰

Family and Non-Family Transactions

In the discussions, weaker or stronger land-family bonds have been connected to more or less active land markets.³¹ Consequently, key figures differentiating between family and non-family transactions were used as indicators in order to measure the developmental stages of specific land markets. Is this legitimate?

With good reason – as, for instance, presented by Janine Maegraith in this volume –, the term *land market* is used in a broad sense; it is applied in describing all affairs surrounding land and property.³² It is not uncommon, however, for this term to be used to describe only those transactions which were conducted under specific market conditions. This idea also seems to be reflected implicitly in the debate presented above. Below, I would like to discuss the implications of such a narrower approach in theory as well as based on the information content in the sources.

While taxonomies are not undisputed,³³ they constitute a prerequisite for all methods of quantification. The manorial records themselves already contain virtual categories in the form of various transaction types according to source terminology and transaction context. Based on these, various aggregations have followed,³⁴ as also en-

28 Dyer, *Changes*, p. 310; Hoyle, "Land-Family Bond", pp. 159–161; Whittle, "Individualism", p. 31; French, Hoyle, "English Individualism", p. 601. See also Razi, *Erosion*, p. 304.

29 Ibid., pp. 296–297.

30 Hoyle, "Land-Family Bond", p. 161 criticised Sreeniwasan for his broad definition of family.

31 The proportion of intra-familial transactions usually served as a proxy for inheritance. E.g. Faith, "Peasant Families", p. 88 (see the quotation in fn. 20); French, Hoyle, "English Individualism", pp. 602–603, although they only regarded transactions within the line of inheritance as family transfers.

32 Maegraith in this volume (in her "introduction"): "(...) we look at land markets in a broader sense, from sales and inheritance to usufruct and land use".

33 Fertig, *Äcker*, p. 34.

34 Certain transaction types may be assigned to rather clear *contexts of action*. For example, changes of possession in the course of marriages or inheritances, or incidents in administrative or legal con-

countered above in the derivation of the *share of transactions between kin* from either inheritance or sales and surrenders. Yet, whatever form transactions may have taken, it is rarely possible to determine whether there was actually an economic intention behind an activity. Supply and demand have not been the only parameters of price formation. Bargained objects connect participating people and form relationships. In order to negotiate the allocation of property, both the object concerned and the “social determinants of the transaction” are of importance, as Feller highlights.³⁵ Thus, in order to evaluate the explanatory potential of methods that are based on a differentiation between family and non-family transactions – for instance, ratios or retention periods –, a discussion of *commercial transactions* and *redistributive transfers* is expedient,³⁶ as is, consequently, a discussion of payment and the impact of the relational constellation. Economic anthropology offers a theoretical framework for this purpose which may also help to illustrate some of the implicit conclusions drawn in early quantitative land market research. Applied to the subject of landed property, Florence Weber described *market transaction* as based on two characteristics: firstly, the object of a transaction is assessed independently of the persons involved; secondly, the transaction is bindingly concluded through the compensation paid.³⁷ These two criteria are interwoven. On the one hand, they refer to the relationship between the contracting parties, and on the other, to the relation between performance and counter-performance (i. e. *quid pro quo*). The two criteria could theoretically be modelled as continua (figure 1): A relationship between the parties involved may influence the transaction and the contractual terms to varying degrees. On the one hand, it would be relevant, for instance, if it was either aggressive or friendly; on the other hand, it would be non-relevant if the participants were indifferent towards one another.³⁸ Meanwhile, performance and counter-performance can also be conceptualised on a spectrum. At one end of the spectrum, performance and counter-performance may constitute a concluded interaction, meaning the interaction was punctual and without delay; this would indicate a market transaction. The payment neutralises the debt, therefore the discrepancy is *null*. At the other end of the spectrum lies an interaction that is not concluded by immediate payment; instead, one actor stays (potentially indefinitely) indebted to the other. With some specific one-way religious foundations or inheritances – transactions *into* or *out of* the afterlife, so to speak – the discrepancy would be immeasurable and therefore considered to be *infinite* (figure 1). Between these extremes lie all sorts of transactions which can be depicted as chains of interaction, as interdependent transac-

texts in connection with the manorial lord. With other procedures, a classification is less straightforward. Constructs such as *inter vivos* or *post mortem* transmission, or the distinction between transactions *determined by the life cycle* or *not determined by the life cycle* provide further abstraction.

35 Feller, “Measuring”, pp. 31 and 37, quote p. 37.

36 Fertig, *Äcker*, p. 28.

37 Weber, *De l'anthropologie économique*, p. 30.

38 Besides *ibid.* also Levi, *Das immaterielle Erbe*, pp. 94–95.

tion sequences taking place within various constellations of lasting reciprocal relationships. The actors within the transactional relationship are thus bound together socially and economically.³⁹ The closer a transaction can be placed to the origin of the quadrant, the more it corresponds to the concept of a transaction that would have taken place under the conditions of market allocation.

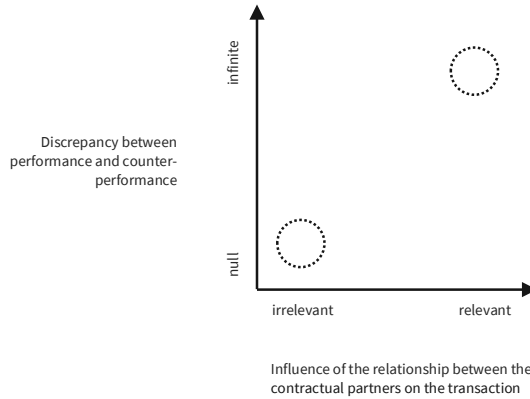


Figure 1 Distinction model of market and non-market transactions

Upon assessing the sources, it becomes apparent that the information provided can only serve this theoretical model to a very limited extent. What information is available? On the one hand, the manorial records declare whether a compensation was agreed upon in the deeds. On the other hand, they provide details regarding kinship and, sometimes, neighbourly relations between contracting parties. However, they ultimately do not reveal whether a consideration definitely concludes the transaction. In addition to this, it is barely possible to determine whether (and how) relationships and possible hierarchies between the negotiating partners affected the transactions. Only the mere attributes of *agreed compensation* and *social proximity* are made comprehensible. While their explanatory power has its limits, the two criteria can nevertheless be connected to each other. Figure 2 illustrates such a simplified model, creating a matrix. This matrix serves as a grid for the classification of transactions according to the rough criteria of compensation and social proximity. Beyond that, however, the approximation is in no way sufficient to be able to make a differentiation between *commercial transactions* and *redistributive transfers*, concepts that seem to underlie the discussions. The attempt to address the issue by reducing the characteristics under consideration –

