

# V!RUS

revista do nomads.usp  
nomads.usp journal  
ISSN 2175- 974X

lugares do habitar  
places of living

sem 1 - 11

REVISITED

How to quote this text: Amorim, L., Griz, C. and Loureiro, C., 2011. It is permitted to permit: the changes in the real state product and the contemporary ways of living in Recife, *V!RUS*, [online] June, 5. Available at: <<http://www.nomads.usp.br/virus/virus05/?sec=4&item=1&lang=en>> [Accessed dd Month yyyy].

## **It is permitted to permit: the changes in the real state product and the contemporary ways of living in Recife**

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### **Abstract**

This research aims at studying the phenomenon of the real state in Recife and its relation with the contemporary ways of living. Currently, the main housing product offered by real state market is the apartment building whose housing units are designed taking the nuclear family as the social organization ideal model. However the adoption of one single family model not always meets the costumers' needs. Besides personal aspirations, the social demographic profile of contemporary Brazil presents non-nuclear family structures with varied requirements in relation to their living spaces. In an attempt to satisfy this demand, construction companies permit changes in the original project during the construction phase. The result of this "practice of transformation" is the *reformed project* that can bear little resemblance to the *original project*. The study of these changes, observed from the programmatic and dimensional variables, indicates the emergence of two reformed unit types - the transition one and the innovative one - expressions of contemporary ways of living.

**Keywords:** ways of living, apartment, housing product, *customization*.

## 1. Recife's housing product: characterization and changes

The apartment building's concept and development - mainly characterized as a set of standard units repeated both horizontally and vertically - involves multiple agents. Fabricio (2002) gives emphasis to the entrepreneur, the land developer, the financial agent, the state (through its regulations), the several designers, the construction companies, the materials suppliers and the clients (users). As well as in general consumer goods production, the entrepreneur and the construction company seek offering a product capable to satisfy the potential client. In that sense, the greater the conformity between the product and the intended user the higher the quality expected.

However, achieving a high standard of conformity between the apartment and its future buyer is a difficult task for all agents involved in the process. On the one hand, this real estate product is traditionally designed taking the nuclear family as social organization ideal model. In the other, census data (IBGE 2009) indicate increasing changes in Brazilian social-demographic profile. The number of non-nuclear family structures has increased considerably, thus presenting different needs regarding dwelling (Berquó, 2004). This diversity of family arrangements should also be associated with different ways of using domestic spaces, different ways of life, which varies according to social origin, education level, association to the so-called urban cultures etc., besides the need to personalize - customize<sup>1</sup> - the domestic environment, increasingly induced by media according to marketing strategies (Griz; Amorim; Loureiro, 2010). Attempting to suit demands of different family arrangements, the construction companies allow modifications in the original project of the apartment (OP) during the construction phase. As a result of such "practice of transformation" (Griz, 2010) we have the reformed project (RP), distinct from the OP concerning spatial arrangement and uses, introducing non-originally planned programmatic items. Within Recife's context, *customization* of apartments along the construction of the building has become increasingly usual (Cavendish, 2000; Construtora AC Cruz, 2008; Amorim; Loureiro; Griz, 2009; Griz; Amorim; Loureiro, 2010).

The increasing demand for changes in the OP does not necessarily mean a low quality of this kind of real estate product since many clients do not modify it - yet it could be a sign nor all buyers have the resources for suiting to individual demands. However, is true that the changes, from simple substitution of rooms' activities (renaming them) to radical changes in its spatial structure, certainly indicate mismatches between the architectural program adopted, its size, its spatial organization, and certain demands to shelter contemporary dwelling.

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<sup>1</sup> The terms customize means to adapt, personalize a product to customers' preferences.

We know that the apartment building replaced the single-family residence as the object that symbolically represents the idealized ambience of contemporary domestic space<sup>2</sup>, and that “everyday practices says much on dwellers’ ways of living life and places, [...] becoming key elements in the study of housing and domestic space” (França, 2008, p. 65). Analyzing changes made onto these apartments may reveal concrete expressions of family structures diversity and different ways of living associated with a varied and dynamic set of behavior inducer factors, either in the dimension of durable goods consumption or in the prospect of inclusion in certain social group.

This phenomenon is examined through the identification and analyses of programmatic composition and domestic activities related to it, present on the labels of different spaces that compose the domestic world in two situations: a. the real estate product, represented by the original project (OP); b. of the renovated apartments, represented by the reformed project (RP). Understanding the variables that constitute this phenomenon may interest various agents involved in the development of real estate product – from the entrepreneur to the customer.

## **2. The apartment: labels, descriptions and activities**

The *customization* phenomenon emphasizes two kinds of knowledge within housing production – the professional and the secular ones (Johnson, 1993; Amorim; Loureiro; Griz, 2009). The professional knowledge is directed by technical requirements and design methods that are based on prescriptions coming from different fields of knowledge. It is the result of a process based on phases beginning with the classification of household activities expressed in an architectural program and defining relations between these activities and the different categories of users. The professional knowledge is synthesized in technical documents, but the original project (OP) is the most relevant one for investigation.

Secular knowledge, within the context of housing, is based on everyday experiences, constructed from the relations among the various members of the family and social practices culturally consolidated and those in transition. This kind of knowledge gives to domestic space its individuality, reflecting the different ways of living that regulate the dwell and promote the observed changes. The result of this process is a new project – the reformed one (PR), defined by values of the family and its members. Therefore, the arrangement, number and size of rooms / spaces are related, among other factors, to each family’s composition and ways of living.

It’s important emphasizing that the two kinds of knowledge are overlapped in the RP, either by the presence of architects defining parameters according to interior design market trends, or

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<sup>2</sup> In Recife, for instance, 74% of potential buyers of residential properties choose the apartment as their home (Mercer, 2009).

by the demands and preferences that constitute the identity of each family. The distinction and relations between the two kinds of knowledge within the context of formulating PO and PR can be observed through three variables:

- a) The programmatic, according to the labels indicated in the architectural programs and projects;
- b) The geometric, identified according to the apartment area, its sectors and key-rooms (such as master bedroom<sup>3</sup>);
- c) The topological, observed through relational properties, from topological nature, based in procedures introduced by spatial syntax (Hillier; Hanson, 1984).

Only the first two variables are considered in this study, evaluating to what extent contemporary<sup>4</sup> housework tasks – their number and dimensions – have been attended by current housing market. For being directly related to use and occupation demands and to particular culture's daily practices, the geometric dimension is important to understand how the new programs are developed joining secular and professional knowledge. As França suggests (2008, p. 225), "some changes in function imply in architectural changes, either by rooms extension or reduction or even by suppressing any of them". The joint analysis of programmatic and geometrical variables shows whether the dimension of space has been changed due to new ways of living demands.

We know that different groups of housework task held in different rooms reflect different cultural and social practices (Monteiro, 1997). Therefore, it is necessary relating the main activities that compose Recife's domestic environment according to literature and the original and reformed designs.

The domestic activities and the rooms where they are made were identified and described by several authors (Tramontano, 1993, 1995, 2004; Monteiro, 1997). However, independently of social class or habits, a house offers, at least, spaces to stay among residents or visitors, eating, cooking, resting, and washing (himself - personal hygiene – objects and clothing). With a greater or lesser variation the contemporary apartments are designed to shelter these activities (as suggested by labels presented in the architectural designs), usually distributed within domestic sectors – social, intimate and service. These *generic activities* are accompanied by other: playing, working, reading, watching TV, listening to music, dressing up etc., not always explained in technical documents.

It is known that direct observations of everyday domestic life or the application of gathering methods collection such as interviews and questionnaires with residents from different social classes (Monteiro, 1997), show that several activities are carried out in various spaces,

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<sup>3</sup> The suite should be understood as the grouping of spaces for exclusive use of its occupant - sleeping space, closet, bathroom.

