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ANALYSIS OF THE URBAN-RURAL GRADIENT TERMINOLOGY AND ITS IMAGINARIES IN A LATIN-AMERICAN CONTEXT

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Abstract

Facing the new territorial configurations where the traditional binary conception of rural area versus urban area has become obsolete, this contribution aims at establishing new precisions about the most recurrent terms used in the scientific literature to describe the urban-rural gradient in a Latin-American context. As methodology, in order to identify and systematize the most outstanding attributes for each term, a Citation Frequency Index (CFI) has been calculated in 64 documents and 598 quotes. Additionally the Sorensen Similarity Index (SSI) has been measured in order to identify distinctions and synergies among terms, obtaining a wider understanding of this territory and its interactions. A total of 50 attributes were identified and, based on them, the following precisions were formulated: "Rurban area" is a territory that, despite experiencing pressure for urban growth, is still strongly rooted to rural activities due to its proximity to the rural area. The terms "suburban area" and "periphery" are spatially located closer to the urban area; however, periphery is mainly associated with precariousness and informality, while a Latin-American suburb is constituted by large extensions of gated communities next to territories of poverty. Finally, the "periurban area" is essentially defined as an interface between urban and rural land, with highly heterogeneous uses and, due to its synergies with the other terms, it is recognized as a more extensive and encompassing territorial notion. This exercise highlights the importance of specific studies that distinguish the conceptual nuances of terminology in each region and the realities and imaginaries they represent.

Keywords: Citation Frequency Index; periurban; suburban; Rurban; periphery

1. NEW URBANIZATION PATTERNS

The magnitude and speed of anthropogenic influence on the worldwide ecosystems during the last decades, is an unprecedented event. Already in 1997, Vitousek et al., affirmed that more than a half of the earth's surface had been transformed by human activities, through new urban settlements and large agricultural and grazing areas. Consequently, the phenomenon of urbanization has become one of the greatest challenges for the coming decades, due to its high impact on the transformation and degradation of natural ecosystems. In 2008, the proportion of world's urban population exceeded the rural population for the first time. Despite several regions have still not reached that threshold, Latin America achieved 50% of urban population already in the seventies and nowadays, this tendency is still increasing, constituting a region essentially urban (United Nations, 2014).

Following this worldwide changes in urban-rural population ratio, the growth pattern of cities has also been transformed in recent years. In the contemporary patterns of urban settlements, a precise separation between the traditional notions of "countryside" and "city" is becoming more complex to delimit, and the city edge tends to disappear in a blurred interstitial territory (Borsdorf, 2003; Ligrone Fernández, 2016; Soja, 2008). For Chambers (1990), the traditional city -a metropolis- was established as a geographical unit, easily recognizable as distinct from the rural space. The contemporary city on the other hand or, what Soja (2008) has called "postmetropolis", is formed as a territory with new urbanization processes that restructure the modern metropolis. It is a new space where the urban-rural dichotomy tends to vanish into a gradient composed of residential areas, satellite cities, industrial clusters, new urban developments, informal occupation zones and agricultural production zones. It is a territory where the conception of an artificial interior (city) and a natural exterior (countryside) weakens in such way that it tends to fade (Chambers, 1990). This is particularly the case of megacities (a term used to describe the enormous size of these new human settlements), the foundation of metropolitan areas or the urban phenomenon of City-Regions (Mancheno & Terán, 2012). These transformations are occurring in a vertiginous speed and have an impact in an increasingly wider territory (Martner, 2016; Piorr, Ravetz, & Tosics, 2011; Seto, Guneralp, & Hutyra, 2012).

2. DISENTANGLING THE URBAN-RURAL GRADIENT TERMINOLOGY

Due to the hybrid condition (neither urban nor rural) of these new territorial configurations in anthropized areas, an extraordinary collection of terms (concepts) are currently used to describe them, such as periurban or suburban area. These terms, in some cases are used with ambiguity or as synonyms to describe similar areas and, in other cases, as terminology that seeks to capture the most outstanding features of these new territories within the urban-rural gradient.

Although sometimes two concepts may correspond to the same notion from a geographical point of view (for example, both periurban area and suburbs are in the outskirts of the city), there are certain historic, functional and morphologic characteristics that are specific for each concept. For instance, a suburb in United States is not only an area in the outskirts of the city, but also a settlement shaped by the migration of a middle class in search of idealized areas with nature. Its expansion has been promoted by new access to private transport and it has particular morphological qualities: isolated and low-density houses with a front yard (Forsyth, 2012; Vaughan, 2015). Additionally, conceptual nuances can appear when terms are used in other geographical and socio-economic realities. Using the same example, the meaning of suburb in a Latin American context can be completely different to a suburb in United States. In fact, a "suburbio" refers a territory in the outskirts of the city that is usually associated with poverty, informality and lacking in infrastructure and services (Frediani, 2009; Hiernaux & Lindón, 2004; Serrano Heredia, 2017). At this point, it seems relevant to distinguish these regional particularities, embodied in terms that reflect specific realities, frequently opaque in a globalized world.