39 Weber, *De l'anthropologie économique*, pp. 38–39. Hunt, *One-way economic transfers*, p. 295. – Naturally, the model is a simplification. The cited 'discrepancy' may be significant not only with regard to time. Durations can be compensated and, therefore, forward transactions and loans would need to be considered in a more differentiated way.

or even by simply distinguishing between family and non-family transactions – leads to a deceptive dichotomy of family versus market.⁴⁰

The matrix, however, proves to be a useful tool for discussing transaction types according to source terminology. Sales, exchanges, handovers, inheritances and the many other designations of contracts, writs or acts in the medieval records do not seem to qualify as *economic* categories either. It has been shown repeatedly that sales, for example, did not only include commercial transactions. Depending on institutions and custom, the transfer strategies for possession were pursued by very different contractual means. Hermann Zeitlhofer, for instance, has demonstrated that redistributive transfers were often framed as sales contracts, and others have made similar observations.⁴¹ Meanwhile, commercial motives are very present in familial contexts.⁴² The matrix helps to illustrate how the same terms may well be located in different quadrants. The transaction names recorded originate from a highly differentiated legal terminology but are not necessarily suitable for answering other questions on underlying potential commercial intentions. The examples given in the matrix (figure 2) are certainly not exhaustive. They belong to the specific sources that will be discussed in the next section and are based on the information explicitly given there.

Transaction within a context of social proximity	... without a (declared) context of social proximity
... without (specified) compensation	adding a spouse	
	inheritance	confiscation
... with compensation	will	will
	dowry	endowment
	handover	handover
	waiver	
	outpayment	court order
	court order	new bestowal
	exchange	exchange
	sale	handover
waiver	sale	
	mortgage	mortgage

Figure 2 Transaction matrix with the criteria *compensation* and *social proximity*

40 Besides Maegraith (in this volume), cf. Zeitlhofer, *Besitzwechsel*, p. 202 and particularly Cerman, “Bodenmärkte”, p. 148. – Beyond the parameters of economic history, the narrative of the progress made by moving beyond the family is present in historiography. Cf. Teuscher, *Verwandschaft*, pp. 85–87.

41 Zeitlhofer, *Besitzwechsel*, pp. 175–177 and 189–190; Kuchenbuch, *Neuwerker Bauern*, p. 114; Feigl, *Bäuerliches Erbrecht*, p. 177; Fertig, *Äcker*, pp. 34 and 180.

42 *Ibid.*, p. 27.

The individual transaction types include further aspects that are not necessarily visible in these manorial registers. For example, the importance of maintenance agreements as part of agreed compensation; in this volume, Birgit Heinzle illustrates the significant role such maintenance agreements could play in arrangements of land transactions.⁴³ Furthermore, prospective inheritance regulations or legal claims arising from marriages are not indicated: such agreements were laid down in other contracts or were predetermined by custom or law.⁴⁴ Other transaction types, such as *handovers*, are unspecific and give rise to further uncertainty.

The transactions assigned to the quadrants of the matrix above stem from the manorial estate registers of a parish called Heiligenstadt in Lower Austria. Based on these sources, I will apply, in the following section, the quantitative methods discussed above and reflect on the issues and specific findings of the established key figures in practice.

The Case Study

Setting

This case study features vineyards and houses in the three wine-growing villages Heiligenstadt, Grinzing and Nussdorf in Vienna's environs. These properties were administered by the parish of Heiligenstadt, which was subject to the Klosterneuburg monastery.⁴⁵ The latter was a wealthy manorial lord in Lower Austria, situated at the shore of the Danube about twelve kilometres north of Vienna. The monastery and the parish kept registers documenting the bestowal and encumbrance of land in abbreviated transcripts of deeds. In addition, the sources include lists of properties and rents which name the changing tenants.⁴⁶ The administration was well developed and rigorously managed. By combining the information from the registers and rentals, we are able to investigate a remarkably coherent history of tenure and land transactions for the properties. The data for this study stems from such an investigation, comprising records from the period between 1454 and 1513.

The institutional setting was shaped by viticulture as well as proximity to the city and surrounding towns. During the late medieval wine-growing boom, high prices were paid for produce of superior quality, thus exportation was viable and high-quality viti-

43 Heinzle in this volume (e. g. in her section "Men and Women as Participants on the Land Market").

44 Kaska, Nussbaum, Heinzle, "Verträge", pp. 220–221.

45 Perger, *Klosterneuburg*, pp. 147–148.

46 Stiftsarchiv Klosterneuburg (StAKI), Grundbücher 1/1a, 8/1 and 8/2, as well as the charter collection. – The sources and their system are extensively discussed in Kaska, Nussbaum, "Organising Landed Property".

