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Settlement/settlement structure



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Urban and spatial development issues cannot be addressed without taking into account settlements and settlement structures. Thus, the latter do not constitute their own field of research. If explicit reference is made to the term 'settlement', the focus is usually either on distinguishing types of settlement or characterising the inner structure of the spaces created by people. It is, however, proving increasingly difficult to distinctly classify settlement types and settlement structure patterns.

1 Settlement and settlement structure in specialist terminology and everyday language

The term *settlement* refers to the result of the occupation and use of space (in the sense of the earth's surface). Thus, anywhere where people stay for more than just a short time is a human settlement. In both the theoretical and the practical planning debate on urban and spatial development processes, the word 'settlement' appears first and foremost as a component of widely used compound terms, such as settlement development, settlement area and large settlement, and not least as part of the collective term *human settlement* referring to (spatial) planning and construction in general. The relevant body of laws contains the terms *small settlement* (as a specific land-use area as per the Federal Land Utilisation Ordinance [*Baunutzungsverordnung, BauNVO*]) and *splinter settlement* in the Federal Building Code (*Baugesetzbuch, BauGB*) or *settlement developments, settlement planning, settlement structure, settlement activity* and *settlement purpose* in the Federal Spatial Planning Act (*Raumordnungsgesetz, ROG*). As a word on its own, however, 'settlement' is used in scientific contexts to a lesser extent than other terms such as *city, town* or *village*, which refer to certain types of settlement. It is not usually defined in any more detail – neither as a component of a compound noun or by itself. As a holistic term, which is not defined any more precisely in specialist language than in everyday language, it refers to various circumstances and contexts; its meaning depends largely on who is talking about settlements (or settlement structures) and in what context. A distinction can be made between two typical perspectives: one which views settlements as material objects, and one which sees them as a social construct. The former perspective is more common to both spatial planning and certain subfields of geography, the latter to the social sciences.

Because of its broad definition, the term 'settlement' – just like the only slightly more specific term 'settlement structure' – touches on and often overlaps with a range of other categories of ▷ *Spatial development*. For example, certain types of settlement such as the ▷ *Village* and the city (▷ *City, town*) and various ▷ *City types* (e.g. the ▷ *Metropolis/Global City*) and their component areas (e.g. the ▷ *Inner city*) have specific properties and structures, in the same way that the development of these settlements and their respective structures have some convergent and some divergent patterns (▷ *Village development*; ▷ *Urban development*; ▷ *Land use change*). This development depends on circumstances and innovations in social, technical or transport ▷ *Infrastructure*, strategies and objectives in various policy areas (e.g. ▷ *Locational policy*, ▷ *Environmental policy* or ▷ *Housing policy*), the effectiveness of the relevant ▷ *Instruments of spatial planning (Raumplanung)* (e.g. ▷ *Land management* or ▷ *Housing development*), on normative bodies of knowledge, which not least reflect the prevailing ▷ *Guiding principles for urban development*, and above all current structures and trends in industry and society (e.g. in ▷ *Land market/land policy*, the ▷ *Real estate sector*, ▷ *Retail trade*, ▷ *Logistics* or even ▷ *Lifestyles*), which manifest themselves as ▷ *Social change*. This list of keywords which have a clear reference to the development of settlements and settlement structures could easily be expanded.

As the terms *settlement* and *settlement structure* cover such an extensive range of subjects with diverse references to almost all aspects of urban and spatial development, they cannot be used to define a discrete problem area characterised by specific lines of debate, arguments and

concepts that can be meaningfully demarcated from the body of urban and spatial research. It is not possible to look at settlements and settlement structures without also taking into account the entire field of urban and spatial development. Against this background, this article is limited to honing the terms ‘settlement’ and ‘settlement structure’ as much as possible and showing the – at least implicit – role they play in many current diagnoses of urban and spatial development.

2 The term ‘settlement’

Attempts to precisely define the term ‘settlement’ are primarily found in the discipline of geography – apart from a few exceptions which can be seen as programmatic ways of avoiding the term ‘city’ (cf. Hamm 1982). But even in the field of geography many steer clear of this term for fear of appearing to have failed to keep up with current debates: unfortunately, the term is often still associated with the settlement geography that originated in the 1920s and focused on differences in settlement developments based on cultural and genetic aspects, which is hardly compatible with the modern theories and theorems found in the social sciences and humanities. In keeping with the root of the word, almost every form of human establishment is considered a settlement – according to Borsdorf and Bender (2010: 30): ‘A settlement generally consists of one (single settlement) or a group of dwellings (group settlement). The term ‘settlement’ includes the encampments of hunting groups just as much as megacities, isolated farmsteads as well as towns or villages, petrol stations as well as clusters of holiday homes. For example, natural caves, windscreens, tents, house boats, bungalows and skyscrapers can serve as dwellings.’ In an effort to define the phenomenon of human settlement spanning all time periods and regions on earth, the geographical term ‘settlement’ is thus broader than that which prevails in both everyday language and in the terminology of planners. When the word ‘settlement’ is used here, it generally implies the presence of a large number of dwellings with the corresponding plots of land, functional buildings, public thoroughfares, infrastructures, etc.; settlements are considered a ‘cluster of buildings in which people live, together with the other buildings, facilities, public thoroughfares, etc. located there which serve other purposes’ (*Bibliographisches Institut GmbH* 2015).