Since urban expansion areas have acquired new configurations, reflected in a highly region-dependent terminology, the general objective of this investigation is to achieve a more precise understanding of the urban-rural gradient through analyzing and clarifying the most frequent terms used to describe it, focusing specifically in the Latin American region. This study is composed of two parts: the first organizes and clarifies these various terms through a quantitative analysis of their most frequently quoted attributes in scientific literature. In the second part, similarities and synergies among terms are explored, in order to have a detailed and systemic understanding of the areas that integrate the urban-rural gradient. This work represents a first exercise and a sort of catalog for facilitating scientific dialogue in socio-territorial studies, by classifying, clarifying and visualizing Latin American realities and their correlates in a technical and scientific language.

3. METHODOLOGICAL PROCESS: A BIBLIOGRAPHICAL STUDY

This bibliographic exploration was focusing exclusively on papers treating Latin American cases, that is, studies about cities within the region or articles written by Latin American authors describing their local context. The database of the Scientific Electronic Library (SciELO) was used, as it has a greater collection of Latin American scientific journals. The terms "periurban area", "rurban area", "suburban area" and "periphery", which are frequently used to describe the urban-rural gradient (André, Mahy, Lejeune, & Bogaert, 2014; Ávila Sánchez, 2009; Galindo & Delgado, 2006), were searched in the database to be analyzed. At this point, it is necessary to clarify that there are other terms associated with the urban-rural gradient, such as *outlying district*, *expanded peripheries*, *fringe*, and *hinterland*, among others. These terms were not taken into account in this study since, in some cases, they do not allow a literal translation

into Spanish and therefore are not frequently used in Latin American literature. In other cases, despite the fact that they are Hispanic terms, they have been used by only one author (e.g. “Periferias Expandidas” (Adrián Guillermo Aguilar, 2002)) so they cannot be considered as common terms. Due to the aforementioned reasons and their greater presence in the database, the four terms were identified in 64 references through a bibliographic search (see Table 1).

TABLE 1 - LIST OF ARTICLES ANALYZED TO CALCULATE THE CFI

Aguilar, A. G., & López, F. M. (2016). Espacios de pobreza en la periferia urbana y suburbios interiores de la Ciudad de México: Las desventajas acumuladas. <i>EURE (Santiago)</i> , 42(125), 5–29.
Aguilar, G. A., & Irma, E. (2009). Periferia urbana: deterioro ambiental y reestructuración metropolitana.
Alegre, S. (2016). Configuraciones territoriales en el periurbano del partido de Florencio Varela. <i>Mundo Agrario</i> , 17(ISSN 1515-5994), 491–498. Retrieved from http://www.mundoagrario.unlp.edu.ar/article/view/MAV17n34a09
Archenti, A. (2008). Producciones identitarias y relaciones interculturales en el periurbano platense. <i>Mundo Agrario</i> , 9(17), 1–14.
Ávila Sánchez, H. (2001). Ideas y planteamientos teóricos sobre los territorios periurbanos: Las relaciones campo-ciudad en algunos países de Europa y América. <i>Investigaciones Geográficas</i> , (45), 108–127.
Ávila Sánchez, H. (2009). Periurbanización y espacios rurales en la periferia de las ciudades. <i>Estudios Agrarios</i> , 93–123.
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Barsky, A. (2005). El periurbano productivo, un espacio en constante transformación. Introducción al estado del debate, con referencias al caso de Buenos Aires. <i>Revista Electrónica de Geografía y Ciencias Sociales</i> , IX (ISSN:11389788).
Bayón Jiménez, M. (2016). Comunidades rururbanas de Quito: entre el empresarismo y el derecho a la ciudad. <i>Íconos - Revista de Ciencias Sociales</i> , (56), 103. https://doi.org/10.17141/iconos.56.2016.2068
Bustamante, V. (2005). SER PAI NO SUBÚRBIO FERROVIÁRIO DE SALVADOR: UM ESTUDO DE CASO COM HOMENS DE CAMADAS POPULARES. <i>Psicologia Em Estudo</i> , 10, 393–402.
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Calderón-Cisneros, A., & Soto-pinto, L. (2004). Transformaciones agrícolas en el contexto periurbano de la ciudad de San Cristobal de las Casas, Chiapas. <i>Revista Liminar. Estudios Sociales y Humanístico</i> , XII (ISSN: 1665-8027. 125), 125–143.
Calleja, R. N., & Bolán, E. N. (1993). Etnografía, ciudad y modernidad: hacia una visión de la metrópoli desde la periferia urbana. <i>Alteridades</i> , 3(ISSN: 0188-7017), 69–77.
Cano Salinas, L., Rodríguez Laguna, R., Valdez Lazalde, J. R., Acevedo Sandoval, O. A., & Beltrán Hernández, R. I. (2017). Detección del crecimiento urbano en el estado de Hidalgo mediante imágenes Landsat. <i>Investigaciones Geográficas</i> , 2017(92), 1–2. https://doi.org/10.14350/riig.50249
Carrión, F., & Erazo Espinosa, J. (2012). La forma urbana de Quito: una historia de centros y periferias*. <i>Bulletin de l'Institut Français d'études Andines</i> , (41 (3)), 503–522. https://doi.org/10.4000/bifea.361
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Cruz Rodríguez, M. S. (2002). Procesos urbanos y “ruralidad” en la periferia de la Zona metropolitana de la Ciudad de México. <i>Estudios Demográficos y Urbanos</i> , 17(1), 39. https://doi.org/10.24201/edu.v17i1.1129
Cruz-Muñoz, F., & Isunza, G. (2017). Construcción del hábitat en la periferia de la Ciudad de México. Estudio de caso en Zumpango. <i>Eure</i> , 43(129), 187–207. https://doi.org/10.4067/S0250-71612017000200009
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Zulaica, L., Ferraro, R., & Vázquez, P. (2012). Transformaciones territoriales en el periurbano de Mar del Plata. Geograficando, 12(ISSN 1850-1885), 169–187.