<sup>4</sup> Housework tasks is everything that people do inside their houses (Monteiro, 1997).

regardless of their labels<sup>5</sup>. However, the relation between space and label and their association with domestic sectors are important indicators of the different visions and contemporary domestic experiences (see Chart 01). Direct researches along with families that occupy original projects and reformed projects will be developed in due time and comparing data will establish a multifocal framework of this phenomenon.

sector	label	activities
soci	living room	Talking and entertaining guests; listening to music, watching TV
	dinning room	Having meals collectively
	balcony	Talking and entertaining guests; listening to music
	restroom	Washing hands, excreting.
	TV room*	Watching TV
priv	bed room	Sleeping, resting, reading, studying
	suite	Sleeping, resting, reading, studying, excreting, washing hands, taking a bath
	closet	Dressing
	wardrobe	Stocking bedd othes, tableware and toilet clothes.
	social bathroom	Excreting, wash ing hands, taking a shower
	study room*	Reading, studying, working
sen	kitchen	Cooking, washing up, washing foods, stocking food
	Copa	Daily meals, individually or collectively
	pantry	Stocking food
	deposit	String materials and household utensils
	service area	Washing up, ironing, storing cleaning utensils
	Service bedroom	Sleeping, resting, dress ing up, (domestic servant only)
	Service bathroom	Excreting, washing hands, taking a shower (domestic servant only)

**Chart 01.** Indication of the labels and activities traditionally associated to it.

\*Both the TV room and the study room can be found in different sectors than those indicated.

### 3. Description and analysis procedures

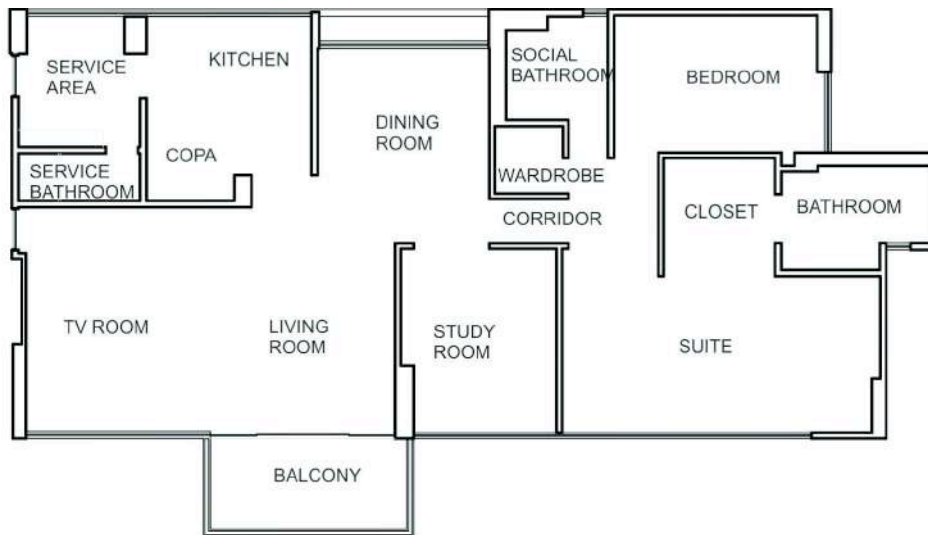
The set of selected apartments comes from buildings made by the same construction company as from 2000 and offered to customers of A1, A2, B1 and B2 classes<sup>6</sup>. Seven OP were chosen because they attended the deadline established by the entrepreneur for requesting apartments' reforms<sup>7</sup>, therefore it is possible to compute the percentage of units changed and analyze its characteristic comparing to OP. These buildings are located in neighborhoods identified as the most valued by consumers, according to a query held in March 2009 by the Real Estate Market Managers Association (ADEMI-PE) in the *2º Salão Imobiliário de Pernambuco* (MERCÊS, 2009).

The RP selection prioritized the documentary records that submit details on the expected layout (Amorim; Loureiro; Griz, 2009), but also included cases in which the labels of the spaces were clearly shown (Figure 01). The 30 selected RP represent from 21,43% to 47,62% of the total number of apartments per building studied (Table 01).

<sup>5</sup> Monteiro (1997) emphasized the difference between space label and the activity that can happen in it, revealing the user's autonomy in the use of space.

<sup>6</sup> Classification based on the criteria of CCEB - Critérios de Classificação Econômica Brasileira (ABEP, 2011), which leaves the definition in terms of "social class" and define it exclusively by economic criteria. It proposes a point system according to wealth, education level of boss and family boss's income. The monthly income of Classes A1, A2, B1 e B2 ranges from R\$ 2.656,00 to R\$ 11.400,00.

<sup>7</sup> The reforms that modify only the covering materials and electrical and plumbing points were not considered.

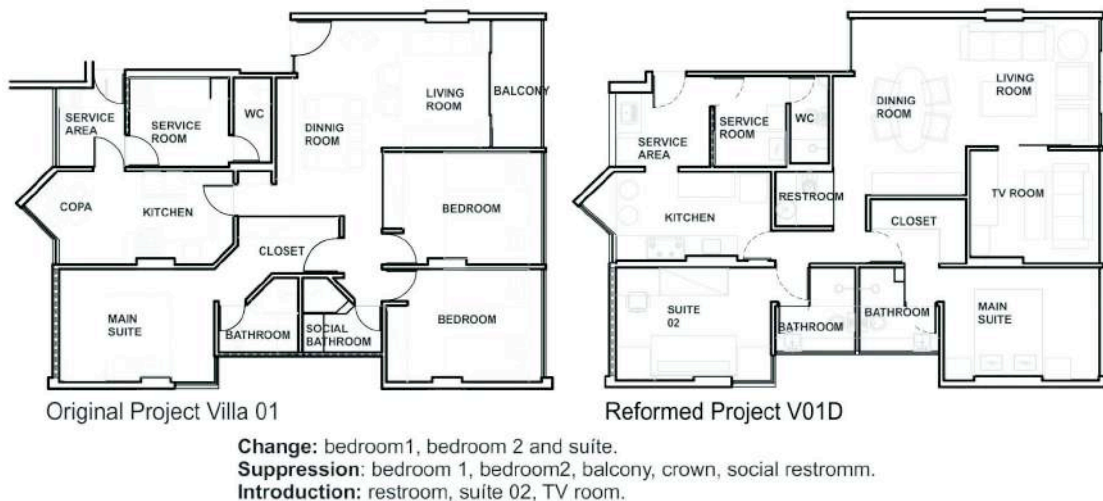


**Figure 01.** Example of a selected plan (V.04.D).

**Table 01.** Apartment units: original project (OP) and reformed project (RP)

Building	neighborhood	bedrooms	area (m <sup>2</sup> )	Apartment units (total)	Reformed apartments	(%)
Villa 01	Boa Viagem	3Q(1S)	92.00	40	9	22.50
Villa 02	Tamarineira	3Q(2S)	130.00	96	45	46.88
Villa 03	Madalena	3Q(2S)	112.00	56	12	21.43
Villa 04	Casa Forte	4Q(2S)	163.61	21	10	47.62
Villa 05	Casa Forte	4Q(2S)	177.88	44	12	27.27
Villa 06	Boa Viagem	3Q(2S)	147,50	56	12	21,43
Villa 07	Graças	4Q(1S)	137,00	92	28	30,43
<b>TOTAL</b>				<b>405</b>	<b>128</b>	<b>31,60</b>

The various changes were classified and described qualitatively and quantitatively using the procedures described below. In the analysis of programmatic variable the changes were observed by space separately and grouped by domestic sector, and classified into categories (Figure 02): a) Change – where the space remains unchanged (in terms of shape and size) but its label changes; b) Suppression – when a particular label no longer exists in the project; c) Introduction – when a non-existent label in the OP is introduced in the RP.



**Figure 02.** Example of the programmatic changes classification.

Program requirements changes were also analyzed in each PO and their PR. For each type of change one point was assigned (Table 02). The sum of points indicates the total changes of programmatic variable by set of RP (Table 03) and it is described according to the frequency of change and the type of change by sector.

