



Extended abstract

EXTENDED ABSTRACT

Title: Together, but not mixed up: gated communities as an emerging residential model in the metropolitan context of Granada.

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Abstract: *(minimum 1500 words)*

When we talk about residential segregation, one of the socio-urban phenomena whose popularity and manifestation in the metropolitan landscape has increased in recent decades has been gated communities. Using physical enclosure and privatization of public space, gated communities are characterised by the search of "living among equals" by its residents creating a physical and symbolic distance between "the life inside the community" and "the life in the outside".

Despite being an increasingly popular residential model in some countries such as the United States (Blakely & Snyder, 1997), Argentina (Roitman & Phelps, 2011), United Kingdom (Atkinson & Flint, 2004) as well as other countries in Asia and South Africa



(Landman, 2004; Wu & Webber, 2004), gated communities are not very barely visible in the Spanish urban landscape. One of the main reasons associated with their scarce presence is due to the lack of specific legal regulations supporting their development and operation as a residential model (Villar Lama & García Martín, 2016). In fact, it is no anomaly to find examples of gated communities that have finally been deprived of the self-management and maintenance of the common spaces arranged inside them¹. In any case, this does not mean that urbanizations in Spain develop other residential mechanisms of self-isolation in the urban context.

In this sense, we propose the concept of "residential community" to give a name to all these residential representations that do not necessarily have an excessively marked spatial closure to really produce that sense of "life in common" among its own residents within the urbanization. From this conceptual proposal we pretend to: (i) present a conceptual purpose that makes it possible to encompass the multiple and very varied ways this idea of "living among equals" can residentially be manifested in the urban space; (ii) create a typology of residential communities in which its heterogeneity is detailed more in depth; (iii) analyse the spatial distribution of residential communities and its relationship with urban segregation pattern² in the metropolitan area of Granada.

Similar to Seville (the capital of the Andalusia region), Granada is characterized by a consolidated metropolitan structure (more than 40 municipalities) because of the incipient work-residence mobility between the central city and the crown (Feria Toribio, 2010). Similarly, and like other Mediterranean cities, the metropolitan area of Granada has not shown a rise in class segregation patterns in recent decades despite the continuous increase in social inequality that has occurred in almost all of Europe. However, the fact that segregation indexes indicate a low level of unequal residential distribution in urban space does not mean that other strategies of spatial separation can exist at a more micro scale (Maloutas, 2020).

2. Residential community as a new conceptual approach

In accordance with theoretical proposition, and although we do not have a definitive conceptualization of what a residential community is, we know that we refer to any

¹ See the final judgment of the 'Urbanización El Serrallo' against the privatization of the gated community and provision of public services by the City of Granada (Mingorance, 2018; Barrera, 2016).

² This part of the analysis is not yet complete. We are still working on it and hope to complete it for the Conference.



urbanization whose morphology makes the (re)production of a "life in common" among its residents possible. This means that to consider an urbanization as a residential community it must have on the one hand, common facilities that enable social interaction within it and, on the other hand, some kind of mechanism (physical or spatial) that allows to delimit the residential complex and to distance itself from the rest of the population. These two basic conditions served to begin the process of quantifying residential communities in the metropolitan area of Granada.

However, when we talk about common spaces that allow interaction among the residents of the community, it is necessary to clarify which common spaces were considered. In our case, we only considered those urbanizations with common spaces enabled either for the development of sports or leisure activities, as well as those spaces with urban furniture suitable as a meeting or gathering point among cohabitants. This means that, for example, those ones whose common spaces only have common stairs or elevators are not recognized as residential communities. Instead, if the urbanization is composed of swimming pools, tennis courts, playgrounds or gardens with benches and other urban furniture, they will be recognized as residential communities. This aspect, in addition to providing a greater degree of precision to our conceptual proposal, also allows us to differentiate the legal understanding of community from the sociological one.

