

RURAL DOMESTIC SPACE AND THE ITALIAN IMMIGRATION IN SOUTH BRAZIL:

Transmission of culture through space organization

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Abstract

From 1875 onwards, the north-eastern part of the Rio Grande do Sul State in Brazil, a hilly and yet wild vacant area, started being populated by Italian immigrants, mainly from the northern regions of Italy – Veneto and Trentino Alto Adige. The immigration follows two main processes: a) an official policy implemented by the Brazilian central government in order to substitute slavery for free labour; b) the crisis that followed the Unification in Italy from 1860 onwards. One of the first tasks of the Italian immigrants in Brazil was to build their houses for shelter and protection. The main goal of an on-going research among the UniRitter Laureate International Universities, Universidade Federal do Rio Grande do Sul and Sapienza Università di Roma is to investigate the rural domestic architecture produced in the beginning of the immigration in Southern Brazil as well as the transformations introduced in the landscape, compared to the main features presented in Italy at that time regarding rural houses and landscapes. The purpose of the research is to identify how a spatial culture can be transmitted from one place to another, evaluating genotypic families of morphological domestic structures and how space is used as a means of cultural transmission, using space syntax techniques. This paper will deal only with the domestic space produced by the first Italian immigrants in Brazil, once the Italian part of the research is yet to be done. From the selected sample of rural houses – 21 houses so far -, it is possible to say that, notwithstanding the differences found in terms of geometry, materials and shapes of the houses, genotypic families can be identified as a consistent feature of the structure of the houses among the sample regarding, for instance, which are the main spaces; how deep or shallow they are from the exterior space; what are the spaces where the members of the houses relate to strangers; how introverted or extroverted they are and so on. The spatial patterns found among the sample reveals that the way the domestic space is organized consistently responds to an important part of the daily life of the first Italian immigrants in Brazil and, as we will try to demonstrate in the comparative analysis, helps to reproduce way of lives and cultural values brought from Italy to Brazil.

Keywords: domestic space; rural houses; Italian immigration in Brazil.

Theme: Spatial Analysis and Architectural Theory

Introduction

This paper presents the first results of an on-going research, which deals with the occupation and spatial structure of a part of the territory of the Rio Grande do Sul State in Brazil that took place from an immigration process that begun from 1875 onwards with Italian immigrants, mainly from the northern areas of Italy.

This occupation created a unique landscape in Brazil and was based, in the political level, on governmental colonization plans and, physically, on a griddy design made by military engineers for an irregular and hilly territory (figure 1).

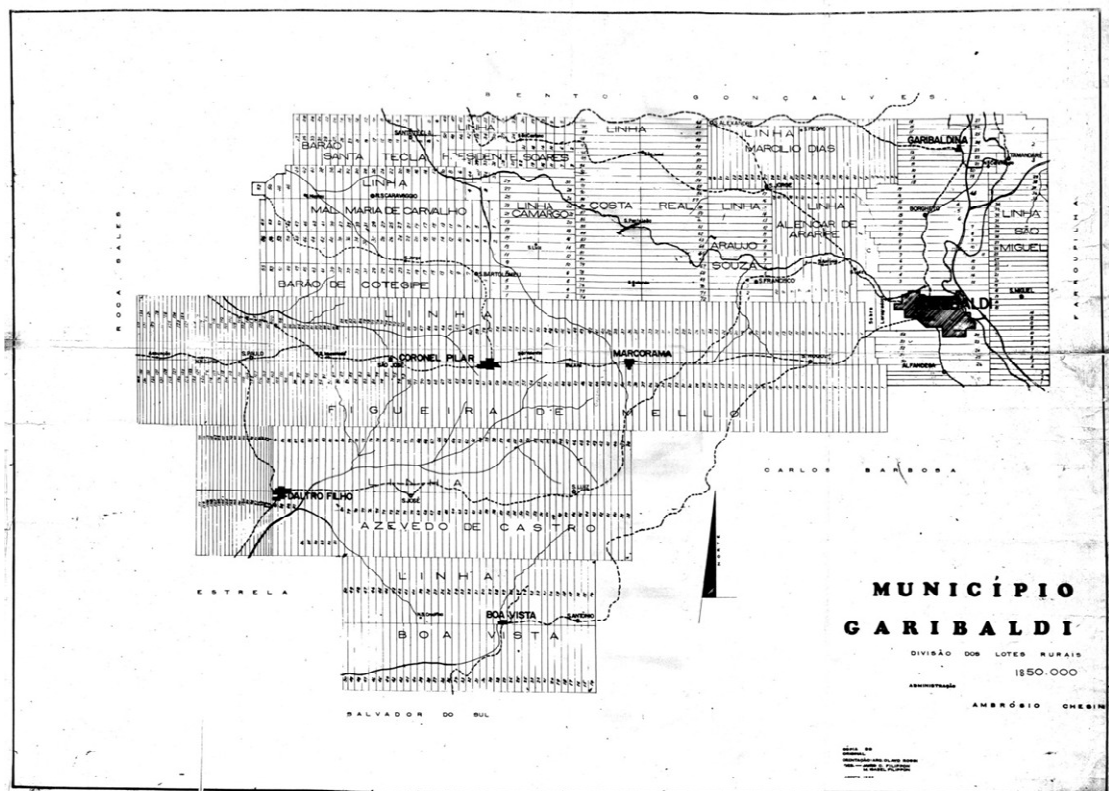


Figure 1: Original subdivision of the entire territory of the Municipality of Garibaldi, Rio Grande do Sul State, part of the First Colony: example of design regularity on a hilly area made by military engineers. Municipality of Garibaldi.

