Delicate urbanism in context:
Settlement nucleation in pre-Roman Germany

The DAAD Cambridge Symposium

Edited by Simon Stoddart

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with contributions from
Ines Balzer, Manuel Fernández-Götz, Colin Haselgrove, Oliver Nakoinz,
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Chapter 2

Early Iron Age *Fürstensitze* – some thoughts on a not-so-uniform phenomenon

Axel G. Posluschny (Glauberg)

There has been a long lasting discussion in European, and especially German, archaeology about the role of the so-called *Fürstensitze* (*Princely* Sites), since Wolfgang Kimmig published his definition of the term *Fürstensitz* in 1969 (Kimmig 1969). Kimmig described parameters that, for him, defined such a site: One of his criteria was the fortification of the settlement, another was the position on a prominent hill. Additionally, he stated that there should be Mediterranean imported goods (such as Greek or Italian transport amphorae or drinking vessels) and, last but not least, that there should be large burial mounds (*Fürstengräber*) nearby, containing exceptional material culture of the nobility, who lived on the *Fürstensitz*. Kimmig and his disciples not only gave definition to the term *Fürstensitze*, they also tried to interpret this kind of settlement as a central place, inhabited by the 'reigning nobility', supported by the power and the wealth to participate in a system of long-distance contacts with Italy, Greece and southern France.

In contrast to this perspective of Kimmig, the following short overview of some of the *Fürstensitze* in southern Germany illustrates the diversity of this category of sites (Fig. 2.1). The essential points of the best known sites are outlined first, whereas the *Glauberg* will be addressed in more detail in the second section.

The best known site is the *Heuneburg* in Baden-Württemberg (for an overview see Krausse et al. 2016). The settlement is located above the banks of the river Danube, a relatively minor river at this point, but most likely navigable from here downstream in the Early Iron Age. A, now partially reconstructed, rampart surrounds the main settlement, and a number of rich graves under mounds are located in its vicinity. Mediterranean finds have been found in these graves, but especially in the settlement itself. The rampart

fortifies a hilltop settlement that could be described as an *acropolis* while large areas surrounding it have been densely populated as some kind of *suburbium*, at least during some of the periods of the hillfort's occupation.

The *Ipf*, occupied both in the Late Hallstatt and the Early La Tène period, is one of the most impressive sites from the landscape perspective (Krause 2014). A number of settlement sites have been found in its vicinity, some of them most likely directly subject to the *Ipf* itself and some probably with a higher ranking and thus politically independent. There are rich graves nearby and, moreover, there is a wide range of Greek pottery that has been found during recent excavations.

The *Marienberg* in Würzburg in northern Bavaria shows the range of sites that are categorized as *Fürstensitze*. The site – impressively situated above the river Main – is nowadays covered by a late medieval/early modern fortification. During excavations, mainly in the 1960s, traces of an undated fortification were recovered which could date to the Early Iron Age allowing for some considerable margin of error. A handful of Greek sherds have been discovered amongst the great number of Late Bronze Age and Early Iron Age finds, and their number has recently been augmented by new Greek sherds just recently unearthed during a rescue excavation in the courtyard of the fortress: Heyse/Feuerhahn 2016). Rich graves that could be connected to the hilltop settlement are, however, still missing. Hinterland investigations have shown that the *Marienberg* could have been supplied from its environs, but that the production of an agricultural surplus was not very likely from the settlement itself (Posluschny et al. 2012). The function of this site was most likely connected to its roles as a trading point, controlling and using the important route along the river Main.
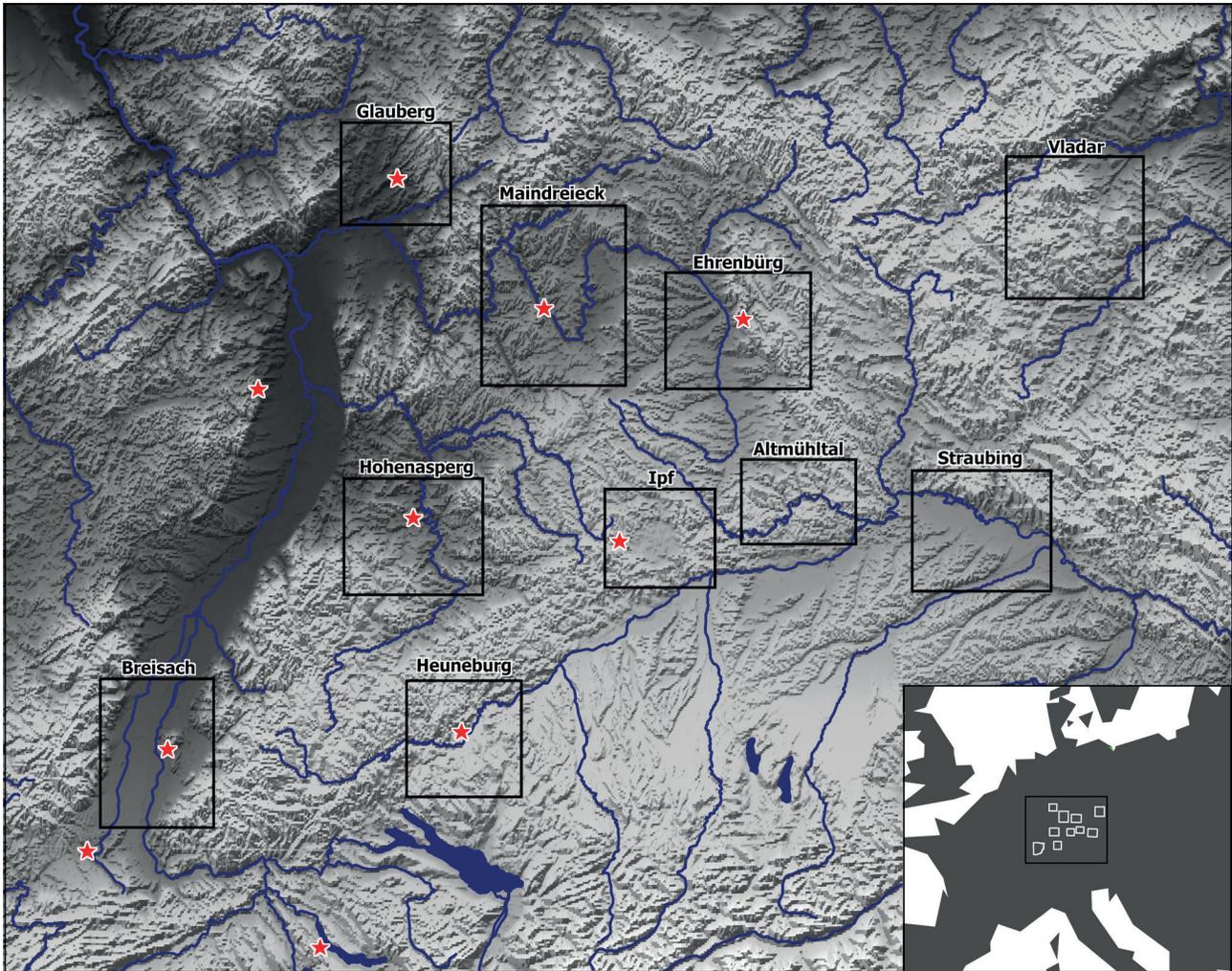
Figure 2.1. *Map of* Princely Sites *mentioned in the text. DEM SRTM90.*

The Glauberg as the northernmost *Fürstensitz*

The *Glauberg* on the eastern rim of the fertile Wetterau region is the northernmost *Fürstensitz*. With its still visible ramparts surrounding the hill's plateau, the *Glauberg* was, of course, a place that attracted researchers rather early in archaeological research, so it comes as no surprise that the first more or less regular excavations started in 1911/1912. Its main investigations started between 1933 and 1939 (Heinrich Richter; see Schallmayer 2011), although the excavation archive was almost completely destroyed in 1945. This investigation was followed by extensive excavations by the State Heritage Service of Hesse from 1985 to 1998 (Fritz-Rudolf Herrmann; the settlement excavations are published by Baitinger 2010), a large-scale magnetic survey from 1994–2001 (Posselt & Zickgraf) and were also part of the DFG (German Research foundation)

research programme by the University of Mainz from 2004 to 2010 (Pinsker & Zeeb 2008; Hansen & Pare 2016).This work has now been followed by a small excavation on the plateau in 2016 (Röder et al. in press) and by another excavation on the southern side of the hill in 2017 which brought to light an Early La Tène burial of a woman with two bronze arm rings and 2 amber beads in a tree trunk coffin directly underneath the rampart which surrounds the whole *Glauberg* hill. The armrings ('Vierknotenarmringe') represent the same type of armring that was found in the main *princely* burial. Further investigation is needed to assess the chronology of these graves and the construction of the rampart/ditch system and the so-called procession avenue around the *Glauberg*.

While the Heuneburg is dated to the Late Hallstatt period, the *Fürstensitz* period of occupation of the *Glauberg* – though also occupied in the Late Hallstatt

period – is primarily during the Early La Tène period. The plateau of a hill of about eight hectares has been fortified, while another twelve hectares have been fortified by a rampart and a ditch to incorporate a spring in the north end of the plateau and the whole area is surrounded by another (unfinished or interrupted) rampart-ditch system which is only now known to a small extent but covers an area of up to 250 hectares. Again, the site is thus a fortified hilltop settlement with rich graves in its vicinity (for an overview of the burial sites see Pinsker & Zeeb 2008), some kind of *acropolis* and *suburbium* (or at least remains of houses and storage pits on the slopes of the hill), but no Mediterranean goods have been found so far (probably with the exception of Mediterranean coral finds: Fürst et al. 2016 and the evidence of the red colour made from Mediterranean cochineal scale used to dye some of the textiles from the *Glauberg* graves: Balzer et al.