culture and wine trade developed as a commercialised business.⁴⁷ This development involved affluent protagonists, often with an urban background, such as burghers and civil institutions, but also including nobility and ecclesiastical bodies. In this context of participating actors from different social estates, tenancy rights evolved and led to a reduction in the manorial influence in the privileged wine-growing areas. Deriving from urban tenancy, the so-called *Bergrecht*⁴⁸ was established in the wine-growing districts. It virtually separated tenants of vineyards from the conventional manorial structure by granting discrete jurisdiction and desisting from personal dependency on a manorial lord.⁴⁹ This development involved the parcelling of vineyards. These were separated from houses and could be divided and handed on as independent plots. They could even be sublet. Houses, on the other hand, usually remained subject to the more restrictive tenancy right with stronger ties to the manorial lord and restrictions regarding property division.⁵⁰ Overall, the manorial influence decreased in terms of legal control, not least in connection with the emergence of competing landlords.⁵¹ The presence of different clerical and noble actors led to a fragmentation of manorial claims⁵² or at least to further levels in the hierarchy of landlords, tenants and subtenants. Vienna's hinterland, and therefore the Heiligenstadt parish, exemplify these circumstances. The geographic and climatic conditions allowed for high-quality viticulture, which involved urban investors and was based on a system of labour division aimed at export. The vineyards were bestowed in the favourable *Bergrecht* tenancy, and, furthermore, the nearby city and the manorial lords provided the institutional framework to reliably conduct transactions involving landed property and mortgage-backed loans.⁵³ At the same time, rents and fees were relatively low.⁵⁴

47 Feigl, *Wirkungen der Weinbaukonjunktur*, pp. 82–83 and 93; Feldbauer, “Lohnarbeit im österreichischen Weinbau”, p. 232; Ertl, *Wien 1448*, pp. 120–127; Ertl in this volume.

48 Perger, *Herrschafts- und Hoheitsrechte*, pp. 205–206.

49 Feldbauer, “Lohnarbeit im österreichischen Weinbau”, p. 232. Otto Brunner called *Bergrecht* a type of bestowal that was *neutral in regard to the social estates*, cf. Brunner, *Land und Herrschaft*, p. 319.

50 Landsteiner, “Weinbau und Gesellschaft”, p. 33; Feigl, *Wirkungen der Weinbaukonjunktur*, pp. 83–86; Steppan, *Bäuerliches Recht*, pp. 23–24. The ‘bound’ tenancy was called *Grundrecht* and would be classified as hereditary tenure. Winiarz, *Erbleihe und Rentenkauf*, p. 12. The dues were called *Grundzins*, *Grundrecht* and probably *Grunddienst* (as in Heiligenstadt). On bound and unbound tenancies, cf. Feigl, *Grundherrschaft*, p. 32, and on the dues, p. 53. – On the influence of freely tradable and divisible parcels on the land market, cf. Whittle, “Individualism”, pp. 52–53.

51 On this matter, cf. Kaska, Nussbaum, “Organising Landed Property”, pp. 19–21.

52 Feigl, *Wirkungen der Weinbaukonjunktur*, pp. 85–86 and 87–88.

53 Cf. Zuijderduijn, *Capital Markets*, pp. 199–208.

54 Feigl, *Wirkungen der Weinbaukonjunktur*, p. 84. Rents were comprised of a fixed quantity of wine, which, according to the normative sources, did not change over time. Registration fees differed locally, and they varied by property type and transaction context. They could be calculated in relation to the selling price or depending on the area. Cf. Winter, *Niederösterreichische Weistümer 1*, pp. 884–895 and 957–962. On the significance of rents and fees on the land market, cf. Whittle, “Individualism”, pp. 28 and 53–54.

Numbers

The processing of medieval sources first requires some data-specific clarifications: The records of the Heiligenstadt parish are extensive but sometimes display gaps and uncertainties that – after processing – disappear behind the bare key figures and tables. These numbers might suggest a precision that does not actually exist. The available dates in the records, for example, are the issuing dates of the deeds. As regards the transactions, however, they are mere approximations, as the written documentation usually followed with delay and sometimes even summarised multiple temporally distant events under the date of a single record. Furthermore, the analysis is subject to the methodological and theoretical challenges mentioned above. Below, I intend to exemplify these issues using the case study presented. The evaluation of the source data follows the three quantitative approaches introduced previously and aims to assess (i) the average transaction frequency; (ii) land transactions by the social relation between succeeding tenants; and finally, (iii) the tenorial continuity by tracing tenant families on their properties. I thereby aim to critically illustrate and address methodological possibilities and shortcomings.

(i) What insights can be gained from Heiligenstadt's data with regard to the frequency of transactions? By relating the cumulative observation periods of all the properties to the number of transactions, we can see that a change of possession happened about every fourteen years on average. A further differentiation can be made by distinguishing plots comprising houses with grounds from independent vineyards. This is possible because, due to their differing legal status, the registers index them separately. The average holding period of land with dwellings was eleven to twelve years. Independent vineyards changed tenancy on average after about sixteen years.⁵⁵ Average numbers, however, cannot reveal whether this observation of frequent turnovers reflects a widespread practice. Included in the numbers are many transactions where plots were passed on immediately after being received.⁵⁶ Then again, the data also contains properties that remained in the hands of subleasing institutions for a long time.

(ii) At this point, the evaluation of transactions in respect to the relationship between the ceding and succeeding tenants raises all the methodological problems mentioned in practice: family definition, determination of relationships and weighting of transactions.

55 The bases of the calculations are all the properties and emerging fractions of divided properties named in the register (StAKI, Grundbuch 8/1) (130 properties, 86 independent vineyards and 44 dwellings with grounds). The cumulative duration of their existence within the observation period (6,526.24 years in total, 4,274.75 years for the vineyards and 2,251.49 for the dwellings) has been set in proportion to all the transactions that caused a change in tenancy (466 transactions in total, 268 independent vineyards and 198 with dwellings).

