Detective work with a deficient sample:

Syntactic analysis of the houses of conflict

57

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Abstract

Space Syntax theory and tools have been utilised to conduct a cross-ethnic comparison in the vernacular domestic space in Cyprus, during a period, which covers the spatial coexistence of ethnic groups namely Greek and Turkish Cypriots, from their co-habitation to their confrontation (1900's – 1974). The study specifically explores the nature and evolution of the inter-ethnic differences, together with town-village variations, across Greek and Turkish Cypriot houses in terms of their underlying spatial genotypes. Limitation of the study area to one part of the divided Island which has been settled only by one of the groups since 1974 and the need to gather data on both Turkish and Greek houses for a period prior to this date have been the major constraints in the study. On the other hand, most of the investigated houses have been either subjected to ethnic cross-occupation due to the migration of original users or to spatial and functional changes and deterioration over time. All these constraints have resulted in a body of data incomplete in nature which, compared to the norm where occupation and spatial form go together, was necessarily "deficient". In order to overcome the special problems posed by the "deficient" sample and to be able to piece together the story from a series of clues present in the incomplete data, certain analytical strategies have been developed and a series of analyses have been conducted.

Space Syntax convex analysis methods have been applied consistently to a sample of 210 house layouts of Greek and Turkish origins. The initial results of this ongoing comprehensive study suggest that the two dominant themes across sample, namely "courtyard" and "central space-integrated", do not correspond to ethnicity but rather to "village" and "town" houses respectively which are referred here as "rural" and "urban" types. In time, the social consequences of rapid and substantial socio-economic changes as a result of modernisation, seem to govern the rules for the development of "rural house" into an "urban" or a "semi-urban" one for both ethnic groups.

57.1

1. Introduction: Statement of the Problem

During the last four hundred years, two ethnic groups, namely Greek and Turkish Cypriots, have lived side by side in spatial proximity with each other, either in mixed or in nearby settlements all over Cyprus, (Markides, 1977; Volkan, 1979). The inter-

ethnic conflict which broke out in the mid 50's, resulted in the physical division of the Island into two in 1974, with Turkish Cypriots gathering in the north and Greek Cypriots in the south of the Island. In the meantime, due to uneasiness created by the conflict there had been a gradual separation of the ethnic groups, each migrating to areas settled by their own majority (1). Yet, ethnicity had not had a conceivable regional patterning across the entire island. This dynamic nature of ethnic co-habitation has simulated interest into the domestic environments of these two different language groups to understand the morphology of their houses and the nature of their spatial evolution as the conflict escalates over time. In this respect, this study attempts to unveil the spatial themes underlying the traditional houses of Greek and Turkish origin, to specifically address two key questions: 1) How far do underlying themes belong distinctly and consistently to the two ethnic groups across the sample? and 2) how do these themes evolve from the time of coexistence to the time of confrontation (1900's-1974)?

In order to answer the above questions, a sample of houses of different ethnic identities for the specified period needs to be compared in terms of differences in their spatial layouts. This involves, exploring first the underlying invariants; then whether these apply consistently to the two ethnic groups across the sample of different regions, villages and towns, and across individual settlements; and finally, the way they evolve during the ethnic conflict period. The sample of house plans required to perform such an analysis should satisfy several conditions: 1) They must belong to the period before 1974 when both ethnic groups were in spatial proximity and distributed all over the island; 2) They must include both Turkish and Greek Cypriot houses; 3) They must contain cases both from different settlement types (i.e. towns and villages) and from different regions so as to allow exploration of the consistency of spatial genotypes across these geographical classifications; and 4) They must include "early" and "late" cases which would represent cases of symbiotic coexistence (1900-1930) and of confrontation (1930-1974) respectively.