2014). While there is no doubt that the place had some importance during the Early Iron Age, there is also no evidence that the *Glauburg* hillfort was the centre of a densely populated area – it seems to have played no role as a focus of population.

The long-lasting interest of many archaeologists for more than 100 years might be because the *Glauberg* was an imposing fortified hilltop settlement which looks rather impressive when approached from the near distance – we will see later that this is less the case when one looks at it from a greater distance. However, the *Fürstensitz* criterion of imported Mediterranean goods was not fulfilled – at least not clearly for the precise site of the *Glauberg*. We know of a handle from an Etruscan Bronze Vessel from the fourth century BC which was found in 1855 on a field in *Nidda-Borsdorf* (Kimmig 1990), some 20 km north of the *Glauberg*, and, in around 1900, the fragment of a bronze neck
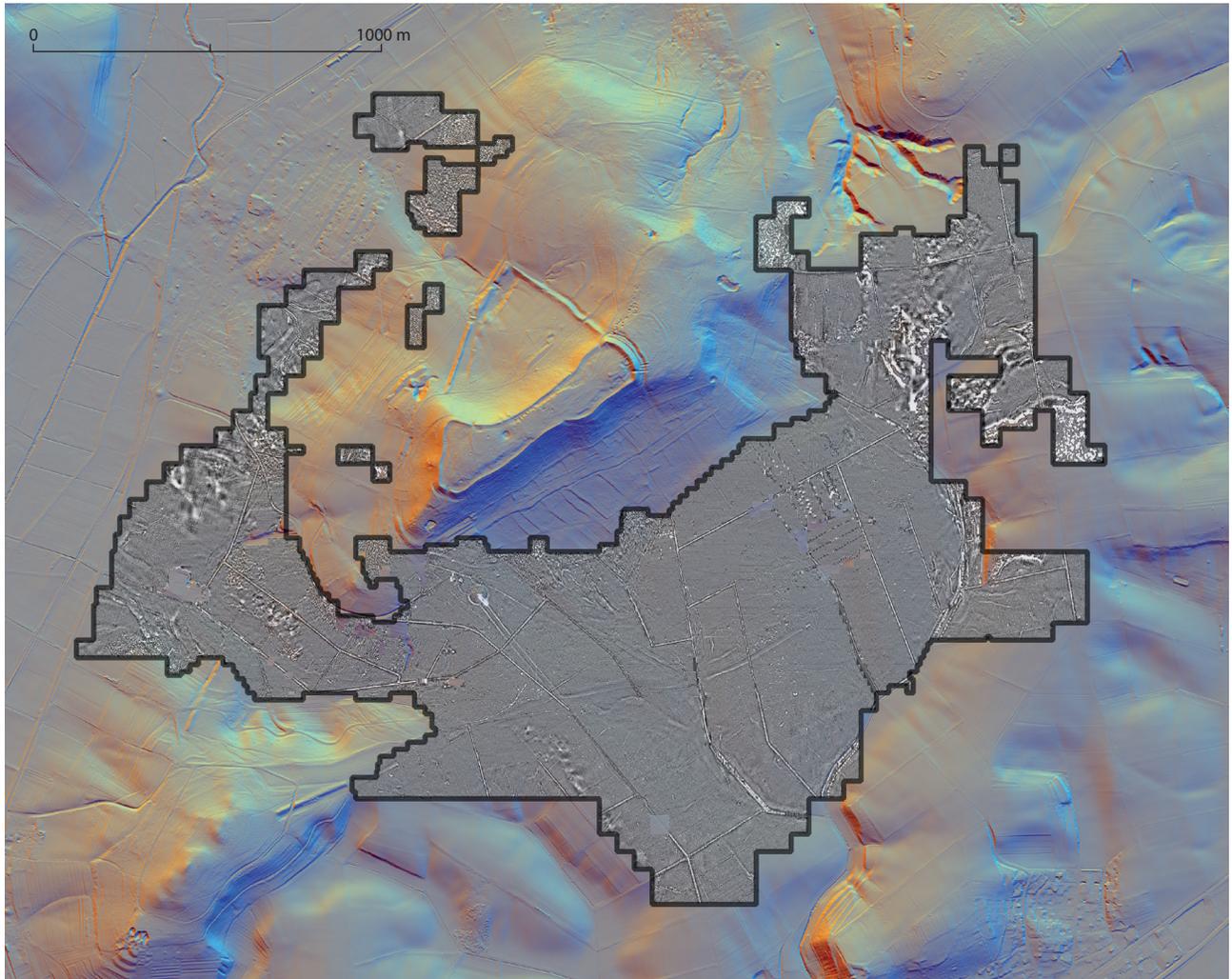
Figure 2.2. *Area of the magnetometer survey on the* Glauberg *between 1994 and 2001.*

Figure 2.3. *The bronze Celtic style* Schnabelkanne *from the* Princely *burial 1 (burial mound 1) from the* Glauberg *(photo U. Seitz-Gray).*

ring, was found in a field on the southern slopes of the *Glauberg* itself (Frey 1980). The rather unusual style of the ring might have been influenced by Persian artists. However, even if we would accept these finds as a proof of Mediterranean contacts of the people from the *Glauberg*, the question then remained: Where are the *Princely Burials*, the *Fürstengräber*?

Amateur archaeologists discovered the shallow remains of a round structure on an aerial image in 1987 and the State Heritage Service focused on this ditch with a diameter of 70 m for trial excavation in 1994 – only to find out that this ditch was part of a flattened burial mound (Tumulus 1). In its centre, the excavators found an empty pit of 2.4 by 2.8 m – most likely not a plundered grave but a pit that never contained a burial or anything else. However, two other features were then discovered which contained the remains of two very rich burials. Finally, on 24 June 1996, the excavators found what can only be described as sensational – a life-sized stone statue of a *Celtic* style warrior, lying in one of the ditches around the burial mound.

All these discoveries led to a very large-scale magnetometer survey of 250 hectares – at that time the largest geophysical survey in the world (Fig. 2.2). Apart from a number of pits, ditches and ramparts, this survey revealed another, smaller, ring ditch with a burial pit in its centre, just some 370 m south of the main burial mound (Tumulus 2). Again this burial was recovered as a block and excavated in the laboratory.

The three graves revealed a number of very extraordinary finds. Grave 1 (Tumulus 1) contained the skeleton of a 21–28 year old person, most likely a man, 1.69 m tall, with a shield, a gold torc, gold arm ring and gold finger ring, various fibulae, a sword, spear and arrow heads, a belt and an iron wire which was the remains of a rather unusual headdress or cap. A bronze flagon, a so-called *Schnabelkanne* – a typical *Celtic* style variant of an Etruscan *Schnabelkanne* – was found in the southeastern corner of the burial chamber (Fig. 2.3). It was wrapped in cloth and contained honey wine (mead).

Burial number 2 in the same tumulus was a cremation on a wooden tray, placed in a 2.3 by 1.3 m wide pit. The burial contained the ashes of a 30–40 year old man with an iron sword, four spear heads, a richly decorated belt and a bronze fibula with coral beads. The most notable find was the very rare bronze flagon, a so-called *Röhrenkanne* (Fig. 2.4), once again containing the remains of mead.

Finally grave 3, the only grave in the smaller Tumulus 2, contained a tree trunk coffin of a 16–20 year old man with a gold arm- and a gold finger ring, shoe trimmings, a leather belt with a sword, a spear head, a small gold-layered bronze fibula and a 10.5 cm large bronze double mask fibula with 109 coral inlays (Fig. 2.5).

One further fact seems to be important to mention: All three graves contained grave goods which make us think that they were burials of warriors with weapons as well as with gold items, a possible indication of their

high social status – a social status that might have been connected with the status of the hillfort and with the meaning and importance of the site as a Central Place – however this term may be defined.

The, already mentioned, life-sized stone statue of a warrior that was found in a ditch is one of the finest pieces of stone sculpture that are known from the European Iron Age (Fig. 2.6; a 3D model of the statue can be accessed online: http://tinyurl.com/y9afrkvv). However, in addition to the complete statue, another 130 fragments, from at least three, more or less totally destroyed, statues were also discovered in the ditches, and these seem to have belonged to very similar statues to the complete one.

We do not know if the complete statue was intentionally buried – like the remains of the three warriors – or why the other three statues were destroyed. However, it is now clear that the complete statue was broken from its base and slipped into the then still half open ditches, coming to a halt at a post that was erected in that ditch (Klausmann in preparation).

Figure 2.4. *The bronze* Celtic *style* Röhrenkanne *from grave 2 (burial mound 1) from the* Glauberg *(photo W. Fuhrmannek).*

Figure 2.5. *Bronze double mask fibula with 109 coral inlays from grave 3 (burial mound 2) from the* Glauberg *(photo P. Odvody).*

Figure 2.6. *Life-size sandstone statue from a ditch at burial mound 1 from the* Glauberg *(photo P. Odvody).*

We also do not know who is represented in the four statues – were they symbols for the most powerful persons from the *Glauberg*, a personification of specific persons or of a role as warrior, priest or a leading person? Why at least four statues? Why is one nearly fully preserved while the others are intentionally destroyed? One intriguing observation, however, seems to be important: All the main features of the complete statue can be found in the material culture of grave 1 in Tumulus 1:

– The sword with a similar handle and a similar shape of the scabbard,
– The shield,
– A gold finger ring,
– A single arm ring (that is made of gold in the grave) and three additional bronze arm rings,
– A gold torc with 3 'extensions',
– And last, but not least, the remarkable, Micky Mouse style cap, which, in the grave, could be identified by the iron wire frame and the remains of leather and wood.

