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Diffusion of urban morphological ideas

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The diffusion of ideas, especially scientific ideas, has attracted considerable systematic research (Morgan *et al.*, 2018). But in the mainstream published literature it is hard to find such analyses of the spread of innovations and concepts in urban morphology, despite the importance of this topic. There have of course been notable reviews in this journal and elsewhere of the development of the field of urban morphology and individual parts of it (see, for example, Moudon, 1997 and M. P. Conzen, 2009), and attention has been given to the roles of significant individuals and the 'schools' associated with them (see, for example, Marzot, 2017). But there have been practically no analyses of spatial diffusion such as have been undertaken, some of them long ago, in fields with which urban morphology has much in common: see, for example, Brown and Moore (1969) and Whitehand (1970) in relation to the discipline of geography.

One reason for this lacuna may well be the limited availability of quantitative data in suitable form. However, an exception is the tabulation by M. P. Conzen (2009, Table 2) of applications of the fringe-belt concept. Used by M. P. Conzen himself in a cross-cultural discussion of this concept, these data can also provide a starting point for tracing the spatial diffusion of what has become a key concept in urban morphology. Suitably processed (see, for example, Figure 1), they help to illustrate the contribution that spatial diffusion studies can make in our field.

Based on M. P. Conzen's tabulation, Figure 1 summarizes applications of the fringe-belt concept by decade in different regions of the world between 1960 and 2009. The dates are those of first publication: subsequent applications in the same urban area are excluded. Also excluded is the initial application in Berlin by Herbert Louis (1936), originator of the fringe-belt concept: remarkably, it was published practically a quarter

of a century before a second much better known and much more developed application of the concept by M. R. G. Conzen (1960) in Alnwick. It was the latter application that effectively triggered the subsequent development of the diffusion pattern.

Broadly in accord with sequences of innovation adoption recorded in other fields (see, for example, Hägerstrand, 1965) there was rapid growth in applications of the fringe-belt concept in the 1960s and 1970s, largely within the British

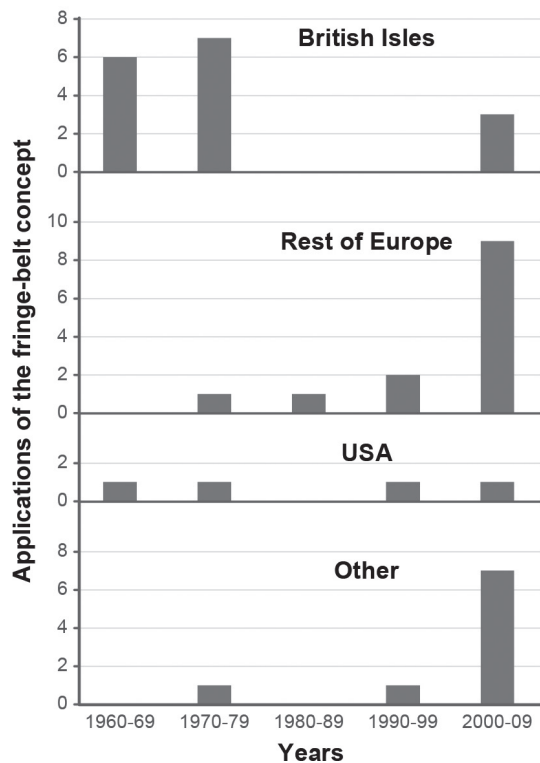


Figure 1. Applications of the fringe-belt concept 1960–2009 by region and date of first publication. (Source: based on M. P. Conzen (2009), Table 2).