The scarcity of substantial records of architectural drawings of these houses for the specific period, necessitated the collection of both architectural and social data through first hand observations and field studies. Thus, the original house layouts which are essential to the analysis had to be reconstructed, whenever necessary, from the present situation of the houses. At the same time, house samples for each ethnic group had to be collected only from northern part of the Island, where the Turkish Cypriots currently live, because no cross movement is permitted between North and South since 1974. This imposed an additional difficulty for houses of Greek origin since all Greek houses in North Cyprus have been settled either by Turkish Cypriots who migrated from South or by Turkish migrants from Anatolia

57.2

who had been encouraged to settle to the houses emptied by the Greeks. This also meant that there was not any chance for interviewing Greek Cypriots, which made it rather difficult to explore the pre-1974 form of their houses. On the other hand, the retrospective nature of the investigation obscured the analysis of factors like space use, decoration and material culture which would undoubtedly support ethnic space differences. Although this was possible to a certain extent for the Turkish Cypriot houses originally occupied by Turkish Cypriots in North Cyprus, this was not the case for Greek Cypriot houses as the original users had already migrated to the south.

Apart from these major constraints of ethnic cross-occupation and the limitation of the study area to one part of the divided Island, there were difficulties common to both ethnic groups' houses. Generally the houses were either close to extinction due to the negligence induced by the conflict and economic difficulties, or they were renewed, enlarged and adapted to meet changing needs and ways of life. In terms of original spatial layouts, together with access relations and functions, both of these processes produced generally "unclear" cases, the identification of which required a special effort of personal judgement and reasoning besides observations and interviews. However, there were cases which remained either unchanged or with readily distinguishable changes. These were "clear" cases, the identification of which were based on direct observations or on clear statements of their inhabitants. Another difficulty was the absence of an accepted terminology related to space labels due to the different languages of the two ethnic groups. It should also be noted that terminology not only varies across ethnic groups but also across different regions even within the same group.

The problem of "unclear" cases together with the major constraints of ethnic "cross-occupation", have resulted in a body of incomplete data, which compared to the norm where "occupation" and "spatial form" go together, was necessarily "deficient". The limitations posed by the "deficiency" of the sample would inevitably affect the way main research questions have been structured and inquired. Such difficulties have been attempted to be overcome by structuring the sample through a set of strategies so that the analysis would allow uncovering the story from the bits of evidence.

As the most vital problem regarding the sample, the absence of house layouts from the period prior to 1974 was overcome by trying to reconstruct the original form of the houses through a field study. Since these original houses were close to extinction because they are either left unused or renewed, to evaluate and piece together the last bits of evidence which is still found to be retrievable even at this

57.3

present stage was a task of high priority. Data were recorded by conducting observations and interviews wherever possible. Cases, which did not yield any clues at all about their previous forms had not been recorded. In some cases, plan layouts together with the permeability relations among the rooms were vague either due to the changes made or due to deterioration because of negligence. On the other hand, there were cases where the syntactic layout was clear (i.e. the organisation of rooms and their access relations) but the functions of the rooms were unclear. So the sample has been divided into two along this line, being either "syntactically" or "functionally" "clear" and "unclear". Identification of the unclear cases was especially supported by strong personal sense and judgement. On the other hand, coexistence of various spaces and permeability relations from different periods adapting to different functions through time meant that the data should be collected in a way so as to uncover layers of subsequent changes into corresponding time segments. Thus, as far as possible, houses were primarily attempted to be investigated by their original layouts and then were further explored by their later developments and changes. These were all noted together by the ethnic identity of their relevant inhabitants. The subsequent changes have been identified as different versions of a house which have been classified as "*v1, v2, v3…*" in the comprehensive database table. Time, which is the main constraint in identifying the evolution of these houses, has been categorised as "*early*", "*late*" and "*recent*" in an effort to overcome the absence of exact information. "Early" refers to cases from the 1890's to the 1930's whereas "late" refers to cases from the 1930's to the 1974(2) and "*recent*" to cases which have been excluded for the scope of this paper, from 1974 until present day. It should also be noted that, "late" cases cover the period of conflict intensification, whereas "early" is meant to represent symbiotic cohabitation. In order not to prevent objectivity and to avoid any confusion, the issues with the space labels have been handled using generic names for the spaces as "*main rooms*", "*rooms*", "*central spaces (hallways)*", "*loggias*", "*courtyard*", "*kitchen*s"…