With regard to the discussion of matters of urban and spatial development, the narrower term ‘settlement’ is usually more useful, as these issues generally refer to complex structures and functional contexts that only arise from a certain size of settlement. The very broad term ‘settlement’ established in geography is nonetheless insightful because it raises awareness of the different facets of the human use of space in general and the universal difficulty of classifying human artefacts in space (e.g. dwellings). This is illustrated, for example, in how the definition below grapples with the problem that the permanence of settlements can by no means simply be assumed as it usually – at least implicitly – is: ‘Depending on the duration of use, a distinction is made between constantly occupied, permanent settlements and temporary settlements occupied [...] in the short term, including seasonal settlements, which are unoccupied for several weeks, e.g. Alpine settlements, weekend settlements, nomad camps, and ephemeral settlements (fleeting settlements), such as windscreens, tent camps, etc. [...]. Semi-permanent settlements used for several years, e.g. in tropical field-forest crop rotation, lie somewhere in between’ (Rößler/Walter 2005: 342).

Furthermore, most attempts to precisely define the term ‘settlement’ refer to the almost unresolvable problem of unequivocally determining the borders of a settlement. On the one hand, virtually all cities and municipalities consist of various sub-areas used for building development, which are separated to varying degrees by distinctive morphological breaks – such as different districts, formerly independent suburbs which have been incorporated in the process of urban growth/▷ *Urbanisation* or incorporated villages. In many cases it is unclear whether it makes more sense to consider each of these settlement elements on its own or treat the entire municipality as one settlement – a problem that arises not least in the practical application of the term ‘*Splittersiedlung*’ that is enshrined in the Federal Building Code and literally means ‘splinter settlement’. It refers to settlement structures that are established in an undesignated outlying area and which are usually not desirable from a spatial planning point of view. In this respect there is furthermore no unequivocal answer to the question of the difference between a settlement and a municipal ▷ *Territorial authority*. On the other hand, in densely populated countries such as Germany, several municipalities/settlements are often connected by built structures and so there are many reasons to regard them as one single large settlement. Densely populated areas (▷ *Agglomeration, agglomeration area*) are by their very definition composed of several municipalities which are linked with each other both structurally and functionally. Therefore, the spatial level at which settlements can be defined and demarcated – and thus settlement structures identified and differentiated – will always also depend on pragmatic considerations.

3 Dimensions of settlement structure

If a settlement can be characterised in connection with the (sub-)spaces which are developed and used, it is almost inevitable that it will also have a more or less differentiated inner structure: its specific settlement structure. In addition to this interpretation of settlement structure, there are at least two other notions associated with settlement structure that are commonly invoked in urban and space-related debates and which imply a completely different meaning; these are briefly mentioned here.

- Firstly, the pattern of distribution of (many) settlements in a certain space is known as ‘settlement structure’ (e.g. when talking about the settlement structure of Germany). The term settlement structure is rooted in the Federal Spatial Planning Act. The central-place structure (▷ *Central place*) represents a special field of application for this interpretation. The most recent edition of this Handbook of Urban and Spatial Development defines it as follows: ‘The existing spatial order is often paraphrased using the terms “spatial and settlement structure”. This means the distribution of cities, villages and locations of facilities in space, how they are connected with each other and anchored in the surrounding forms of use and open spaces’ (Sinz 2005: 863; cf. also Blotevogel 2005: 1311 et seq.).
- Secondly, the term ‘settlement structure’ plays a key role in demarcating ▷ *Territorial categories* (of settlement structure) and refers here above all to certain characteristics which most of the settlements in a certain space/▷ *Region* have (e.g. rural).