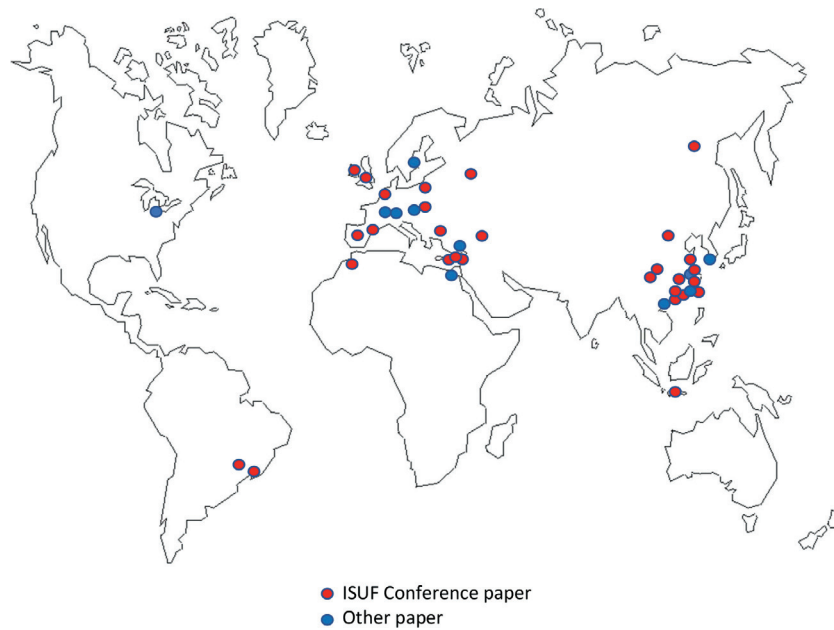


Figure 2. Places for which an application of the fringe-belt concept was first published in 2010–2020. (Source: based on ISUF Conference records and the Web of Science).

Isles. Applications by M. R. G. Conzen in various urban areas were followed by applications by other researchers who had either been working at some point with him or had significant connections with his work in the UK. The geographical proximity of the majority of these applications accorded with Hägerstrand's (1965) 'neighbourhood effect'.

However, also a notable feature of Figure 1 is the very few new applications of the fringe-belt concept in the 1980s and 1990s, marking a pronounced departure from the frequently noted S-shaped curve of the cumulative adoption of innovations (Morrill, 1968). At first sight the timing of this might seem surprising since the closing years of the twentieth century were a time of increase in the size and number of relevant publications and conferences and, in urban morphology in particular, increased links were becoming evident between researchers working in geography, architecture and planning. However, the wider growth of urban morphology internationally, including its relationship to the work of M. R. G. Conzen, was slow until the mid-1990s, when the founding of the International Seminar on Urban Form (ISUF) occurred. There was, furthermore, a time lag between these developments in the relevant research environment and a major resurgence in applications of the fringe-belt concept, which did not occur until 2000–2009. In this decade there

were nearly as many new applications as in the previous 4 decades combined.

In light of the early presence of a neighbourhood effect and the departure from an S-shaped curve of cumulative adoption, the subsequent pattern of diffusion of the fringe-belt concept is of interest to urban morphologists in several respects. The compilation and mapping of similar data for 2010–2020 (Figure 2) confirms a further acceleration in the speed of adoption: substantially more new applications occurred than in 2000–2009. In Europe a neighbourhood effect was evident but the area of predominant distribution was now farther east and, more significantly, new clusters of applications had developed in the Near East and in Eastern Asia (almost entirely in China).

An important element distinguished in Figure 2 is papers presented at ISUF annual conferences, the majority of which were held within or close to Europe. In Eastern Asia the even closer clustering of applications correlates with high attendances by Chinese researchers at ISUF conferences at this time and the development in China of urban morphology research groups.

Underlying these few observations on the diffusion of the fringe-belt concept have been major changes in the organization of research in urban morphology internationally. Perhaps most notable has been the increasing awareness amongst urban

morphologists of the existence of different schools of thought. Especially significant has been the creation of ISUF itself and developments associated with it, notably its international conferences, journal, and regional networks. In relation to the diffusion of the fringe-belt concept, just in the past decade annual ISUF conferences have on five occasions included sessions specifically on fringe belts.

If Herbert Louis had lived long enough to see Figure 2, he would probably have been astonished that his conceptualization some 85 years ago of an aspect of Berlin's morphological development had provided the starting point for multiple applications almost worldwide. The diffusion of the fringe-belt concept has much in common historically and geographically with the development of what has become widely known, at least amongst those researching urban morphology in the English-speaking world, as the Conzenian approach, after the key developer of the fringe-belt concept, M. R. G. Conzen. But that is a much larger topic than there is space for in the present brief discussion.

The example of findings on the spatial diffusion of just one concept touched on in this Viewpoint provides a *soupeçon* of a range of aspects of the diffusion of urban morphological ideas. It suggests too the importance of fitting an aspect of the development of our research into a wider perspective, most obviously in relation to methods of investigation but also with regard to our organizational structures and to some extent awareness of the historical development of our field.

An integrated spatial strategy for the inner fringe belt as an operational entity

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The Conzenian historico-geographical approach provides many valuable concepts for mapping and understanding the evolving urban landscape from a holistic perspective. Yet it is weakly represented in landscape planning and management, although several scholars have advocated for its feasibility and significance in those fields during the past two

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decades (Whitehand and Gu, 2010; Whitehand and Morton, 2003, 2004, 2006). The fringe belt (FB), both as a concept with which to view urban development, and a dynamic spatial structure of towns and cities, is a valuable topic for morphological study, landscape design and planning. From the perspective of FBs as physical entities,