Many studies regarding Italian immigration in the Rio Grande do Sul State usually present approaches that can vary from sociology, ethnology or anthropology points of view, but no systematic researches deal with the relationship between the space produced in the new land and the space where the immigrants used to live in Italy, specially the regions of Veneto and Trentino Alto Adige, origins of most immigrants.

1. The goals of the paper

The purpose of the study is to identify how spatial culture can be transmitted from one place to another, evaluating genotypic families of morphological domestic structures and how space is used as a means of cultural transmission, using space syntax techniques. This paper will deal only with the domestic space produced by the first Italian immigrants in Brazil, once the Italian part of the research is still on-going.

2. Methodology

In this paper, the analysis will be based on a selected sample of rural houses built in the hinterland of the municipality of Bento Gonçalves in the beginning of its occupation. Bento Gonçalves was part of the so called "First Colony", the first part of the territory of the Rio Grande do Sul State to be occupied by Italian immigrants and a brief historical account of the Italian immigration process in the State will be given in order to understand the context of the study case presented here. The sample of the houses brings a group of houses belonging to the first period of the immigration, which that still stand after more than one century. Most of the houses of this period have disappeared: some of them by substitution and, in the case of the wooden houses, by the action of time over them. In addition, once there are no records of them, it was necessary to identify the houses of the sample, one by one, and to make a thorough survey, including the reconstitution of the plans of the houses and the identification of the labels of every room in each one of them. Over the plans of the houses, together with the labels of the rooms, space syntax techniques were used, mainly producing graphs and calculating depth and integration values for every room of every house of the sample. The final results are then analysed. The following step will be to compare these results to the Italian situation in the Northern areas of Italy, taking a sample of houses belonging to a period previous from the immigration process.

3. Historical Background

Italy, just after the Unification (1861), was still not entirely united. The Catholic Church, for instance, refuses the Unification and only solves its problems with the Italian Government in 1929, following the Lateran's Treaty, signed by Pope Pio XI and Mussolini, which creates the Vatican State, defines the Catholicism as the official religion of the Italian State and provides a financial compensation for the annexation of areas that belonged to the Church. During the first years of the Unification, the central government was unable to solve the agrarian problem, the impoverishment of the peasants and the conflicts related to the land. Brazil, on the other hand, during the second half of the XIXth century had to face a growing number of problems, namely: the international pressure against the slavery; the need to introduce free labour in agriculture; the large amount of State vacant land, mostly far from the coast, which occupation was considered strategic. The colonization policy is then due to a number of different issues and private companies become responsible for promoting the occupation of vacant lands and to disseminate this policy in countries where the offer of land could be attractive, like Italy. In the last quarter of the XIXth century almost 90.000 people left northern Italy, most from rural areas, to begin a new life in the colonies of the Rio Grande do Sul State and, from 1875 to 1913, more than one million Italians moved to Brazil.

4. The rural house built in the rural area of Bento Gonçalves municipality

4.1 The Building

No matter how simple are the plans of houses, they present some peculiarities which enables us to understand them beyond what can be seen through their appearance or by the physical attributes easily recognizable: the materials, scales, proportions, relationships between solids and voids, etc. In this way, every house tends to be a unique object, connecting needs and wishes to produce one solution among many possibilities. This is true for erudite architecture – produced by architects – as well as for vernacular architecture – produced by a reproduction process throughout time and space by the culture.

Nevertheless, considering a house as explained above exposes a methodological problem for its analysis once this approach essentially restricts the whole discussion to a question of shape and form. The content of the house as a living space practically underlies as a dimension almost independent of the form, like using a house does not implies that how space is organized is an essential attribute for the very constitution of the house and its occupancy.

Every building is distinct from public space once the latter is a continuous and the building constitutes the creation of limitations to free movement and, therefore, the experience of one is quite different from the experience of the other. Buildings, as an interruption of the spatial continuous belonging to the public realm, propose a fundamental distinction between an interior and an exterior space. While the exterior can be conceptualized as the space of free use where one can go from every place to any other place, the interior constitutes the domain of the few who control social relations according to social rules. Therefore, the spatial limits imposed by the buildings also limits the relations between the inhabitants, who control the space, and strangers, who can only enter and move in the building according to previously known and shared social rules.

The building, then, defines the potential relation between inhabitants and visitors because the space organization physically defines the non-deterministic possibilities of social relations in space.

These distinctions are fundamental for understanding the ways in which the use of the space (Hillier, 1997) enables the production and reproduction of social relations and allows societies use the space as one of its instances, the one which will be responsible for the possibilities of the interface between strangers – in the public domain – and for the interfaces between inhabitants and strangers in the private domain, within the boundaries of the buildings.

As Hillier, B. & Hanson, J. (1984:145) say:

“In moving from outside to inside, we move from the arena of encounter probabilities to a domain of social knowledge, in the sense that what is realised in every interior is already a certain mode of organizing experience, and a certain way of representing in space the idiosyncrasies of cultural identity.”

In this way, spatial order is one of key-concepts, meaning how it is possible to understand the nature of the relations among different social categories. Ordering space means

“...at least some domain of unitary control, that ‘unitariness’ being expressed by two properties: a continuous outer boundary, such that all parts of the external world are subject to some form of control; and continuous internal permeability, such that every part of the building is accessible to every other part without going outside the boundary.” (Hillier, Bill and Hanson, Julienne. 1984:147)

4.2 Space Syntax techniques

The plans of the houses were used as the main data source, useful in order to understand their morphology.