The sample has been constructed in a way so as to allow cross ethnic comparisons across individual settlements, villages and towns and different regions and against time. At the settlement scale it has been composed of 12 settlements of varying ethnic identity of 2 Mixed, 5 purely Turkish and 5 purely Greek, according to 1960 census, including towns and villages and covering three regions in Northern Cyprus. The selection criterion of these settlements was based on the availability of identifiable cases for the specific period under consideration. At house scale 210 houses have been included into the analysis presented here, excluding cases after 1974. All identifiable houses in these settlements had been recorded, considering all potentially useful clues for the completion of the picture. Figure 1 shows the three main regions together with the location of individual settlements from which the

sample is constructed. Table 1(a) gives the constitution of the sample on settlement basis, with their labels, ethnic identities, types and regions. Referring to a period prior to 1974 necessitates accepting the conditions of that specific period. Hence, the settlement names used reflect the labels, which were in use during that period. Table 1(b) shows the constitution of the sample on a house basis.
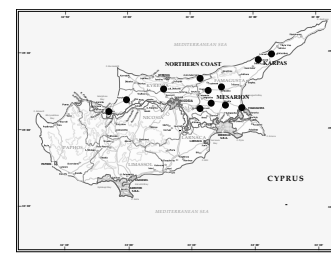

Figure 1: The location of twelve settlements within three main regions of Northern Cyprus

Table 1: Sample constitution (a) on settlement basis (top) and (b) on house basis (bottom)

Settlement name	Ethnic identity of Settlement	Settlement Type	Region	No. of Cases - sample upto 1974	Syntactically Clear	Syntactically Unlear
LEONARISSO	Greek	Village	Karpas	23	15	8
ASHA	Greek	Village	Mesarion	10	8	2
PPERISTERONA	Greek	Village	Mesarion	21	15	6
AY. AMBROSIOS	Greek	Village	Northern Coast	5	2	3
MORPHOU	Greek	Town	Northern Coast	10	10	0
KNODHARA	Turkish	Village	Mesarion	18	15	3
PHOTTA	Turkish	Village	Mesarion	31	21	10
GOUPHES	Turkish	Village	Mesarion	10	9	1
LEFKE	Turkish	Town	Northern Coast	21	15	6
FAMAGUSTA	Turkish	Town	Mesarion	11	9	2
EPHTAKOMI	Mixed	Village	Karpas	31	15	16
VATILI	Mixed	Village	Mesarion	19	13	6

Ethnic Identity of HOUSE	No. of Cases - sample upto 1974	Syntactically Clear	Syntactically Unclear
GREEK	96	62	34
TURKISH	112	85	27
UNCLEAR	2	-	2

2. Courtyard houses of Cyprus

The domestic architecture in Cyprus, especially the traditional rural type, is in its simplest form and lacks any variety and richness in its appearance. Both village and town houses follow a simple rectangular arrangement developed around an inner courtyard. Whether Turkish or Greek, the houses of both ethnic groups seem to be constructed by similar spatial elements, namely: courtyards, rooms, transitional and multi-functional spaces such as loggias and central open or semi-open hallways and the secondary spaces(3) located inside the courtyard. The rural households were mainly dealing with agriculture and stock raising until the early years of 20th century. Households in towns were mostly involved in public services and commerce.

The plan layouts of the houses have evolved from old days. The simplest organised unit of dwellings was the one which concentrated all functions in one room. Functionally it may be divided into several sections, each serving for various purposes such as main living, livestock raising and cooking. In time, according to the changing needs and economic condition of the family, more rooms were added to this central room. The next step seemed to be the allocation of functions into separate rooms. Thus the family's living needs were separated from that of livestock and storage facilities. There could be more elaborate types of dwellings as well, based on the activities of its occupant.

57.5

Research about these houses has been scarce until recently and has been confined to the archaeological domain which refers to the original house form as "round house" and describes its development into a rectangular building in time, (Wright, 1992). In one of the studies within the geographical domain, the rural house has been introduced as a workshop, laboratory and a factory for the self –sufficient farmer and his family while providing minimal living facilities. This is traced best in a Cypriot saying, "*a house as little as can accommodate you and land as much as you can see*". It provides shelter not only for the family but also for their livestock, implements and produce, (Christodoulou, 1959).