Insofar as settlement structure refers to the composition and inner structure of a settlement, various dimensions can be distinguished and used to define, analyse and potentially to classify this structure. These dimensions receive more or less attention depending on the particular

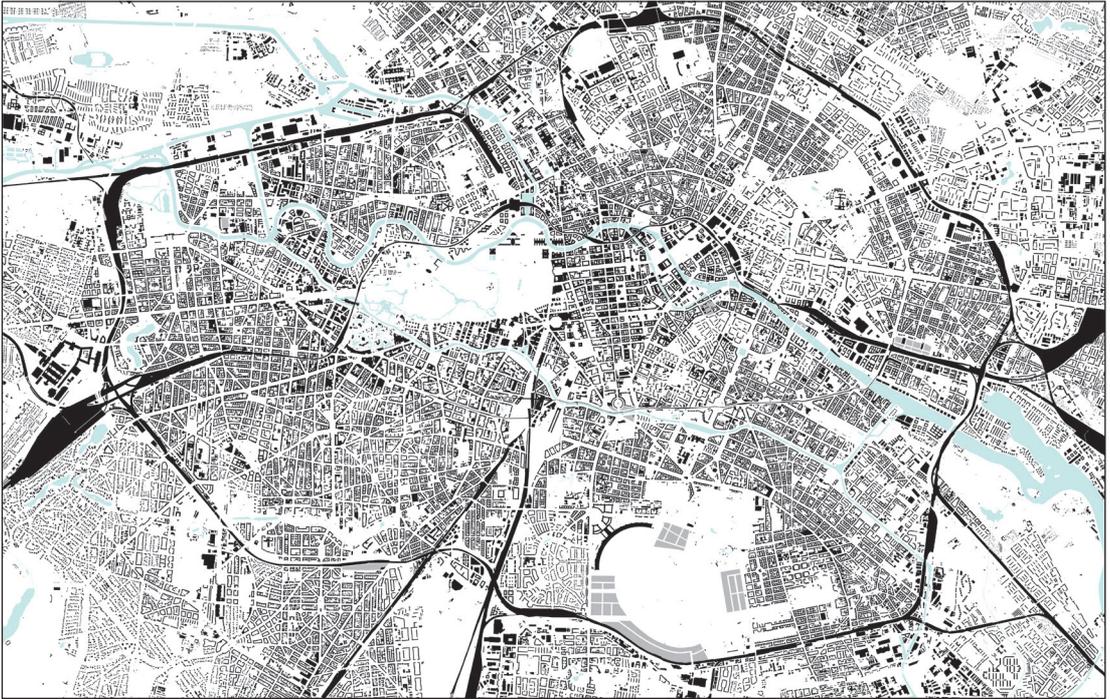
subdiscipline or area of interest from which settlements are being considered. Below is a brief introduction to the three most frequently addressed dimensions of settlement structure – the first two are mainly relevant where settlements are predominantly seen as a physical/material objects, the third dimension where settlements are primarily understood to be a social construct.

3.1 Settlement structure based on spatial and structural (morphological) characteristics

Settlements are probably most obviously (internally) structured by the distribution and form of the buildings and other built structures of which they are composed. Thus, it is possible to distinguish between, for example, Wilhelminian areas in perimeter block developments, residential areas comprising rows of residential building blocks or districts of detached houses. The specific form of these settlement elements and their spatial layout give each settlement a characteristic morphology. One of the main tasks of municipal spatial planning is to regulate the structural and spatial settlement structure; this is, for the most part, done by demarcating areas (plots of land) that can be built on and areas (plots of land) that cannot be built on, and by stipulating the design and density of built use within the scope of ▷ *Urban land-use planning*. When settlement areas are enlarged – in the course of ▷ *Urban expansion* – it is not just the size of structurally and spatially organised units that increases, but also often their diversity as new forms of building are added. But even the existing structural and spatial settlement structure can become the subject of planning intervention – for example as part of ▷ *Urban regeneration* or ▷ *Urban redevelopment*.

There is no generally accepted, or even authoritative, classification system for systematising the morphology of entire settlements or individual areas of settlements. However, proposals for a typology have been developed in many projects and studies. Two broad approaches can be identified: firstly, the structure of entire settlements can be classified in terms of the outer perimeter, the (outer) geometric form as well as the characteristic pattern of the (inner) structural and spatial settlement structure (including its ▷ *Density* based on the shape and layout of buildings and thus also the ratio of developed to undeveloped areas) (e.g. Williams/Burton/Jenks 2000) – for example with the aim of illustrating the spatial patterns of ▷ *Suburbanisation* (e.g. Siedentop 2005) or the ecological footprint of a settlement (Ewing/Goldfinger/Oursler et al. 2009) and discussing its ▷ *Sustainability* as scientific problem. A comparative analysis of figure-ground diagrams offers both a simple and, thanks to their reduction to one essential characteristic, an intuitive method for this (see Fig. 1). Secondly, the debate around the structural and spatial settlement structure often also aims to differentiate between individual parts of a settlement or neighbourhoods – for example, with the aim to record the ▷ *Ecosystem services* and the ▷ *Resilience/robustness* of certain urban design formations or the spatial planning problems typically occurring in certain districts. Examples here include the classification of settlement areas using the concept of urban structure types (Pauleit/Duhme 1999) or using the milieu approach (▷ *Milieu*) which takes into account features of urban planning and social space in equal measure (cf. Nuißl 1998).