“Morphology, in this study, is taken to be only the pattern of adjacencies and connections between rooms within a dwelling. This can also be called permeability structure of the plan because it is concerned with the ways in which people can move into and through the

building” (Shoul, Michael. 1993:24).

From the plans, a justified graph was made taken every room of every house as the root of the graph and the integration values of every room and house was then calculated. In addition, for every house all rooms were ranked by order of integration. These procedures allow us to evaluate the structure of the houses and of the whole sample.

Buildings will be basically represented by ‘justified graphs’ in which every room of the building is represented by a circle and each permeability or connection among different rooms is represented by a line. Therefore, we can analyse buildings beyond their shape, materials and so on, relying on the spatial relations among spaces. This kind of representation enables us to identify spatial relations among the rooms and to quantify spatial properties as well.

In the example below taken from Hillier, B. & Hanson, J., 1984:148, (figure 2) we can illustrate the reasoning explained above with the plan of a building, in the left, and the correspondent graph, in the right:

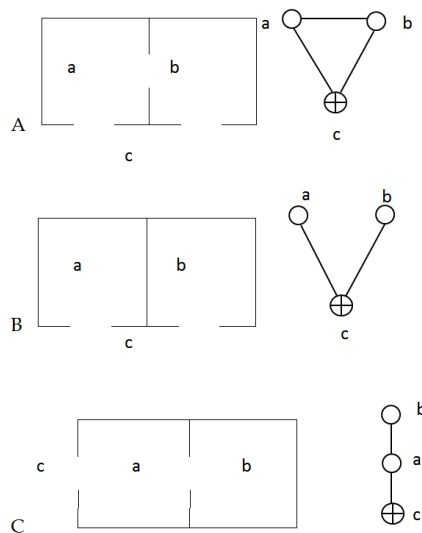


Figure 2: Plans and respective graphs. From: Hillier, Bill and Hanson, Julienne, 1984:148

Spaces ‘a’ and ‘b’ are somehow related to the exterior space ‘c’, and the role of each space depends on its relative position regarding all others and the different plans showed in the figure mean differentiations in the ways all spaces control all other and, therefore, represent different ways of controlling social relations.

By analysing a number of buildings using this technique it is possible to identify families of structures – or genotypes – and these genotypes will allow exploring the main purpose of this paper, which is to verify how Italian immigrants reproduce the structure of their Italian houses, when they move to Bento Gonçalves, Brazil. These genotypes will enable us to link morphology and social use of space.

“...a genotype in *buildings (gamma, in the original)* can be defined in terms of associations between labels of spaces and differentiations in how those spaces relate to the complex as a whole... (...) genotypes will be the result of relations of inhabitants with inhabitants and inhabitants with visitors” (Hiller, Bill and Hanson, Julienne, 1984:154).

The interface between inhabitants and strangers are the main social generators of buildings (Hanson, Julienne, 1998:22).

In this piece of research only a small number of available syntactic measures will be utilized to describe the structural proprieties of house layouts. Integration is the most important measure to be used once it makes it possible to identify the role of every room in a building regarding all others. Therefore, it is possible to evaluate how every space helps to approximate all spaces among them. The integration is a function of depth from every space to all others and depth here is taken as the number of different rooms is needed from every room to reach every other in the whole building.

4.3 Labels or, what are the uses of the rooms?

The identification of what happens in every room in a house is very important to understand the logic of space organization and its relations to social behaviour in space. In this way, regularities or differences presented in a group of buildings can define families of structures or the genotypes. As Julienne Hanson says:

“Integration has emerged in empirical studies as one of the fundamental ways in which houses convey culture through their configurations. (...) we began to find that in cases where we were able to work with a statistically reliable sample of real houses from the traditional and vernacular record, different functions or activities were systematically assigned to spaces which integrated the dwellings to differing degrees. Function thus acquired a spatial expression which could also be assigned a numerical value. Where these numerical differences were in a consistent order across a sample of plans from a region, society or ethnic grouping, then we could say that a cultural pattern existed, one which could be detected in the configuration itself rather than in the way in which it was interpreted by minds. We called this particular type of numerical consistency in spatial patterning a house ‘genotype’”(Hanson, Julienne, 1998:32).

For our purposes, the cultural patterns are exactly the kind of features we are interested in identifying in a sample of rural houses in the countryside of Bento Gonçalves, Brazil.

5. The sample

The starting point for the definition of the sample of houses to be used in this research was a survey made in 1996 by the Municipality of Bento Gonçalves, which intended to identify buildings that could be considered as heritage and such survey was made in the entire territory of the municipality of Bento Gonçalves including its rural area. In this paper only rural houses were considered because most of the Italian immigrants themselves came from rural areas of Italy. Once in the rural area of Bento Gonçalves more than 54% of the immigrants originally came from the Veneto Region, this will be the main area to gather information about the Italian rural houses in the next step of the research.

After a first selection within the existing survey a thorough field research was made in order to add information not available in the 1996’ survey, specially the reconstitution of the plans of the houses and the identification of the uses of every room.

During the field research, interesting houses that non-existed in the previous survey were included and some existing houses that were too mischaracterized over time were discarded. All

the houses are named following the family name as it was recorded in the 1996' survey.

5.1 - The house of the Italian immigrant in the rural area of Bento Gonçalves, Brazil

It is important to conceptualize what was the role and how worked a rural house of the Italian immigrant because this enables us to recognize constituent and important parts of the very spatial organization of the house.

In the beginning of the immigration and occupation of part of the territory of the Rio Grande do Sul State in Brazil, the rural house was not only the core of the family shelter but was also part of a complex organization that can only be understood in the ways the families had to face the problems of moving from a country to another, being placed in the middle of nowhere in an unknown environment, with few resources and forced to adapt all their way of life to a new territory.

