

SUMMARY: CENTRALITY AND SPATIAL DEVELOPMENT

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Central places are not products of coincidence but the result of long-term market economic processes. They constitute a fact and not the invention of spatial planners or scientists. Central places have achieved their degree of centrality only partially due to the planning decisions of public authorities. Their specific rank in the hierarchy of settlements may rather be attributed to the countless consumer decisions of private households and other economic agents as well as to location decisions made by the service industries, the tertiary and quaternary sectors. By purchasing goods and services, the private households have contributed to the development of a settlement into a central place, and so have the enterprises of the services sector through their choice of location. Access to transportation networks, accessibility and consumer or user potentials – these are the basic requirements for the specific rank of a central place in the hierarchy of settlements. We must, however, keep in mind that the public services sector has also played a pivotal role by providing the basis for the central place system through the historically developed allocation of public services.

Central places can claim to provide the population with goods and services (including public services) in such a way that shopping distances and transport costs are kept to a minimum for all concerned. On the other hand, public and private suppliers of goods and services in central places can count on a certain attractiveness of the area, thus providing an adequate economic basis or utilisation of their facilities. Accordingly, central places have an eminent property: They represent “natural” central settlements and, due to the long-term, countless shopping and location decisions made by private households as well as by the public and private enterprises of the services sector, they have acquired their specific hierarchical ranks and “spatial acceptance”.

In the past decades, regional planning authorities (or, to be more precise, those of the *Länder*) adapted central places to a model of spatial structuring on the one hand, and used them as planning tool on the other (aiming, above all, to optimise the provision of the population with goods and services or at infrastructure planning). In addition, they were partly employed as a trigger for the intended spatial development or as a basis for planning transportation infrastructure (above all, for designing road networks). In spatial planning, central places were identified, structured by categories and characterised

by functions and catalogues of facilities and services, which should provide the basis for the public and private service suppliers’ or retailers’ choice of location. Little consideration, however, was paid to the fact that these catalogues of services were deduced from the state prevailing at the time. Furthermore, it should be noted that in spatial planning no or far too little attention was given to implementing the Central Place Concept or to developing appropriate strategies.

In retrospect, it must be pointed out that even in the public sector, location decisions were only partly made by considering criteria of centrality, but, as it seems, rather by chance and not by having knowledge of the Central Place Concept. Moreover, decision makers did not, or only insufficiently, succeed in taking into account the dynamics of the Central Place Concept as well as the crucial social and economic changes.

Additional implications resulted from the political practices of application and applicability. On the one hand, classification according to the central place hierarchy was considered as imposing restrictions on the municipalities’ opportunities towards a higher-order development, on the other hand – though less frequently – as preserving “outdated” central place structures and facilities. This may help to explain the municipalities’ struggle when it came to ranking within the hierarchy of settlements – be it with regard to the approval or denial of central place facilities or with regard to opportunities assumed to improve or hamper the procurement of subsidies or the funding of projects. It is inevitable, however, that the implementation of the Central Place Theory through regional planning means that only a few municipalities can be upgraded in the central place hierarchy. In consequence, winner and loser mentalities may develop among the municipalities. Moreover, interventions produced excessive political pressures. Exemptions, political opportunism and the consideration of special interests regarding the location of public facilities weakened the effects of the Central Place Concept, which was employed only when it seemed supportive and advantageous.

IV Translated from German into English by Angelika Weichhart. Sincere thanks to Christian Haydon for revising the English version.

This was the situation when the “ZORE” project with its specific issues was initiated (ZORE being an acronym for “Zentrale Orte und Raumentwicklung” – central places and regional development). It was carried out by Peter Weichhart and Heinz Fassmann (both of the University of Vienna) together with Wolfgang Hesina (Austrian Research Center Seibersdorf) in the second half of 2003 and in the first half of 2004.^v The project was monitored by the ÖROK (Austrian Conference on Regional Planning) working group “Zentralität-neu” (Centrality-New).^{vi} On the one hand the project aimed to produce a critical revision of the Central Place Theory against the background of changed social conditions and, on the other hand, to investigate the application and applicability of the Centrality Concept to Austrian regional planning. The major questions were: Is the Central Place Theory still of any relevance today and does its application to regional planning still make any sense? And if it does, which changes are necessary in order to put it into practice?