Figure 1: Example of a settlement structure based on spatial and structural characteristics: figure-ground diagram of the city centre of Berlin



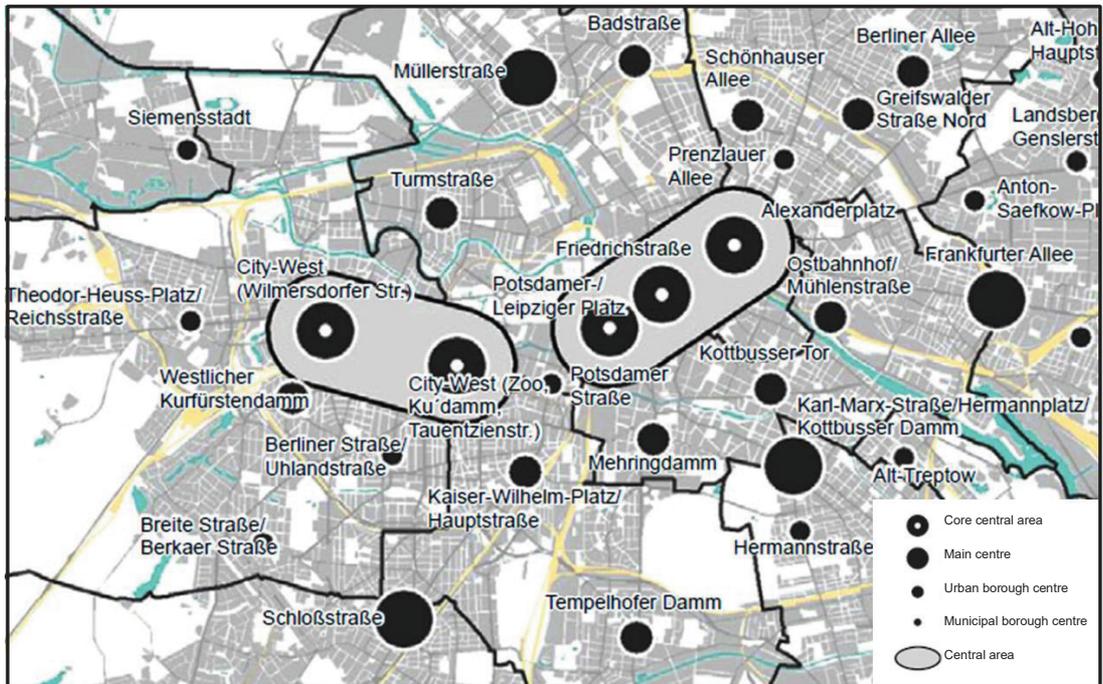
Source: Senate Department for Urban Development Berlin (*Senatsverwaltung für Stadtentwicklung Berlin*) 2010, 'Existing buildings and plan of city centre' map

3.2 Settlement structure based on functional characteristics

As the individual areas of a settlement are not just demarcated from a structural and spatial point of view, but also typically serve different purposes or have different functions, settlements are also internally structured from a functional point of view – they have their own characteristic functional settlement structure (see Fig. 2).

One common way of determining the functional settlement structure in \triangleright *Spatial planning* (*Raumordnung*) is based on calculating residents' employment densities in, as well as commuter movements between, the individual areas of a settlement entity; thus, the functional settlement structure is the result of how settlements function as an economic space and regional \triangleright *Labour market*. This approach is reflected in the traditional notions of the \triangleright *Urban region* (Boustedt 1953) or densely populated area (Boustedt 1968).