Unfortunately the remains of the other three statues are too badly preserved to be able to detect similar features – either similar to the first statue or similar to one of the other graves.

Models of centrality

The main questions of the *Fürstensitze* research programme, funded by the German Research Foundation DFG from 2004 to 2010 (http://fuerstensitze.de/) were:

– Was there a concentration of power and if so, were the *Fürstensitze* a result or maybe the source of this concentration of power?
– What was the reason for some sites becoming seemingly more important and powerful, or at least more wealthy?
– Did a concentration of power, of people or of wealth result in a process of urbanization?
– And last but not least: What was the effect of distance? What happened to settlements and societies in the close proximity to and at greater distance from the *Fürstensitze* during these processes?
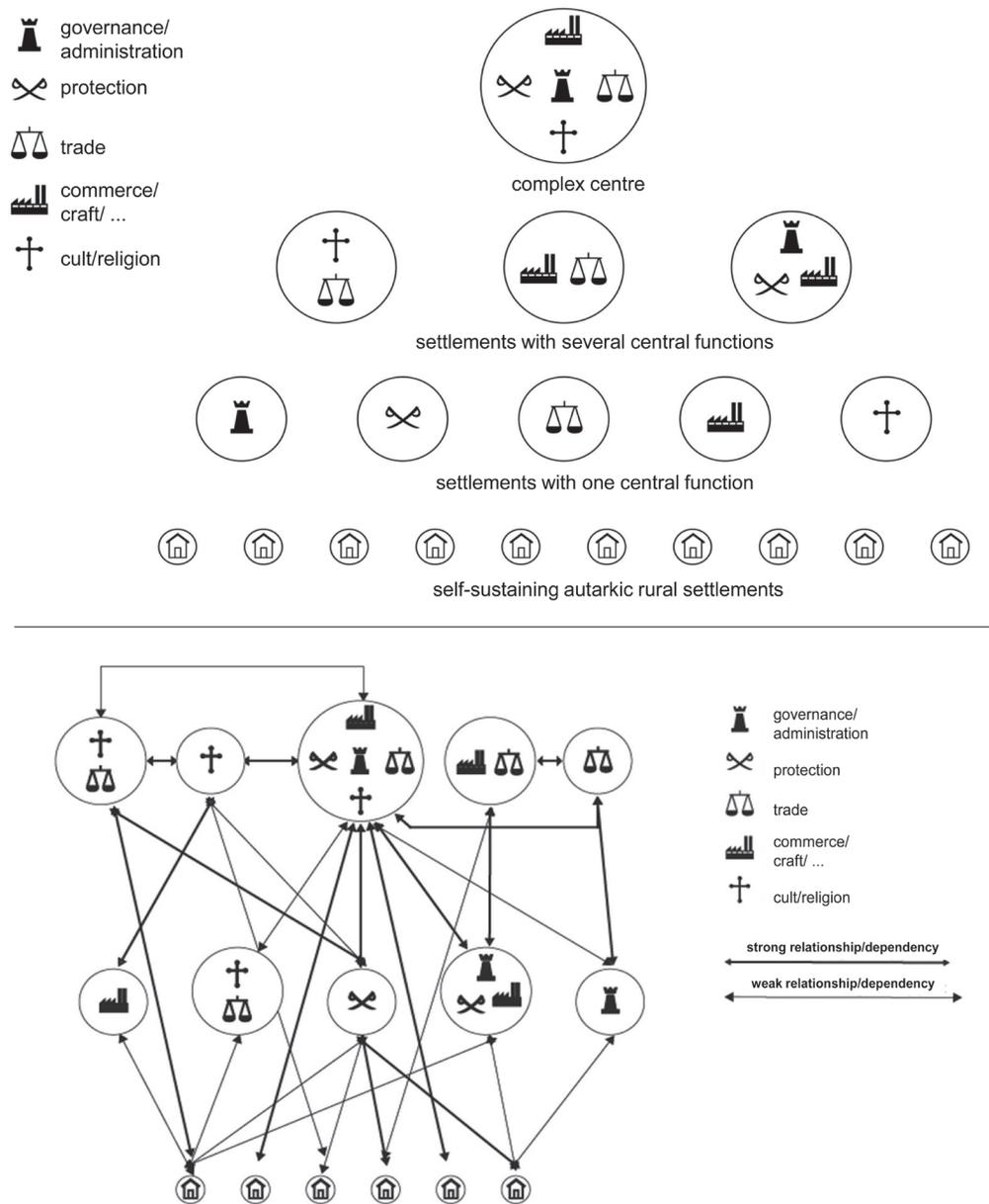
Figure 2.7. *Top: Model of a settlement hierarchy for the Early Iron age (based on a model for medieval societies by Gringmuth-Dallmer 1999). Bottom: Alternative hierarchical model taking into account the complexity of different Early Iron Age settlement sites.*

These main research aims and questions are strongly related to an understanding of a potential settlement hierarchy of the Early Iron Age and the role the *Fürstensitze* might then have played in such a system. Eike Gringmuth-Dallmer (Gringmuth-Dallmer 1999) described – influenced by Christaller's system of central places (Christaller 1933; Collis 1984) – a system drawn from the evidence of medieval societies and the kinds of functions that settlements could have had at that time. It is a model where we could see a *Princely Site* on the top of a pyramid while other settlements with lesser functions were inferior or even tributary to the major centre (Fig. 2.7, top). This very simplified image reminds us of the idealized representation of a city with all its different functions that are important for the neighbouring settlements of lesser importance.

The question, however, is: can we see such a system in the archaeological record and can such a system be transferred from the medieval and modern

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Table 2.1. *Functions of Central Places and their appearance at Early Iron Age Fürstensitze.*

	Marienberg	Glauberg	Heuneburg	Ipf	Ehrenbürg	Breisach	Hohenasperg	Vladař
control	?	?	?	?	?	?	?	?
protection	X	X[1]	X	X	X	X	X	X
trade	?	?	X	?[2]	?[2]	X	0	?[3]
crafts	0	?[4]	X	0	X	X	0	?
cult & religion	0	X[5]	0	?[6]	0	0	0	0

1. Outer rampart/ditch for representation?
2. Mediterranean import?
3. Bronze figurine from northern Italy/eastern Alpine region?

4. Annex area
5. Potential calendar building
6. 'Herrenhof' Bugfeld?

periods to the Early Iron Age in Central Europe. On the one hand, there are strong doubts that it is possible, in general, to find archaeological traces of all the different functions in the settlements because of the limitations of archaeological methodology. On the other hand, even if we could find archaeological evidence for aspects like religion, administration and the like, it seems still too simple to reconstruct Iron Age settlement systems as a pyramid, when it seems far more likely that a network of places with different functions, with different meanings and with different relationships amongst each other and on an interregional level, describes the historical situation much better in the middle of the first millennium BC (Fig. 2.7, bottom).

If we simply list what we know about important functions, related to Central Places – or even Urban Centres – and their evidence at the respective sites, we can see that many of these functions are not verified (Table 2.1). This is, of course, no proof of their absence, but at least we should be suitably careful when building theories and interpretations on absence of evidence. Another important fact that one of the main criteria related to urbanism (control and administration) cannot be easily established in any of the places listed in Table 2.1. This might be due to methodological constraints, but still makes it difficult to use this criterion for developed interpretations.

The role of landscapes and environs

To overcome the methodological issues, it might make sense to look at the landscape settings in which the *Fürstensitze* have evolved, developed and finally declined. Is there any evidence for the specific meaning and the regional aspects or differences of these sites based on their environs? Is there more to these sites than the notability of specific finds or archaeological features if we also take into account features of the landscapes in which these *Fürstensitze* were embedded?

The *Fürstensitze und Umland* ('Princely Sites' and Environs) project mentioned above aimed to analyse these questions from an, archaeologically framed, landscape perspective, choosing a number of areas around most of the *Princely Sites*, as well as some regions without these extraordinary settlements. These project areas were situated in southern Germany (Baden-Württemberg, Bavaria and Hesse), the Alsace region and in western Bohemia, chosen for their differences in landscape and environment to allow for interregional comparisons (Posluschny 2007; Posluschny 2010; Posluschny 2012a).

The underlying basis of the analyses was the site management databases of the archaeological heritage management authorities as well as the main publications, compiling a total of approximately 5800 settlement and 7700 burial sites from the Late Bronze Age Urnfield period, the Early Iron Age Hallstatt and the Early Iron Age Early La Tène period.

A main prerequisite of the analysis is the idea that human behaviour was influenced in part by the natural environment and that this behaviour – like for instance the decision where to settle – left recognisable and interpretable patterns in the landscape. The combination of different environmental preferences might give a hint about the role of economic needs, settlement history and environmental behaviour of the prehistoric societies, especially when choosing a settlement site, also shedding light on potential economic gain as a possible source of wealth or even influence and power (Posluschny 2007).