**Table 02.** Number of program changes by RP.

Villa 01 Labels	V01A (1002)				V01B (1301)				V01C (1501)				V01D (1601)			
	(a)	(b)	(c)	Total	(a)	(b)	(c)	Total	(a)	(b)	(c)	Total	(a)	(b)	(c)	Total
Bedroom 1		1		1		1		1		1		1	1			1
Closet bedroom1				0				0				0				0
Bedroom 2	1			1	1			1	1			1	1			1
Closet b2				0				0				0				0
Bedroom 3				0				0				0				0
Suite 01	1			1	1			1	1			1	1			1
Closet s1				0				0				0				0
Suite 02				0			1	1			1	1			1	1
Closet s2				0				0				0				0
Social bathroom	1			1		1		1		1		1		1		1
Restroom				0			1	1			1	1			1	1
Dining room				0				0				0				0
Living room				0				0				0				0
Balcony		1		1		1		1		1		1		1		1
Kitchen				0				0				0				0
copa				0		1		1				0		1		1
Service area				0				0				0				0
Service bedroom				0				0		1		1				0
Service Bathroom				0				0		1		1				0
Study room				0				0				0				0
TV room				0				0			1	1			1	1
Wardrobe			1	1				0				0				0
Pantry				0				0				0				0
Deposit				0				0				0				0
Private living				0				0				0				0
<b>TOTAL</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>9</b>

1. (a) Change; (b) Suppression; (c) Introduction;

2. (b) Cells in gray indicate that the labels are not present in the studied OPs.

**Table 03.** Sum of the scores of Villa 01.

Villa 01 (sum)				
Labels	(a)	(b)	(c)	Total
Bedroom 1	1	3	0	4
Closet bedroom1	0	0	0	0
Bedroom 2	4	0	0	4
Closet b2	0	0	0	0
Bedroom 3	0	0	0	0
Suite 01	4	0	0	4
Closet s1	0	0	0	0
Suite 02	0	0	3	3
Closet s2	0	0	0	0
Social bathroom	1	3	0	4
Restroom	0	0	3	3
Dining room	0	0	0	0
Living room	0	0	0	0
Balcony	0	4	0	4
Kitchen	0	0	0	0
<i>copa</i>	0	2	0	2
Service area	0	0	0	0
Service bedroom	0	1	0	1
Service Bathroom	0	1	0	1
Study room	0	0	0	0
TV room	0	0	2	2
Wardrobe	0	0	1	1
Pantry	0	0	0	0
Deposit	0	0	0	0
Private living	0	0	0	0
<b>TOTAL</b>	<b>10</b>	<b>14</b>	<b>9</b>	<b>33</b>

The dimensional variable permitted classifying spaces in sectors according to permanence, extension or reduction of the respective areas<sup>8</sup>, recorded in absolute and proportional values to the total area of the apartment. Particularly interesting is the observation of the relations between the dimensions of the rooms and sectors, as they reveal different investments in spaces and domestic activities.

The collected data were described and examined together, according to the programmatic and dimension aspects, adding variables [d] and [e] to Table 01 (Table 04), showing the number of rooms with changes in area. Following the same previous procedure, for each type of modification was assigned a point (Table 04), which sum indicates the total changes per RP set (Table 05). The sector more modified, as well as the type of change percentage in each sector can be checked in each RP set.

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<sup>8</sup> Extending or reducing changes are regarded as that modify, in at least 5% of the area more or less, respectively.



**Table 04.** Number of programmatic and dimensional changes by RP.

Villa 01	V01A						V01B						V01C						V01D					
	(a)	(b)	(c)	(d)	(e)	T	(a)	(b)	(c)	(d)	(e)	T	(a)	(b)	(c)	d	(e)	T	(a)	(b)	(c)	(d)	(e)	T
Bedroom 1		1				1		1				1		1				1				1		2
Closet bedroom 1						0						0						0						0
Bedroom 2	1			1		2	1			1		2	1			1		2	1			1		2
Closet b2						0						0						0						0
Bedroom 3						0						0						0						0
Suite 01	1				1	2	1			1		2	1			1		2	1			1		2
Closet s1				1		1				1		1				1		1						0
Suite 02						0			1			1			1			1			1			1
Closet s2						0						0						0						0
Social bath room	1					1		1				1		1				1		1				1
Restroom						0			1			1			1			1			1			1
Dining room				1		1				1		1				1		1			1			1
Living room				1		1			1			1				1		1						0
Balcony	1					1		1				1		1				1		1				1
Kitchen						0			1			1			1			1			1			1
<b>copa</b>						0		1				1						0		1				1
Service area						0						0						0			1			1
Service bedroom						0						0		1				1					1	1
Service Bathroom						0						0		1				1						0
Study room						0						0						0						0
TV room						0						0			1			1			1			1
Wardrobe						0						0						0						0
Pantry						0						0						0						0
Deposit						0						0						0						0
Private living						0						0						0						0
<b>TOTAL</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>14</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>16</b>

**Table 05.** Sum of the scores of Villa 01.

Villa01 (sum)						
Label	(a)	(b)	(c)	(d)	(e)	Total
Bed room 1	1	3	0	0	1	5
Closet bedroom 1	0	0	0	0	0	0
Bed room 2	4	0	0	4	0	8
Closet bedroom 2	0	0	0	0	0	0
Bed room 3	0	0	0	0	0	0
Suite 01	40	0	0	0	4	8
Closets 1	0	0	0	3	0	3
Suite 2	0	0	3	0	0	3
Closets 2	0	0	0	0	0	0
Social bathroom	1	3	0	0	0	40
restroom	0	0	3	0	0	3
Dining room	0	0	0	4	0	4
Living room	0	0	0	2	1	3
Balcony	0	4	0	0	0	4
kitchen	0	0	0	3	0	3
<i>copa</i>	0	2	0	0	0	2
Service area	0	0	0	1	0	1
Service bedroom	0	1	0	0	1	2
Service bathroom	0	1	0	0	0	1
Study room	0	0	0	0	0	0
TV room	0	0	2	0	0	2
Wardrobe	0	0	0	0	0	0
Pantry	0	0	0	0	0	0
Deposit	0	0	0	0	0	0
Private living	0	0	0	0	0	0

## 4. Analysis of original and reformed project

### 4.1. The original project (OP)

From a programmatic perspective, certain characteristics are common to all cases examined. Besides the spaces traditionally aimed to the functions of receiving (living room), eating (dining room), cooking (kitchen), resting (bedrooms), bathing (bathrooms) and service dependencies (service area, maid's room and bathroom), all the OP (Figure 03) also present at least one balcony and one suite. The larger apartments – Villas 04 and 05 – present a living room for two ambient and more than one suite (Table 06).

These program components and their respective areas correspond to the items collected from query held by ADEMI-PE (Mercês, 2009), which justifies the choice of these programmatic and dimensional characteristics to the OP. The profile of an apartment with one suite, for instance, meets the needs of 70% of interviewees, even if bedroom's area is reduced. On the internal infrastructure, the balcony was identified as the most valued item by 55% of interviewees. The *copa* room was reported by 16% of respondents; therefore, undervalued, as a large service area.



Figure 03. OPs' plans.

Table 06. Architectural program of the OPs.

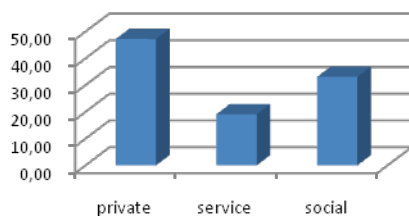
	Labels	Villa 01	Villa 02	Villa 03	Villa 04	Villa 05	Villa 06	Villa 07
<b>social</b>	living room	1	1	1	2	2	1	1
	dining room	1	1	1	1	1	1	1
	balcony	1	1	1	1	1	1	1
	restroom	0	0	0	0	1	0	0
<b>service</b>	kitche n	1	1	1	1	1	1	1
	<i>Copa</i>	1	0	0	0	0	1	1
	service	1	1	1	1	1	1	1
	service bedroom	1	1	1	1	1	1	1
	service bathroom	1	1	1	1	1	1	1
<b>private</b>	bedroom	2	1	1	2	2	2	3
	bedroom's closet	0	0	1	0	0	0	0
	suite	1	2	2	2	2	2	1
	suite's doset	1	0	2	0	1	0	0
	social bathroom	1	1	1	1	1	1	1

The only labels not appearing in all projects are the copa room, the restroom and the closet. The copa is present in three cases – Villas 01, 06 and 07. Although the Villas 02 and 03 indicate the label “copa” in their plans, there is only the presence of a dining table and not “family’s real place for daily meals, the place for socializing by excellence” (Tramontano, 2004, p. 109).