3. Methods and sources

Regarding the quantification process of residential communities and after the methodological review (Carlucci et al., 2020; Zambon et al., 2017; Vidal et al., 2011) of different studies focused on the geolocation and counting of real estate in urban space, we used Google Earth program to identify residential communities from satellite images and the Street View option. Following the same approach, but focusing on the recognition of residential communities, the electronic Spanish Cadastre³ was also used, which, apart from providing crucial information for the identification of residential communities, also served for the elaboration of residential communities' typology. In

³ The cadastre provides the parcel information of residential communities not because it recognizes them as such, but because the vast majority are comprised in a single parcel.



addition, we made some face-to-face visits to those urbanizations that were impossible to recognize properly using only Google Earth⁴ images.

After the first community count, a total of more than 200 residential communities were recognized. This task was carried out by inserting markers on Google Earth for each community located, which also allowed us to obtain the coordinates of each community for subsequent cartographic representation through the ArcGis software. Once the first count was completed, the next step was to collect all the information of every residential community we firstly recognised in the database. To this end, a scheme was drawn up for all the information to be obtained on each residential community. To date, we continue to review all communities initially located in the metropolitan area of Granada.

In this communication we will present a preliminary typology of residential communities, as we are currently still completing the database. However, we have a sample of more than 500 recognized residential communities, surpassing even the first count carried out. We expect to reach a total of 600 residential communities in the entire metropolitan area of Granada.

3.1. Description of observational variables

A total of 10 observational variables (table 1) were developed to provide a greater degree of detail to the database. The first two variables generated were the degree of enclosure and common facilities which correspond to the main two conditions of residential community's definition.

Table 1: Explanatory table of the categories created for the database

General identifiers	CPRO	Granada province code
	MUN	Name of the municipality
	CMUN	Municipality code (3 digits)
	CDIS	Census district code (2 digits)
	CSEC	Census section code (3 digits)
	CMAN	Mancomunidad code (2 digits)
	CMAN01	Code of subcommunity in commonwealth (2 digits)
	CCOM	Residential community code (3 digits)
	LAT	Latitude (UTM; ETRS89_30N)
	LON	Longitude (UTM; ETRS89_30N)
Basic	AÑO	Year built
	SUP	Area (m2)

⁴ Sometimes the land register of the Cadastre and the satellite images of Google Earth do not correspond to reality, either because the property is not properly recorded in the Cadastre (lack of land register or inconsistencies in the number of dwellings presented) or because the information from both resources does not match each other (no record of a property already built or vice versa).



characteristics	NVI	Number of dwellings
Type of dwellings	VAI	Single-family detached houses
	VPA	Semi-detached and other single-family dwellings
	VAD	Semi-detached single-family houses
	PMC	Apartments in closed block
	PMA	Apartments in open block
	CON	Under construction
Structural elements	CSS	Cul-de-sac street
	CFS	Cul-de-sac street
	CPE	Pedestrian street
	LIN	Internal commercial premises (urbanization)
	LEX	External commercial premises (urbanization)
Use of roads	PPU	Public domain and public use
	PRE	Restricted private domain for public use
	PPR	Private domain for private use
Distance from the population centre	DIS	Isolated development
		Separate development
		Urban development integrated in the urban area
Nature of the enclosure	VER	Gates or fences
	MUR	Walls
	CAD	Chains
	BOL	Bollards
	ARB	Shrubs
	CPP	Private/individual property signs
Access entries	PVI	Entrance(s) per dwelling
	PBL	Entrance/s per block
	COM	Common entrance to the development
	COMS	Several common entrances to the development
Common facilities	PIS	Swimming pool
	PTP	Tennis/paddle tennis court
	PBA	Basketball court
	CFU	Soccer field
	CGO	Golf course
	GIM	Gym
	PAR	Playground
	MOB	Patio with furniture
	JAR	Gardens/parks
Security	GSE	Security guard
	CSE	Security cameras
	BSE	Security barrier
	ASE	Security alarm

Note: Compiled by authors

Instead of providing a detailed explanation of each of the variables - which would make this summary too long - we prefer to provide a brief description to the easiest variables to understand and focus more on those variables which can be confusing to understand without a prior explanation.