56 About 30 %, 139 of 466 transactions.

As emphasised during the debate, the definition of the unit referred to as *family* is critical.⁵⁷ In this study, all ascertainable kinship relations are considered family. These can be identified in the sources as far as they are declared, or – as the sequences of transactions and tenants are comprehensively reconstructed – if family ties are visible because of the relational constellation in combination with an identical surname. The large majority of the family relations observed belongs within the first and second degree of kinship. Of the named relationships, only one sixth is not specified or lies beyond this range. In these cases, the sources do not give details but speak of *adduced evidence of relationship*. The few more distant relatives mentioned comprise aunts or uncles who handed on property to their nieces and nephews. Relatively rarely, there is mention of a so-called *Vetter*: a term that indicates relationship but does not allow further classification. Property transfers between spouses are disclosed separately but are treated as continuity in the familial context;⁵⁸ in contrast to direct transmissions to relatives by affinity. The reasons for this differentiation are as follows: in research aiming to distinguish market transactions from non-market transactions, a number of considerations play a role. Transactions within the circles of those entitled to inherit may be influenced by future claims of intergenerational transfers or maintenance. The transactions may then take on the character of redistributive transfers or reciprocal alliances.⁵⁹ However, I have already argued for rejecting the possibility of making such a distinction, and so this is not the motivation behind the definition of the family group here. Arguably, however, wealth allocation is a constitutive element of kinship,⁶⁰ and in land market research it is certainly not unreasonable to use the social group in which redistributive wealth allocation took place as a category for defining the family. The advantage of this definition is that it originates from this specific society itself and as such is directly observable in the transactions concerned. Admittedly, property regimes were in a state of flux at the end of the Middle Ages,⁶¹ and in fact in Heiligenstadt the tenants were offered various possibilities for organising inheritance and marital property.⁶² These possibilities, however, existed in the immediate vicinity of kin and spouses. Relatives by affinity remained outside the circle of those entitled to inherit

57 Razi, *Erosion*, p. 296; Hoyle, “Land-Family Bond”, pp. 159–161; French, Hoyle, *Character*, pp. 183–184.

58 By applying a wider definition of family, the concept of lineage and consanguinity is not considered here. For this, cf. Schlumbohm, “Land-Family Bond”, pp. 474–475.

59 Cf. Fertig, *Äcker*, pp. 144–145. – Definitions are constructs and could lead to discussable results, e.g. when a property of land is passed from a woman directly to her brother-in-law (her sister’s husband), this counts as a non-family transaction. If it first went to the sister and then to her husband, it counts both times as a family transaction.

60 Lanzinger, Maegraith, “Vermögen”, pp. 203–204; Teuscher, *Male and Female Inheritance*, pp. 599–600.

61 Sabean, Teuscher, *Kinship*, p. 6.

62 Including wills. However, of 45 wills, only one favoured more distant relatives (*Vetter* and *Muhme*, cf. StAKL, Grundbuch 8/1, fol. 61v), which I considered to be family in the statistics. Three wills

directly.⁶³ In Heiligenstadt's registers, there are in any case only very few identifiable cases of transactions in a relationship of affinity: six altogether.⁶⁴

The main issue is, without doubt, that uncertainties pertaining to existing but undisclosed genealogical connections will remain and will inevitably lead to a systematic understatement of transactions within the family.⁶⁵ This problem cannot be solved satisfactorily for the Heiligenstadt sources either. Transactions without a visible kin relationship between the contracting parties include court and official acts, but predominantly sales. Of all the sales,⁶⁶ very few (6 out of 160) are identified as being concluded between family members.⁶⁷ However, non-existent references to relationships do not necessarily mean that these relationships did not exist. In about half of the transactions (220), no kin relationship between the parties involved is mentioned or can be determined by means of identical surnames or other references (see table 1). For about one third (71) of these transactions, this is true without a doubt, because at least one of the two parties was an institution or the manorial lord himself, so a kin relationship is not possible. For another quarter, the possible portion of kin relatives was probably not excessively large, because the transactions went to men with different names. This means that the circle of possible relatives is limited and often lies outside the usual beneficiaries in inheritance matters in Heiligenstadt.⁶⁸ However, for many transactions there remains uncertainty, limiting the scope for interpretation considerably.

As a third methodological issue, the question of weighting arises. In the research debate cited above, Zvi Razi suggested that transactions within the family involve larger plots of land than conveyances outside the family. Hence, by merely counting transaction numbers, we would be underestimating the significance of the former.⁶⁹ For the properties examined in this study, a weighting based on the area transferred is possible for the vineyards, as these are characterised by size in the manorial reg-

favoured institutions, while the rest willed to close relatives or spouses, who were all legal heirs anyway.

63 Feigl, *Bäuerliches Erbrecht*.

64 StAKI, Grundbuch 8/1, fol. 71v: Sale to the widower of an aunt; fol. 73v: Redemption (*Ablösung*) by a widower of a relative; fol. 43r: sale to the stepfather of a relative; fol. 21r: sale to the widower of a sister; fol. 83v: handover to a brother-in-law; fol. 36v: sale to the stepfather of an aunt (*Muhme*).

65 Razi, *Erosion*, p. 296.

66 New bestowals to newly assigned tenants (e. g. after a confiscation) by the landlord are sometimes called sales but are not counted here.

67 StAKI, Grundbuch 8/1, fol. 25r and fol. 55v: mothers to daughters with their husbands; fol. 16v: a sale involving two *Vetter*; fol. 102r and 102v: succeeding couples with the same name, however, the monastery stood in between and there is a time gap; fol. 68r: sales of two plots involving two brothers. – On the same subject, cf. the figures from Heinzle in this volume (in her section "Participants and Their Interrelation").

68 60 transactions to men with different names, of which 33 transactions were solely between men, i. e. with an even more restricted circle of possible relatives.