To solve this two-tier initial problem, the members of the project team started out with theoretical investigations. Based on the available references and international state of the art research, the Central Place Theory was critically and comprehensively scrutinised, related to the latest theoretical research results and expanded on an overall level. On the other hand, empirical investigations and critical analysis concentrated on the application of the Central Place Concept to every-day regional planning in the Austrian *Länder* and its relevance for activities under public and private law. In this process, the close monitoring by the working group “Zentralität-neu” was most helpful because by doing so it ensured the direct connection with the Austrian supra-local planning practice.

All in all, the “ZORE” project comprised ten modules, which may be summarised in four pivotal fields of issues:

The first group of issues is dedicated to the analysis of terminology and concepts as well as to a review of the latest national and international references. At the outset the authors analyse the terminology currently in use, its various implications and present the relevant features of the Central Place Theory itself. They discuss the essential theoretical background and, in conclusion, the resulting discourses: the theoretical discourse on the locations of the tertiary and quaternary sectors, the empirical discourse on the measurability of city-region relationships and, last not least, the normative discourse on the application of the Centrality Concept.

In this first part, special emphasis is put on discussing the latest international centrality research (focussing on empirical research and the Central Place Concept as applied in spatial planning). As a result, a general model of market relationships was developed

including the most significant aspects of recent development and their theoretical explanation. Special consideration is given to social developments (e. g. growing mobility, poly-(multiple) orientation of shopping behaviour, differentiation of lifestyles), the changes in retail trade patterns (e.g. concentration of enterprises, growing sales areas and sales volumes, increase in the number of branches a chain store has and decline of one-man businesses) and the restructuring of public services. By employing general approaches (e. g. Regulation Theory), these various kinds of development are tied together on the theoretical level and integrated. With regard to the opportunities of public intervention, its theoretical and empirical analysis has largely been blended out because this issue goes far beyond the authors’ basic assignment, namely the critical assessment of the Central Place Concept.

In the second field of issues, aspects relating to the application of the Central Place Concept as an instrument in Austrian spatial planning and to the planners’ points of view are identified. On the whole, the authors investigate the empirical reality of implementing the Central Place Concept in regional planning. At the outset the question is raised how the Central Place Concept is employed as a steering instrument in current Austrian regional planning. To answer this, the various laws on regional planning, the *Länder’s* development plans and other documents of regional planning law were analysed. The other basic issue is concerned with determining the viewpoints of the *Länder’s* regional planners regarding the Central Place Concept, its capacity for solving problems and their expectations of a reformulated concept. To deal with these aspects, a questionnaire was designed and distributed to the senior officials of the *Länder’s* planning departments as well as to the relevant executive officials at various ministries.

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VI Members of the working group were: OR Mag. Roland Arbter, Federal Chancellery, OBR DI Dr. Christoph Braumann, Office of the Government of Salzburg, Ing. Mag. Johannes Gielge, City of Vienna, MR DI Mag. Wolf Huber, Federal Chancellery, HR DI Dr. Günther Knötig, Office of the Government of Upper Austria, Dr. Ralf Kronberger, Austrian Economic Chamber, Mag. Brigitte Neubauer, City of Salzburg, DI Michael Redik, Office of the Government of Styria, w. HRin Dr. Brigitta Richter, Office of the Government of Lower Austria, DI Werner Thalhammer, Ministry of Agriculture and Forestry, Michael Unterrainer, Ministry of Economy and Work.

In the third part focus is put on the producers of centrality. On a more general level, reflections aim to identify the agents producing centrality as a specific property of central places and to determine the strategies pursued. Answers to these questions were provided by analysing the latest relevant literature and by interviewing relevant “producers of centrality”. As a result, the authors introduce a general typology which comprises and categorises the producers of centrality. Moreover, analysing the branch networks of various retail establishments, the locations of public services and those of production-oriented services helped identify their diverse relationships with centrality.

In the last part the authors turn to the various approaches of regional development involving the political aspects of planning and how they are linked to a general Centrality Concept. They inquire to what extent specific approaches of regional development are based on, require or integrate the centrality of locations. The answers emphasise that a number of more recent approaches (theories of endogenous development) focus on centrality, reproduce it or require it as a basis. The results encourage the modernised implementation of the Centrality Concept in Austrian planning practice and in spatially effective sectoral policies.

Detached from the various modules, the relevant results of the project are summarised in the following, allowing a number of conclusions to be drawn. They may be condensed to represent some concrete practical recommendations for the Austrian regional planning policy.