The first variable, **general identifiers**, provides basic information for the identification of each residential community in the metropolitan urban space, while the other two following categories - **basic characteristics** and **type of dwellings** - collect essential



information on each recognized property. Although a priori they do not have a direct implication in determining what type of residential community each recognized property is, the importance of some of their elements clarifies a first decision on what is a residential community and what is not (e.g., number of dwellings).

Nature of enclosure is a descriptive variable referring to those materials or elements that allow the spatial delimitation of a residential community (fences, walls, chains, bollards, the use of shrubs for perimeter fences, etc.). Regarding to the **access entries** variable refers to the number of entrances arranged in each residential community. If the entrances to the urbanization are individual - for each dwelling or block - or if, on the contrary, they are common - everyone must enter and leave the urbanization through an entrance shared with the rest of the residents. In addition, both individual and common entrances can perfectly coexist in the same urbanization. Likewise, **security** variable includes four personal and mechanical mechanisms to restrict and control the residential space (security bars, security guards, security cameras and security alarms). Although this is one of the main premises associated with the individual's determination to live in gated communities, the fact is that a very high presence of these mechanisms has not been observed in the case of residential communities in Granada. Even so, the identification of security elements in the database was essential for further analysis. These three observation variables, together with **structural elements**, **use of roads** and **distance from the population centre**, were crucial for the elaboration of the typology of the residential communities.

In accordance with **structural elements**, its initial objective was simply to provide a little more information regarding the way in which residential communities are shaped. In this way it would even be possible to discern between different models of residential communities for each ideal type of community previously elaborated.

Figure 1: Structural aspects in residential communities



Dead-end street

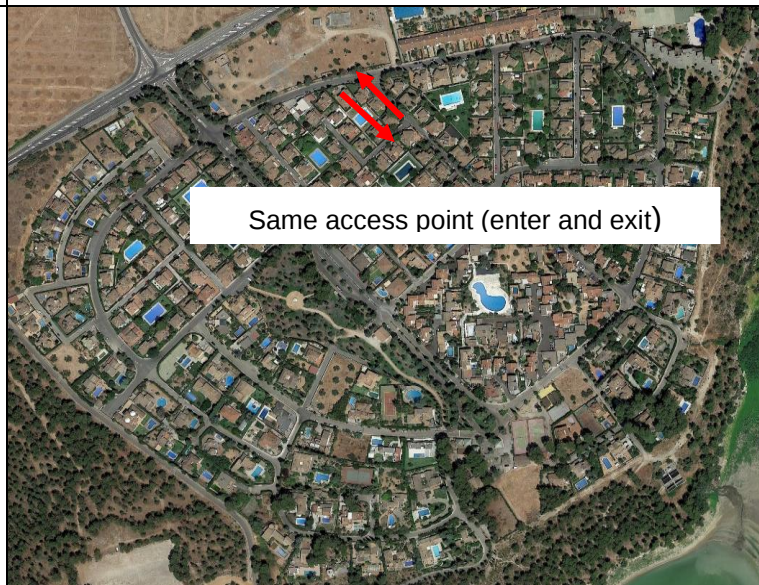
A local or private road that has a single point of entry but no exit.



Residential community in Alfacer.

Street in a cul-de-sac

A local or private road (linear or serpentine) that begins at a single point of access and runs through the entire property and ends at the same point.

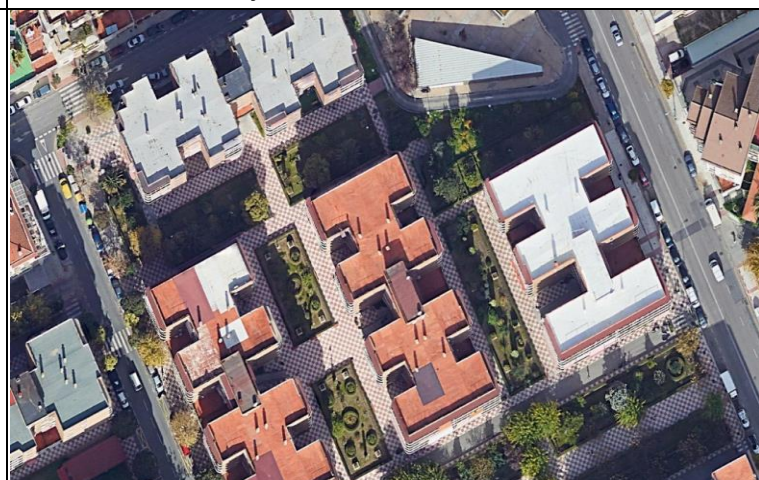


Same access point (enter and exit)

Residential community in Albolote. Code: 003013

Pedestrian street

Local or private road prohibited for vehicular traffic. For this variable we are only interested in pedestrian streets that are not closed to non-resident pedestrian traffic in the community, but are restricted (e.g. business hours) or not limited.