Figure 2: Example of a functional settlement structure: retail centres in central Berlin



Source: Senate Department for Urban Development Berlin 2011, 'Centres strategy – centres hierarchy' map (excerpt)

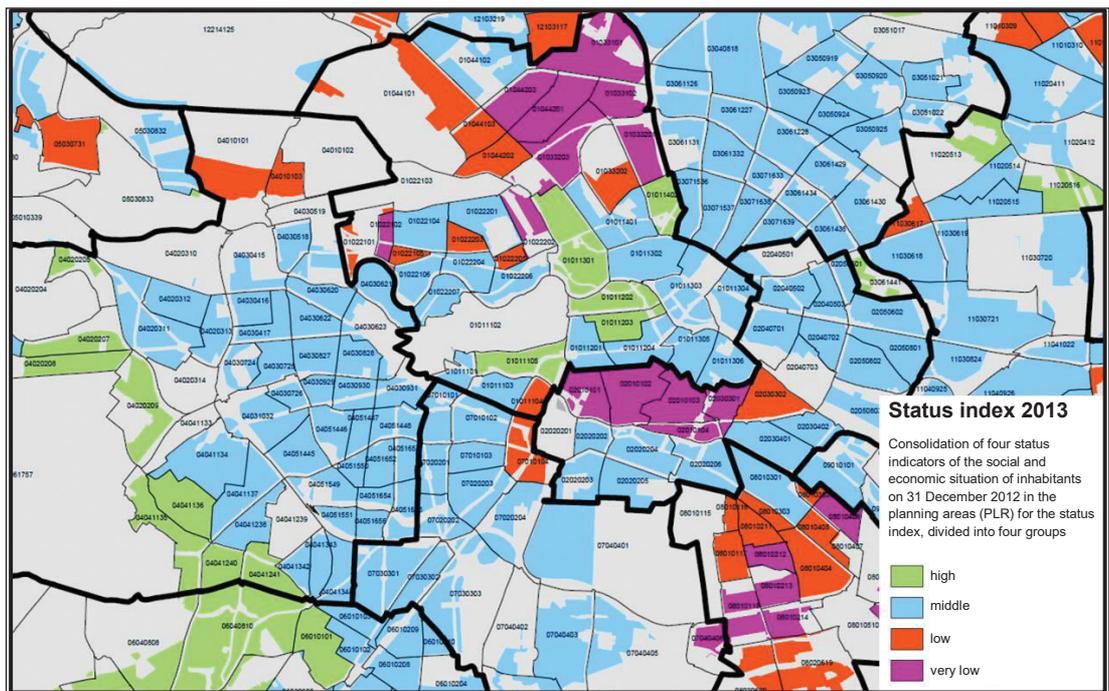
Unlike these spatial planning strategies that ignore the structural and spatial settlement structure, urban development and urban planning tend to focus their interest in the functional settlement structure on the reciprocal relationship between the function and morphology of individual areas of the settlement. ▷ *Housing*, employment, recreation and transport are regarded as the typical purposes/functions of the individual areas of a settlement ever since the spatial separation of functions was postulated in the guiding principle for modern urban development (▷ *Guiding principles for urban development*). Although these functions rarely tend to be fully discrete from each other in reality, and their spatial separation has not been considered worthwhile for a long time (Jessen 2000), nonetheless each settlement structure displays a differentiated spatial structure along these functions. This is because each area has a different mix of functions and their individual urban planning functions come in various shapes and sizes. For example, predominantly commercial areas can be distinguished from each other according to the type of businesses located there or according to the structure and size of the businesses. The second key task of urban land-use planning (besides regulating the structural and spatial settlement structure) involves regulating the functional settlement structure; this is done by stipulating the building use category based on the specific land-use areas defined in the Federal Land Utilisation Ordinance. The regulation of the functional settlement structure in particular as a ▷ *Transport policy* and ▷ *Transport planning* approach to implement spatial structures that avoid traffic and thereby increase the sustainability of settlements has been the subject of intense and controversial discussion for a long time in transport research (cf. Holz-Rau 2001).

3.3 Settlement structure based on socio-spatial characteristics

Just as entire societies cannot be considered fully homogenous social entities, nor can settlements. It is always possible to identify different population groups, the members of which are not distributed entirely evenly across the settlement area in terms of their place of residence. This more or less pronounced spatial \triangleright *Segregation* of social groups creates a characteristic socio-spatial settlement structure (see Fig. 3).

The residents of a settlement are usually fully aware of the individual aspects of this socio-spatial structure, reflected for example in the fact that they know where the good property locations, affordable neighbourhoods or student quarters of a city are located. In principle, it would be possible to identify an infinite number of social characteristics which can be used to describe the socio-spatial structure of settlements. Attention, however, is usually particularly focused on three characteristics of the socio-spatial settlement structure: social position, age and ethnic/migration background. The Chicago School of Urban Sociology (\triangleright *Urban research*) has developed typical examples for studying the socio-spatial structure of settlements.