Therefore, usually, the house is not the only transformation that has to be made in the landscape and territory for the family but it is the centre of a number of complex activities that often requires other complementary buildings.

During the first and hardest years after the arrival, the house of the immigrant is not just a shelter and the place of the reproduction of labour force but it is also essential for the survival of the family. The house, apart from shelter, is also a place of representation, mainly for neighbours and strangers and, in a more pragmatic level, it works as a place which ensures independent living conditions along the year, marked by quite delimited paces of work with the land and with domestic animals, seeding, harvesting, storing, without which the very survival of the members of the family would be at risk. The house is a constituent part of all this process and the spatial organization is simultaneously linked to all these aspects, regardless the size of the family or its house. The size of the family is particularly important for its survival once, in a world based on physical labour, the larger the number of members of a family, the more work could be invested in the land in a period when every family was responsible for its own sustenance and when there were no paid work available or affordable.

In a typical situation, the house of the Italian immigrant in the rural area of Bento Gonçalves can be analysed in different parts. One of the main parts of the house is the service area, usually consisting of a dining room, a kitchen and a small area for dishwashing and preparation of food. The dining room is utilized throughout the day, especially for those members of the family who are responsible for keeping the house, including the cleaning, making the beds, doing the laundry, fixing clothes, cooking, baking, preserving food, feeding domestic animals, like poultry – important source of eggs and meat, pork – base for the production of all kind of sausages -, milking of cows – base for the production of cheese. The production of some seasonal kinds of foods, like cheese, jams, sausages and preserves allows storing them for a long period of time and, therefore, they can be regularly used for feeding the family.

The kitchen usually consists in a stove which use wood as fuel and during the wintertime is the place where the entire family is gathered together, especially in the cold nights. It works as an important space for social interchanges and for discussing family issues and to organize the work. In the summertime, the exterior of the house is more utilized. The area for dishwashing is used also for preparing food and is the area for disposal the waste.

The access to the kitchen is usually made by an independent door to the exterior space. Therefore, there is no need to pass through other spaces in the house, which is a strategy to keep apart some

parts of the house that are cleaner, presenting more controlled uses, as we are going to see. Another common spatial strategy for this part of the house, besides the direct access to the exterior, is being built as a different volume from the rest of the house, with a passage as a connecting element. This kind of separation is made mainly when the house is entirely built in wood or in cases when the service area is built in wood and the rest of the house is made in bricks or stones and this works as a security strategy, once the kitchen is more exposed to fire accidents. When the entire house is built in stones and bricks, the volume of the service area still is an independent volume from the rest of the house but now they are juxtaposed to each other, with connecting doors linking the service area to the rest of the house.

The plan of the private area of the house is quite simple, usually consisting in a living room, probably the less used compartment of the house and its importance relies more in receiving strangers or more formal visitors. Neighbours and relatives most of the time share only the service area of the house.

The furniture tends to be more elaborated, even with little use by the family. Most of the times, the living room is the connecting space for the sleeping rooms, which are separated according to gender and age and small children often sleep together or close to the parents. Also this part of the house is usually directly connected to the exterior space and to the service area of the house. In spite of little use in the family daily life, the living room is a very important space within the house working as a representation space, mainly for strangers and is important also for some special occasions in the life of the family as weddings and funerals. Therefore, the living room is a fundamental space for social interactions between the family and strangers, a symbolic space mainly for visitors where the best furniture, the tidiest part of the house could be showed off and, at the same time, the less used of all spaces within the house.

The cellar is always present in the rural house. It is usually built of stones and has a small number of windows and doors, which are always independent from the rest of the house. The control in the use of the building materials and openings to the exterior space ensures that the internal temperature is kept low and constant, an important strategy to preserve part of the food production of the family (cheese, sausages), store the wine and other sensitive kind of foods (potato, seeds). By allowing storing products that require low temperatures to be preserved, the cellar represents a key space for the sustenance of the family and works as a natural fridge, thanks to the way it is inserted into the terrain, mostly with the floor in direct contact with earth, and to the control in the use of materials and appropriate building techniques.

With a similar functioning, the attic is always useful for the functioning of the house. Besides being part of the access to dormitories, the cellar, because it is submitted to high temperatures and low levels of humidity, it is used for the storage of grains, like wheat and corn – the so called *granaros* - and for storing and drying nuts – the so called *ogliessa*. In this way, the transformation of grains into flours is made when needed in small mills for making bread and *polenta*, essential for feeding the family throughout the year.

Apart from the house itself, a number of other buildings are part of the whole, mainly used for production purposes, for sheltering domestic animals and storing tools and other stuff used for work. The barn is the building utilized for storing tools and other implements used for working the land and, sometimes, for storing food as well. As for the stable it is where part of the animals are fed and kept during the night – oxen used for ploughing, horses used as a mean of transportation - and where the cows are milked. The barn and stable are located a little apart from the house, due to the need of cleaning and for hygiene purposes.

The breeding of poultry and pigs are made in separated places but never too far from the house because feeding and cares are permanent and because it allows an easy control. No house presents a WC inside it and only recently this compartment was inserted in the houses layouts. Baths usually were taken in the bedrooms using towels and a basin.

6. The houses and their main features – some results

In the table below (table 1), a summary of some of the features of the 21 houses of the sample is presented and a first classification is made according to the order of the mean integration value of the houses, the total number of spaces, number of bedrooms and typology, especially regarding the relationship with the exterior space. In figure 3, an overall presentation of the plans of all houses is made.