Residential community in Granada, district 02. Code: 087009

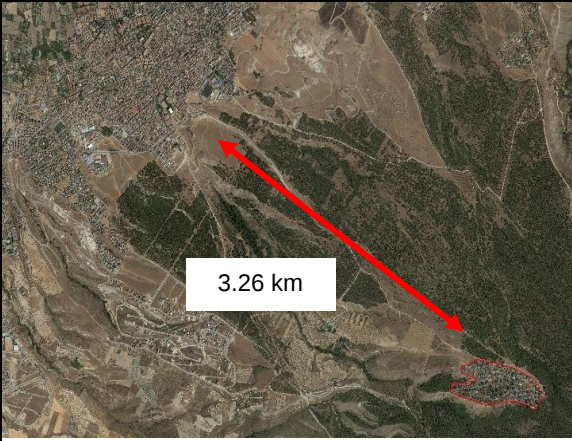
24 - 26 November 2021 Madrid XLVI Reunión de Estudios Regionales International Conference on Regional Science Full cities, empty territories Universidad Autónoma de Madrid  	
Commercials inside the community Establishment that carries out a commercial activity within the residential community whose access points are located inside the community.	 Comunidad residencial en Granada, distrito 02. Código: 087045
Commercials outside the community Establishment that carries out a commercial activity in the residential community and whose access points are located outside the boundaries of the residential community.	 Comunidad residencial en Granada, distrito 06. Código: 087028

Note: *Compiled by authors*

The structural aspects are followed by the category **use of roads**, referring not only to the type of tenure of the roads within the residential community, but also to the type of access that has been previously established by the community (public, private, or restricted). Finally, there is the **distance from consolidated population centres**. To evaluate the physical distance of the residential communities from the population centres, we have started from three possible assumptions.

Figure 2: Distance from the population center



Integrated urbanization	The residential community is part of the population nucleus.	 Residential communities in Granada, district 09.
Separate urbanization	The community is located between half a kilometre and one kilometre away from the population centre.	 Residential community in Otura
Isolated urbanization	The community is located more than one kilometre away from the population centre.	 Urbanization 'Cumbres Verdes' (La Zubia).

Note: Compiled by authors

The first assumption would be when the *residential community* is located in a *population nucleus*, which means that it is located in a space made up of ten or more buildings no more than 200 meters away from the nucleus boundary (INE, 2021).



It should be noted that when we talk about consolidated population centres, we do not refer to the specific population centre we are referring to. This is because it does not make sense to take as a reference the population nucleus of the territory in which each residential community is inserted when it is either located closer to the population nucleus of the neighboring municipality, or even if it is in the middle of two population nuclei. If the layout of the buildings in the urban space maintains a certain continuity without exceeding 200 meters in distance, the residential community is considered to be inserted in a population nucleus.

Secondly, there would be *separate residential communities* which, unlike the previous assumption, are characterized by being sufficiently separated from the nearest nucleus (more than 200 meters away), but without being totally isolated from it (less than one kilometre away). However, calculating such a distance solely through a previously established measure is sometimes insufficient, and even imprudent, as it can lead us to neglect other crucial aspects such as the socio-spatial environment in which each residential community is located.

In fact, some residential communities use spatial distancing - *isolated communities* - as a segregation strategy between the community and the rest of the population. Other communities, however, use road or even natural infrastructures (such as rivers, lakes, parks, etc.) for the same purpose. Although they do not symbolize a discontinuity in the administrative structure, it could be said that they do symbolize a social discontinuity with respect to the consolidated population nucleus.