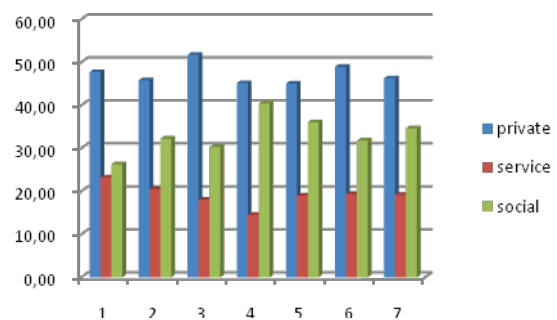
The restroom is a label used in plans to designate a room with a restroom seat and a washbasin or sink (Tramontano, 2004, p. 145). So this is effectively found in only one case,

the Villa 05. In two other plans – Villas 01 and 02 – “restroom” refers to the sink. In the same way, the occurrence of closet is variable: within the suites, it is found in three projects (Villas 01, 03 and 05) and only in one case within the bedrooms (Villa 03).

From the dimensional perspective, all OP have the same order of decreasing area per the sector: intimate>social>service (Figures 04 and 05). In two of them – Villas 02 and 06 – the intimate sector’s floor area is almost half of apartment’s total area; 2/3 of the remaining area corresponding to the social and 1/3 to service. In Villa 01, conversely, service area almost equals social area. At Villa 04 distribution of area is relatively uniform between intimate and social sectors (about 40% for each), leaving less than 15% for the service sector (the lowest percentage among all the OP).



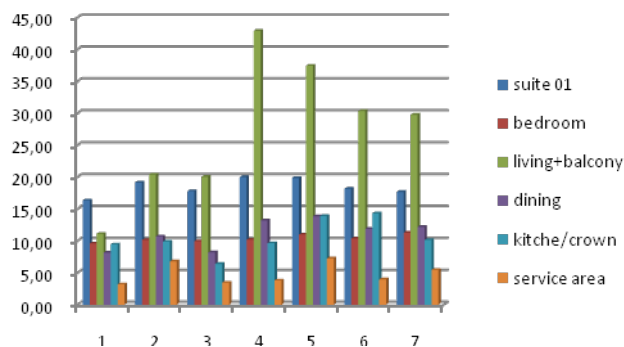
**Figure 04.** Average area per sector



**Figure 05.** Percentage area per sector per PO

The master suite is always the larger bedroom, having even twice (Villas 02, 03 and 04) or more (Villa 01) area than the other bedrooms. Its importance in the contemporary domestic universe context is emblematically revealed in cases where it is the apartment’s largest room, as in Villa 01, supplanting the sum of living room and balcony areas.

Excluding this case, in the other apartments the larger area among all the spaces corresponds to the living room and balcony. In the Villas 04, 05, 06 and 07 projects the values come close to twice the size of the suite area. The service sector is the one with the smallest area in all cases (Figure 06).



**Figure 06.** Area by room in each apartment - OP.

## 4.2. The reformed project

The programmatic changes in the RP are many and with varied concurrency, but all them remain with the existing labels of living room, dining room, kitchen and suite, from the respective OP. Moreover, the bedroom, the balcony, the maid's room and bathroom, which are present in all PO, are suppressed in some RP.

With regard to the sectors (Figure 07), the intimate is the most modified one (60,95%), followed by social (25,44%) and the service (13,61%). The main change in social is the introduction of new labels (79,07 %), while in the intimate changing the labels is the most frequent change (51,46%) and in service, the suppression of labels (60.87%) (Figure 08).

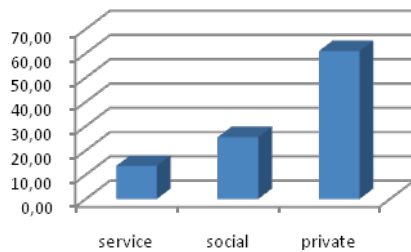


Figure 07. Program changes by sector.

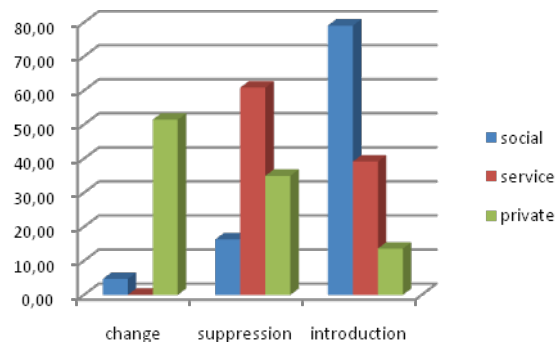


Figure 08. Kind of program changes by sector.

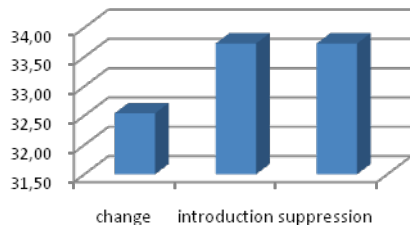
The change in nomenclature of rooms found in RP associated to the same housework is an aspect to be noted (see Table 01). Aiming at facilitating the reading and the understanding of our argument will use the labels found more often (see Chart 02).

sectors	Original labels	New labels
soci	living room	living 01, living 02
	dining room	dining
	balcony	-----
	restroom	-----
	tv room	home theater
priv	bedroom	-----
	suíte	master suite, couple's suite, main suite, son's suite, maria's suite, <b>suíte 01, suíte 02</b>
	d oset	-----
	wardrobe	-----
	social bathroom	wc, bwc
serv	study room	home office, office
	kit chen	-----
	copa	-----
	pantry	-----
	deposit	-----
	service area	service
	service bedroom	maid's room
service bathroom	maid's bathroom	

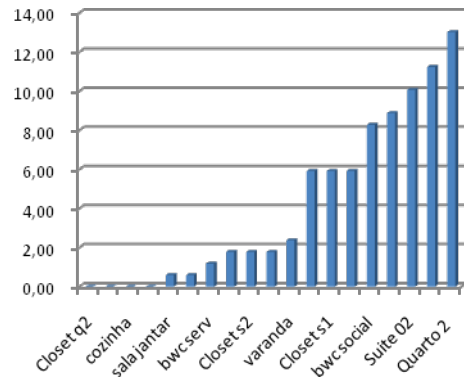
Chart 02. Change in names of labels

The analysis by room (Figures 09 and 10) reveal that only 32,54% change the label, while introduction and suppression represent 33.73% of total RP. The bedrooms are the most

modified, more often with the change of label. The existing spaces of social sector in OP – dining and living room – practically do not change (just label changes), as well the kitchen and service area. The suppression of labels in the service sector, as described above, refers to maid’s room and bathroom.

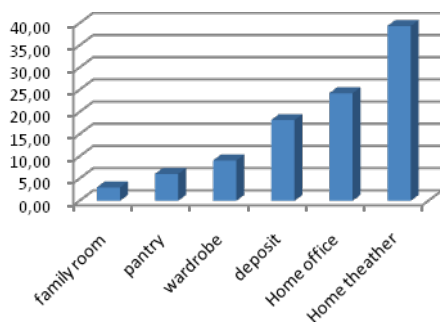


**Figure 09.** Kind of programmatic change in the room.

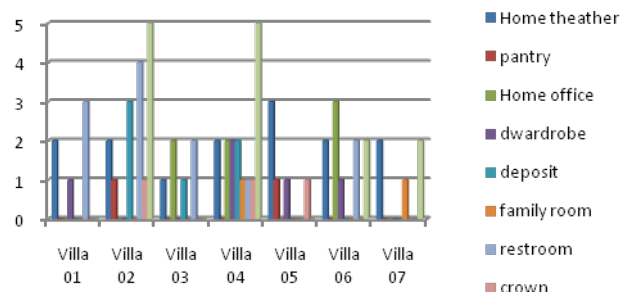


**Figure 10.** Programmatic change in the room.

Among the new labels<sup>9</sup>, six of them did not appear in any OP – the home theater, the home office, the pantry, the wardrobe, the deposit and the family room. Among the new labels, the home theater and the closet<sup>10</sup> within the master suite are the most requested (21,54% each), followed by the restroom (18,46%) and the home office (10,77%). Spaces as pantry, family room, copa and wardrobe appeared infrequently (Figures 11 and 12).