For the first part of the study, which consisted in identify the most frequently cited attributes (characteristic used to define each term), a list 50 attributes were identify from 598 quotes (see Table 2). This data was systematized in a matrix and the Citation Frequency Index (CFI) (%), proposed by André et al. (2014), was calculated. In this index, the values oscillate between 0 and 100%, being the attribute with the highest percentage the most quoted for each term. The equation of the CFI is the following:

$$CFI_{at} = 100 \times f_{at} / n_t$$

Where *a* is the attribute by which the index is being calculated, *t* is the term analyzed (periurban, suburban, rurban or periphery), *f_{at}* is the number of citations of the attribute *a* for the term *t* and *n* is the number of total citations used to describe one term. In this study, a "citation" is a phrase or short paragraph, analyzed by the authors, in which a term is defined or a specific attribute is described.

For example, in order to calculate the CFI of the attribute "*fragmented and scattered space*" (*a*) for the "*periurban area*" (*t*), the number of citations referring to this attribute were quantified (*f_{at}* = 19) and divided for the total number of citations of all attributes for that term (*n* = 339). Through it, a CFI of 5.6% was obtained.

The attributes with greater frequency were considered the most characteristic for each term. Therefore, in order to understand the essential notion of each term, the 50% of the most outstanding attributes for each term were those taking into account, as they represent the most distinctive conceptual characteristics of each zone.

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TABLE 2 - LIST OF ATTRIBUTES ORGANIZED BY CATEGORY. THIS ATTRIBUTES WERE CLASSIFIED BASED ON THE MAIN TOPIC THEY ADDRESS IN ORDER TO HIGHLIGHT SPECIFIC THEMES

ATTRIBUTES	
1.	Fragmented and dispersed space
2.	Concentric ring
3.	Hybrid forms - complex spatial structures
4.	New buildings
5.	Low built density
6.	Close to the city
7.	Distant to the urban center
8.	No defined limit
9.	Advance of the urbanization along axes of exit of the city
10.	Occupation and informal construction
11.	Construction of gated communities for the elites
12.	Construction of social interest housing
13.	High landscape value
14.	Dynamic and fast transformation
15.	In process of consolidation
16.	Persistence of highly rural activities
17.	Functionally linked to the city
18.	Daily commuting towards the urban center
19.	Formation of new centralities
20.	Heterogeneity in land uses
21.	Growth focused on residential uses
22.	New infrastructure and services
23.	Lack of services
24.	Interface between the countryside and the city (urban and rural activities)
25.	New educational opportunities (relocation of the offer)
26.	Lack of territorial planning policies
27.	Environmental problems (fragile ecosystem)
28.	Conflicts over the land (land use and tenure)
29.	Conflicts over the tenure of water
30.	Coexistence between different socioeconomic groups (precarious settlements next to gated communities for higher income population)
31.	Territory as a benchmark for better quality of life
32.	New actors and new forces (exogenous) build territory
33.	Conservation of traditional social practices
34.	Social isolation
35.	Own social dynamics based on a sense of belonging (rooting)
36.	Particular social and cultural changes (urban inhabitants that integrate into the rural)
37.	Particular social and cultural changes (rural inhabitants that integrate into the city)
38.	Ghetto / poverty
39.	Decentralization of the industrial and commercial sectors
40.	Labor precariousness
41.	New jobs
42.	Crisis in the agricultural sector (reduction)
43.	Low land price
44.	Land speculation
45.	Stimulated by the flexibility of transportation
46.	Pressure for urban growth
47.	Land-use change
48.	Resistance to change
49.	Population growth due to immigration
50.	Low population density