Table 1: Main Features of the Houses of the Sample – the authors

House	Order of integration	n° of spaces	Service as a different volume	n° of bedrooms	Access to the exterior
Arsego House	4	12	No	6	Porch
Bianchi Brothers House	14	10	No	5	Direct
Comiotto House	5	17	Yes	9	Porch
Destro House	19	16	No	5	Porch
Gabardo House	9	12	Yes	6	Direct
Giordani House	2	15	Yes	5	Direct
House of the Pasta	13	11	Yes	5	Roofed corridor
Jatir Toniollo House	6	15	No	6	Porch
Merlim House	11	10	No	3	Direct
Moret House	21	13	Yes	4	Porch
Old Moret House	20	6	No	2	Direct
Old Rossato House	16	10	No	2	Direct
Rossato House – Eulalia Alta	17	12	No	5	Direct
Rossato House – Linha Eulalia	3	10	No	6	Direct
Simadon House	18	9	Yes	3	Direct
Somenzzi House	15	10	No	5	Direct
Somensis House – in the Valley	7	11	No	6	Direct
Somensis Larentis House	1	17	Yes	9	Roofed corridor
Strapazzon House	12	14	Yes	7	Roofed corridor
Toniollo House	10	20	Yes	8	Porch
Zachet House	8	9	Yes	4	Direct

The order of integration within the sample is a first attempt to compare a structure value with some other physical features of the houses, like size and type. The number of spaces refers to the total number of different compartments of the houses, including the exterior space.

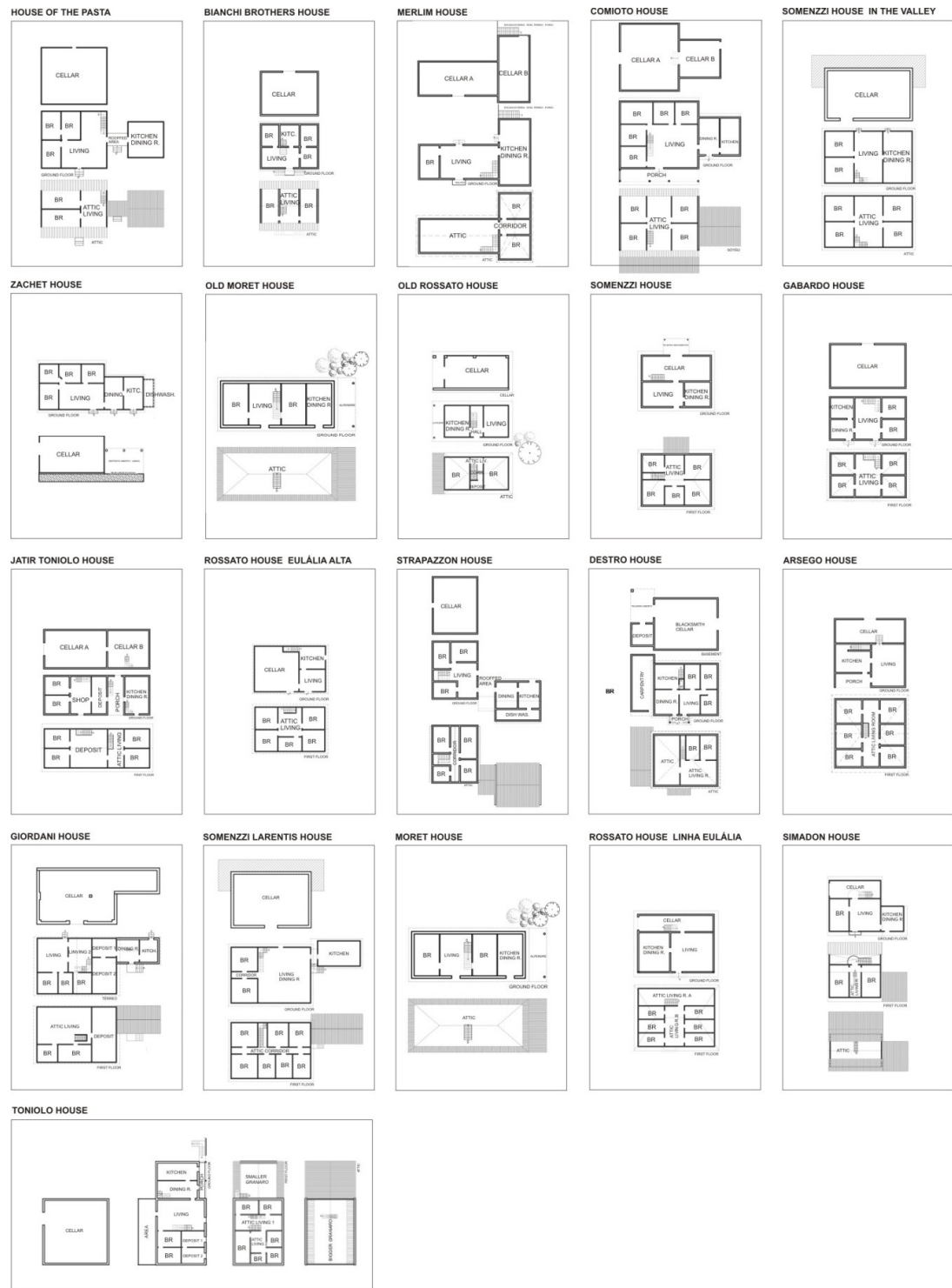


Figure 3: The plans of the houses of the sample – The authors.

Service as a different volume considers the houses that present the service part of the houses in a different volume from the rest of the house. Sometimes this volume is connected to the house by a roofed open area, sometimes it is juxtaposed to the rest of the house but it always presents one single floor, even when the rest of the house is higher. The access to the exterior refers to the way the houses are connected to the exterior space: directly or with no intervening space, through a porch or through a roofed open area.