**Figure 11.** Frequency of introduction of new labels.



**Figure 12.** New labels by RP group.

The label deposit needs detailed comments. The municipal building code defines the minimum area for maid’s rooms, but OP does not always address such area. For their approval by legal bodies, this room is usually labeled as 'deposit'. The RP present similar situations<sup>11</sup>, probably not to compromise the release of the legal certificate authorizing the property’s use, as the

<sup>9</sup> The copa, the restroom and the master bedroom’s closet are indicated as 'new label' in Figure 15 since they are not present in some OP (Figure 16).

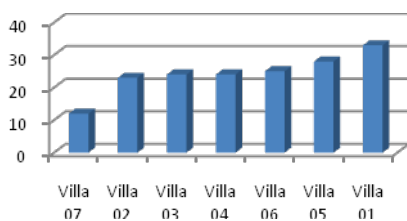
<sup>10</sup> It is worth mentioning that in some RP the occurrence of the closet seems to be somewhat forced, as the label does not correspond to a clearly defined space for the activity of dressing.

<sup>11</sup> Among the six storages counted, five present a bed in the layout.

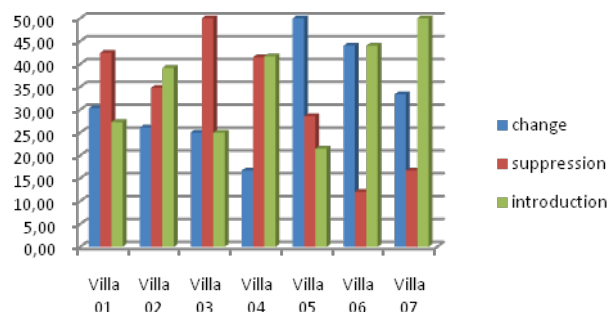
reformed plans, although not needing formal approval by legal bodies, they are in the hands of builders and therefore are accessible to fiscal.<sup>12</sup>

The Tables 1 and 2 presents the programmatic changes for each group of OP and their respective RP, according to the three kinds of changes (Villa 01 as example). The sum of the changes makes possible identifying the most modified OP – o Villa 01 – and the most intact – o Villa 02. The others presented similar programmatic changes (Figure 13).

Regarding the kind of change, the percentage of occurrence varies from one building to another (Figure 14). The Villas 01 and 03 present the higher occurrence of removed labels, while Villas 02 e 07 presents the higher occurrence of introduced labels. Regarding the label change, Villa 05 presents the higher percentage of occurrence.



**Figure 13.** Number of changes by building



**Figure 14.** Percentage of changes kind by building

Regarding the changes for each group of RP, a striking fact is the change of number of rooms and suites (Table 07). Only 26,66% of the RP (08 units) did not change the number of bedrooms and suites originally offered by the builder, while 73,34% have diminished is. All the RP of Villas 01, 04 e 06 modified the original number of bedrooms. In some situations (Figure 15), for this purpose, is necessary to join two of them. The change in the suites number is another factor that draws attention. From the 14 projects that change the number of suites (46,66% of the total RP), 64,88% increased the amount offered in OP.<sup>13</sup>

<sup>12</sup> The certificate to inhabit is a document stating that the property was constructed by following the city's requirements to projects approval.

<sup>13</sup> The variable demand by number of rooms and suites has been partially attended by the supply of plants that allow the elimination of one or more rooms, or even offering their assemblage or offering one or more types of plans.



**Table 07.** Number of bedrooms and suites by OPs and RPs.

Apartment building	Bedrooms		Bedrooms RP	Apartment building	Bedrooms		Bedrooms RP		
	OP	RP			OP	RP			
Villa 01	3Q(1S)	V01A	2Q(1S)	Villa 04	4Q(2S)	V04A	2Q(1S)		
		V01B	2Q(2S)			V04B	2Q(2S)		
		V01C	2Q(2S)			V04C	2Q(1S)		
		V01D	2Q(2S)			V04D	2Q(2S)		
Villa 02	3Q(2S)	V02A	3Q(2S)	Villa 05	4Q(2S)	V05A	4Q(2S)		
		V02B	2Q(2S)			V05B	3Q(2S)		
		V02C	3Q(3S)			V05C	3Q(3S)		
		V02D	3Q(1S)			V05D	3Q(3S)		
		Villa 03	3Q(2S)	V02E	3Q(3S)	Villa 06	4Q(2S)	V.06.A	4Q(2S)
				V02F	2Q(2S)			V.06.B	3Q(3S)
V03A	2Q(2S)			V.06.C	3Q(3S)				
V03B	2Q(1S)			V.06.D	2Q(2S)				
Villa 07	4Q(1S)	V03	3Q(2S)	V07A	2Q(1S)	V07B	2Q(1S)		
		V03D	3Q(1S)	V07C	2Q(1S)	V07D	3Q(1S)		



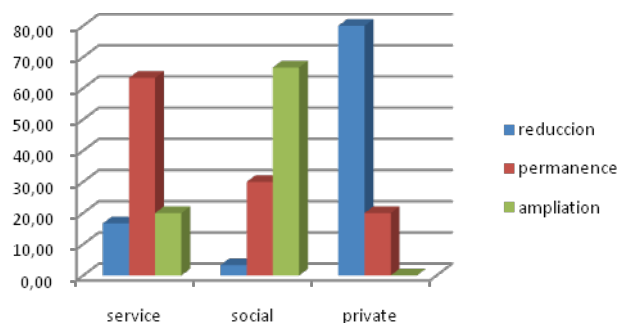
**Figure 15.** Example of an assemblage of two bedrooms to form a master suite and to introduce a home office.

The balcony is suppressed only in the unit with the smaller living area – the Villa 01. The restroom is a programmatic element with variable occurrence. It appears in just one OP – the Villa 05. However, only one RP in this building (25%) keeps with this label, but 12 among the 26 other RP (41,15%) add the restroom in the architectural program.

In relation to changes in the dimensional variable, the most modified is the intimate (42,8%), followed by the social (37,50%) and the service (19,64%) (Figure 16). While most RP maintain the service sector unchanged (63,33%), the social increases in a proportion equivalent to intimate’s reduction (Figure 17), corroborating with the identified programmatic changes.



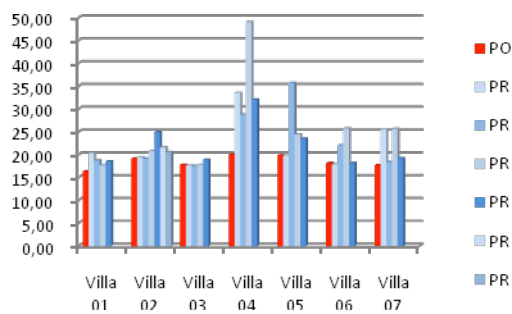
**Figure 16.** Area changes by sector



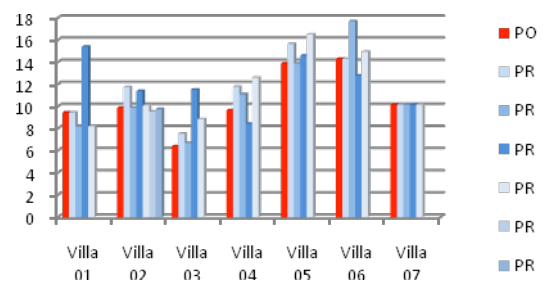
**Figure 17.** Kind of area changes by sector



Concerning the change in the rooms' area, it is worth emphasizing two data: the increase of area in master suites (Figure 18) and copa/kitchens (Figure 19). The master suite is the bedroom with larger area in all OP, however it seems not to attend clients' expectations. Comparing this fact with the area changes by sector, we realize that, despite intimate sector decreasing, the suite increases by incorporating area from other bedrooms. In turn, the copa/kitchen is expanded in 46,67% of cases, even without major changes in social sector's areas.