In a *second part* of the study, which consists in exploring similarities and synergies among terms, the Sorensen Index was calculated. This index enables to identify similarities, emphasizing the presence of

the same element in different groups (Gebrehiwot et al., 2019; Noukeu et al., 2019). This is particularly important for this research since, in several occasions, one attribute could be associated to more than one term. For example, the attribute "*Fragmented and dispersed space*" was used to describe both the periurban and the suburban area (Ávila Sánchez, 2009; Frediani, 2010). Identifying these similarities would allow acquiring a more detailed understanding on how these terms are perceived and the possible correlations among them, within the gradient.

5. RESULTS

5.1. Overview

From the bibliographic search, 64 articles were analyzed. The majority of them, 21 to be precise, were written in a Mexican context, followed by the Argentine production (20). The rest corresponds to academic research carried out in Ecuador (5), Brazil (3), Chile (3), Colombia (2), Bolivia (1), Uruguay (1) and several with a regional approach (8). The oldest reference included dates from 1993, considering that in Latin America the rural exodus that generated the explosive urban growth was particularly determinant up to 1990 (Da Cunha et al., 2009).

Out of a total of 64 articles and 598 quotes, the term *Periurban area* was the most mentioned in a total of 48 articles and in 339 quotes, followed by the term *periphery* which was mentioned in 23 articles (113 quotes), *suburban area* in 14 articles (76 quotes) and *rurban area* in 12 articles (70 quotes).

Several authors mentioned more than one concept in the same article. In some cases, clearly defining the specific characteristics of each term. For example in Frediani (2009):

*"The **suburbanization** (...) is an expansion that extends in the form of an oil stain with the access of the middle and working classes to individual housing and that will explode with the access of the same classes to the ownership of the automobile. This suburbanization will not be rural, but an invasion of rural spaces by the city, which will include the conservation of some elements, such as the green of the trees, the small gardens and existing parks" (p. 105). "This situation makes the **periurban area** have a high degree of interest because it is a very dynamic and heterogeneous environment, as well as because environmental fragility and imbalances in the relationship between society and nature occur in it. In this geographical space large equipment and industries, landfills, slums, caves, closed urbanizations, etc. coexist in a complex way" (p. 111)*

However, in other cases, mixing the concepts as if they were the same space:

"In the first instance, the analyzed models are similar to each other because they contain a booming peripheral space, in which the periurban area has gained accessibility through road infrastructure and increased use of the automobile, allowing suburbanization far from the center by high social strata and easy center-periphery accessibility" (Serrano Heredia, 2017: 52).