69 Razi, *Erosion*, p. 296.

isters.⁷⁰ The proportional differences support Razi's thesis but are negligibly small.⁷¹ Nevertheless, beyond the area, weighting by effectively transferred property shares is, on the whole, possible and worthwhile – for houses too. Instead of counting absolute transaction numbers, it is worth considering that in many transactions it was not the entire property that changed hands.⁷² In fact, this applies to all the cases where members of ceding and succeeding tenant groups overlapped. This was often the case among relatives and spouses: namely, where there were transactions within communities of heirs, or where spouses were beneficiaries in wills and came into sole possession of a commonly held property, or, contrarily, where spouses were added to the land register in order to establish common tenancy. In all these cases, some of the new tenants already held shares previously. All this information is stated in the manorial records, for example, where they refer to *half a house* that has been transacted, or to whose *share* of a property the transfer actually concerned.⁷³ If the transactions are weighted accordingly, these – mainly intra-familial – transmissions are therefore of lesser significance.⁷⁴ Such a weighting might also help compensate for biases that have barely yet been considered from a methodological perspective. These biases are caused by the varying organisation of transfers and usage of contracts, which were determined by the respective institutional frameworks, i. e. customs and the manorial lords.⁷⁵ Depending on these, the transmissions were organised through different transactions and transaction sequences. If a property was directly handed down to a single heir, or if it circulated via a community of heirs, this circumstance certainly influenced the decisions of the tenants. At the same time, this affects the results of quantitative evaluations and complicates transregional comparison. In the case at hand, it was not uncommon for hereditary succession to lead to a chain of transactions among a group of relatives. Furthermore, common tenancy was also established on the occasion of marriage. Sales to outsiders, by contrast, were usually concluded in one single act. Following this understanding, the significance of property transmission outside the family should not be underestimated, and the proposed weighting would – to a certain degree – account for that (see table 1).

The challenges of the intra-familial transactions discussed above could be avoided by shifting the focus to the *family* as the acting subject. By only considering land trans-

70 The areas range from 1/16 Joch to 1 1/3 Joch, where 1 Joch is equivalent to ca. 1,15 ha. Cf. Pribram, *Preise und Löhne*, p. 122; Perger, *Weinbau und Weinhandel*, p. 211; and for more detail: Landsteiner, *Weinbau und Gesellschaft*, pp. 282–285.

71 The difference between the absolute numbers and the numbers weighted by area is below 2,5 %.

72 Cf. French, Hoyle, "English Individualism", p. 600; French, Hoyle, *Character*, p. 182.

73 E. g. StAKI, Grundbuch 8/1, fol. 37v: "Erhart Rätich Anna sein hawsfraw sind an dy gwer kchömen ains halben haws vnd ainer halben hofstat (...)"; or *ibid.*, fol. 73v: "(...) vnnd derselben Kathrey tail vnnd gerechtigkeit (...)".

74 Cf. table 1.

75 On the influence of different institutional contexts on the shaping of contracts, cf. Kaska, Nussbaum, Heinzle, "Verträge" and Kaska in this volume.

Table 1 Transactions⁷⁶ within and outside the family (1 January 1454–31 December 1513).
Houses/farmsteads and vineyards in Heiligenstadt, Grinzing and Nussdorf, 1454–1513.
Sources: StAKI, Grundbücher 8/1 and 8/2, Urbar 1/1a.

Succeeding holders	Transactions absolute		Transactions weighted by effectively transacted share in possession	
No kin relations recorded or ascertainable	220	(47 %)	209.5	(54 %)
Relatives by kinship	185	(40 %)	138.5	(36 %)
Spouses	57	(12 %)	37.0	(9 %)
Unknown	4	(1 %)	4.0	(1 %)
Total	466	(100 %)	389.0	(100 %)

actions in which an actual change of tenant family occurred, the biases depicted above would disappear. Moreover, going beyond the misleading attempts to differentiate the market from the family, the latter undoubtedly remains a central object of investigation and an essential factor with regard to activities on the land market.⁷⁷ Unfortunately, an investigation at the level of the family faces the same serious challenges as are discussed above: the difficulties of family definition and of undisclosed genealogical connections. For the case of Heiligenstadt, such an analysis can be carried out while being faithful to the sources (and their information content) but will remain on shaky ground with regard to the possibilities of interpretation.

For example, by taking the first approach of counting transaction frequency, and by restricting the field of actors to families, the calculation shows that the dwellings and independent vineyards remained, on average, within one and the same tenant family for about 30 years⁷⁸. This – even by applying the wide definition of family as depicted above, where all the stated kin relations have been considered, including transmissions

76 The calculations were based on all transactions, including those of institutions. In the latter, evidently, relatives could never be the addressees. The absolute and weighted numbers, 'adjusted' for the transactions of institutions, are:

No kin relations recorded or ascertainable	183	(43 %)	173.8	(49 %)
Relatives by kinship	185	(43 %)	138.5	(39 %)
Spouses	57	(13 %)	37.0	(11 %)
Unknown	4	(1 %)	4.0	(1 %)
Total	429	(100 %)	353.3	(100 %)

77 In general, cf. Teuscher, Lanzinger, "Trennende Verwandtschaft", p. 2.

78 The calculation is based on all the properties and emerging fractions specified in the register (StAKI, Grundbuch 8/1) as being in the hands of families (102 properties). The cumulative duration of their existence within the observation period (4,874.78 years; the duration of tenancy in the hands of institutions has not been considered) has been set in proportion to all the transactions that caused a change of tenant family (166 transactions). Change of family means that a family has left tenancy for good and no family member is still a tenant of the property or even of a fraction of it.

to spouses – merely covers one generation. It would indicate a rather busy circulation of land, barely constrained by familial boundaries. This result is not impossible, yet it is subject to uncertainty. The same applies to the implementation of method three: the analysis of the tenurial continuity by tracing tenant families on their properties:

(iii) Reflecting on Sreenivasan's critique and its subsequent implementation by French and Hoyle, I considered measuring actual retention periods for specific plots in units of time. However, besides the prevalent issue of dating transactions,⁷⁹ the strict starting and ending dates of the study – partially determined by the source material – posed a challenge to the stringency and comparability of the results. I hereupon returned to Macfarlane's approach but applied Sreenivasan's suggestion of thoroughly reconstructing the tenurial history for every property. Furthermore, following French and Hoyle, I traced the progression of tenurial continuities over time, my aim being to display developments and reveal individual deviations. Starting with ascending reference dates, I traced the duration of land-family connections continuously for the period between 1454 and 1513. Table 2 displays the percentage of those families initially encountered that were still registered on their properties after one decade, two decades, and so on. Or, expressed differently, it shows the percentage of properties still held by the same tenant families over the course of time, as far as this is ascertainable. Tables 3 and 4 show the tenurial continuities distinguished by dwellings with grounds (table 3) and independent vineyards (table 4). Certainly, this analysis has to be read with the reservations presented earlier in mind.