57.6

Recent studies generally describe vernacular houses as "courtyard houses" being organised around an inner courtyard and refer to their typical architectural elements. Elements most frequently referred to are the rooms, loggias(4), central hallways, also called as "*sofas*" by Turkish authors (Dagli et al, 1997; Yildiz, 1998, Oktay and Onal, 1996) and bay windows(5), (Oktay and Onal, 1996; Yildiz 1998). Some authors categorise some of the houses in Cyprus as "Ottoman Houses" and emphasise their resemblance to the houses built in western and southern parts of Anatolia, based on their common elements mentioned above, admitting the existence of differences due to their local characteristics, (Yildiz, 1998; Oktay and Onal, 1996). Oktay attributes these differences to the weakened privacy requirements of Turkish community, due to the indirect influences of Turkish and Greek Cypriots in time, which has been reflected by the direct link of the house to the street.

Today the traditional houses are close to extinction due to serious negligence. There are quite a few systematic attempts to record and understand the architectural data related to these cultural artefacts, (Demi, 1992; UNHCR, 1995). Danilo Demi's typology is one of these attempts which goes one step further and identifies the courtyard with its central distributive function within the complex for one specific town. The absence of in-depth exploration of organisation of these dwelling interiors considering both spatial and functional properties and the lack of any systematic approach for investigating deep into the ethnic influences are common to these limited studies.

With this study, it is aimed to understand the traditional Cyprus houses morphologically rather than simply pointing to surface characteristics and to explore the ethnic influences objectively. The damaged situation of most of these houses of the period under consideration (1900-1974) and the limited availability of records containing the architectural evidence require immediate research on this housing stock. The strong belief that information is still retrievable has inspired this investigation into a realm of incomplete data.

Space Syntax theory and analytical tools, which allow objective investigation and produce culture-specific results, have been utilised in this study. The concepts of "configuration" and "genotype" as invariant properties of these underlying structures, have formed the backbone of the study besides other various syntactical and functional measures. These techniques have been extensively explained by Hillier and Hanson and will not be repeated here (Hillier and Hanson, 1984, Hillier et al., 1987; Hillier, 1996; Hanson, 1998). The analyses were based on the justified access graphs drawn from the exterior which clarify the space configuration and permeability pattern within the complex. Then the basic syntactic values were computed automatically by New Wave software application developed at the Bartlett School of Graduate Studies for this purpose. The results were then tabulated in Statview 5.0, a statistical package, which enabled most of the "detective" side of the analysis to be complemented.

57.7

3. A preliminary test: Reliability of data

At this initial stage it is aimed to evaluate the proposed categories into which the "deficient" sample has been built in order to find out whether the data can be used reliably in the analysis. For this purpose Statview 5.0, a statistical package has been employed. A series of t-tests have been applied to both syntactically and functionally "clear" and "unclear" cases and to the proposed time categories of "early", "late" and "recent".

The first and vital strategy in dealing with incomplete data is, dividing the sample into the categories of "clear" and "unclear" cases for syntactical and functional properties of layouts separately. Since the "unclear" cases form a substantial bulk of the sample (Table 1), the first question to investigate is whether the unclear cases can be used in the analysis with confidence? Unpaired t-test has been applied to see whether the difference in the mean integration values of any two suggested groups is significant or not. The unpaired t-test compares the means of two groups and determines the likelihood of the observed difference to occur by chance with a "p-value". A small p-value (p<0.05) indicates that such a difference is unlikely to occur by chance and that the difference is significant whereas a higher p-value (p>0.05) points to an insignificant relationship. While the difference between syntactically "clear" and "unclear" cases is highly not significant with a p-value of 0.94, (unpaired t-value=-0.79, p=0.9374), this value drops to 0.16 when functionally clear and unclear samples are considered. It is still not significant but not as reliable as the syntactically unclear cases, (unpaired t value=1.422, p=0.1562). These test results suggest that in terms of syntactic measures "all" of the sample including unclear cases can be used safely, whereas in terms of functional measures although t-test suggests reliability,

the unclear cases should be used with more caution. However since functional analysis have been kept out of the context of this paper, only syntactical values have been employed so far.

