

**CHRISTOF J. SCHUPPERT, GIS-gestützte historisch-geographische Untersuchungen frühkeltischer Fürstensitze in Südwestdeutschland.** Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg volume 126. Konrad Theiss, Stuttgart 2014. € 29.00. ISBN 978-3-80622885-4. 250 pages, 112 figures.

This attractive monograph is the result of doctoral work in historical geography at Bamberg University, resulting from a Deutsche Forschungsgemeinschaft (DFG) research project that was begun in 2004 to investigate early “Celtic” sites commonly referred to as “Fürstensitze” or “princely seats”. The project’s focal point was the origin and development of presumed centres of economic and political power at the end of the early Iron Age (c. 600–400 BC), paying particular attention to their geographic context and expected “territories.” The monograph is published in the prestigious research series “Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg” by the Landesamt für Denkmalpflege, the state heritage board of Baden-Württemberg.

The book’s main contribution to the DFG project is the use of geographic information systems (GIS) technology to explore and highlight spatial relationships among historically recorded landscape variables so that the spatiotemporal and functional context of the Fürstensitz concept may be examined from a long-term historical perspective. The volume is impeccably presented and richly illustrated with colour maps and other images, many derived from GIS analyses that accentuate specific spatial relationships in powerful and appealing ways. While GIS is useful in revealing spatial relationships, like any technique, its interpretive potential is bounded by the theoretical concepts and perspectives utilised in the interpretation of the relationships.

According to the project narrative for the DFG research project SPP 1171, ([http://www.fuerstensitze.de/1149\\_Forschungsprogramm.html](http://www.fuerstensitze.de/1149_Forschungsprogramm.html) [last access: 15 December 2016]), the latter part of the early Iron Age was distinguished by the emergence of complex central places that flourished in a cultural milieu of extensive regional contact with the Mediterranean world and a local concentration of political power and economic wealth. This narrative forms the essential part of the interpretive context of the work. The approach of this study to Iron Age settlement patterns is explicitly “historisch-geographisch”, which means that historically recorded spatial data from the surroundings of Fürstensitze are collected and examined to explore change through time. The data are processed through GIS and are used to identify previously unrecognised spatial relationships that may have been relevant to early Iron Age settlement practices, and to assess proposed interpretations of the sites as central places in structured settlement systems.

The author uses GIS to organise landscape data from the Roman period to the 19<sup>th</sup> century. These data are then assessed for information about the prehistoric nature of the landscape and its occupants. The author examines a variety of relationships in the natural qualities of the landscape associated with a Fürstensitz, such as topography, hydrography and exploitable resources (e. g. arable land, vegetation and iron ore). He then explores links between cultural elements, such as pathways and roads, burial monuments and other sites. The result is intended to provide a new and expanded spatial perspective on the Fürstensitz and its role in early Iron Age society.

The book is divided into six chapters that can be grouped into three general parts. Chapters 1 through 4 address the background, theory and methods of the project. Combined, these chapters represent about 20 % of the narrative text (not including the table of contents and front matter). Chapter 5 is the descriptive and analytical portion of the work, and it makes up the primary matter of the book with 112 pages or about 65 % of the narrative text. Chapters 6 and 7 represent the broader synthetic and interpretive contribution of the work, which constitutes a significantly smaller proportion of the work (15 % of narrative text).

Chapter 1 is a brief introduction to the work and its larger context in the DFG project. The stated focus of research is on the elucidation of relationships of economic activity and movement dynamics in prehistoric settlement patterns from a historical perspective in order to uncover possible factors in the origin and spatial integration of early Iron Age Fürstensitze in settlement systems.

Chapter 2 is dedicated to a discussion of fundamental analytical and interpretive concepts in settlement pattern analysis, beginning with the original Fürstensitz model and its historic development in German literature. The author then addresses a body of spatial theory known as Central Place Theory (CPT), which was originally formulated in the analysis of a hierarchical market economic system but has been variably applied to preindustrial contexts, including the early Iron Age. The author briefly discusses alternative paradigms, such as core-periphery and network theory that prioritise preferential statuses in a chain of interactions over the structural integration of CPT. He then examines the Fürstensitz as a specific “urban” phenomenon. Absent from the discussion of settlement pattern analysis is the important work on “heterarchy” as championed by Carole CRUMLEY in 1995 (*Heterarchy and the analysis of complex societies*. In: R. M. Ehrenreich / C. L. Crumley / J. E. Levy [eds], *Heterarchy and the Analysis of Complex Societies*. Arch. Papers Am. Anthr. Assoc. 6 [Arlington 1995] 1–5), which has become a standard resource in Anglo-American literature. While “territory” is a foundational concept of the entire DFG project, there is little critical treatment of the concept in light of modern (or even postmodern) understandings of space, interaction and social practice. Ultimately, the author proposes a set of theoretical assumptions and questions that are later applied to GIS analyses. He deduces that Fürstensitze were an early form of urban place that reflected control of resources, trade and cultic activities and were the favoured location of elite occupation. He proposes historical geographic GIS analyses to assess whether these places had variable functions or whether they encompassed all functions of centralised socio-economic control (that is, they operated as “primate” central places).