Table 2 Tenurial continuity (families, all properties) – Percentage of properties still being held by the same families (as far as ascertainable) in course of time. Houses/farmsteads and vineyards in Heiligenstadt, Grinzing and Nussdorf, 1454–1513.

Sources: StAKI, Grundbücher 8/1 and 8/2, Urbar 1/1a.

Reference date	n = ⁸⁰	After					
		10 years	20 years	30 years	40 years	50 years	60 years
1454, Jan 1	84	65 %	54 %	38 %	23 %	20 %	14 %
1464, Jan 1	80	80 %	59 %	39 %	31 %	21 %	
1474, Jan 1	84	76 %	52 %	39 %	29 %		
1484, Jan 1	83	71 %	52 %	37 %			
1494, Jan 1	81	70 %	51 %				
1504, Jan 1	84	69 %					

79 Cf. the reflections at the beginning of this subsection.

80 Why are the family and property numbers so small? Firstly, the plots of land held by institutions on the reporting date do not appear here; secondly, emerging fractions of plots of land (i. e. fractions bestowed separately to different tenants according to the manorial records) are only counted if they actually existed on the reference date.

Table 3 Tenurial continuity (families, dwellings with grounds) – Percentage of plots with houses still being held by the same families (as far as ascertainable) in course of time. Houses/farmsteads and vineyards in Heiligenstadt, Grinzing and Nussdorf, 1454–1513. Sources: StAKI, Grundbücher 8/1 and 8/2, Urbar 1/1a.

Reference date	n =	After					
		10 years	20 years	30 years	40 years	50 years	60 years
1454, Jan 1	32	59 %	47 %	31 %	16 %	13 %	6 %
1464, Jan 1	33	76 %	48 %	27 %	18 %	12 %	
1474, Jan 1	32	66 %	41 %	22 %	16 %		
1484, Jan 1	32	63 %	34 %	22 %			
1494, Jan 1	29	52 %	34 %				
1504, Jan 1	31	58 %					

Table 4 Tenurial continuity (families, independent vineyards) – Percentage of vineyards still being held by the same families (as far as ascertainable) in course of time. Houses/farmsteads and vineyards in Heiligenstadt, Grinzing and Nussdorf, 1454–1513. Sources: StAKI, Grundbücher 8/1 and 8/2, Urbar 1/1a.

Reference date	n =	After					
		10 years	20 years	30 years	40 years	50 years	60 years
1454, Jan 1	52	69 %	58 %	42 %	27 %	25 %	19 %
1464, Jan 1	47	83 %	66 %	47 %	40 %	28 %	
1474, Jan 1	52	83 %	60 %	50 %	37 %		
1484, Jan 1	51	76 %	63 %	47 %			
1494, Jan 1	52	81 %	60 %				
1504, Jan 1	53	75 %					

The interpretation of the analysis (tables 2–4) is delicate. While the sequences of transactions and tenants have been comprehensively reconstructed and traced, uncertainty remains with regard to undetected family connections. The figures obtained give the impression that long-term family property was probably not a prevalent phenomenon in the Heiligenstadt parish. These figures suggest that the holding continuity would not have been particularly strong over the years, and, although with a decreasing rate, the proportion of remaining families would have dropped quite rapidly. About one quarter of the families would have left their houses and vineyards within the first decade. After twenty to thirty years, only half of the families would still have been in tenancy, and after fifty years merely a fifth would have remained. However, the figures are not beyond doubt. In addition to the methodological issues repeatedly mentioned above, ten vineyards and two houses do not list a single change in family during the

entire observation period. For some of them, we have to express some reservations with regard to the sources, and we have to assume some gaps in tradition.⁸¹

What is remarkable is the difference in the calculated tenurial continuity between the dwellings and the independent vineyards. If we were to assume that they were not handled fundamentally differently, the retention period of houses with grounds would be relatively shorter than the retention period of independent vineyards. However, while both types of lands were passed on to both daughters and sons, married couples played a greater role in transactions with dwellings. This means that the figures for the latter are also subject to greater uncertainty as regards unidentified married daughters and therefore also as regards ignored familial continuity.

In contrast to the families, it is beyond methodological doubt that the ecclesiastical and civil institutions kept their properties for a substantially longer period of time (table 5).

Table 5 Tenurial continuity (institutions) – Percentage of properties still being held by the same institutions in course of time. Houses/farmsteads and vineyards in Heiligenstadt, Grinzing and Nussdorf, 1454–1513. Sources: StAKI, Grundbücher 8/1 and 8/2, Urbar 1/1a.

Reference date	n =	After					
		10 years	20 years	30 years	40 years	50 years	60 years
1454, Jan 1	21	100 %	90 %	90 %	90 %	90 %	71 %
1464, Jan 1	25	88 %	88 %	88 %	88 %	68 %	
1474, Jan 1	24	96 %	96 %	96 %	75 %		
1484, Jan 1	24	100 %	100 %	79 %			
1494, Jan 1	28	100 %	82 %				
1504, Jan 1	28	82 %					

In the case of institutions, however, sporadic evidence from charters and rare clues in the property and rent lists reveal that their vineyards were bestowed to subtenants

81 The two houses/farmsteads and five of the ten vineyards were indeed regularly transferred within the family. The remaining five vineyards were registered in the hands of only one single person each for the whole observation period, often only visible in the rent register. Some cases show inconsistencies: one tenant, for example, was registered on a property for the entire period up to 1513, while in other sources he has been referred to as already deceased in the year 1486 (Albert Zetter, rent registers: StAKI, Grundbuch 8/1, fol. 9r and 8[115]v; StAKI, Grundbuch 8/2, fol. 13v; Urbar 1/1a, fol. 89[99]r. Meanwhile in the transaction register: StAKI, Grundbuch 8/1, fol. 54r [02.11.1486] and also 106r [10.04.1510]). In another case, a register entry from 1514 mentions a range of transactions. Some of them must have happened years before. (Niklaus Steiner, rent registers: StAKI, Grundbuch 8/1, fol. 5v u. fol. 15[122]r; StAKI, Grundbuch 8/2, fol. 8v; Urbar 1/1a, fol. 85[95]v. Transaction register with the entry including the preceding transactions: StAKI, Grundbuch 8/2, fol. 6v [11.07.1514]). – However, the study of the gaps in tradition does not yet confirm whether or not transactions between family members have taken place.

once again with temporary contracts.⁸² ‘Sublease’ or cultivation by wage labourers is probable with ‘private’ tenants as well. The sources attest many burghers and persons of various professions as tenants: busy people who probably did not work in the vineyards themselves.