In spite of the Italian part of the research is not made yet, in the literature about rural houses in the Bellunese – hills around Belluno - this last characteristic is referred to as house “*feltrina*” – first typology, directly connected to the exterior space (figure 4, left); house “*bellunese*” – second typology, with a presence of a porch mediating the relationship of the house with the exterior space (figure 4, centre); and the house with a “*ritonda*” – as it is called when the kitchen consists of a different volume of the house (figure 4, right) (Migliorini, Elio and Cucagna, Alessandro, 1964). Even at this point of the research, it is possible to infer that all the houses of the sample belong to one of the types identified in the Italian Bellunese and, therefore, at least from this point of view, the houses built by the Italian immigrants in Bento Gonçalves are typologically related to the Italian houses of the area where they came from.



Figure 4: In the left, Somensi House in the Valley, example of a “*feltrina*” house; in the centre, Comioto House, example of a “*bellunese*” house; in the right, House of Pasta, example of a “*ritonda*” house. The authors.

The first conclusion made possible by this table is that structure, or space configuration, does not depend on the house typology, its shape, form and size. Houses presenting high or low values of integration can be found in small or big houses; in houses with or without intermediate space between the interior and the exterior; in houses with a single or multiple volumes. This means that these features although producing different formal aspects of the houses are not able, by themselves, to produce different configurations and, moreover, are not able to explain about how different spaces within the houses take on different roles in the space organization and, therefore, in the way they control social encounters.

Analysing the table below (table 2), which presents the order of integration of the rooms of the houses of the sample, it is possible to verify that in 62% of the houses the living room is the most integrated space, and yet the least used, and in 19% of the cases the attic living room is the shallowest space of all. This means that in more than 80% of the cases, spaces responsible for the organization of the layout and the distribution of movement concentrate most of the integration of the houses. The difference lies in the fact that the living room is always shallower regarding the exterior space and, therefore, works as a mediator with strangers, while the attic living room is deeper regarding the exterior and is more protected from strangers and, therefore, is prioritized for the only use of the members of the family.

Table 2: Order of integration of the rooms of the houses. In order to make the table more readable, in the Toniollo House (marked with *) the 13th space (smaller *granaro*) and the 14th space (bedroom 2) were removed from the original table – The authors.