Centrality as an inherent property of market economic processes

All those market processes that are concerned with material goods and immaterial services and are controlled by households and entrepreneurs are functioning in a “real” world. They all need locations and, in consequence, are bound to the physical-material space. Furthermore, all material goods and services are subject to diversified appraisal by consumers – i.e. private households and enterprises. Some goods and services are demanded less frequently, others more often, perhaps even daily. According to the rules of business economic reasoning, the diversified (inner) range is inevitably coupled with the providers’ location choices. Goods and services rarely consumed demand a wide range and, in consequence, a large number of potential consumers. They have to select sites which are centrally located and can be reached by a large number of consumers. In contrast, frequently demanded products require a smaller number of potential consumers because of basically different expected sales volumes. Hence, these products are offered at a variety of locations, but are not ubiquitous. The differences in centrality relating to the locations of the tertiary and quaternary sectors are closely linked to a market economic selection process. Those who ignore this

differentiation or want to neglect it by referring to modern information and communication technologies will try in vain to escape the compelling rationality of market economic processes.

Changes in the general conditions for centrality

Due to changes in social, economic and political conditions, it is not possible to simply apply the central place model (published in 1933) to the present day. The same applies to the Central Place Concept developed in the 1960s and early 70s. Adaptations are inevitable – also because some trends, already apparent at the time, have intensified considerably. In this report the relevant tendencies of change have already been elaborated upon, so they will not be repeated at this point.

Explicit attention must be paid to the growing consumer poly-(multiple) orientation. Nowadays ranges and market areas are far less distinct than 30 or 40 years ago, a considerable proportion of the consumers of a specific market area do not meet their needs at their nearest accountable central place, but at another one or at several others. The enormous rise in opportunities for mobility and the relatively low, economically affordable transportation costs are favourable to this growing freedom of choice.

The Central Place Theory is based on the assumption that transaction *costs* constitute the decisive criterion for shopper destination choices and are to be regarded as a linear function of distance. The authors have endeavoured to improve this approach by relativising transaction costs and by introducing the term “transaction *utility*”. They point out that transaction utility represents a subjective function that depends on the consumer’s current sensitivities, the specific context and the consumer’s lifestyle as well as on the centrality of the place of purchase. Regarded from a general perspective, the concept aims to offer a comprehensive explanation of the current modifications of central place systems.

As a result, the significance of coupling effects has changed as well. Consumers increasingly tend to purchase different kinds of goods at the same location (e.g. at petrol stations providing not only petrol, but also groceries). This, too, limits and perforates the rigid definition of ranges. In general we may say that the reasons for the motivation of consumers acting in an economically rational way are becoming more and more complex in a post-modern and differentiated society. In spite of that, the principle of spatial hierarchy in the supply structure patterns still remains valid.

The expansion of ranges

Among all the numerous tendencies of change pointed out in the report, the problem of service ranges is of particular significance. Due to favourable

transportation costs and a complete motorisation, consumer scopes have widened considerably. In consequence, a provider's catchment area has increased, which may result in higher sales volumes. Under the present market economic conditions it seems only natural that each entrepreneur puts a claim on these opportunities to increase turnovers and profits. This competition, however, involves a steady growth of sales areas and the necessity to improve the attractiveness for shopping. The shopping atmosphere must differ from that of the competitor and must be relaxing. As a positive effect, the consumer transaction utility is increased. Attractively designed shopping arcades and shopping centres increasingly meet these requirements, and they are forced to do so in order to extend their ranges, thus allowing for the necessary and, in any case, rising minimum turnover. The increasing (inner) ranges of retail and service establishments result in the mutual expansion of the hierarchical central place patterns. The lower-order central places are losing their significance as providers of the population because certain central place functions cannot be maintained under these circumstances. Central places of middle and, above all, of higher orders benefit from this development by adopting these functions.

Suburbanisation of centrality

Not only the middle- and higher-order central places themselves profit by this shift in significance, but also the suburbs. This development, however, is considered as a special problem whenever it stretches beyond the municipal boundaries of the "core city" and involves the surrounding municipalities. Yet it has to be taken into account that large-scale shopping centres located on the fringes of cities are basically also the result of the cities' expansion and of the altered location requirements for the tertiary and quaternary sectors. The shifting of administrative boundaries and the incorporation of the "suburban communities" into the core city would be the "logical" consequence, which, though not curbing the processes of CBD decline, would at least keep the purchasing power within city boundaries. Though incorporations have been exercised throughout the centuries of urban development, they are currently not feasible. As a result, other solutions have to be proposed for steering this development.