Reflections

In practical terms, it can be argued that the methods discussed above seem applicable to the data from the Heiligenstadt parish. Key figures pertaining to the average transaction frequency give an impression of the mobility of land. The analysis of land transactions by the criterion of social relation between succeeding tenants provides some insight into the structure of property transmissions, and tracing tenant families on their holdings sheds light on the extent of tenurial continuity. However, figures based on family relationships are subject to reservations, as not all kin relationships are likely to be revealed by the sources. The methods approach events related to the land market under various aspects. In view of the challenges posed by medieval sources, I believe that they offer applicable tools for answering the aforementioned specific questions, as far as the sources permit. However, it becomes clear again and again that differentiation is crucial, for example, in the case of heterogeneous protagonists such as households and institutions which, although legally acting on the same level, show a different pattern and hence seem to have played a different role. Here, what has long been the subject of research⁸³ becomes apparent in the manorial records as well: tenancy was multi-layered, and the transactions registered in the sources only represent a segment. At lower levels, beyond monastic bestowals, another land market was thriving. This was probably an extensive land market of subtenancy, barely visible in the sources and certainly not systematically graspable. Moreover, it becomes apparent that the methodological discussion is not over yet. The influence of different inheritance and matrimonial property practices on transaction figures must be assessed further and, following this, great importance must be attached to a differentiated weighting of transactions. This is particularly true with regard to supra-regional comparisons,

82 E. g. StAKI, Grundbuch 8/1, fol. 7[114] and Wiener Stadt- und Landesarchiv (WStLA), HABsp, 845 [24.01.1531], where sharecroppers are mentioned; similarly: StAKI, Grundbuch 8/1, fol. 11v; WStLA, HABsp, 808r, where a property of the parish that is bestowed to the civil hospital is sublet with a temporary contract; StAKI, Grundbuch 8/1, fol. 34v, where the parish's property is in the hands of the monastery St. Dorothe, which is admonished to install a tenant; StAKI, Grundbuch 8/2, fol. 8v, where a vineyard in the Heiligenstat parish reverts to the civil hospital from a tenant without heirs; StAKI, Grundbuch 8/1, fol. 9v and fol. 20r and 92r, where a vineyard in the hands of a guild is sublet temporarily.

83 The multi-layered social structure in medieval viticulture is described e. g. by Feigl, *Wirkungen der Weinbaukonjunktur*, pp. 87–89, and Landsteiner, “Bären anbinden”, p. 226.

which would otherwise be of little validity. Here again, the family category would offer advantages. The level of the family as acting subject might be comparable because it factors out the regional differences of intra-familial contract practices, for example in the course of the distribution of estates. At the same time, however, research into this level of tenancy is also subject to extensive methodological challenges and shortcomings, and analyses at this level certainly ignore substantial parts of the land market.

Interpreting the statistics provided by the sources studied is a delicate matter, given the methodological peril. From the numbers alone, it is barely possible to identify a 'bond' between landed properties and tenant families in the records of Heiligenstadt, Grinzing and Nussdorf examined for the time period from 1454 to 1513. Even by applying a broad definition of family, the houses and vineyards were often alienated to persons not declared as such. In around half of the transacted property shares, the succeeding tenants are not referred to as relatives. Perhaps, though, this does not mean much. If we were to narrow the focus to the ancestral family, alienation would be registered even more often in the statistics. Looking to Macfarlane's and his colleagues' question of whether the name remained on the property,⁸⁴ the practice shows no sign of such efforts. By favouring surviving spouses, it was systematically accepted that landed property would leave the stem family. Considering wives and husbands in wills was very common.⁸⁵ Turning land into common property on the occasion of marriage was widespread as well.⁸⁶ The frequent transfer of property to widows and widowers was also noticed by a late medieval contemporary, namely by Enea Silvio Piccolomini, the later pope Pius II. In his city description of Vienna, he criticised the lack of familial continuity by stating: "rarely succeeded a son his father".⁸⁷

Does this now indicate that the wine-growing environs of Vienna had an active land market in the fifteenth and early sixteenth century? That commercially-oriented transactions prominently supplemented redistributive transfers? That the market supplemented the family? While the evidence collected from sources and research certainly points to a "brisk land market",⁸⁸ the quantitative approaches discussed here are not able to answer the question of whether transactions were concluded under market terms. The conditions of contract negotiation and pricing do not derive from the sources. Neither is it possible to determine the importance and impact of relationships and hierarchies between the parties involved with regard to the transactions. Furthermore, as the discussion in the previous section has shown, this last question is arguably inadmissible, since it implies a separation of market and family. In order to

84 Macfarlane, Harrison, Jardine, *Reconstructing*, p. 158.

85 Here, in almost three quarters of the aforementioned wills, spouses are favoured (in 33 of 45).

86 A variety of agreements could apply in widowhood. Cf. Feigl, *Bäuerliches Erbrecht*, p. 164; Brauneder, *Studien II*, pp. 222–223.

87 Feigl, *Bäuerliches Erbrecht*, pp. 164 and 171; Aeneas Silvius [Piccolomini], *Geschichte Kaiser Friedrichs*, pp. 20–21; Eneas Silvius Piccolomini, *Historia Austriacis*, p. 278: "Raro filius patri succedit".