Likewise, the agglomeration of residential communities in a space separated from the population nucleus should not be considered as a population nucleus in itself, since the very logic of the socio-spatial enclosure of residential communities is opposed to that of a population nucleus. Let us recall that population nuclei arise from the spatial interaction of people moving from their homes to work and vice versa. In the case of communities, such a spatial connection does not exist, nor is it sought. All these variables, without considering the first three (Table 1), were fundamental for the elaboration of the typology of residential communities.

Finally, there is the **common facilities** variable which is composed of a total of 9 categories depending on the type of services provided by each urbanization (swimming pools, gym, gardens with urban furniture, paddle courts, children's playgrounds, etc).

Note: *Compiled by authors*



As we already know, all residential communities must have some type of enclosure system that seeks to restrict, totally or partially, access to the property by non-resident passers-by. From this premise arises one of the key variables for the categorization of residential communities, which is the **type of closure** and with which, in addition to recognizing the (in)existence of walls, fences or other material means evident in the morphology of each urbanization, it will also be possible to distinguish between more or less hermetic residential communities. However, for the construction of the type of enclosure variable, three other secondary, or second-degree, variables had to be created beforehand.

In order to facilitate the understanding of this task, we have chosen to explain these three variables following the inverse order to the one presented in Table 3. Thus, we will begin with what would be the last variable of second degree, which is the **structural closure** and with which we intend to account for those cases in which the plot morphology of the residential community itself already contributes to its perimeter isolation without the need for walls or fences to enclose the residential space. For the construction of this new variable we took into account, firstly, the category of distance from the population center and, secondly, the categorical elements referring to the self-excluding roads to the resident or pedestrian population located in the category of structural aspects.

The second variable of second degree is the **traffic affluence on community streets**, which refers not so much to the domain of the roads (public or private management and maintenance responsibility) but rather to their use within each residential community. The purpose of this variable is to collect those cases in which the residential community is partially open to passers-by due to the existence of commercial premises inside. This variable was constructed from, firstly, some of the categorical elements (presence of internal commercial premises) located in the category of structural aspects and, secondly, by the category use of roads, specifically by those roads of public or restricted use.

Finally, there is the secondary variable **closure level** with which we can know what level of physical enclosure and self-exclusion is present in each residential community. It can be said that it is the most complete and determining secondary variable of the



As it can be observed, five types of residential communities have been distinguished, which are also ordered in ascending order. Thus, the first type of residential community is the totally enclosed communities, which is the most studied residential community model so far and from which not only this typology but also the beginning of this research as such has started. This is followed by residential communities with a not total enclosure but restricted mainly from the type of road use previously established in the community. Even though they are not totally enclosed, they do have surveillance and control systems for the residential complex.

Nonetheless, although common facilities variable was not considered for this typology of residential communities, a small classification was also made based on this variable according to the type and number of common facilities provided in each urbanization (Table 5).

Table 4: Type and complexity of common facilities

Name of facilities	Description
Sophisticated	Three or more sports facilities in the residential community
Complex	Two sports facilities and living areas
Simple	A single sports facility and some living areas
Basic	Only living areas

Note: *Compiled by authors*

Two types of facilities were differentiated. In the first place, there are **sports facilities** such as swimming pools, tennis or paddle tennis courts, golf courses or similar. Secondly, there are **living areas** which, as their name suggests, are those which, although they are not designed for the practice of exercise or any type of sport, are designed to encourage possible social interaction among the residents of the community. Regardless of whether this actually takes place or not. As an example of these facilities, it is worth mentioning the landscaped or walking areas with certain urban furniture (e.g. benches, lampposts, litter garbage cans, etc.) as well as the typical playgrounds that can also be a meeting point for parents with small children.



Consequently, and as with sports facilities, the type of community depending on the equipment present differs not only by the availability of the type of equipment per se, but also by the number of facilities available in the community.

Keywords: *Gated communities; Residential segregation; Socioeconomic inequality; Metropolitan area of Granada.*

JEL codes: O18. – Urban, Rural, Regional, and Transportation Analysis; Housing; Infrastructure

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