ANALYSIS OF THE URBAN-RURAL GRADIENT TERMINOLOGY AND ITS IMAGINARIES IN A LATIN-AMERICAN CONTEXT

TABLE 3 - CITATION FREQUENCY INDEX

Periurban area		Rurban area	
Attribute	CFI%	Attribute	CFI%
1. Interface between field and city	8.26	1. Persistence of mainly rural activities	12.86
2. Pressure for urban growth	7.08	2. New infrastructure and services	10.00
3. Fragmented and scattered space	5.60	3. Own social dynamics based on a sense of belonging (rooting)	10.00
4. Dynamic and fast transformation	5.31	4. Resistance to change	7.14
5. Coexistence between different socioeconomic groups	4.72	5. Particular social and cultural changes (urban inhabitants that integrate the rural)	7.14
6. Environmental problems (fragile ecosystem)	4.72	6. Interface between field and city	5.71
7. Population growth due to migration	4.42	7. Pressure due to urban growth	5.71
8. Crisis in the agricultural sector (reduction)	3.54	8. Low built density	4.29
9. Particular social and cultural changes (rural inhabitants who integrate into the city)	3.24	9. Distant to the urban center	4.29
10. New infrastructure and services	2.95	10. Growth focused on residential uses	4.29
11. Heterogeneity in land uses	2.65	11. Conservation of traditional social practices	2.86
12. Hybrid forms - complex spatial structures	2.36	12. Environmental effects (fragile ecosystem)	2.86
13. Persistence of mainly rural activities	2.36	13. High landscape value	2.86
14. Growth focused on residential uses	2.36	14. Crisis in the agricultural sector (reduction)	1.43
15. Lack of services	2.36	15. Conflicts over the land tenure	1.43
16. Occupation and informal construction	2.36	16. Fragmented and scattered space	1.43
17. Construction of gated communities	2.36	17. Heterogeneity in land uses	1.43
18. Decentralization of the industrial-commercial sectors	2.36	18. Advance of the urbanization along axes of exit of the city	1.43
19. Distant to the urban center	2.06	19. Lack of services	1.43
20. Stimulated by the flexibility of transportation	2.06	20. Dynamic and fast transformation	1.43
21. Conflicts over the land tenure	2.06	21. Land-use change	1.43
22. Land speculation (real estate)	2.06	22. Population growth due to migration	1.43
23. New buildings	1.47	23. Territory as a benchmark for better quality of life	1.43
24. Lack of territorial planning policies	1.47	24. Labor precariousness	1.43
25. Land-use change	1.18	25. Decentralization of industrial and commercial sector	1.43
26. Conservation of traditional social practices	1.18	26. Land speculation	1.43
27. New jobs	1.18		
28. Concentric ring or crown	1.18		
29. Low built density	1.18		
30. Advance of the urbanization along axes of exit of the city	1.18		
31. Formation of new centralities	1.18		
32. Territory as a benchmark for better quality of life	1.18		
33. Labor precariousness	1.18		
34. No defined limit	0.88		
35. In the process of consolidation	0.88		
36. New actors and new forces (exogenous) build the territory	0.88		
37. Social isolation	0.88		
38. (Ghettos in) poverty	0.88		
39. Close to the city	0.59		
40. Connected (dependent) functionally to the city	0.59		
41. Daily commuters towards the urban	0.59		
42. Low population density	0.29		
43. New opportunities education, relocation	0.29		
44. Own social dynamics based on a sense of belonging (rooting)	0.29		
45. Particular social and cultural changes (urban inhabitants that integrate into the rural)	0.29		
46. Landscape value	0.29		
47. Conflicts over the issue of water	0.29		
48. Low price of land	0.29		

Suburban area	
Attribute	CFI%
1. Coexistence between different socioeconomic groups	7.89
2. Territory as a benchmark for quality of life	7.89
3. (Ghettos in) poverty	7.89
4. Close to the city	6.58
5. Stimulated by the flexibility of transportation	6.58
6. Lack of services	6.58
7. Construction of gated communities for elites	6.58
8. Fragmented and scattered space	5.26
9. Daily commuting towards the urban	5.26
10. Occupation and informal construction	3.95
11. Growth focused on residential uses	3.95
12. New infrastructure and services	3.95
13. Pressure for urban growth	3.95
14. Low built density	2.63
15. Connected (dependent) functionally to the city	2.63
16. Formation of new centralities	2.63
17. Heterogeneity in land uses	2.63
18. Dynamic and fast transformation	2.63
19. Labor precariousness	2.63
20. Hybrid forms - complex spatial structures	1.32
21. Distant to the urban center	1.32
22. Highly rural activities persist	1.32
23. Population growth due to migration	1.32
24. Conservation of traditional social practices	1.32
25. Land speculation	1.32

Periphery	
Attribute	CFI%
1. (Ghettos in) poverty	10.62
2. Occupation and informal construction	9.73
3. Lack of services	8.85
4. Land speculation	6.19
5. Growth focused on residential uses	5.31
6. Coexistence between different socioeconomic groups	5.31
7. Pressure for urban growth	4.42
8. Concentric ring	3.54
9. Close to the city	3.54
10. New infrastructure and services	3.54
11. Construction of gated communities for elites	3.54
12. Social isolation	3.54
13. Labor precariousness	3.54
14. Population growth due to migration	2.65
15. Fragmented and scattered space	2.65
16. Dynamic and fast transformation	2.65
17. Low built density	1.77
18. Connected (dependent) functionally to the city	1.77
19. Daily commuters towards the urban	1.77
20. Lacks territorial planning policies	1.77
21. Environmental effects (fragile ecosystem)	1.77
22. Low price of land	1.77
23. Distant to the urban center	0.88
24. Advance of the urbanization along axes of exit of the city	0.88
25. Highly rural activities persist	0.88
26. Stimulated by the flexibility of transportation	0.88
27. Formation of new centralities	0.88
28. Heterogeneity in land uses	0.88
29. Territory as a benchmark for better quality of life	0.88
30. Construction of social interest housing	0.88
31. Conflicts over the issue of land (land use and tenure)	0.88
32. Decentralization of industrial and commercial sectors	0.88

5.2. First part: Analysis of the Citation Frequency Index

The results of the CFI are presented in Table 3. The attributes with highest percentages are the most quoted and, therefore, those that embody the most representative characteristics of each term, according to the perception of Latin American authors.