The next category to test is the time periods of the house layouts as "early", "late" and "recent", introduced based on interviews and observations supported by personal judgement. These categories are essential in exploring the evolution of house form throughout the conflict period. The analysis showed that in general the change in the mean integration values from "early" to "late" and finally to "recent" cases is found to be significant only between "early" and "recent" cases (unpaired t-value=-2.514 p-value=0.131) when all sample is taken into account. However, since "recent" cases are not considered in this paper, samples up to 1974 have been investigated for "early" and "late" cases only. Yet again, the difference from "early" (103 cases) to "late" (107 cases) is not significant statistically implying that both categories can be treated together in the analysis whenever necessary.

4. Space-type distribution

In order to get the preliminary suggestions about the configurational tendencies across the sample and their relation to ethnic groups, "justified access graphs" of Turkish and Greek houses from various settlements and regions have been analysed in terms of the topological properties of their individual spaces.

Space-types have been introduced by Hillier (Hillier, 1996), as topological types within the "justified access graphs" which have different potentials of occupation and movement. Hillier named these spaces as "a", "b", "c" and "d" type spaces. Since they are extensively explained elsewhere (Hillier, 1996; Hanson, 1998), they will not be repeated here. Nevertheless it will be practical to remember that "a" and "b" type spaces indicate "tree-like" graphs whereas "c" and "d", "distributed" that is "ringy" graphs. On the other hand while "a" and "d" type spaces create integration, "b" and "c" create segregation in the plan. So, a low number of "a" and "d" type spaces is indicative of strongly categorised plans, (Hanson, 1998).

Initially the distribution has been investigated to see whether there are any patterns on geographical basis i.e. across regions, settlement types of villages and towns, and across the individual settlements. Then, the ethnicity factor has been introduced into the geographical categorisations in order to explore whether the patterns change across the ethnic groups. Finally a time effect was investigated against "early" and "late" cases to get insights about the way the pattern of space-type distribution evolved in time. These investigations were conducted for both "only

57.8

clear" and for "clear and unclear" cases together whenever necessary, in order to check whether the resulting pattern is coherent. The stages of this investigation are displayed in the subsequent graphs in Figure 2.

When "clear" and "all" samples are considered (up to 1974) (Figure 2a and 2b), it is seen that there are more "a-b" type spaces over the "c-d" types. That is, the sample has a tendency towards tree-like graphs in general. This indicates the limited availability of rings across the sample of houses. Similarly the number of integrating spaces is higher than the segregating ones, which implies that houses have less categorised or differentiated configurations. The analysis for clear cases separately supports this strong theme as well. While statistically the difference between "a-b" and "c-d" type spaces is significant for both syntactically "clear" (paired t-value=10.719 p-value=< 0.0001) and "all" samples (paired t-value=11.714 p-value=< 0.0001), the variation of this difference across "clear" and "unclear" samples does not imply any significance, (unpaired t-value=1.256 p-value= 0.2109).

Geographically, the entire sample has more "a-b" type spaces than "c-d" ones. Village houses on the other hand are more "tree-like" than town houses as the difference between "a-b" and "c-d" types is more pronounced, (Figure 2c). When regions are taken into consideration it is seen that, except for Karpas, which is found to be significantly more distributed, all have the similar tendency, (Figure 2d). Similarly, when settlements are considered individually all, except Leonarisso, a Karpas village of more "c-d" type spaces over "a-b", follow the same trend. However when the sample is looked at from the integrating-segregating spaces point of view, Famagusta, Turkish Town in the Mesarion region is the only one which has more segregating spaces over integrating ones, (Figure 2e).
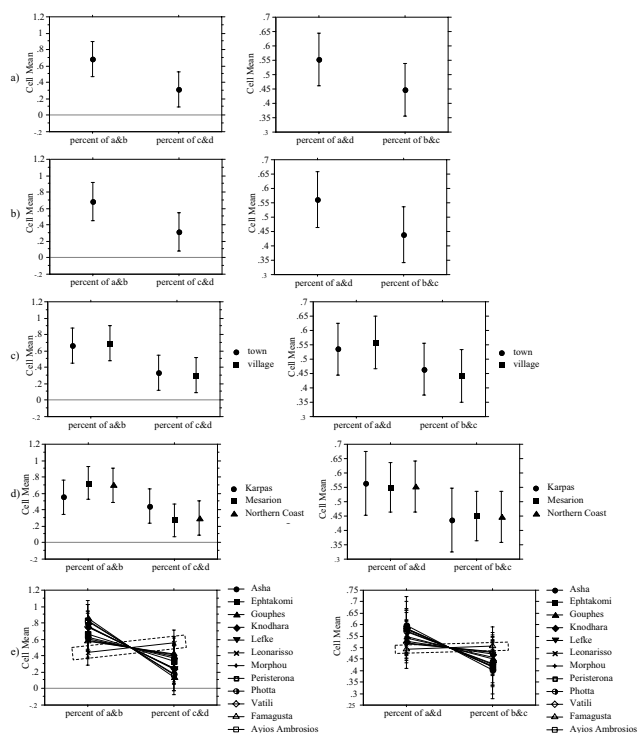
Figure 2: Space-type distribution across (a) "syntactically clear" sample, (b) "all" sample (c) towns and villages – "syntactically clear" sample, (d) across regions – "syntactically clear" sample (e) across settlements