Evidence of such a suburbanisation of centrality may be detected for a number of central place functions. In consequence, centrality in agglomerations is neither restricted to municipalities nor, above all, exclusively to the core city, but is associated with "central place location regions". Under current conditions (e. g. increasing consumer mobility; changes in: consumer demands and consumer behaviour, transportation systems and accessibility, settlement systems and the general economic conditions), the agglomeration benefits of centrality

are shifted to a higher level (agglomerations, macro-agglomerations). Hence, large-scale clusters of central place functions are developing that complement one another and are related to each other on the regional level.

Diversified location patterns of the tertiary and quaternary sectors

The term "suburbanised centrality" reflects the current development of the tertiary and quaternary sectors in Austria only most inadequately. A lot of the categories of the tertiary sector and a few of those of the quaternary sector are still established at the lower levels of the central place hierarchy and provide the population with their services. The presented analysis of the locations of nearly 6,200 branches of large chain stores (and of established public services) demonstrates that in some categories of the tertiary sector the number of shops is still coupled with the specific municipal centrality. Branches of some of these corporate groups are located at an over-proportional rate in lower- or middle-order municipalities. Other corporate groups, however, only set up their branches in middle-order settlements upwards, whereas others prefer the suburban municipalities, as described above ("shopping centre distribution").

Regarded from the perspective of planning policy, such a "shopping centre distribution" creates various problems because it results in an asymmetric distribution of economic profits on the one hand and in ecological burdens on the other. Further issues arise from the trend to close down retail businesses in low-order settlements whilst transferring them to and concentrating them in higher-order locations. This development involves not only a rise in traffic, but also creates disadvantages for all those groups restricted in mobility.

Centrality – a requirement for trans-sectoral location policy

A number of conclusions can be deduced from the changes in the central place systems, described in the report, that seem significant for the implementation in regional policy. Above all, special consideration should be paid to the evident distinct relationship between centrality and spatial development.

Considering market economic conditions, the development of centrality is a specific property of central places and represents a logical consequence of this process. Market economic processes produce centrality and, on the other hand, they themselves need centrality to acquire and maintain competitiveness. Having reflected upon and accepted these conditions and processes, it becomes evident why all successful approaches to regional development include the centrality of functions in some way or other, for one explanation or another and to various degrees. Whether it is the concept of develop-

ment centres, or the models of cluster development and new industrial districts, or the concept of learning regions, which relies on the production and concentration of human capital and its creativity, is actually not relevant. What does become relevant though, is the awareness that concentrating functions and production factors at specific locations will create advantages through agglomeration, which may help make the entire region more competitive. Moreover, this has to be considered in a wider context: Concentrating cultural facilities, research institutions as well as public and private services, too, are decisive assets for the trades, industries and economy-related services to settle down and remain in the region, thus stimulating a positive regional development.

Results have demonstrated that the distinctive increase in the significance of economy-related services constitutes one of the pivotal trends in the development of centrality. The requirement to cut down costs increasingly forces enterprises of all branches to source out specific business functions and to adopt a professional approach to their business economies. This development triggers an enormous demand for economy-related services, which, due to increasing specialisation, are concentrated in higher-order central places. Similar effects arise from all those central place functions that as a whole constitute the so-called “soft location factors”. In this respect, the person-related soft location factors play an imminent role as they serve as attractors for attaching highly qualified employees to a region. In short: Relating to their way of functioning and their location features, virtually all regional location factors which are referred to as media and incentives of regional development in the relevant literature are to be identified as phenomena of centrality.

Central places – an alternative concept to the dispersed development of settlements

Pursuing modern centrality-based strategies does make good sense even under changed social, economic and political conditions: Central places are designated, enhanced in their development through steering the location of public facilities or – in the case of retreat – through their selective closing^{vii}. Preferences in allocating residential areas play a pivotal role because the concentration of a residential population (and, in consequence, of purchasing power) provides the prerequisite for locating and maintaining private sector forms of centrality. Based on this kind of policy, those settlements with centrality which may flourish as centres of development and growth for the entire region will be identified and promoted. Therefore, strategies fostering centrality must be regarded as an alternative not only to the dispersed provision of service facilities but also to their excessive concentration in just a few locations. This kind of strategy may perfectly be

combined with the concept of polycentric spatial structure patterns, but represents a broader, theoretically supported interpretation of this concept.