Visibility and prominence

The viewshed from the *Heuneburg* (Fig. 2.8, above), as well as from the nearby hill top settlement on *Mount Bussen* (Fig. 2.8, below), was calculated drawing on Kimmig's idea of the *Fürstensitz* as a prominent site with a high degree of outward and inward visibility. It became evident that the viewshed from *Mount Bussen* is
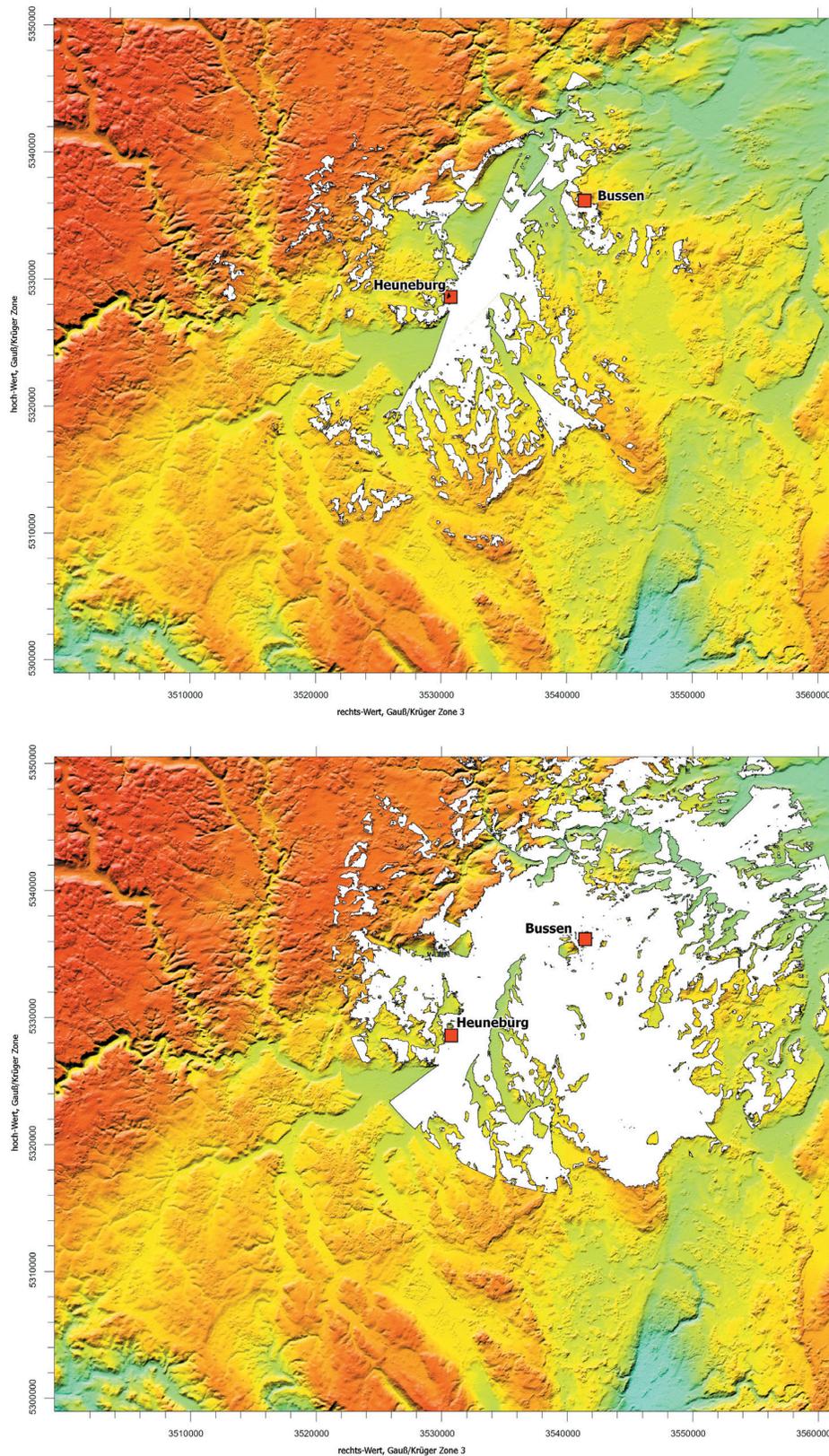
Figure 2.8. *20-km viewsheds from the* Heuneburg *(left) and the nearby* Mount Bussen *(right). Based on the 25-m resolution DGM50/M745 (courtesy Bundesamt für Kartographie und Geodäsie 2004).*
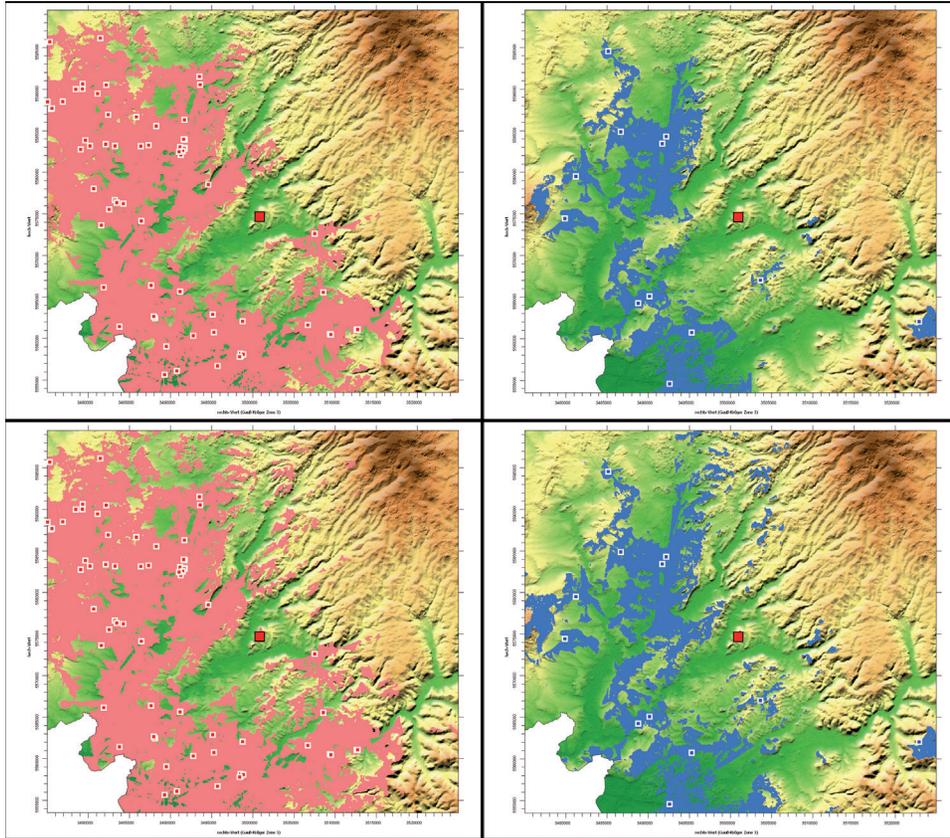
Figure 2.9. *Viewsheds of the Hallstatt settlements (left) and Early La Tène settlements in the area around the* Glauberg. *The* Glauberg *is marked in red. Top: 10-km visibility; bottom: 20-km visibility. Based on the 25-m resolution DGM50/ M745 (courtesy Bundesamt für Kartographie und Geodäsie 2004).*

much more far-reaching and covers a much wider area. The landscape is much better seen (and controlled) from the Bussen hilltop than from the *Heuneburg*, where the main focus is on the river Danube (which was most likely navigable downstream from here in the Early Iron Age). Correspondingly, the site on the *Bussen* is also more easily seen from the surrounding landscape than from the *Heuneburg*. From this analysis, microregional factors prevail, namely the access to and control of the river, responding to its capacity as a trading and information route, factors that were of greater importance than the (visual) control of the whole surrounding landscape.

The *Glauberg* is another site with an allegedly prominent location. One might argue that the site itself, on one of the mountains situated between the fertile loess regions of the Wetterau area and the foothills of the Vogelsberg massif, is prominent enough to work as a landmark, a feature in the landscape which assists orientation in approach and therefore as a trading post or market place.

The cumulative viewshed, calculated from all known settlement sites of the Hallstatt period, the

transitional Hallstatt/Early La Tène period and the Early La Tène period, calculated both with a maximum view of 10 and 20 km (Fig. 2.9) shows that the visibility of the *Glauberg* from its contemporary settlements is near to Zero and it becomes obvious that the *Glauberg* was not a place visible from afar within its inhabited landscape, at least not for the people who lived there at the time when the *Glauberg* had its importance as a *Princely Site*. Of course, when approaching the *Glauberg* from the very close vicinity it looks impressive and prominent, but this prominence depends on distance and scale.

Routes, reachability and trade

One reason for the economic wealth and maybe political and social power of the *Fürstensitze* might have been the placing of the settlements in a position favourable to long distance traffic and trading routes. We know from the finds of the *Glauberg* settlement and its graves that there were connections between the people living here and people in the uplands to the north and

to the Hunsrück region in the southwest. There were connections even reaching far further east to Bohemia. However, was the *Glauberg* situated in a way such that it was an ideal stopping point, as a distribution or market place?