Chapter 3 outlines the sources of historic information captured in GIS analyses presented in the work. These sources include cartographic archives, land records, remote sensing data (such as aerial photographs and LiDAR scans) and other written sources.

Chapter 4 summarises the methods used to reconstruct historic cultural landscapes. It includes a discussion of issues associated with the application of historic data to the analysis of prehistoric settlement patterns as well as a brief survey of the use of GIS in historical geography.

Chapter 5 presents four case studies in the application of GIS to the study of historic settlement patterns around early Iron Age Fürstensitze. The case studies encompass familiar sites to Iron Age enthusiasts: Heuneburg, Hohenasperg and Ipf in Baden-Württemberg and Glauberg in the Wetterau region of Hessen. These sites were geographic focal points in the DFG research project, and each location was examined through various research techniques, providing a wide range of information about human occupation. For each site, the author presents a brief summary of the environment, research history and available historic landscape sources. A compelling part of this chapter is the integration of historic maps and remote sensing data to identify previously unrecognised cultural features such as possible mounds, earthworks and pathways that enhance our understanding of the complex landscapes of the Fürstensitze. While some of these “new” features have been published elsewhere as part of the DFG project, the author provides a valuable synthesis for each of the four case studies. Analysis of historic data concerning land use – including forestry, agriculture and mining – as well as water use provides a context for assessing the loss of prehistoric resources and underscores the extent to which the landscapes have been altered through time. At a regional scale of analysis, GIS is used to explore patterns of historic settlement, roads and river transport, and resource exploitation and production (such as iron, salt and copper). For each site, the author discusses evidence of possible “cultic” functions in the environs of the sites, including

historic interpretations of monuments as well as property names on old maps that reference religious concepts (for example “Heiden” or “Heilig”).

In Chapter 6, the author presents a comparative synthesis of the four case studies. There are two parts to the presentation. In the first part, he compares and contrasts environmental factors – such as topography, geology, soils and ecological regions – as well as water use, mineral resource exploitation, transport and communication networks, patterns of historic settlement, and cultic interpretations. In the second part, data from Chapter 5 are discussed in relation to theoretical perspectives outlined in Chapter 2. The author argues that tendencies of historic centrality in the GIS results, expressed particularly in evidence of superregional networks, may indicate that there was a structural persistence of centralised functions that was originally established at these places in the early Iron Age. He then assesses several published models of centrality in early Iron Age settlement patterns in light of the results of presented GIS analyses. To enhance the explanation of the process of centralisation during the early Iron Age, the author resurrects the “mercantile model” from positivist economic geography in the early 1970s, reinforcing the assumption that trade was a primary factor in the rise of early Iron Age centres. Finally, the author concludes that GIS analyses support the “urban” or “proto-urban” status of the investigated Fürstensitze.

In the brief concluding section (Chapter 7), the author highlights select results of the GIS analysis of historic landscape data. At a broad scale, the Fürstensitze were linked in superregional networks but they were characterised locally by considerable variability. In reference to the sites, he prefers so-called neutral terms such as “central place,” “gateway community” or “node settlement” to the established Fürstensitz term, although these suggestions are not truly neutral since they are embedded with assumptions of hierarchy and they prioritise specific ideas of economic behaviour over other equally important human factors, such as relations of knowledge, identity and power.

Within the context of German-language approaches to the archaeology of the Iron Age, this book is a solid contribution. It harnesses the analytical power of GIS and offers the reader many things to consider from the perspective of traditional historical geography. The author successfully highlights a range of interesting and thought-provoking spatial relationships within some of the most important archaeological landscapes of southern Germany. Therefore, the book is essential reading for any person interested in the cultural landscapes of Central Europe. However, for persons interested in contemporary approaches to early Iron Age society, the work suffers from a reliance on CPT and other paradigms derived from positivist economic theory and on a relatively narrow understanding of “territory” in critical spatial analysis. The treatment of alternative spatial constructs – such as network theory – is promising, though ultimately underdeveloped. The author’s analytical approach adopts a mechanistic understanding of process in contrast to agency. Clearly, trade and superregional influences were important aspects of early Iron Age society, but were they the driving forces of social change that this study implies? Although he touches upon aspects of experiential archaeology, especially when considering movement across and through the complex landscapes of the Fürstensitze, the author does not appear to embrace the potential of GIS to explore a more dynamic human creation and interpretation of place that uncouples the concept from essentialist economic assumptions. Perhaps in the future, such efforts to examine the rich Iron Age heritage of Germany may adopt the broader interpretive opportunities of “landscape archaeology” as illustrated in the diverse approaches to landscape (including the idea of “territory”) gathered in the classic *Handbook of Landscape Archaeology* (Walnut Creek 2008) edited by Bruno DAVID and Julian THOMAS.

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