The second group of investigations explore the space-type distribution across settlements with respect to ethnicity. In this set of analysis, both clear and unclear cases have been included whenever necessary in order to base investigation on a larger body of data. The space-type distribution ("a-b"/"c-d") across settlements of different ethnic identity, namely Greek, Turkish and Mixed gives a rank of G<M<T (Figure 3a), whereas this order is GV<GT<M<TT<TV(6) for villages and towns,

meaning that Turkish Villages and Towns have more tree-like graphs compared to Greek ones. However when Leonarisso, the only distributed village is excluded for a moment, the inequality becomes, GT<GV<M<TT<TV (Figure 3b). So the resulting pattern has two rules: 1) Ethnic rule of Turkish being more tree-like than Greek; 2) settlement rule of village houses being more tree-like than town's.

When the ethnic identity of individual houses instead of settlements has been taken into consideration, it is seen that the same rules of inequality apply, (Figure 3c). This inequality is seen to change as GV<TV<TT<GT when "a-d" and "b-c" type spaces are considered, in an order of increasing categorisation within the configuration (Figure 3c).

Until now the patterns have been explored synchronically. The same principles of analytical strategy have been then repeated for "early" and "late" categories to see how this pattern for space-type distribution varies in time. While it remains consistent that Greek houses are less tree-like compared to Turkish houses (Figure 4a and 4b) it is seen that in time both categories' houses have become more distributed (ringy) still maintaining the relative difference among themselves, (Figure 4c and 4d). The same principle applies to town houses and village houses for both ethnic groups.

57.10

Figure 3: Space-type distribution for (a) settlements of different types and ethnic constitution (b) when Leonarisso is excluded (c) ethnic identity of houses and different types of settlement
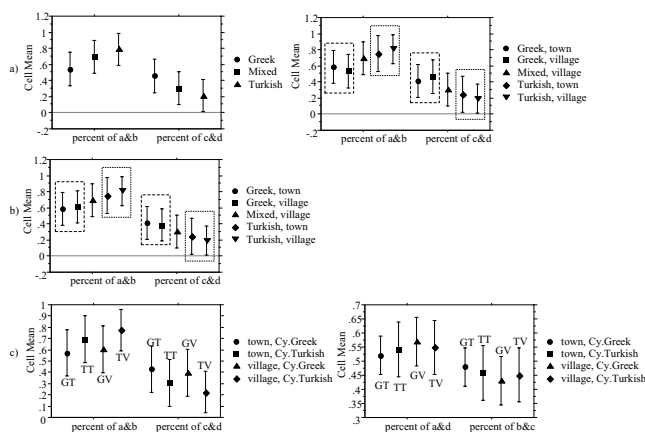
Figure 4. Space-type distribution for (a) ethnic identity of houses and (b) settlement types in time (c) Turkish houses and (d) Greek houses in time
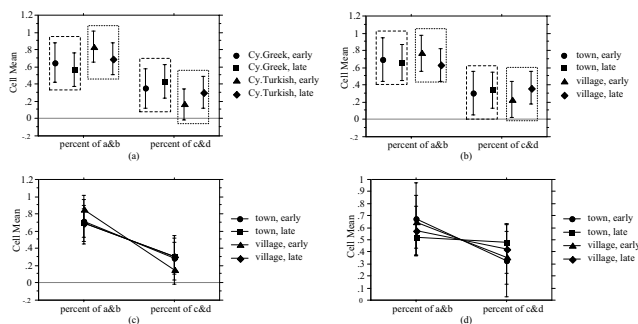
The change then, has been investigated at the level of individual settlements for the Mesarion region from where the data mostly originate. Mesarion Greek houses support the same trend of more "a-b" over "c-d" type spaces, with a less pronounced difference compared to Turkish houses. When the change of only Greek Cypriot houses in their corresponding villages in Mesarion sample is investigated, it is illustrated that (Figure 5a) in Mixed village Vatili, where Turkish Cypriots were the majority, Greek houses had at the beginning the ratio of "a-b" to "c-d" type spaces similar to Turkish houses while in time they became more distributed. The same is true for a few Greek houses in Gouphes where the majority of the population was Turkish. This could be the implication of influence between the two ethnic groups in time. Such a change has not been observed in purely Greek settlements.