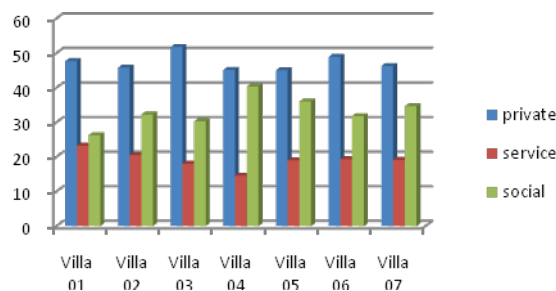


**Figure 18.** Area changes in the suite master



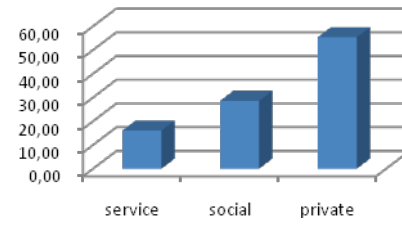
**Figure 19.** Area changes in copa/kitchen.

Still regarding the dimensional variable, in some cases the order of decreasing area (found in all OP) has been changed from the pattern intimate>social>service. The Figure 20 presents the changes in some RP, as Villas 02 and 07, whose order of decreasing area is social>intimate> service.

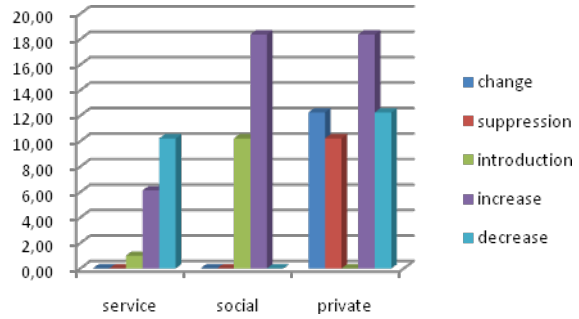
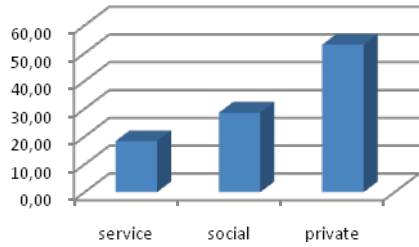


**Figure 20.** Average distribution of sectors area by group of RP.

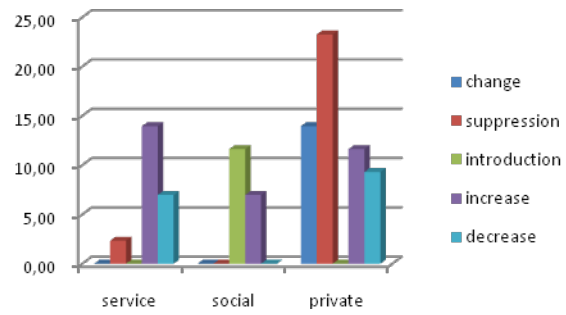
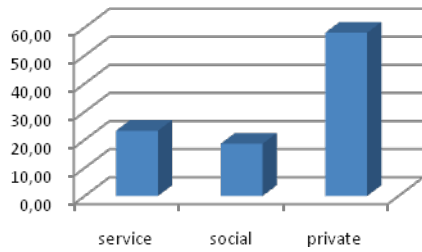
The joint description of programmatic and dimensional changes (Tables 03 and 04) indicates that the most modified sector is the intimate, with 57,38% of the changes (Figure 21). Excepting Villas 03 and 04, the service sector is the least modified, especially Villa 07 with no changes in this sector. In the other, the change in the intimate sector relates more to the dimensional than programmatic changes.



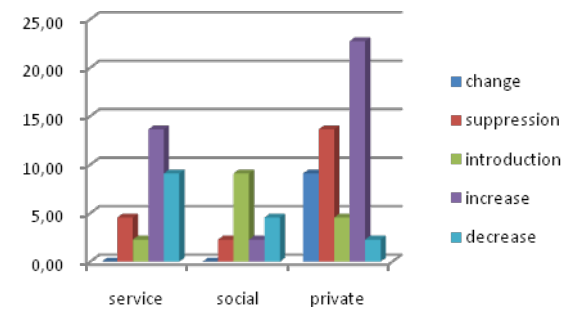
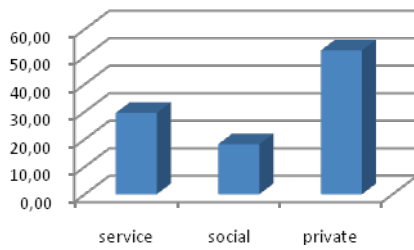
Villa 01



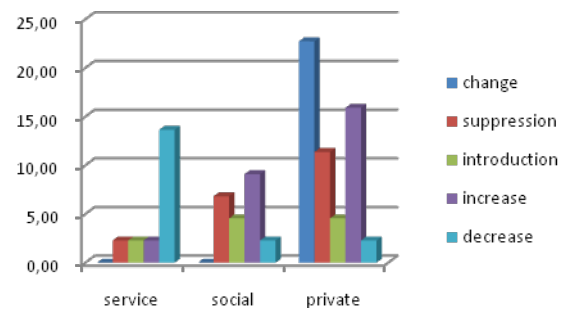
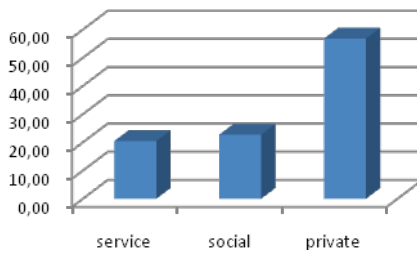
Villa 02



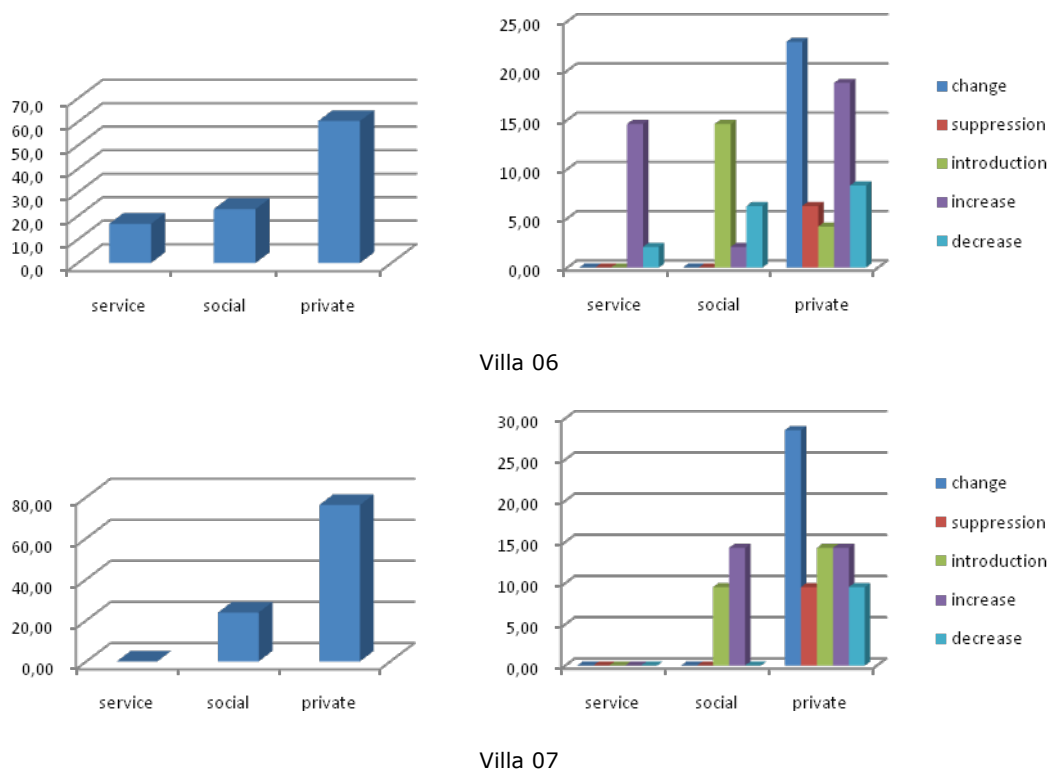
Villa 03



Villa 04



Villa 05



**Figure 21.** Kind of change by sector, in each group of RP.

## 5. Yesterday, today and tomorrow: dwelling cultures in transition and innovation

The analysis results suggest that the changes promoted by the apartments' owners, motivated by specific demands of different family groups, constitute a very diverse ensemble. However we can perceive, first, some permanences in the form of organizing domestic space, and secondly, important programmatic changes that reveal new ways (or just reinterpretations) of dwelling, observable in the relations among three pairs of spatial variables and developed activities: a. social sector | new labels; b. intimate sector | suite extension (dimension and program); and c. service sector| traditional labels.