Standard least cost path analyses (based solely on the slope as cost, connecting areas of the distribution of a specific kind of decorated pottery) indicated that the *Glauberg* is not situated on one of the modelled optimal routes (Fig. 2.10). Such an analysis, based on least cost, is at variance with the traditional understanding of ancient routes and roads (Loewe 1956; Baitinger 2008; for the methods see Posluschny 2012b) which can be summarized as follows:

1   Ancient roads show immense continuity (from the Neolithic until the Iron Age or even the Roman Period, perhaps even into the modern period). Ancient routes can, therefore, be projected back from the modern.

2   Ancient roads always run along the crests of hills and mountains to avoid crossing streams and rivers and difficult ground such as swamps and wetlands in the river floodplain.

3   Prehistoric routes follow the lines of prehistoric grave mounds (or attracted the construction of mounds).

There is much evidence that these points might have played a role in certain periods, in specific areas and for specific purposes of travel. However, it is far too simple to build one model simply on these principles, especially when the argument forms a vicious circle, and when other analyses have shown that the *Glauberg* was not necessarily situated next to a main traffic route.

One main argument posed for the use of hilltop paths has been the avoidance of swampy areas in the floodplain of rivers, which would have been the main flat area available for crossing the landscape. As a counter to this argument, there is a very clear evidence for
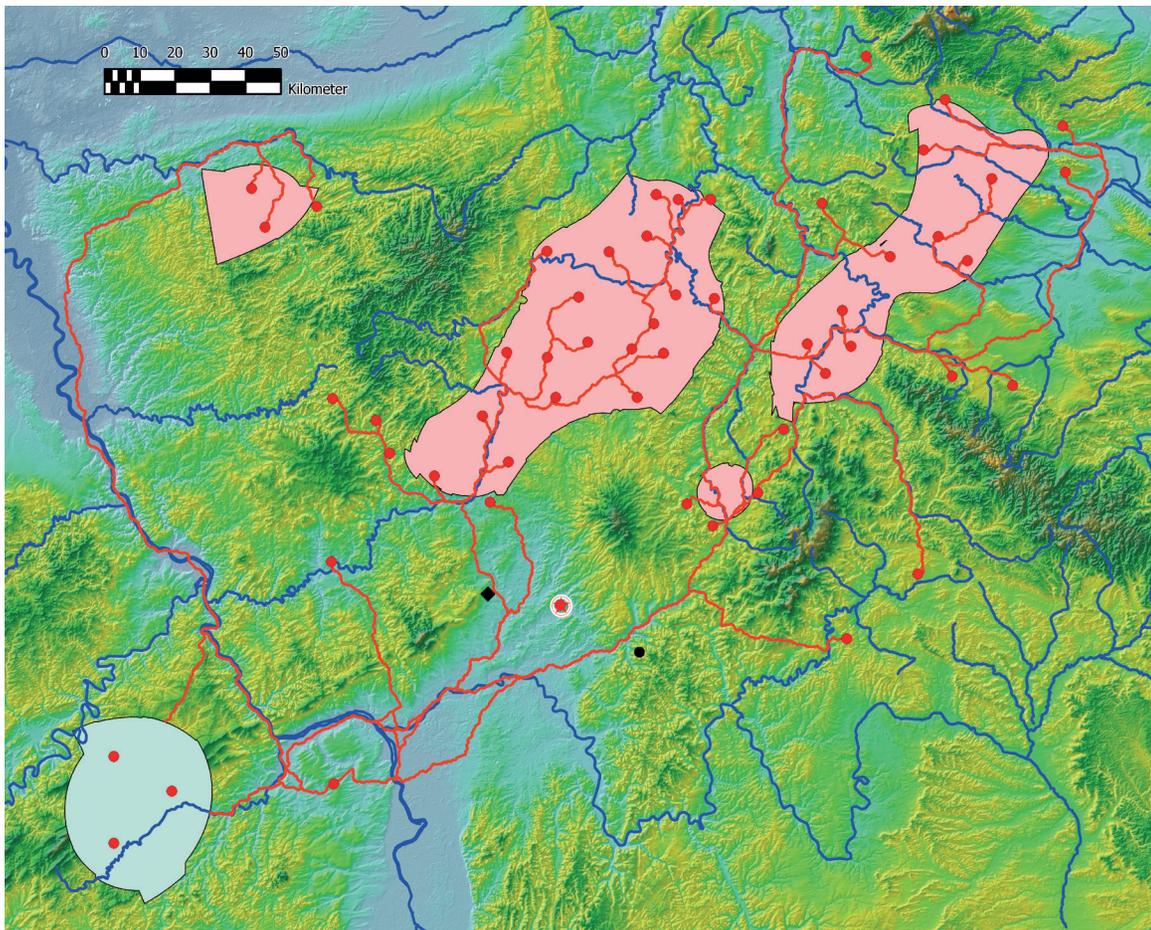
Figure 2.10. *Slope based least cost path model of possible routes connecting sites with line-decorated pottery, also found on the* Glauberg. *Based on the 25-m resolution DGM25 (courtesy Bundesamt für Kartographie und Geodäsie 2004).*

the use of bridges, crossing these very same swampy areas, starting in at least in the Bronze Age and continuing in the Iron Age. Beyond the use of the waterways themselves as a means of transport, the construction of roads along rivers has been identified, supported by the construction of different kinds of bridges (Jud 2002; Schussmann 2003; Meiborg et al. 2013), even in prehistoric periods, where no central power was likely to be in charge of planning and maintenance. The long-term use of routeways tends to overcome the friction provided by the cost surface of the landscape, differing from more short-term movement of people which might have responded more readily to such factors.

In summary, we can, of course, find roads along hillcrests, used for specific purposes and at specific times, but we also find them on slopes and in the plains. The mere existence of a road does not make a particular place an ideal market or trading point, as, of course, roads, paths or routes would have interconnected all settlements. This is a question of causality. Did the roads emerge to connect existing sites, or did sites develop because of the existence of specific roads? Both options are equally possible and both might have occurred in the past. However, for a place like the *Glauberg* with a very special meaning, at least at a regional level, it is clear that routes that connected this place to other sites (settlements, burial sites, sites of a religious meaning, other sites with central meaning, …) could have developed because of the *Glauberg*'s meaning rather than through its role in a settlement hierarchy.

Beyond the secular

If it were not for reasons of trade organization, what made the place of the *Glauberg* so special? Is there a single explanation that fits other similar places as well?

An important feature of the *princely site* of the *Glauberg* is the ditch-rampart system surrounding the plateau with the main settlement, incorporating an area of about 180–250 hectares. On the one hand, the layout of this surrounding ditch system incorporates the rich burial mound within the settlement area and places within the sphere of the living (Fig. 2.11, a). On the other hand, the ditch rampart also excludes the burial mound as well, placing it *extra muros* (which is the usual location of burial sites in that period) within the sphere of the dead (Fig. 2.11, b). In that sense, the rampart/ditch system exhibits a double use and perception, both of space and of its borders and it gives the burial mound an even greater meaning as a mediator between two different components of society: everyday life and religion (which most probably would not have been so clearly demarcated in prehistoric societies, as is usually the case in the West today).

It seems important also to mention that the enclosed area is incomplete and thus rather permeable, and the system (though with a 5 m deep ditch of some 18 m width and a rampart of similar dimensions) could by no means have served as a fortification. Moreover, the rampart/ditch system consists of several sections which might not have been constructed at the same
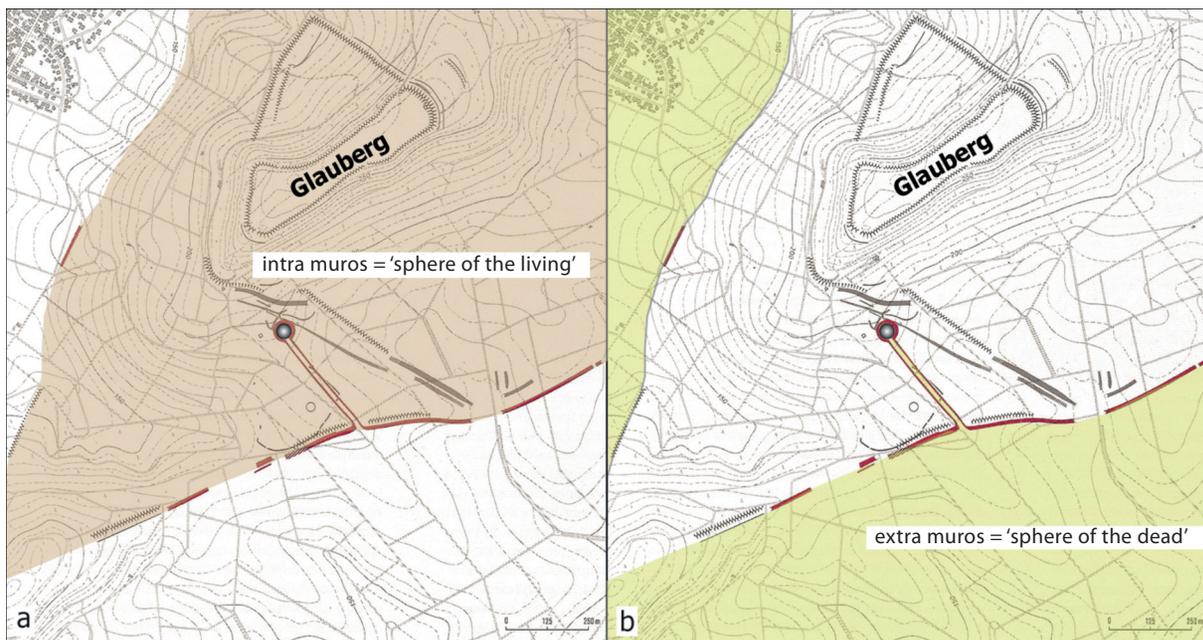

Figure 2.11. *Location of the* Princely *grave on the* Glauberg: *a) Sphere of the living; b) Sphere of the dead*.

time, so it might be possible, that these component parts of the surrounding enclosure might have been dug and erected as some kind of social activity where people from surrounding villages and communities came together at specific dates to work together and to celebrate with feeding and feasting activities to strengthen a corporate feeling of the society that belonged to the sphere of the *Glauberg*.

