

## C.42: Urban Commission: Urban segregation and fragmentation in unequal cities 1

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Business School Q122

Commission C.42: Urban Commission

Presentation type Oral Presentation

Chairperson Francisco Cebrián, Jesús González Pérez

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08:30 - 08:45

### 02.058 Urban fragmentation in recent literature. A state of the art.

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#### Abstract

Urban fragmentation is an emerging concept addressing a prevalent phenomenon in cities worldwide. It lacks a universally agreed-upon definition, leading to a diverse array of contributions shaping its identity and scientific range. Unlike the well-established discourse on urban segregation, consensus on urban fragmentation remains elusive. This study examines the scholarly output on this concept across various cultural contexts, delineating distinctions among French, Anglo-Saxon, and Spanish-speaking schools. Through an exploration of key authors and perspectives, the analysis reveals varied approaches to this polysemic term. The research underscores the potential applications of the concept in Spain, emphasizing its relevance in an urban landscape characterized by social, ethnic, and economic disparities. Findings reveal various analytical currents, employing different methods, scales, and topics in the study of cities and their fragmentation processes. While French and Anglophone literature show robust tradition, the Latin American context is characterized by a moderate presence, and Spain exhibits a notable gap in both conceptual development and integration of this concept into urban sciences.

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08:45 - 09:00

## 02.059 The role of shopping centers as social mixers in segregated cities over time. An exploration based on mobile and social network data

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### Abstract

Cities are currently suffering from increasing socio-economic segregation in their residential areas. In this context, consumption and leisure spaces could become an opportunity for social mixing and cohesion.

This study analyzes a wide variety of shopping centers in Madrid, one of the most segregated metropolitan areas in Europe, in different temporal scenarios. Built environment factors and both car and public transport accessibility describe the location of each shopping center. Foursquare social network data is used as a proxy of each shopping center popularity or 'symbolic capital', whereas mobile phone origin-destination data provide a rich description of each center patronage catchment area. Further, a Shannon entropy indicator, calculated based on mobile phone data and official income rate information, measures socio-economic inequality among shopping center clients.

The results shed light on the role that shopping centers play as social mixers over time. They also reflect the diversity of shopping centers and possible interrelationships between shopping patronage, social mix, symbolic capital, accessibility and configuration of the built environment.

09:00 - 09:15

## 02.060 The role of commute mobility in activity-space segregation: evidence from mobile phone data

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### Abstract

The activity-space segregation has received increasing interest in recent studies. However, the role of mobility in the activity-space segregation is still under debate. This study examines whether the commute mobility increases or decreases the activity-space segregation. The analysis is based on mobile phone data in Guangzhou, China. We firstly estimate the overall activity-space segregation (exposure index) of different income groups based on residential and work locations respectively, and then visualize the spatial distribution of local exposure index. An important finding is that lower income groups are integrating with higher income groups by commute mobility, but higher income groups are segregated from lower income groups by commute mobility.

09:15 - 09:30

## 02.061 Unravelling urban typologies in Latin American cities: a multidimensional approach across scales

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### Abstract

Latin American and Caribbean (LAC) cities exhibit significant sociospatial segregation and pronounced inequalities concerning income, housing, health, and urban service accessibility. As a result of historical processes and consequences of the neoliberal system, marginalized communities are frequently separated spatially from commercial hubs while coexisting alongside wealthier housing areas with lower population densities. Understanding this multidimensional nature of urban inequality by integrating socioeconomic data with urban configuration is pivotal for guiding policy tools targeting

segregation reduction. This research introduces a classification system that integrates these multidimensional components, employing hierarchical clustering analysis, to spatially identify urban typologies at city and municipal levels. We selected the 18 LAC metropolitan (256 municipalities). We computed the following metrics: total built-up area, urban density (population/built-up), fragmentation, compactness and types of new built-up (infilling, edge-extension and leapfrog). We collected demographic, ethnographic and economic information from National Census data. Cities and municipalities revealed varying degrees of compactness or sprawl, with several implications on socioeconomic conditions. Three main typologies emerged: 1) Compact, dense areas associated with wealthier socioeconomic conditions and a trend of sprawling (at municipal and city scales). 2) Dense, infilling areas with vulnerable socioeconomic conditions (at the city level). 3) Fragmented areas with vulnerable socioeconomic conditions (at municipal and city scales). Similar typologies are expected to be found in other urban areas in LAC. These typologies represent a unique combination of urban characteristics, allowing the understanding of the interlinkage of built-up changes with socioeconomic indicators, which can help to identify challenges and opportunities for managing LAC cities.

#### References

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09:30 - 09:45

**02.062** So far, so close. A methodological approach to identify extreme socio-spatial intraurban divisions based on income differentials.

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#### Abstract

Inequality in its various forms constitutes one of the most important problems in today's cities. As numerous studies have already noted, globalisation, post-industrial socioeconomic restructuring, neoliberal policies, and the dismantling of the welfare state are some of the factors that would explain the rise and increase in intensity of inequality in European cities. (Kesteloot, 2005; Musterd, 2020).

In the scientific analysis of these processes, the concepts 'boundary', 'edge', or 'barrier' have taken on a special importance as an expression of spatial discontinuities and their cognitive categories (Lynch, 1960; Jones, 2009). These

discontinuities are multidimensional and can be analysed from political, symbolic, morphological, social, and functional perspectives (Duroudier, 2014). The objective is to assess whether the accumulation of discontinuities is evidence of the consolidation of urban fragmentation. We are going to use as a case study the city of Lleida, a medium-sized Spanish city with relatively compact and continuous urban fabric. In this type of cities, when discontinuities reach a certain magnitude, socio-spatial differences tend to manifest themselves more as a 'barrier effect' than as an 'edge' or 'boundary' (Bellet, 2021).

To pursue this goal, we first make a quantitative assessment of the previously cited phenomena. We then propose a methodology for initially identifying the most extreme 'boundaries' based on differences in income between census tracts relating to the intermediate city of Lleida. In the second phase, once these boundaries had been identified, we carry out a qualitative/cartographic analysis of the factors involved in the consolidation of this 'ruptures'.

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