The first pair deals with the companionship habits within family and with the guests' reception. The second deals with the change in privacy and comfort demands of the family's members, especially the couple or the head of family, according to the existing family arrangement – single parents, heterosexual or homosexual couples etc. The third pair observes the programmatic arrangement of the spaces mainly occupied by maids in the everyday maintenance of family life.

In social sector, what really draws attention is their valuation by the residents, who choose increasing the original area by 50% (Figure 22), as a direct consequence of the decrease in total area in intimate sector. This increase relates to both the expansion of existing spaces – dining and living room – and to the inclusion of the restroom, home theater and/or home office. Two factors can justify this kind of change: a. the reduction of the family unit (Berquó,

1989, 2004; IBGE, 2009); b. the consolidation of the habit to receive guests and/or interact within the family.



**Figure 22.** Example of RP which increases the social sector area at the rate of 50%.

If, on the one hand, the average number of family members decreased, and therefore fewer bedrooms are needed, in the other, in apartments with less than 03 bedrooms offered by the real estate market, the social area is significantly reduced, not compatible with consumer tastes of middle and upper classes. The desire to have a large social area, habit inherited from the past century<sup>14</sup>, promotes the buying and renovation of apartments designed for larger families, corroborating with Tramontano's (2004, p. 47) suggestion that "the social sector does not appear to vary according to the number of users or members of the domestic group, but according to family income" and, in addition, according to its 'extroverted standard of sociability'.

The inclusion of new labels in the social sector is the main indicator of behavior changes in the act of receiving guests and interacting within the family. Besides providing more comfort for guests (or distancing them from family's private sphere) by including the restroom, for instance, the contemporary family seeks at offering exclusive spaces for social 'trendy' activities such as watching to digital TV and the blue-ray movies within a room equipped with high-end equipment – the home theater. This label inclusion, as indicated in studies of housing from the end of last century (Tramontano, 2004; França, 2008; Paula, 2007), is a reflection of cable TV spreading and of a variety of entertainment TV shows, but also a sign of the urban insecurity sense that drives the families to stay in private spaces – either the building or the apartment.

Another typical label in the contemporary apartment is the home office. Its location within the apartment varies: sometimes in social sector, sometimes in intimate sector, sometimes in a position that allows access through two sectors (Figure 23). The inclusion of this room exclusively for working/studying indicates the persistence of a habit emerged with the spread of personal computers and the advances in the field of Information Technology Communication (ITC) that made easier working at a distance.

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<sup>14</sup> Tramontano (2004, p. 45) notes that, in Brazilian society, the rooms and convivial reception spaces present, throughout the twentieth century, the largest areas of all the rooms in the apartment.



**Figure 23.** Typical locations of home offices found in the sample.

The changes in the intimate sector provide more comfortable rooms and increase the privacy for all residents, not only for the "head of house", by including bathrooms and closets, suggesting that contemporary family is more democratic and less hierarchical (Garcia, 2003). As Prost suggests:

[...] the family deinstitutionalizes and becomes the set of private lives informally united by blood relations. The private area of dwellings is no longer necessarily public among inhabitants, seeking to enable the delimitation of individual spaces for each one of its members, in levels that vary with social classes (Prost, 1992, p. 61).

However, a certain hierarchy is still maintained. When it comes the 'head of house's' suite, the privacy and the comfort can reach the maximum level, with spaces to a little living, TV, working, larger bathrooms and closets (Figure 24). The master suites, as commonly referred by publicity, are multifunctional spaces that become a symbol of sophistication of the couple's life.



Figure 24. RP which a 'super suite'.

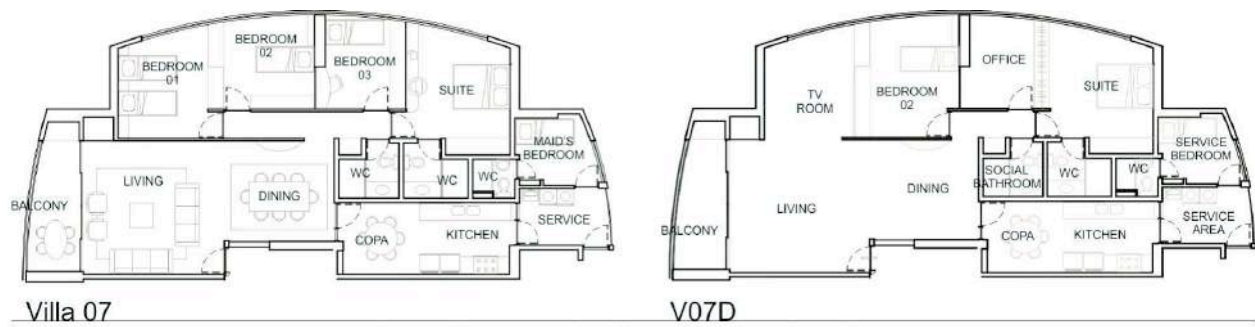
Regarding the service sector it is important highlighting a contradiction, as indicated by the reforms, compared to other regions of Brazil. Several authors (Brandão, 2002; Tramontano, 2004; Pinho, 2005; Paula, 2007; França, 2008) emphasize the maid's disappearance as a permanent member of the family group and the decrease in the kitchen area due to the insertion of new technologies that facilitate cooking activities. To some extent, the OP studied reflects this trend expressed in a reduction of this sector. However, RP indicate that other habits are still present in contemporary Recife's families, where the maid still lives in the apartment in most cases – 53%, taking into account only those spaces with the label 'maid room' (Figure 23) and 66,66% when the label 'deposit' presents a bed within the layout (Figure 24). In such cases, the area reserved for the maid is even smaller<sup>15</sup>, reflecting their segregation and hierarchy of domestic dwelling users.

In synthesis, the relations among the three selected pairs and programmatic and dimensional changes computed for each RP (Table 04) reveals two ways of structuring the contemporary domestic space, according to professional and secular knowledge: 1. the transition project, and 2. the innovation project.

The first one is characterized by the partial maintenance of the OP, with alterations or additions of new labels (Figure 25). In the transition project, the interventions indicate a certain distance from the traditional way of living, with the incorporation of technological devices that provide working and leisure places for the family, and the promotion of more privacy in intimate sphere (Figure 02). These cases may have been motivated by the adequacy of the original architectural to the demands of family, or due to family budget constraints, probably compromised with the expenses of acquiring the property. Future research may enlighten the issue.

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15 The copa/kitchen, for instance, is often expanded at the expense of the maid's room area.



**Figure 25.** Example of a Transitional Project.

The innovation project, in turn, presents major changes, mainly in the architectural program of social and intimate sectors. It is characterized by a significant reduction in the number of rooms to a expansion of area and labels of the social sector, mainly to the inclusion of new programmatic items, particularly for devices of digital technology for communication, for fun and for working, and the master suite (Figures 22 and 24). This type of project seems to be related to non-nuclear families – single parent, couples without children, divorced and single people (Bucher, 1999), all of them with a high purchasing power and desire to invest in social and intimate comfort.

Whatever the type of domestic group, the innovative projects show a significant change in the social and private life, particularly of the master suite's occupant(s). Contrary to the expected behavior from classical modern nuclear family, whose demonstration of parental sexuality was repressed and silenced adequately at home space, the contemporary post-sexual revolution family home is more liberalizing, regarding both the dealing with issues on sexuality within the family, and the recognition of bedroom as place for sexuality expression. The suite is the obvious locus of parental sexuality, where the comfort, the privacy and pleasure are performed, despite the separation of bodies, at least in some circumstances, with the adoption of two different private bathrooms (Figure 24).