This idea of seasonal meetings, with social activities, collective working, feeding and feasting, combined with the burial mound (and the persons buried inside) as mediator between different worlds, might relate to a number of extraordinary features that have been discovered during the excavation of the burial mound. A number of ditches and posts surrounded the mound as part of a complicated and well-constructed system which could probably be interpreted as a calendrical structure, enabling people to measure time – seasons and also longer periods, since it is related to the Southern Moon Standstill which occurs every 18.6 years (Deiss 2008). Counting time might then have been the structuring element for the collective activities of the society that belonged to the *Glauberg*, for feeding and feasting and out of respect to the person we now know as the *Keltenfürst* (*Celtic Prince*) from the *Glauberg* (mainly because of a lack of a more precise description).

The knowledge of one or more persons related to the reading of time might have been the reason for the significance of the site and it might have been significant for people from far away, even further than the direct hinterland of the settlement. The construction of such a complex mathematical and astronomical system can only be done with a certain degree of knowledge that is based on the work of generations of people with a specific role within the society. The knowledge, especially the knowledge of time, as is visible in a calendrical structure, is something that might be a source of the power of the Place. Someone who had this knowledge and lived and worked on the *Glauberg* might have underwritten the central role of the whole *Glauberg* settlement, even extending their influence to a wider hinterland.

Centrality and central meaning

The *Princely Sites* could not have functioned without their environs or their hinterland. However, such a surrounding area of interest or influence may not have been simply economic. Such an area, at least for a *Fürstensitz* may have been defined in a somewhat more perceptional manner. Most of the burial mounds in the vicinity of the *Glauberg* – though most of them are not yet dated – do lie more or less exactly at the border of the visible zone around the *Fürstensitz*, demarcating the area that is under visual control from the *Glauberg*. In this case, we do not see an economically defined hinterland, but an area that is marked by the graves of the ancestors.

The economy was, nevertheless, important; within a society based on agriculture, the relationship between consumer and producer sites was of considerable importance (Posluschny et al. 2012). Did the *Princely Sites* depend on the support of the surrounding settlements? Or did they have a larger potential agricultural yield than the 'regular' settlements and did they offer supplies to the surrounding villages? When we look at the economic features of the hinterland regions, it is, first of all, interesting to see what the hinterland areas (e.g. within 60 minutes walking distance) tell us about the site itself, by comparing the *Fürstensitz* to the other settlements. The diagram (Fig. 2.12) shows that the median values of the size of the 'hinterlands' of all the regular settlements within each of my areas of research, do not differ so much compared with the differences between the territories of the 'central places'. In general, the hinterland areas of the regular settlements are more or less comparable, whilst the *Fürstensitze* and other important places obviously did differ much more on a regional scale, depending on the size of their surrounding landscapes.

Within the area of the Nördlinger Ries, occupied by the *Fürstensitz Ipf* and the two ditch enclosures of *Osterholz*, we can see the biggest spread between the mean value of the territories of the regular settlements and those of the central places. Only the fortified hillfort of the *Goldberg* in this area appears to have a territory much more like the regular settlements. Within these surrounding areas, the *Ipf* itself has the largest share of soil with low suitability for plant cultivation in its territory, as well as the smallest share of high quality soils. In contrast, the availability of good or at least medium soils is much greater around the ditch enclosures of *Osterholz*, which compensates for their smaller territories. The *Goldberg* site with its large hinterland area had a relatively high percentage of good soils as well.

Knowing that the people in late Iron Age times made their living mainly by crop farming and cattle raising means that the large hinterland areas where the mean values of size are more or less the same as the value of the hinterland size of the 'special settlement' itself are an indication of a mainly agricultural based way of living of the people of the 'Central Place'. We can make this assumption for the *Goldberg*, while the *Fürstensitz* on the *Ipf* itself as well as the ditch enclosures of *Osterholz* on his foothills seem to have played a different role in the settlement system.
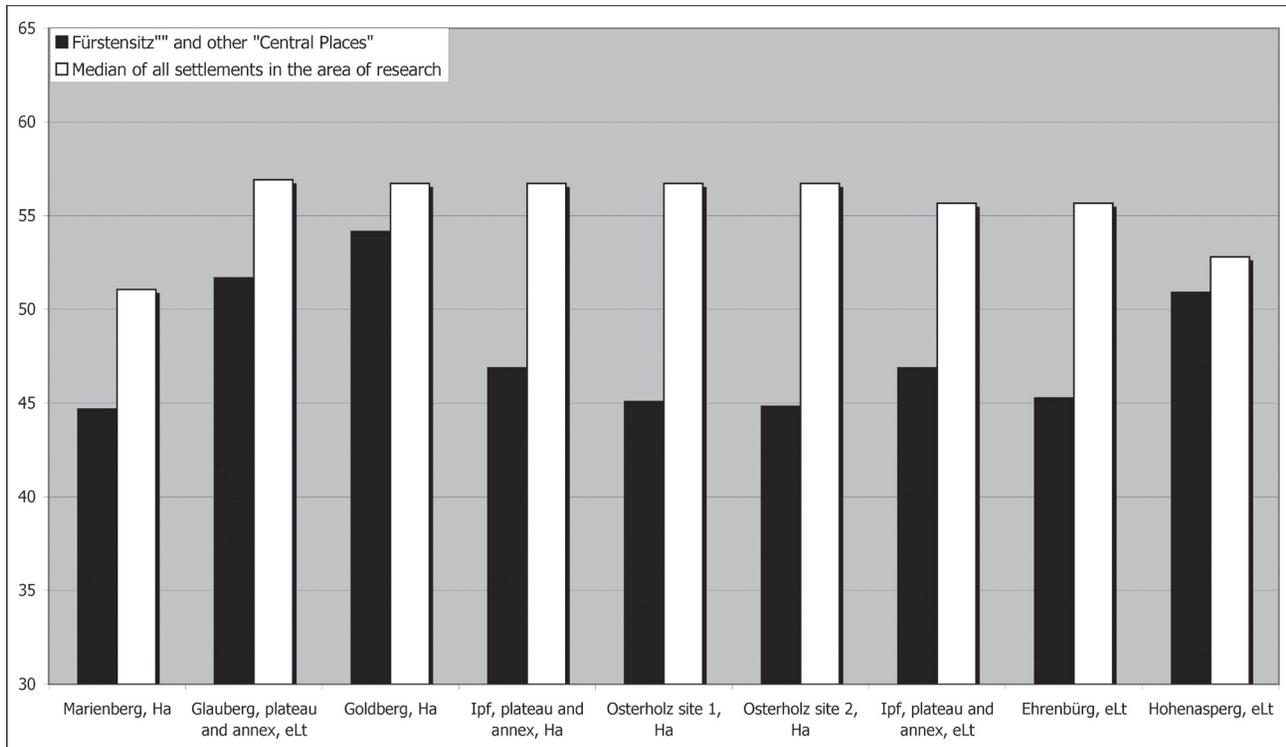
Figure 2.12. *Sizes of the catchment areas that are reachable on foot within a one hour from a settlement. Black: Catchment area (in sq. km) of the* princely *and other special sites; white: Median value of all catchment areas (in sq. km) around the* princely *and other special sites.*

The *Ipf* is more or less a landmark in both a cultural/ritual way and in an economic way as part of a traffic and trading system, whereas we have some still very weak evidence that at least one of the *Osterholz* ditch enclosures might have been a place with a ritual meaning (Krausse 2014).

Settlement densities and site distributions

Prehistoric people made their decisions of where to settle most probably based on their agricultural or economic needs and on the availability of resources in the vicinity of a site. A very dense site distribution would therefore show that the main factors for successful economic activities have been met, whilst gaps might show a lack of one or more basic resources.

In the area of the *Fürstensitz Marienberg*, the density of population can be calculated in three periods (for the method see: Zimmermann et al. 2009): the Urnfield, the Hallstatt and the early La Tène. In Urnfield period, the highest density (73 per cent), focused on two zones, was concentrated 2 km from the settlement. In the following Hallstatt period, the highest density (83 per cent) was concentrated 2.5 km from the settlement, showing that there was not only

settlement continuity, but new areas were colonized further from the settlement (Fig. 2.13). During both these periods, the *Fürstensitz* of the *Marienberg* was never focus of a densely populated area which was placed at an increasing distance from the settlement, reaching 4 km in early La Tène.