Based on the 50% attributes with highest percentage, the **periurban area** is conceived as an interface between the countryside and the city, that is, a place where urban dynamics cohabite with rural ones (CFI: 8.26). This territory is under constant pressure due to the exogenous growth of the urban area (7.08). It is characterized as a fragmented and dispersed space (5.60) with hybrid forms and complex spatial structures (2.36). Here, new housing projects (2.36) are next to areas for agricultural activities (2.36), industrial zones and new commercial developments (2.36). It means that there is a high heterogeneity in land uses (2.65). It is also a territory in a dynamic process of transformation, both towards its edges and inside (5.31) even though it is distant from the urban center (2.06). Within it, different socio-economic

groups coexist (4.72): precarious or informal settlements (2.36) with lack of services (2.36) but also gated communities for high-income groups (2.36). The presence of non-compatible uses, as well as the reduction of forests and natural covers, has caused a deterioration of its ecosystems, damages and environmental degradation (4.72). Its population profile responds to a migratory phenomenon (4.42) that comes from two sources: i) the exodus of the urban population to the countryside in search of a better quality of life, facilitated by the access to private transport (2.06); and ii) the migration from the countryside to the city, related -among other things- to the agricultural sector crisis (3.54). This double entry of population with practices that respond to two opposite realities –rural versus city life- generates a series of social and cultural dynamics that are exclusive to this territory (3.24), as well as conflicts over the use and tenure of the land (2.06). Finally, along with the construction of new buildings (1.47), new road infrastructure and urban services and facilities have been implemented (2.95). However, they are not always articulated to a clear territorial policy (1.47) but rather to opportunistic land speculation (2.06).

The **suburban area or suburbs** are characterized for having different socioeconomic strata (CFI: 7.89). Exactly with the same frequency of citation, the authors describe this territory with two attributes that would seem contradictory: some describe it as a place where people migrates in search of a better quality of life, idealizing it as a more healthy, quiet space surrounded by nature (7.89); while others describe it as a territory with highly impoverished settlements (7.89). These two scenarios, although dissimilar, are in synchrony with its first attribute: coexistence of different socioeconomic groups. The suburban territory is also characterized as an area geographically close to the city (6.58) and its development has been greatly enhanced by the recent and accelerated access to private motorization (6.58), generating permanent commuting to and from the urban center (5.26). In relation to its -partial- condition of poverty, informal settlements are usually located within it (3.95) with lack of basic services (6.58). On the other hand, the new morphological pattern of development of the middle and upper classes, responds to a private urbanization model, enclosed and isolated, provided with a perimeter wall and a single guarded access (6.58). Finally, this territory is characterized for being a fragmented and dispersed space (5.26), essentially residential (3.95) and in process of consolidating due to the implementation of new services and road infrastructure (3.95). All of these as a result of urban expansion (3.95).

The **rurban area** is characterized by the persistence of rural landscapes and activities (12.86), although, in a context of a globalized world, new urban forms start to appear in this territory. For example, the spread of new urban services and road infrastructure (10.00). However, the rurban territory is strongly based on a sense of belonging or rooting of its inhabitants (10.00). It is a territory that resists changes (7.14) and that conserves traditional social practices (2.86). Despite it is under pressure due to urban development (5.71), the rurban area is characterized by having its own dynamics that responds to particular social and

cultural changes (7.14), due to its condition of interface between the countryside and the city (5.71). Morphologically, it is characterized as a settlement of low building density (4.29), with a growth focused on residential uses (4.29) and with a high landscape value (2.86). However, it is being increasingly more exposed to new environmental problems, and is recognized as a fragile ecosystem (2.86). Unlike the periphery or the suburban zone, the rurban area is recognized as a space *far* from the city (4.29).

Finally, the term **periphery**, which literally means “the outer edge of an area”, in Latin America is usually associated with ghettos or slums, highly poor (10.62). It is formed by informal settlements and their constructions (9.73), with precarious or nonexistent basic services (8.85). In spite of this, in recent years and with increasing intensity, these territories have been the subject of speculation, driven by the logic of the land market (6.19) due to its privileged position of proximity to the city (3.54). This speculation is accompanied by the construction of new infrastructure and services (3.54) for new residential developments (5.31). These last characteristics triggers a double socio-territorial condition (5.31): precarious neighborhoods next to new condominiums for inhabitants with a different socioeconomic condition (3.54). Despite this, the marginality image of the periphery prevails, since its condition is also strongly associated with job insecurity (3.54) and with the social isolation of its inhabitants (3.54). Finally, its main changes are resulting from the urban expansion (4.42) which morphologically is expanding as a concentric ring (3.54).