In common to both identified types, the peculiarities of the service sector related to its design and programmatic permanence, appear as an indelible cultural features of local society.

## 6. Conclusions

The study of the phenomenon of change in the real estate product in Recife, from the perspective of its relations with contemporary ways of living, was observed from the existence of two sets of apartments: those designed and offered by entrepreneurs to its potential clients – *the original project*; and those who have suffered interventions of residents – *the reformed project*. Both projects were analyzed in the programmatic and dimensional variables and, particularly, through the relationship between three relational pairs observing the spatial and occupational, specifically: a. social sector | new labels; b. intimate sector | suite extension (dimension and program); and c. service sector| traditional labels.

The relations among the three pairs selected and the programmatic and dimensional aspects show two ways to structure the contemporary domestic space, the transition project and the innovated project, but also reveal an indelible cultural feature. The first one shows a certain detachment of traditional way of living, made possible mainly by the introduction of technological devices that modify the ways of interpersonal relations within the the family and promote greater spatial isolation among the components of family. The privative rooms approach the idea of autonomous housing units.

The second one reveals more fundamental changes in the architectural program and ways of living. They are units that show a significant reduction in the number of bedrooms, an expansion of the area and a diversity of room's labels in social sector. Just as the first type, such as expected, the apparatus of digital technology for communication, for fun and for working promote the moments of higher sociability – when receiving guests, or of higher privacy – promoting the spatial isolation, but the, so to say, *transpatial* interactivity.

The partial results are not yet comprehensive enough to be generalized in the context of Recife, even less in the national context. Properties for A1 and A2 classes' exclusive housing market, as well such as other projects aimed at C1 and C2 income levels are being examined. The results may contribute to a more general understanding of the phenomenon in question.

Other aspects and variables that characterize the production and customization process of the real estate product, as well as its effects in the spatial structure's configuration (Amorim; Loureiro; Griz, 2009; Griz; Amorim; Loureiro, 2009; Griz, 2010; Griz; Amorim; Loureiro, 2010), marketing strategies in the construction of the living demands (Loureiro; Amorim, 2002; Amorim; Loureiro, 2003, 20103) and the new demands arising from population aging process (Griz; Amorim; Loureiro, 2009) has been extensively analyzed in several papers. The reading of these documents contributes to an understanding of other facets of the problem and how is the interaction between them.

## **Acknowledgments**

The authors would like to thank the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) and the Fundação de Amparo à Ciência e Tecnologia do Estado de Pernambuco (FACEPE) for their financial support to research.

## **References**

ABEP, 2011. *Critério de Classificação Econômica Brasil*. Available at: <<http://www.abep.org/novo/Content.aspx?ContentID=301>> [Accessed 07 April 2011].



- Amorim, L. and Loureiro, C., 2003. Alice's mirror: marketing strategies and the creation of the ideal home. In: J. Hanson, ed. 2003. *Proceedings of Fourth International Space Syntax Symposium*. V. 1. London: University College London/Space Syntax Limited, pp.22.1-22.16.
- Amorim, L. Loureiro, C. and Griz, C., 2009. A casa deles, a casa minha.... In: *Seminário IV Projetar 2009*, 2009, São Paulo. Projeto como investigação. São Paulo: Altermarket.
- Amorim, L. and Loureiro, C., 2010. Tall and enclosed: housing form and social use in Brazilian apartment buildings. In: D. Naik and T. Oldfield, ed. 2011. *Critical cities: ideas, knowledge and agitation from emerging urbanists*. V. 3. London: This is not a gateway.
- Berquó, E., 2004. Arranjos familiares no Brasil: uma visão demográfica. In: L. M. Schwarcz. *História da Vida Privada no Brasil 4: contrastes da intimidade contemporânea*. São Paulo: Companhia das Letras.
- Berquó, E., 1989. A Família no século XXI: um enfoque demográfico. *Revista Brasileira de Estudos de População*, 6 (2), p. 1-16.
- Brandão, D. Q., 2002. *Diversidade e potencial de flexibilidade de arranjos espaciais de apartamentos: uma análise do produto imobiliário no Brasil*. Ph.D. Universidade Federal de Santa Catarina.
- Bucher, J., 1999. O casal e a família sob novas formas de interação. In: T. Féres-Carneiro (org.). *Casal e Família: entre a tradição e a transformação*. Rio de Janeiro: NAU.
- Cavendish, A., 2000. *Arrumando a casa: investigando transformações no espaço doméstico*. Undergraduation. Universidade Federal de Pernambuco.
- Construtora AC Cruz, 2008. *Relatório de obras realizadas*, Recife.
- Fabricio, M. M., 2002. *Projeto simultâneo na construção de edifícios*. Ph.D. Escola Politécnica da Universidade de São Paulo.
- França, F. C., 2008. *Indisciplina que muda a arquitetura: a dinâmica do espaço doméstico no Distrito Federal*. Ph.D. Universidade de Brasília.
- Garcia, C., 2003. *Família igualitária: a democracia no âmbito público e no privado*. Graduation. Universidade Federal de Pernambuco.
- Griz, C., 2010. *Apartamentos do Recife: a prática da transformação*. Monograph presented as a partial fulfillment of the requirements for approbation at Seminar Teoria da Morfologia Arquitetônica e Urbana, Programa de Pós-Graduação em Desenvolvimento Urbano, UFPE, Recife.
- Griz, C. ; Amorim, L. ; Loureiro, C., 2010. Customização do produto imobiliário: projeto de apartamentos no Recife. In: XIII Encontro Nacional de Tecnologia do Ambiente Construído, 2010, Gramado. *Anais do XIII Encontro Nacional de Tecnologia do Ambiente Construído*. Porto Alegre : ANPARQ / UFRGS. p. s/n.

- Griz, C., Amorim, L., Loureiro, C., 2009. The elderly and the house: how housing should be design in order to meet old person needs? [doc] In: INCLUDE 2009. *Inclusive design into innovation: transforming practice in design, research and business*. London.
- Hillier, B., Hanson, J., 1984. *The social logic of space*. Cambridge: Cambridge University Press.
- IBGE, 2009. *Síntese de Indicadores Sociais 2009*. Available at: <[http://www.ibge.gov.br/home/estatistica/populacao/condicaoodevida/indicadoresminimos/sinteseindicsoais2009/indic\\_sociais2009.pdf](http://www.ibge.gov.br/home/estatistica/populacao/condicaoodevida/indicadoresminimos/sinteseindicsoais2009/indic_sociais2009.pdf)> [Accessed April 2010].
- Johnson, P. A., 1993. *The theory of architecture: concepts, themes and practices*. New York: Van Nostrand Reinhold.
- Loureiro, C., Amorim, L., 2002. A. Moradia dos sonhos: onde e como morar. In: *Anais do IX Encontro Nacional de Tecnologia do Ambiente Construído - ENTAC*. Foz do Iguaçu 07-10 May 2002. Foz do Iguaçu: ENTAC, pp. 819-827.
- Mercês, M., 2009. *Demanda por imóveis: pesquisa de mercado*. Recife: M&E Dados.
- Monteiro, C., 1997. Activity analysis in houses of Recife, Brazil. In: *First International Space Syntax Symposium*. Londres: University College London, v.3, pp.20.1-20.14.
- Paula, V. D. C., 2007. *Espaço e sociedade: apartamentos no Rio de Janeiro no século XX*. Ph.D. Universidade Federal do Rio de Janeiro.
- Pinho, A., 2005. *Conexão: apartamentos e mídias em Belo Horizonte*. Masters. Escola de Engenharia de São Carlos – USP.
- Prost, A., 1992. Fronteiras e espaços privados. In: Prost, A., Vincent, G. *História da Vida Privada: da Primeira Guerra aos nossos dias*, v. 5. Translated by D. Bottman. São Paulo: Companhia das Letras.
- Tramontano, M., 2004. *SQCB. Apartamentos e vida privada na cidade de São Paulo*. Higher Thesis. Universidade de São Paulo.
- Tramontano, M., 1995. *Habitação contemporânea: riscos preliminares*. São Carlos: EESC-USP.
- Tramontano, M., 1993. *Novos modos de vida, novos espaços de morar*. São Carlos: EESC-USP.