Figure 3: Example of a socio-spatial settlement structure: social status in the planning areas in central Berlin



Source: Senate Department for Urban Development and Environment Berlin 2013: 43, 'Status index 2013' map (excerpt)

In current urban sociology, attempts to determine and – for example by means of segregation indexes – classify socio-spatial patterns of entire settlements play a lesser role than they did in the heyday of quantitative urban research some decades ago. There is, however, some focus on individual elements of socio-spatial settlement structure, such as inner city

‘middle class islands’ (Frank 2011), in order to illustrate deeper social processes. Above all, however, it is the often highly differentiated approaches and statistical instruments of social ▷ *Monitoring* that – in larger municipalities in particular – nowadays provide detailed information about the way and extent to which social differences manifest themselves in the varying composition of the population of individual areas of a settlement. The resulting neighbourhood-specific ▷ *Social space* is now usually considered – as in the milieu approach – in connection with the respective urban development context and forms the conceptual reference point for the social space orientation approach in municipal social policy (cf. Kessel/Reutlinger/Maurer et al. 2005; ▷ *Neighbourhood/neighbourhood development*).

4 Typology and classification of settlements

A major part of the academic debate on spatial structures and processes which explicitly refers to the term ‘settlement’ aims to define different types of settlement forms including their respective settlement structures. Before briefly looking at some examples of corresponding approaches to the classification of settlements, it is worth noting the wide range of existing terms that describe a certain subset of settlements (i.e. basically certain settlement types).

The city is by far the most prominent and most discussed settlement type. Unlike the umbrella term ‘settlement’, it has not only been the subject of extensive theorisation for at least a century, but is also the object which gives a discrete cross-discipline its very identity: urban research. In this context, the (settlement) structure of cities – such as ▷ *Cityscape*, ▷ *Urban hierarchy* and ▷ *Urban structure* – was and is studied in depth and described in such a way that distinctions can be made between various city types on this basis.

Insofar as settlements are primarily considered a social construct, the city is typically contrasted with the countryside, which in turn is largely distinguished by the absence of cities. Where settlements primarily become of interest as material objects, there is an established dichotomy of city and village or rural settlement as the two basic settlement forms. These are part of the conventional binary classification schemes used as a point of reference in a complex reality, not just in everyday life, but also in the scientific and planning discussion of processes of urban and spatial development. This is because both of these display fundamental differences in terms of their size, economic basis and especially with regard to the variation of their settlement structure based on structural and spatial as well as functional characteristics. Furthermore, there are elementary differences between cities and villages in terms of legal status, the forms of socialisation present there and social norms. The classical sociologists Georg Simmel and Max Weber are credited with systematically working out these differences. However, this also gave rise to the tradition of urban research addressing the differences between cities and villages especially from the point of view of the city and considering the second basic settlement type, the village, as more of a residual category for everything that is not a city – in line with the distinction between the city as a settlement form and the countryside as a residual space missing a certain settlement type, namely the city (cf. Helbrecht 2014).

Beyond the distinction between city and village, there is essentially a multitude of other more or less poorly defined settlement types in both everyday language and academic discourse – for example the ‘large city’ (cf. Bahrdt 1969), the ▷ *European city* (cf. Häußermann 2000),

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the ‘slum’ (Nuissl/Heinrichs 2013) or even the ‘settlement’ in the sense of a ‘group of [similar, smaller] dwellings [with garden]’ (*Bibliographisches Institut GmbH* 2015), which can be found many thousands of times under this very term in Germany’s municipalities. Other terms which describe a unique type of settlement are stated below. They all imply certain morphological, functional and/or socio-spatial structures.

Approaches for classifying settlements using scientific processes have been developed primarily within geography as well as in ▷ *Spatial observation*. In geography, settlements are traditionally classified according to their economic basis and their centrality in relation to economic space. One typical example of this is provided by Linde (1953), who distinguishes between residential communities (surplus of out-commuters), business communities (surplus of in-commuters), communities with a prominent market character (high number of employees in retail and the trades), and communities with a prominent administrative function and spas. Even if this classification is no longer particularly insightful nowadays because economic life has fundamentally changed since the mid-20th century, it very clearly illustrates the basic thrust of the typologies of communities from the perspective of economic geography. Of course, multivariate statistical analyses can be used to create much more differentiated, detailed settlement typologies (e.g. Bähr 1971). These were developed in the scientific decades after the Second World War and came to represent a significant research area within geography and regional studies. In addition, in the geography of ▷ *Rural areas*, the demarcation and typology of rural settlement forms and their characteristic morphology became an established, discrete branch of historically-oriented research on cultural landscapes. This branch is above all credited with the conscientious classification of village forms (of Central Europe in particular) (e.g. Born 1977).