5.3 Second part: Distinctions and synergies

The previous paragraphs seek to highlight the most outstanding characteristics of each term; however, even as each term represents an independent idea, there are synergies among all of them. In order to identify the level of correlation between these terms, the Sorensen Similarity Index has been calculated (Table 4).

TABLE 4 - SORENSEN SIMILARITY INDEX. THIS DIAGONAL MATRIX SHOWS THE NUMBER (UPPER CELLS) AND THE PERCENTAGE (LOWER CELLS) OF COMMON ATTRIBUTES BETWEEN TERMS.

	Periurban	Suburban	Rurban	Periphery
Periurban	24	9	7	11
Suburban	48.6 %	13	3	10
Rurban	37.8 %	23.1 %	13	3
Periphery	55.0 %	69.0 %	20.7 %	16

Periphery and suburban area are the terms with the greater percentage of similarity (69%), which means that more than half of their outstanding attributes are the same. Geographically, both are the only terms that emphasize being *close to the city*. They also match in being spaces with *poverty, informal occupation and precarious services*. This description causes a negative perception of these two territories. However,

considering the weighting detail of their attributes, periphery is a more pejorative notion since its three more frequent attributes are poverty, informality and lack of services; and it has attributes related to social isolation and precariousness labor. While the suburban imaginary has a double burden: in addition to its condition of poverty, it is also conceived as a territory for the recent migration of the middle class in search of better quality of life.

On the other side, the rurban area is the term more distinguished from the others. It has a similarity of only 23.1% with the suburban area and 20.7% with the periphery. Its most outstanding characteristics are related to *the permanence of activities and rural dynamics* and the *conservation of traditional social practices*. All these describe a territory that is resisting the change, due to its particular social condition based on a sense of territorial rootedness.

Finally, what is more outstanding from the notion of periurban area, is that it is the term with highest similarities within the other three territories; to be precise, it shares 48.6% of its most outstanding attributes with the suburban area, 37.8% with the rurban area and 55% with the periphery.

5. SUMMARY AND DISCUSSIONS

Although some ambiguity is evident in the use of terms in the literature, recognizing the most distinctive characteristics through the Citation Frequency Index, has allowed clarifying and refining each terminology with more precision, from a Latin-American perspective. It can be summarized that: the *rurban area* stands out as a territory that still resist the predatory logic of urbanization. Although it is a territory that experiences strong pressure due to urban growth, and its inhabitants live functionally connected to the city, it stills maintaining rural logics, practices and landscapes (Ávila Sánchez, 2009; Cacivio & Ringuet, 2012; Nates Cruz, 2008; Otero Macuacé & Gomez Sanchez, 2014; Salazar, Díaz Mery, Mc-Intyre, & Foster Bonnette, 2014; Sereno, Alicia, & Serer, 2010).

On the other hand, the *suburban area and the periphery* share socio-territorial phenomena strongly influenced by their proximity to the city (Delgado Campos, 2003; Durán, Martí, & Mérida, 2016; Frediani, 2010; Hiernaux & Lindón, 2004; Martner, 2016). However, the term "periphery" carries an unquestionably more negative appraisal in the social imaginary because of its association with poverty, precariousness, marginality, exclusion and informality (Adrián G Aguilar & López, 2016; Cacivio & Ringuet, 2012; Carrión & Erazo Espinosa, 2012; Domínguez Aguilar, 2017; Hernández & Vieyra, 2010; Hidalgo, Borsdorf, & Sánchez, 2007; Ringuet, 2008). While the most outstanding attribute of the suburban area is the interaction of both realities: impoverished territories next to gated communities built

for middle and upper classes. Both cases are essentially residential (Calleja & Bolán, 1993; Delgado Campos, 2003; Durán et al., 2016; Frediani, 2009; Inostroza, 2017).

Finally, the *periurban territory* is characterized for having highly heterogeneous uses and for being under a strong pressure because of urban growth. It is essentially defined as an interface between urban and rural areas. Due to its multiple coincidences with the other terms, based in the Sorensen Index results, it would seem to be a much more general and extensive notion, able of containing the others. In fact, several articles *insert* the other terms within this apparently larger space: the periurban. "It is also understood the external area of this strip, or *rurban zone*, as the external limit of the periurban, where the urban-rural continuity shows a predominance of the rural area although with some characteristics of the city" (Serenó & Santarelli Serer, 2012: 43). "Any place around the city is a periurban area, but not anyplace is a rurban area; the latter is located around the city where the mentioned transformations are lodged with the new rurality" (Salazar, Díaz Mery, Mc-Intyre, & Foster Bonnette, 2014: 224).