In the *Glauberg* region, large areas were not even settled (Fig. 2.14). The number of settlements from the Urnfield period is, in fact, larger than from the Hallstatt period, but the populated zones are very comparable – so that we can detect a decreased density rather than movement of settlement. Once again the *Fürstensitz* is located at the periphery of settlement density, indeed in an area of low population. One very obvious reason for the small number of settlements here seems to be either rather poor soil quality or steep slopes similarly unsuitable for agriculture. Clearly, a combination of different environmental factors – most of them connected to agricultural production – determined the choice of settlement location. Hinterlands are the basis for the economy – and where the environmental factors did not match the needs of the people, differences in the settlement densities did occur. The wealth and power of the *Fürstensitze* were not the determining factor, but issues of agricultural suitability.
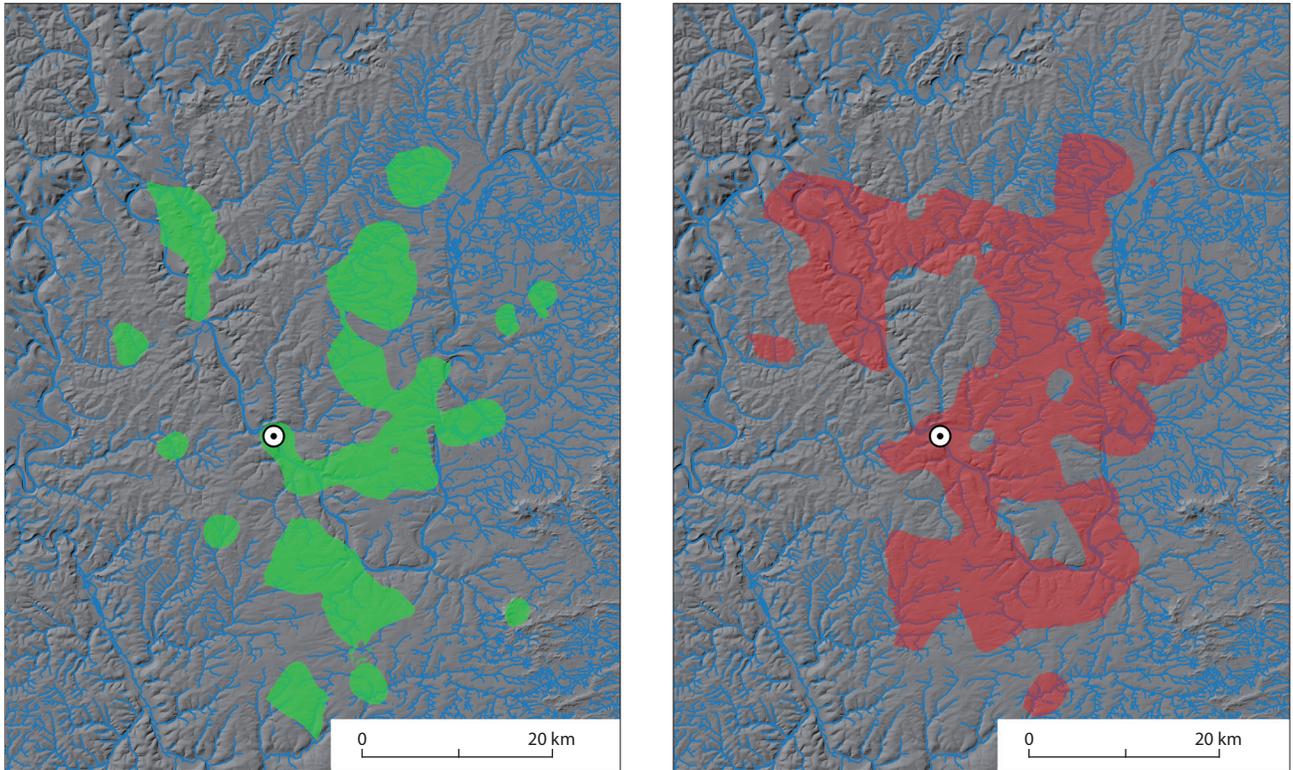
Figure 2.13. *Core settlement areas of the* Marienberg *surrounding in the Urnfield period (GREEN) and the Hallstatt period (RED), based on the Largest-Empty-Circle approach. This technique defines the area of typical settlement density in the landscape and thus core settlement areas (for a full explanation see Zimmermann et al. 2009).*
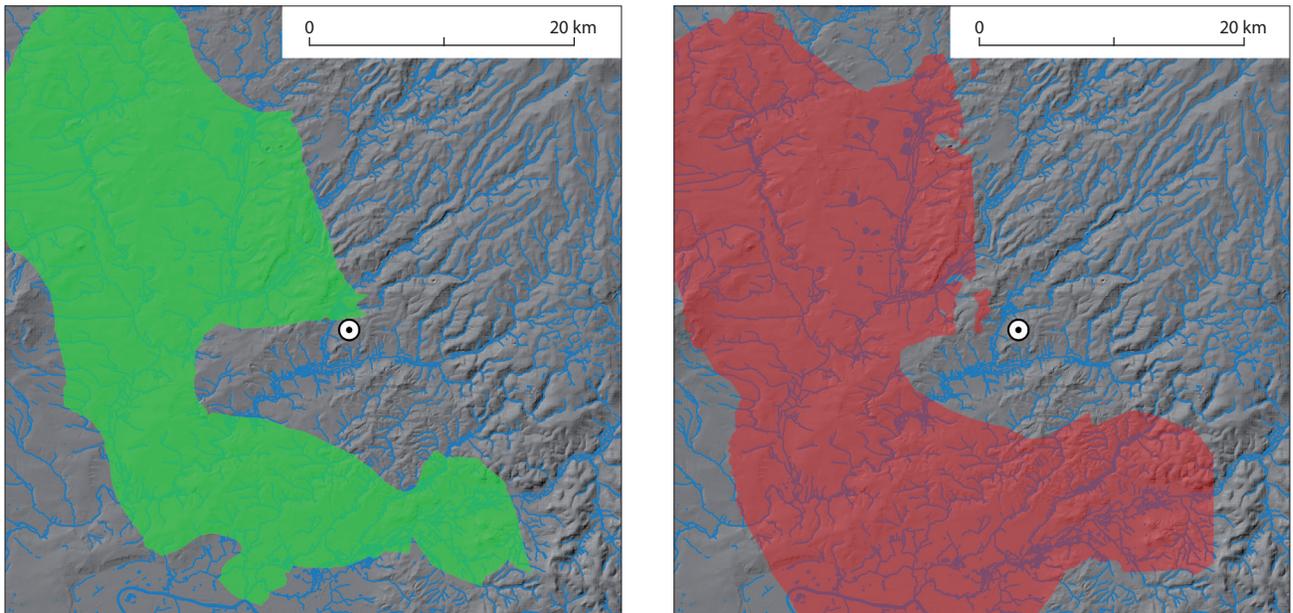
Figure 2.14. *Core settlement areas of the* Glauberg *environs in the Urnfield period (GREEN) and the Hallstatt period (RED), based on the Largest-Empty-Circle approach. This technique defines the area of typical settlement density in the landscape and thus core settlement areas (for a full explanation see Zimmermann et al. 2009).*

Concluding summary

The central meaning that the *Princely Sites* played in their time and their territories might have resulted in a central position of these sites within the landscape. The problem is that we have very little knowledge of the precise territories that might have belonged to a *Fürstensitz*. We do not know how large they were, or on what reasoning their layout was based and we do not even know if there was something like a political territory for each *Princely Site*.

For the later Iron Age, the era of the large late Iron Age *oppida* which Caesar and others have described, we know from the work of Peter Jud (Jud 2000) that at least in the area of the Upper Rhine Valley between Baden-Württemberg and Switzerland, military control was handled from places near the border of territories and of larger regions, whereas the settlement with a
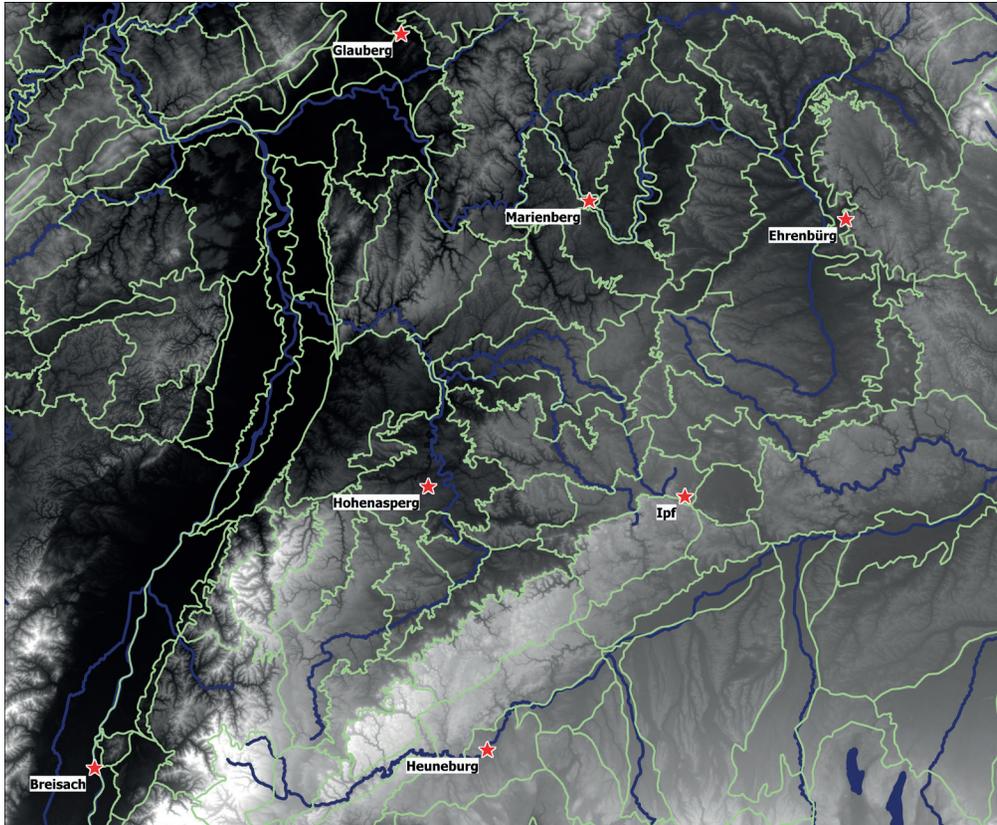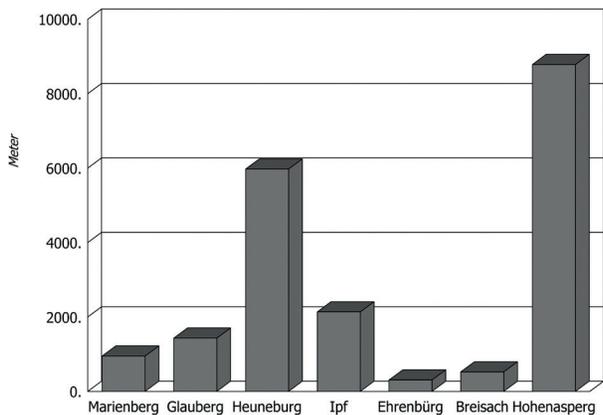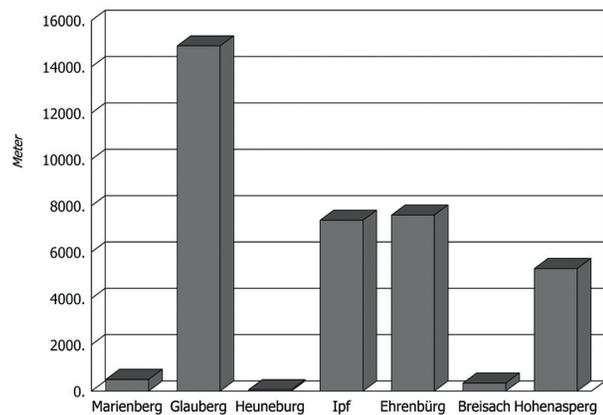