Central places – steering instruments for implementing sustainability

Strategies for supporting centrality as well as those for implementing them in a consequential way are also suitable for putting the guiding planning principle of sustainable development into practice and for maintaining the characteristic urban features of European cities, a cultural ideal which has been cultivated for centuries. To ensure the adequate implementation of the three key aspects of sustainability (social, economic and ecologic sustainability), the following four activity fields are referred to in relevant literature:

- ▲ Enhancing the development of settlement structures
- ▲ Providing the population with goods and services
- ▲ Creating efficient transportation systems
- ▲ Providing incentive measures for the economy

As regards social sustainability, the most important factors turn out to be the fair distribution of resources and securing their provision. These demands refer to the traditional tasks of centrality-related strategies, which will be a special challenge in peripheral regions. Due to the impacts of globalisation, the aspect of competitiveness, relating to economic sustainability, is becoming more and more significant. The spatial concentration of central place functions represents a basic requirement for the competitiveness between the regions. In this context, arguments insisting on the efficient utilisation of infrastructure become most convincing. As the Centrality Concept may be regarded as a model portraying the ideal settlement structure, which is characterised by a minimum of transportation investments and a thrifty use of resources, there is no doubt about its ecological efficiency. The models of decentralised concentration and of polycentrism included in the concept foresee not only the reduction of traffic (“settlement structure of short ways”) but also the protection of free space.

The Centrality Concept also seems suitable to safeguard the specific urban properties characterising European cities. They are based, above all, on the spatial concentration of a large variety of central functions in the CBDs, historically developed, which is expressed by the harmonious mixture of commercial, administrative and cultural activities and their amalgamation with public space.

^{vii} Even if the closing of certain public facilities is considered inevitable, centrality can be useful in decision making. In this case, facilities in lower-order places should always be closed in favour of those in higher-order locations because, if required, the higher-order locations can provide the services for lower-order ones.

The Central Place Concept – highly accepted among experts

The survey conducted as a part of this project and based on the Delphi method provided sufficient evidence that the Centrality Concept is still highly appreciated by the planning experts. According to the group of experts, the pivotal problems to be solved through the traditional Central Place Concept of spatial planning are associated with justifying public location decisions, ensuring decentralised concentration and steering the location of large-scale retail establishments. From the experts' point of view, the problem solving capacity of the concept is rated on a "medium" level.

In the experts' opinion, the significance of centrality phenomena has (slightly) increased over the course of time, whereas the impact of the Central Place Concept as a planners' steering instrument has (slightly) declined. Nevertheless, the experts predominantly reject the statement that the Central Place Concept is "an old hat out of the arsenal of grandpa's spatial planning tools". On the other hand, the planners are anonymously convinced that the Central Place Concept urgently requires adaptation, which, above all, should consider the current changes in the development of central place systems. Bringing into line the transportation system and settlement development, pursuing an active building land policy and mobilising building land – these issues are regarded as the most pressing ones in Austrian spatial planning. As regards the question on national-scale regulations for the Central Place Concept, a majority of the answers, expressed through the number of weighting points, is in favour of a single terminology and methodology.

Recommendations relating to examples of good practice for implementing centrality-based strategies

It was the basic assignment of this project to present a critical analysis of the Central Place Concept, taking into light the current developments in spatial structures and to scrutinize its applicability as a steering tool for regional planning. Even though a politically agreed upon "instruction manual" for its implementation was not included in the catalogue of assignments, some proposals were nonetheless made with the aim of answering the question about "what-to-do".

The foremost recommendation refers to monitoring: The central place systems and their current trends of changes should become subject to systematic monitoring and be made accessible to the qualified public. If we succeed in conveying the major tendencies of change in an objective way, the first step towards implementing appropriate strategic planning measures will have been taken. This approach is also pursued through the examples given for the second proposal: The application of a common terminology represents

a fundamental asset in highlighting problems. If all agents involved use a terminology which is to some degree consistent, joint activities will certainly be facilitated.

The third recommendation based on examples of good practice also involves joint activities. Developing binding regional concepts for the location of large-scale retail establishments in built-up areas rests on joint strategies pursued by the local decision-makers. Such a regional concept for retail establishments focuses on achieving unity of voice among neighbouring municipalities at an early stage in order to prevent a location competition that would result in long-term disadvantages for the entire region. The recommendation includes proposals of good practice that relate to the mutual agreement on projects affecting neighbouring municipalities as well as to specific measures for compensation and steering.

Last not least, the fourth recommendation for putting centrality-related strategies into practice relies on establishing multi-functional service centres in peripheral regions in order to ensure their basic provision with services. By referring to select examples from abroad, the authors present measures to secure the basic provision of the population with services and point out the requirements for their successful implementation.