Based on the above synthesis, the following scheme is proposed to illustrate the overall composition of the urban-rural gradient, based on the perceptions and imaginaries from Latin American authors and studies (Figure 1).

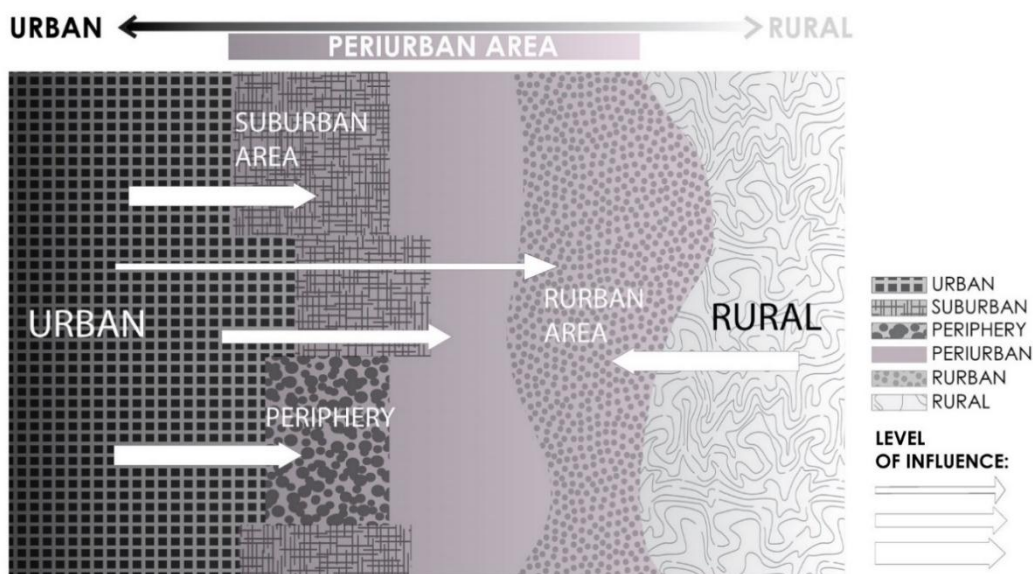


FIGURE 1: GRAPHICAL SCHEME OF THE URBAN-RURAL GRADIENT. BASED ON THE CFI AND THE SORENSEN INDEX. THIS GRAPHIC PROPOSES A SCHEME OF THE SPATIAL LOCATION OF THE DIFFERENT STUDIED TERRITORIES AND THEIR RELATION AMONG EACH OTHER. THE WIDTH OF THE ARROWS SHOW THE LEVEL OF INFLUENCE FROM THE URBAN OR RURAL AREA TO A SPECIFIC TERRITORY.

The main contribution of this research in relation to a previous study about the terminology in the urban-rural gradient from a multi-regional approach (André et al., 2014) is the recognition of the peculiarities of

the Latin American reality and its imaginaries. Indeed, important divergences can be identified while comparing these two studies. The first notable difference is that the term "periphery" does not appear in the multi-regional study; therefore, it seems that these territories, strongly associated with precariousness, are spatial imaginary distinctive for the Latin American region. Likewise, the terms suburban and periurban area, in the study of André et al., are defined as the same notion, where the only difference is the language of origin (if it comes from a francophone context it is defined as periurban area). Both are defined as a territory where: "i) the built-up areas are not dominant, ii) where there is no explicit zoning of uses and iii) where there isn't exclusively agricultural or forestry uses" (p.66). However, in Latin America, when analyzing the zoning, it can be notes that these two concepts are very different: the periurban territory is highly heterogeneous (residential, industrial, commercial and agricultural) while the suburb has an explicit zoning: mainly residential.

6. CONCLUSIONS

This exercise highlights the importance of specific studies that distinguish the conceptual nuances of terminology in each region, and the realities and imaginaries they represent. It is necessary to overcome univocity, that is, the idea that there are unique conceptions, valid for everyone and everywhere. On the contrary, it is necessary to recognize the diversity of the realities abstracted in different concepts, avoiding that any territorial particularity will become invisible. It would be wrong for academics, policy makers or city planners to propose territorial management strategies based on generalized concepts, since this could result in projects and guidelines disconnected to the specific needs of each place.

After these first results, it seems essential to verify and validate these theoretical-symbolic notions in a specific territory. Greater distinctions or similarities could appear between cities and countries within the region. As well, further studies approaching other regions could also enrich the discussion about contemporary urbanization patterns. Finally, a relevant challenge for future studies would be, not only to understand the status quo of these new territorial configurations, but also to recognize and measure their possible social, environmental and economic impacts, which represent the main concern about the contemporary patterns of urbanization in Latin America.

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