Geographical approaches to the typology of settlements generally arise from the intention to associate various settlement forms and structures with certain social and/or economic conditions in order to learn more about how these conditions shape and form the space. One example of this is the interpretation of the rule-compliant construction of ‘rural settlements as part of the eastward expansion’ as the ‘settlement structure of a sovereign organised agricultural society’ (Lienau 2000: 190 et seq.). Such approaches to typology in settlement geography – that are at least latently based on the theory of a culturally and genetically driven development – nowadays only play a subordinate role (although structurally analogous arguments are very much in vogue in current urban research debates). Within the scope of official spatial observation, however, regularly updated municipality typologies remain. These are usually based on just a few variables (which can also include an allocation to a spatial planning type of area derived from the spatial location and/or the respective function pertaining to a central place). The Federal Institute for Research on Building, Urban Affairs and Spatial Development (*Bundesinstitut für Bau-, Stadt- und Raumforschung, BBSR*) provides two such municipality typologies on its homepage (‘City and municipality types’ as well as ‘Spatial types 2010’) (*BBSR*, undated).

Overall it can be said that the academic interest in the systematic classification and typology of settlements has noticeably declined of late. This may not least be down to the fact that past structural differences such as the town-countryside polarity have long since become too ambiguous and ambivalent to provide a clear point of reference – incidentally not just in the field of spatial development. It is, therefore, less and less possible to synthesise the diversity and complexity of spatial development to clearly defined settlement types. The essentially academic interest in the questions as to how settlements develop and how settlement structures change,

as well as in the causes and consequences of these space-shaping processes, nonetheless remains. Time and again it results in the definition and differentiation of distinctive settlement structure patterns.

5 Present and future development of settlements and their structure

Settlements and their structure are not static entities, but undergo continuous change. The study of this change is one of the main subjects of major parts of urban and spatial research. The existing knowledge about the transformation of settlements and settlement structures is thus so varied that it cannot be summarised here. However, some prominent trends currently shaping the development of settlements in Germany are briefly outlined here as examples of the three dimensions of settlement structure that have already been distinguished: with regard to the structural and spatial settlement structure, the blurring of the boundaries of a settlement (urban sprawl) and the expansion and transformation of the specific settlement morphology with large buildings bound to a globalised aesthetic, etc. are discussed as scientific problems (e.g. Aring 1999). In terms of functional settlement structure, the focus is on the development of new functional mixes and functionally heterogeneous spatial fragments as well as the increasing dissolution of the functional hierarchy between the (geographical) centre and the peripheries of urban regions (e.g. Venturi 2001). From the point of view of socio-spatial settlement structure – especially in large cities and given the widespread concern about the ever-widening social gap between the privileged and disadvantaged parts of society – a dynamic of ▷ *Gentrification* of old neighbourhoods close to the inner city has been identified. This is typically closely related to processes of ▷ *Reurbanisation* and means that the spatial dimension of social inequality is becoming more significant – frequently in combination with the devaluation of older, monofunctional residential areas often located on the periphery (e.g. Holm 2014).

As a result of these trends and many others in the development of settlements and settlement structures, established differences that have been frequently covered in the literature of the past decades, both between different settlement types as well as between individual areas of a settlement, have fused together, but new contrasts are also emerging. This can probably best be illustrated by the disintegration of the defining boundary between towns and villages, which goes hand in hand with the emergence of new settlement types and new patterns of settlement structure: from a social science point of view, the comparison of city and village has not been very insightful for a long time because urban lifestyles (▷ *Urbanity*) are ubiquitous nowadays, both in the economic sense (due to the dominance of industrial and service work) and in the sociological sense (as non-private interpersonal contacts are now structured almost everywhere by social roles instead of personal acquaintance). At a time when urban forms of building and use (from industrial estates to artists' colonies) can be found up and down the country, when elements of rural settlements (e.g. in the form of urban gardening) are also increasingly making their way (back) into cities and when ever growing spatial units are characterised as a 'halfway point' between countryside and city as a result of the almost unabated growth of settlement areas, it is also difficult from an urban development and planning perspective to identify clear, distinctive characteristics of cities and villages. As the past city/village dichotomy fades away,

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new settlement forms with characteristic structures emerge; examples for rural areas include various village types far removed from their original agricultural function, such as artists' villages, book villages or – as an entrepreneurial variant – adventure villages (cf. Wehling 1980). Current urban and spatial research devotes much attention to the emergence of previously unknown settlement forms (in the course of the transformation of existing settlement types and structures), with the focus largely on urban spaces and regions. A distinction can be made – albeit somewhat simplistically – between the two perspectives mentioned at the beginning:

- a) In order to conceptualise the transformation of material and spatial functional properties of settlements and settlement structures, a range of relevant terms has found its way into the recent literature of spatial and planning science, which can be interpreted as descriptions of new types of settlement – terms such as 'edge city' (Garreau 1991), *Zwischenstadt* (in-between city) (Sieverts 1997), *Funktionaler Archipel* (functional archipelago) (Kunzmann 2001) or *Metropolregion* (metropolitan region) (cf. Knieling 2009) are widespread in the German language debate. Furthermore, a multitude of structural models of decentralised, dispersed and fragmented urban regions has been developed (see Bose 2001 for an overview) to illustrate the structural and spatial as well as functional transformation of settlement structures. The newly coined terms and models relating to settlement structures reflect, amongst other things, the fact that in urban spaces the previously pronounced functional difference between the centre (▷ *Central public amenities*) and the peripheries (▷ *Peripheries/peripheralisation*) has increasingly dissolved: many suburban areas nowadays have values on a par with the city proper regarding the inhabitant/employment density; commuter relationships are now highly tangential and functions that used to be the preserve of the centre (central business district) – for example, office space, shopping malls or technology parks – have also been located on the peripheries of settlements for a long time (e.g. Phelps/Wu 2011). This ▷ *Polycentricity* has become a trait of many larger settlement areas. On the other hand, structural elements that were typically suburban in the past, such as shopping malls or gated residential complexes, have for some time now been increasingly making their way into inner-city areas (e.g. Glasze/Webster/Frantz 2006). One process which has become apparent in Germany in just the past two decades and which is also concomitant with a fundamental transformation of settlement patterns is urban shrinking (▷ *Shrinking cities*), which often paradoxically occurs simultaneously with reurbanisation trends, bringing with it entirely new challenges for municipal policy and planning (e.g. Kühn/Fischer 2010).
- b) When settlements are viewed as social constructs, the focus – if reference is made to geographical space at all – is primarily on socio-spatial settlement structures. However, in the past approximately 25 years, a broad social science debate has emerged on issues of urban and spatial development, which takes an interest in all dimensions of settlement structure equally. It is linked to neologisms such as 'technoburb' (Fishman 1987), 'postsuburbia' (Kling/Olin/Poster 1995), 'postmetropolis' (Soja 2000) and 'new downtown' (Helbrecht/Dirksmeier 2012). Just like the models and terminology referred to in (a), these terms signify the end of the settlement forms and structures typical of the phase of modern industrial society/Fordism. Nonetheless, this is not their primary aim; rather they have a farther-reaching aspiration. From the perspective implied by these terms, which has been established since the end of the 1980s among Californian urban researchers in particular (e.g. Davis 1994; Dear 2005), interest is not focused in the first instance on a detailed analysis of spatial matters, but rather

on understanding the social and economic processes that bring about these structures: in other words, the actual object of knowledge is not so much the settlements and settlement structures themselves, but rather the forces of the social ‘productions of space’ behind them (Lefebvre 1972). Today’s form and the changed functional structure of settlement areas are thus interpreted as an expression of fundamentally different conditions of social production and reproduction (Dear/Dahmann 2008: 269) or as a new ‘spatial fix’ that corresponds to the present state of development of capitalism (Harvey 2001). In the process it is noted that today urban regions are particularly characterised by a high level of economic, social and, last but not least, infrastructural fragmentation (one could also say: pronounced and striking differences and ruptures in terms of settlement structure) – a phenomenon which Graham and Marvin (2001) have translated into the influential adage ‘splintering urbanism’.

6 Concluding remarks: the topicality of the term ‘settlement’

Given the fundamental transformation of settlements and conventional settlement structures, there is at times a question mark over whether the common categories of urban and spatial research – such as city, peripheries or suburbanisation – still have any descriptive and explanatory power at all (cf. Wood 2003). Lang and Knox (2009: 790) even declare established terms of this type ‘zombie categories’, because while most of these terms implied the possibility of clear demarcations between settlements and areas of settlements, as well as between clearly defined and definable models of settlement structure, the reality of spatial development today is often characterised by rapid change and the spatial and temporal overlap of these patterns. In this respect there may be reasons to reevaluate the term ‘settlement’ – especially because it conveys the fact that people are settled in certain places and leave their mark there comprehensively and without differentiation, as it were in a single term, without making any distinctions in terms of the type of this settledness and its spatial manifestation, or without differentiating between settlement types such as cities, suburban areas or villages, which are almost impossible to meaningfully distinguish from each other by definition. Yet, any such revival of the term ‘settlement’ has so far at best been hesitant (cf. Borsdorf/Bender 2010).

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