Figure 2.15. *Early* Celtic *style* Fürstensitze *and their relation to the borders of larger regions and major rivers.*

central socially constructed meaning was not clearly visible as such in the archaeological record. The 'centre of power' of a society which does not have a permanent administration (which is clearly the case for the Late Iron Age and even more so for the Early Iron Age) is usually situated at the living place of the ruling person(s) (Jud 2000, 116). A tribe, or a society in general and its territory was controlled from the ruling person's or group's home village or even farmstead, which was not necessarily a large *oppidum* or in the case of the Early Iron Age a *Princely Site*

Border situations can be defined in different ways. There might be political, cultural or ethnic borders, there are also borders to larger scale regions that are based on the natural environment – in some cases these different borders might be the same, while, in other cases, they might have been totally different. The *Princely Sites* in southern Germany are always placed close to the borders of landscape units or to larger rivers – which

also might have functioned as borders or at least as separators or as zones of passage (Fig. 2.15). I would like to interpret this as a hint that the *Fürstensitze* might have had a central meaning, but not a central position within their landscape. Theirs was the position close to borders or to a passage that was important, be it for trading purposes or for other reasons.

Natural borders are more or less static through time, while the settlement dynamics from the Late Bronze to the Early Iron Age reflect changing social or political as well as cultural borders so that, at least in prehistoric periods, environmentally based regions are not the same as political territories. The map shows the temporal dynamic of settlements in different regions within different landscapes and with very different levels of settlement density from the three different phases of the Late Bronze Age (Urnfield Culture), Early Iron Age Hallstatt Period and Early Iron Age Early La Tène Period (Fig. 2.16).
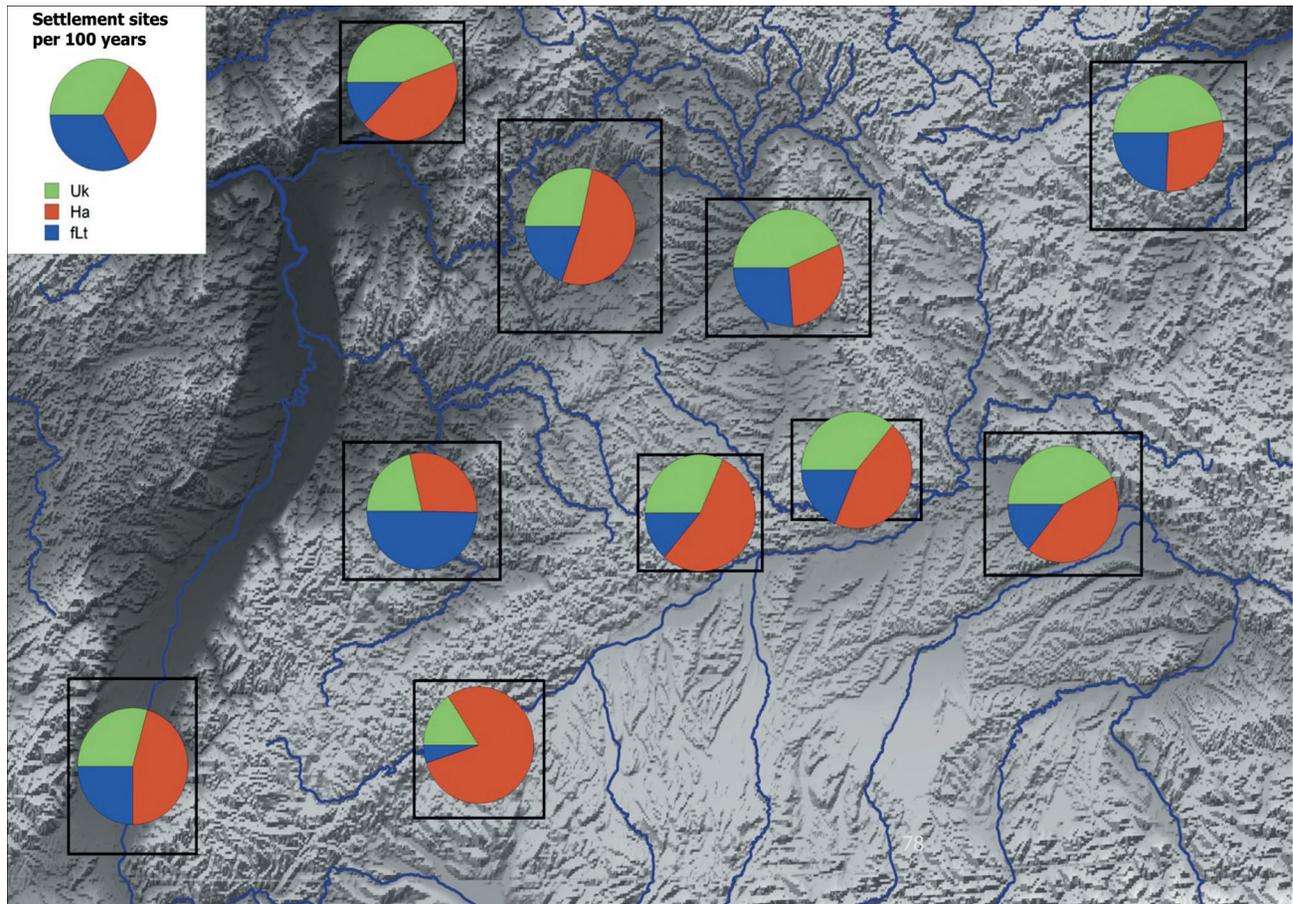

Figure 2.16. *Share of settlement sites per 100 years for the Late Bronze Age (green: Uk; Urnfield Culture), the Early Iron Age Hallstatt (red: Ha) and the Early Iron Age Early La Tène period (blue: fLt). In other words each diagram shows the share of Uk, Ha and fLt settlements in each research area, normalized for time, since the Uk, Ha and fLt are periods of different length.*

The maps shows very clearly the varied demographic dynamics of what was going on in the first millennium BC in southern Germany. Related to the questions of centralization processes and of patterns of social development, we now know that the situation during the Hallstatt and Early La Tène Period is much more complex than we thought it to be, when our ideas were driven by the simple model that Wolfgang Kimmig presented in 1969.

Do we really see an early urbanization in the *Fürstensitz* phenomenon just because some places seem to become larger or richer and seem to achieve a more elaborate structure for at least a while (Krausse et al. 2015)? This, in the end, pretty much depends on the definition of the term urbanization, making this probably a not very well-suited tool to describe the dynamics and developments of different and differing sites embedded in different landscapes.

Six years of research of several projects working together in the *Fürstensitze* research programme have brought together new insights and a new evaluation of the role of those special hillforts. The more or less simple hierarchical model of Kimmig and others has changed into the understanding that we cannot lump the *Princely Sites* together. Every site might have had a different basis for its growth and importance: be it trade and the exploitation of resources in one, be it a surplus agricultural economy in another or be it its role as a centre for cult and religion in a third – or perhaps a combination of more than one differently weighted factor in all of them.

All the sub-projects of the DFG research programme have collectively created a much more differentiated picture of the *Fürstensitze*. We have no single cause for the centralization process (not to mention the term 'urbanization') and we still do not have answers to all the questions concerning those *Princely Sites* – but maybe that would have been asking too much?

Acknowledgements