HOUSE	ORDER OF INTEGRATION											
	1	2	3	4	5	6	7	8	9	10	11	12
BIANCHI BROTHERS HOUSE	LIVING ROOM	ATTIC LIVING ROOM	EXTERIOR	KITCHEN	BEDROOM 1	CELLAR						
			BEDROOM 4	BEDROOM 3	BEDROOM 2	BEDROOM 5						
ARSEGO HOUSE	ATTIC LIVING ROOM	LIVING ROOM	PORCH	CELLAR	EXTERIOR							
				KITCHEN								
				BEDROOM 1								
				BEDROOM 2								
				BEDROOM 3								
				BEDROOM 4								
				BEDROOM 5								
				BEDROOM 6								
ZACHET HOUSE	LIVING ROOM	EXTERIOR	KITCHEN	BEDROOM 1	DISH WASHING							
		DINING ROOM		BEDROOM 2								
				BEDROOM 3								
				BEDROOM 4								
COMIOTO HOUSE	LIVING ROOM	DINING ROOM	ATTIC LIVING ROOM	PORCH	BEDROOM 1	EXTERIOR	KITCHEN	BEDROOM 6	CELLAR A			
					BEDROOM 2			BEDROOM 7	CELLAR B			
					BEDROOM 3			BEDROOM 8				
					BEDROOM 4			BEDROOM 9				
					BEDROOM 5							
MERLUM HOUSE	LIVING ROOM	ATTIC LIVING ROOM	EXTERIOR	KITCHEN	CORRIDOR	BEDROOM 1	CELLAR A	BEDROOM 2				
							CELLAR B	BEDROOM 3				
HOUSE OF PASTA	LIVING ROOM	EXTERIOR	BEDROOM 2	BEDROOM 1	KITCHEN/DINING ROOM	BEDROOM 5						
		ROOFFED PASSAGE			BEDROOM 3							
		ATTIC LIVING ROOM			BEDROOM 4							
					CELLAR							
STRAPAZZON HOUSE	LIVING ROOM	EXTERIOR	ROOFFED PASSAGE	DINING ROOM	BEDROOM 1	CELLAR	BEDROOM 3	KITCHEN	DISH WASHING			
			ATTIC LIVING ROOM		BEDROOM 2			BEDROOM 4				
								BEDROOM 5				
								BEDROOM 6				
SIMADON HOUSE	CELLAR	ATTIC LIVING ROOM	EXTERIOR	BEDROOM 2	KITCHEN							
		LIVING ROOM		BEDROOM 3	BEDROOM 1							
				DEPOSIT ATTIC								
GABARDO HOUSE	LIVING ROOM	ATTIC LIVING ROOM	EXTERIOR	BEDROOM 1	BEDROOM 3	CELLAR						
			DINING ROOM	BEDROOM 2	BEDROOM 4	KITCHEN						
					BEDROOM 5							
					QUARTO 6							
ROSSATO HOUSE - LINHA EULALIA	ATTIC LIVING ROOM	KITCHEN	LIVING ROOM	BEDROOM 1	CELLAR							
			EXTERIOR	BEDROOM 2								
				BEDROOM 3								
				BEDROOM 4								
				BEDROOM 5								
GIORDANI HOUSE	LIVING ROOM	EXTERIOR	SALA 2	ATTIC LIVING ROOM	DINING ROOM	KITCHEN	CELLAR	BEDROOM 3	DEPOSIT 1	DEPOSIT 3	DEPOSIT 2	
						BEDROOM 1				BEDROOM 4		
						BEDROOM 2				BEDROOM 5		
TONIOLLO HOUSE*	LIVING ROOM	ATTIC LIVING ROOM 1	EXTERIOR	ATTIC LIVING ROOM 2	DINING ROOM	BEDROOM 1	AREA	BEDROOM 7	PORCH	KITCHEN	CELLAR	BIGGER GRANARO
								BEDROOM 8			DEPOSIT 1	BEDROOM 3
											DEPOSIT 2	BEDROOM 4
												BEDROOM 5
												BEDROOM 6
SOMENZI HOUSE	ATTIC LIVING ROOM	CELLAR	LIVING ROOM	EXTERIOR	KITCHEN/DINING ROOM							
				BEDROOM 1								
				BEDROOM 2								
				BEDROOM 3								
				BEDROOM 4								
				BEDROOM 5								
OLD MORET HOUSE	LIVING ROOM	EXTERIOR	BEDROOM 1	KITCHEN/DINING ROOM								
			BEDROOM 2									
			ATTIC LIVING ROOM									
MORET HOUSE	LIVING ROOM	EXTERIOR	CORRIDOR	PORCH	KITCHEN	CELLAR A	BEDROOM 1	BEDROOM 3	BEDROOM 4	CELLAR B		
			DINING ROOM		ATTIC LIVING ROOM	BEDROOM 2						
ROSSATO HOUSE - EULALIA ALTA	ATTIC LIVING ROOM B	CELLAR	BEDROOM 1	ATTIC LIVING ROOM A	LIVING ROOM	EXTERIOR	KITCHEN					
			BEDROOM 2									
			BEDROOM 3									
			BEDROOM 4									
			BEDROOM 5									
			BEDROOM 6									
DESTRO HOUSE	PORCH	LIVING ROOM	EXTERIOR	ATTIC LIVING ROOM	CELLAR	CELLAR A	BLACKSMITH	CARPENTRY	BEDROOM 4	BLACKSMITH DEPOSIT		
	DINING ROOM		KITCHEN					DEPOSIT	BEDROOM 5			
			BEDROOM 1									
			BEDROOM 2									
			BEDROOM 3									
OLD ROSSATO HOUSE	HALL	EXTERIOR	LIVING ROOM	CELLAR								
	ATTIC LIVING ROOM	CORRIDOR	BEDROOM 1	DEPOSIT								
			BEDROOM 2									
			KITCHEN/DINING ROOM									
JATIR TONIOLLO HOUSE	SHOP	EXTERIOR	DEPÓSITO DA LOJA	KITCHEN/DINING ROOM	CELLAR A	BEDROOM 3	CELLAR B					
	PORCH				BEDROOM 1	BEDROOM 4						
		ATTIC LIVING ROOM 1			BEDROOM 2	BEDROOM 5						
		ATTIC LIVING ROOM 2				BEDROOM 6						
SOMENZI LARENTIS HOUSE	LIVING ROOM	EXTERIOR	BEDROOM 3	BEDROOM 1								
	ATTIC CORRIDOR	ROOFFED PASSAGE	BEDROOM 4	BEDROOM 2								
		CORRIDOR	BEDROOM 5	CELLAR								
			BEDROOM 6	KITCHEN								
			BEDROOM 7									
			BEDROOM 8									
			BEDROOM 9									
SOMENZI HOUSE - IN THE VALLEY	LIVING ROOM	ATTIC LIVING ROOM	EXTERIOR	KITCHEN	BEDROOM 1	BEDROOM 3	CELLAR					
					BEDROOM 2	BEDROOM 4						
						BEDROOM 5						
						BEDROOM 6						

In the case of Jatir Toniolo House, which was used also as a shop, this room is the most integrated space of all, which is consistent with its role as a space where strangers need to easily move around.

Another common feature within the sample is that the exterior is never the shallowest, and in only one case it is the deepest space in the configuration. Actually, in more than 71% of the houses it is the second or the third space in the order of integration and only in three houses the exterior space presents an integration value below the mean integration of the house. With only one exception, all the houses are neither too closed nor too open to the exterior space, meaning that, even when necessary, the access and movement of strangers is always under control. As for the bedrooms, they tend to be the deepest spaces in the configuration and, therefore, they are always far from the scrutiny of strangers. In some cases, part of the bedrooms is shallower in the configuration and they are normally used by the couple and, sometimes, there is a room connected only with the parents' bedroom, usually used by small children, especially girls, who tend to be more controlled.

From the graphs (figure 5) some other features can be identified, using the exterior space as the root of the graphs. Only three houses present a tree-like structure (Bianchi Brothers'; Old Moret's and Old Rossato houses). In all others, there is at least one ring and always contains the exterior space, usually linking it with the living room and kitchen or dining room. Therefore, the exterior space can be used as a mediator not only regarding the living room (where strangers are admitted to the house), but also separating the social and service parts of the houses, meaning that the inhabitants can move from the exterior directly to the service or to the social part of the house and this feature is quite important because, in special occasions, the social and service parts can be used separately and in the daily-life it is crucial to keep the social part of the house neat and ready in case of the arrival of strangers. This task would be difficult with most of the family working in the land all day long.

The graphs also show that the bedrooms are always the deepest spaces in the houses regarding the exterior and, therefore, they are strategically located to cluster the family members away from the scrutiny of strangers.

