

## Review of: "Study of environment-behavior in three types of the urban context of Tehran — Comparative analysis of the Chizar, Narmak, and Khazane neighborhoods' context using survey and space syntax methods"

Karla Silva Poblete<sup>1</sup>

1 Universidad Catolica de Temuco

Potential competing interests: No potential competing interests to declare.

The main purpose of the study is to identify common physical attributes in three types of urban residential contexts and their impact on the daily behavior of residents. An analysis approach based on spatial syntax theory is used in parallel with observation and questionnaire methods. The study focuses on social interactions, and an area around the residence is selected as the unit of analysis. Limitations are mentioned, such as limitations of spatial syntax theory and observation and questionnaire methods.

The introduction of the article provides a solid overview of the topics to be addressed in the study and establishes a clear foundation for the research. It highlights the importance of E-B studies and the need to understand how the physical environment affects human behavior, which captures the reader's interest. Additionally, the introduction sets the historical context and limitations in the field of study, adding depth and perspective. The presentation of the study's purpose is clear and specific, allowing the reader to understand what is expected to be achieved. The mention of using spatial syntax theory as an analytical approach is relevant and shows how the study relates to previous research.

The methodology section provides a comprehensive and detailed description of how the study was conducted, which is essential for readers to understand the methodology used and evaluate the validity of the results. Including information about the software used, analysis methods, and how correlation coefficients were calculated is beneficial for transparency and replicability of the study. The description of the residential contexts studied is relevant to understand the scope of the research and how the study locations were chosen. However, the section could benefit from further explanation of why these specific contexts were selected and how differences between them are addressed in the analysis. Mentioning the availability of research data is important to promote transparency in scientific research.

Presenting the results through graphs and tables is an effective way to visually and accessibly communicate the study's findings to readers. The use of colors to indicate the highest and lowest values in spatial syntax analysis graphics makes it easier to understand trends and differences in attributes among the three contexts. Including survey results in the areas of social interaction, social territories, and behavioral configurations with environmental affordances adds an important dimension to the study, as it allows for relating spatial syntax findings to the behavior and perceptions of residents in different contexts. Presenting internal attribute correlations (R2) is valuable for understanding how different aspects of the



physical environment and human behavior are related to each other. This can provide important information about which attributes have a stronger impact on social interactions and behavior in each context. The combination of spatial syntax analysis and surveys enriches the understanding of the relationship between space and behavior. However, it could benefit from a more detailed interpretation of the findings and a clearer discussion of their relevance and applicability in urban and residential design.

The study provides valuable contributions to the field of spatial syntax by comparing different residential contexts and revealing surprising correlations between spatial attributes and human behaviors. These findings expand our understanding of how spatial structure affects behavior. The article offers suggestions for future research, such as repeating the study in more sections of each context, studying more similar samples for each type of context, and further developing the study attributes. These proposals can guide further research in this field. The authors declare that they have no financial or personal conflicts of interest that could influence the work. Additionally, they share the research data, which increases transparency and the possibility for other researchers to use this data for future research.

Although interesting results are presented, the section could benefit from a more detailed discussion of the practical implications of these findings. How can these results be applied in urban design or planning? What is the relevance of these findings in a broader context? It would be interesting to conduct longitudinal research to assess how these correlations may change over time and whether certain patterns persist or change with urban development. Future research could focus on how this knowledge can be applied in urban and residential space design. While the study focuses on spatial attributes, it would be valuable to consider how social and cultural factors may interact with these attributes to influence behavior. Including sociodemographic and cultural variables in future research could enrich understanding. Also, replicating this type of study in different geographic locations and with different population groups would help validate the findings and determine whether there are universal or contextual patterns in these correlations. These recommendations can serve as starting points for future research wishing to delve deeper into the topic of spatial syntax and its relationship with human behavior in residential contexts.