88 Landsteiner, "Bären anbinden", p. 228.

substantiate these considerations, the data from Heiligenstadt might provide further indications. The rejected assumption that a stronger 'land-family bond' goes hand in hand with a weaker market⁸⁹ may be further undermined by the following observation: the parish's empirical evidence shows that the turnover of dwellings was faster and the tenurial continuity of dwellings was – perhaps – lower than that of independent vineyards (tables 3 and 4). What is remarkable here is the fact that – as described at the beginning of this section – tenancy rights for houses were more restrictive than those for independent vineyards, so in this case the norm cannot explain the practice. In comparison with the dwellings, the vineyards are objectively more likely to have been the subject of commercial transactions. Vineyards were productive areas and, on the one hand, integrated into supra-regional markets through the commercialised product of quality wine. On the other hand, the tenant structure in the Lower Austrian quality wine-growing regions extends far beyond local protagonists.⁹⁰

The presumably more intensive land market for dwellings is accompanied by a more extensive encumbrance on mortgages. Whether causality exists here, however, would first have to be proven. The question arises as to whether this was related to the financial possibilities and constraints of tenants in the villages, and whether the social stratification of house and vineyard tenants differed. Isolated observations that Viennese citizens who came into possession of houses in the villages immediately alienated them again⁹¹ may lead to the hypothesis that the houses were predominantly in the hands of the wine-growing villagers. If they frequently became indebted when purchasing land, it is also conceivable that land mobility increased in the context of mortgage encumbrances.⁹² In the case of vineyards, this may have been less pronounced because the group of vineyard tenants more often included wealthy individuals.⁹³ Eventually, economic practice within Heiligenstadt's land market may have been characterised by activity, but it may also have been simultaneously reflected through tenurial continuity.

Conclusion

In quantitative approaches to medieval land markets, transaction numbers have played an important role. Following precursors in the early twentieth century, systematic

89 This point is summarised effectively by Ghosh, "Rural Economies", p. 268.

90 E. g. Feldbauer, "Lohnarbeit im österreichischen Weinbau", p. 233.

91 E. g. StAKI, Grundbuch 8/2, fol. 15r: the burgher Hanns Zochman inherits a house-farmstead-vineyard in Heiligenstadt and the recording in the manorial register states that the property must be sold as soon as possible and a tenant should be appointed. If this did not happen, the parish priest would have been authorised to intervene.

92 Béaur, *Bodenmarkt*, p. 266. – However, the opposite is also conceivable, namely that loans granted could avert sales and thus reduce transaction numbers.

93 Cf. van Bavel, *Land Market*, pp. 141–142; van Bavel, *Structures of Landownership*.

quantitative analyses of land transactions have been established since the 1960s. Initially, the interest focused on inheritance customs, and English researchers developed various approaches to describe transaction patterns. The distinction between conveyances to family members and those outside the family circle was of particular concern. In the late 1970s, these approaches were used for the dichotomous differentiation of European societies and their stages of modernisation, whereby the patterns of land transfer identified became an essential part of the argument. Thus, the quantitative methods for the analysis of land transactions were attributed a more far-reaching significance. They became instruments by means of which questions about individualism and emotional or economic behaviour were to be addressed. The theses were widely received. They triggered a debate and quite some resistance. While the derived conclusions were critically reviewed, a highly practical and source-oriented examination of the methodological approaches developed. For the quantitative work with land transactions, the indicators of (i) transaction frequency, (ii) the proportion between family and non-family transmissions, and (iii) the 'bond' between families and their land were discussed and further elaborated. The approaches have been able to throw various spotlights on transaction patterns and land market structures, but they also harbour dangers. The differentiation of family transactions, which was often intended to serve as a proxy for inheritance-related transfers, also implied a demarcation between family and market. While the approximation might suggest itself due to the limited information in the sources, it is not in accordance with the theoretical model. In addition to the information on compensation, insights into the context of the transaction would also be necessary, namely the actual impact of the specific relationship or hierarchy between contracting parties on the transaction and the pricing. The deeds and manorial records provide references to performance and counter-performance, and they also mention family relationship. The actual relevance of these relations to the transaction, however, remains hidden. When it comes to the economic significance of the family and non-family transaction categories, limitations must be admitted, and the same applies to the source terminology for the transaction types. These terms describe legal concepts and not economic ones.

Applied to the case study of the Heiligenstadt parish, the key figures shed light on the mobility of land, to some degree on the structure of property transmissions and – with major reservations – on tenurial continuity. The numbers do not, however, predict economic intentions or behaviour per se. The evidence may point in different directions, and additional methodological approaches are required in order to interpret specific circumstances. Heiligenstadt's data reveals a busy land market of village houses with grounds, and of independent vineyards in and around the three wine-growing villages not far north of Vienna. The institutional framework offered scope for agency, and the family seems not to have been – so to speak – a restricting entity. The land market was multi-layered, from subtenants up to the manorial lord. While the recorded tenancies only reflect a segment, the tenants involved came from various

social strata. Powerful protagonists, such as urban and clerical institutions, acted as tenants as well and show significantly longer holding continuity than familial households. Meanwhile, village houses circulated faster than vineyards, although the latter were normatively vested with freer tenancy rights and more options.

The methods used do not have the far-reaching significance that was once assumed. They do have the advantage of having been rigorously debated, but source-related uncertainties pose major obstacles to their thorough application. What is required is a combination of different approaches: a definition of *family*, a reconstruction of possession histories, and also a weighting at least by the share effectively transacted. The latter is a prerequisite for comparisons, since otherwise quantifications are barely meaningful on a supra-regional level. Different institutional frameworks – including regional and manorial customs as well as the practices of dealing with inheritance and matrimonial property – resulted in varying transaction patterns. Here, the focus on the family as a whole might serve as a useful category that omits those difficulties.

The desire to be able to compare quantitative evaluations of medieval land markets is entirely understandable. However, the task is subject to major challenges and requires a great deal of reflection. Quantification is indispensable in approaching serial sources in order to gain insight into the structure and patterns of the land markets under study. However, interpretations are barely credible without subjunctives and must, at all events, be deeply embedded in qualitative analyses.

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