The number of rooms is usually affected by the number of bedrooms and this can give a glimpse – but not always – about the size of the family. Not always because once the separation by gender is made, sometimes one single bedroom can be shared by three, four or more people. In this way, even houses with a little number of bedrooms do not mean that a small number of inhabitants live there.

Sometimes, the complexity in the use of a house can also affect the number of compartments, especially when the house is also used for another activity. In the sample, the Jatir Toniolo House presents also a general store and the Destro House was also used for a blacksmith and carpentry. But these activities are held in rural houses meaning that part of the family works in the land and another part – usually the head of the family – runs the business.

The service area of the house is a common group of spaces which can be found in all houses with some variation when the kitchen shares its space with the dining room – in eight out of 21 cases - or every use is held in separated spaces, in 13 houses of the sample. Only three houses present a special room for dishwashing and food preparation.

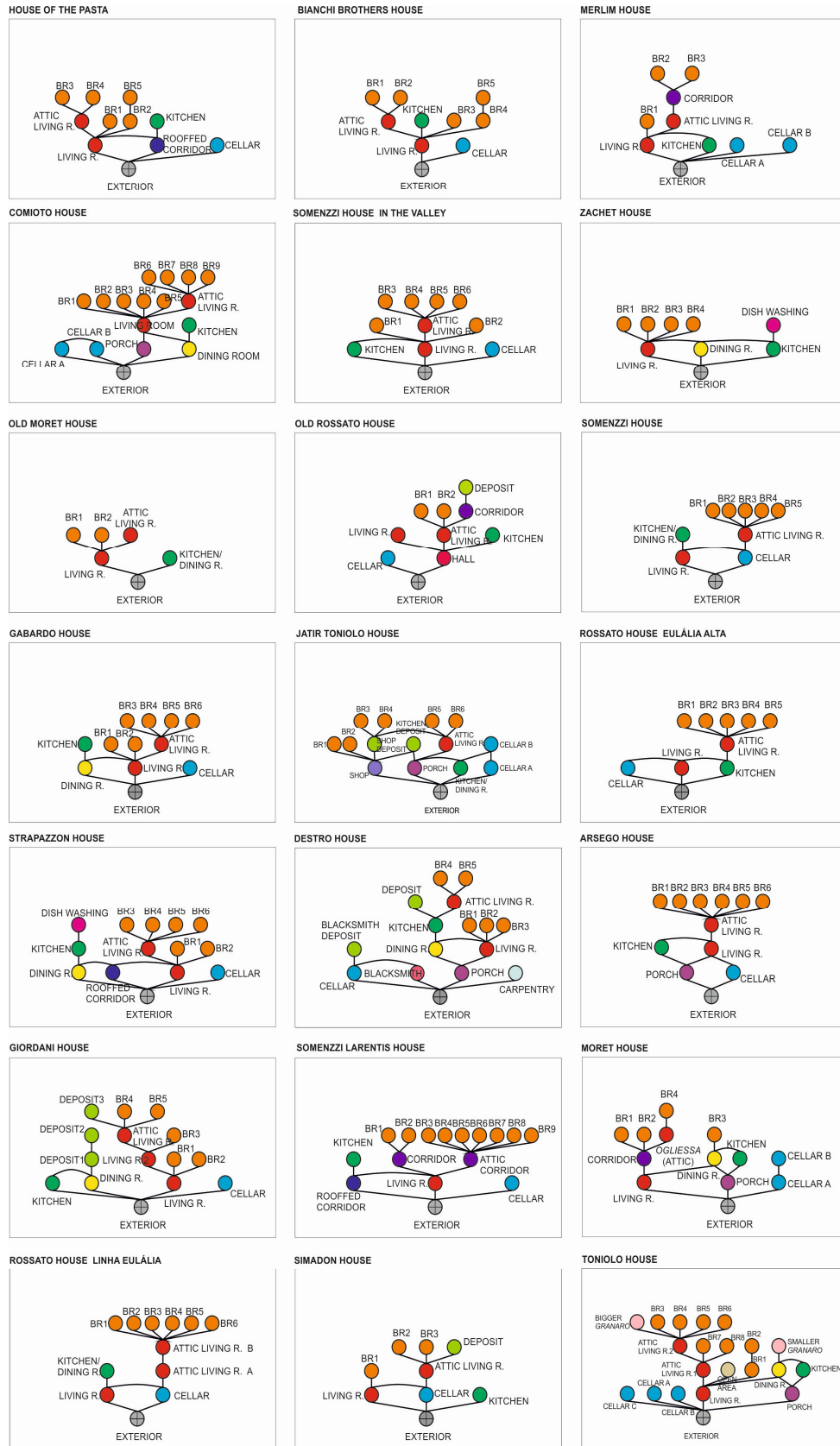


Figure 5: The graphs of the houses from the point of view of the exterior space.

So far in the research development and from the point of view of the rural houses built in Bento Gonçalves by the Italian immigrants, it can be observed that many common features in the structure of the houses pervade the entire sample. This means that there is a strong relationship between the way which the layout of the houses is individually organized by each family and the kind of social interactions every family expects and allows to be held within the houses.

The regularities found in the spatial solutions among the sample can only be explained by a deep and shared social sense about the way the family should work, how the space itself is used to mediate the way the members of the family relate to each other - usually in a highly hierarchical way as patriarchal families tend to be - and, most of all, how the entire family relates to strangers.

The next step of the research, in the Italian Veneto pre-Alps, will confirm if the space organization in Bento Gonçalves, Brazil, reproduces the Italian configuration of their rural houses and, therefore, if it can be said that what they did in Brazil were culturally brought from Italy.

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