The same trend towards ringy graphs is observed for the Turkish houses in the same region except for one village, Gouphes, with relatively lower values (Figure 5b). Gouphes is a small village located away from the main road network and concealed among the hills. It can be speculated that change had been much slower in this village which did not make a difference in house morphology until 1974.
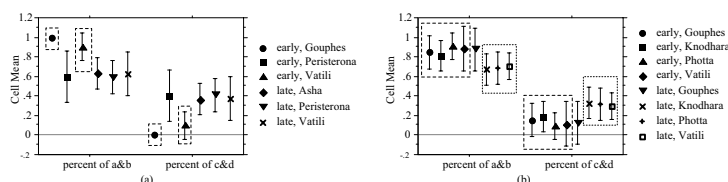
Figure 5: Space-type distribution for (a) Greek (left) and (b) Turkish (right) houses of Mesarion in time – up to 74

5. Patterns of integration

One basic measure obtained from the justified access graph is the mean integration value (RRA), which is a relativised syntactic measure put simply as "…*the extent to which the layout draws people and things together or keeps them apart*" by Hanson (Hanson, 1998). While "justified access graphs" display the permeability structure of the complex, integration value is a quantified expression of the configuration displayed by the graph. The next step investigates the distribution of overall mean integration measures (RRA)(7) across the sample so as to explore the availability of any systematic distribution across individual settlements in respect to their ethnic constitution and different types as villages and towns.

57.11

The univariate scattergram in Figure 6 (a) visually demonstrates the mean integration hierarchy for the 12 individual settlements ranking them from the most to the least integrated. The relevant syntactic information for these settlements has been tabulated in Tables 2(a) and 2(b) for "all" and for only syntactically "clear" samples, respectively. The town-based data seem to present a pattern for the mean integration across settlements of different ethnic identities (Figure 6(a)). Leonarisso, Asha and Peristerona, all Greek villages, are the most integrated, followed by a Mixed village, Ephtakomi, where Greeks are in majority. Knodhara, Photta and Gouphes, the three Turkish villages follow the Mixed. There is one Greek village - "Ayios Ambrosios", among Turkish ones shown as marked on the graph (Figure 6a). This is the village where the sample, most of which is unclear, is too small to be reliable (Table 1). Next to Turkish villages is another Mixed village, Vatili, of which majority is Turkish. After these, come all the three towns in an order, which follow the ethnic rule of Greeks being more integrated and Turks being relatively segregated. So towns are relatively segregated compared to villages. Famagusta seems to be the most segregated as a town. It should be noted that Famagusta is the only town in the sample, which contains more segregating spaces over integrating ones, (Figure 2e).

Figure 6: Distribution of RRA values with (a) exterior and (b) without exterior across settlements for "all" sample up to 74

It is interesting to see that Mixed villages locate themselves in such a way that a Greek dominated one is close to Greek and a Turkish dominated one is close to Turkish settlements.

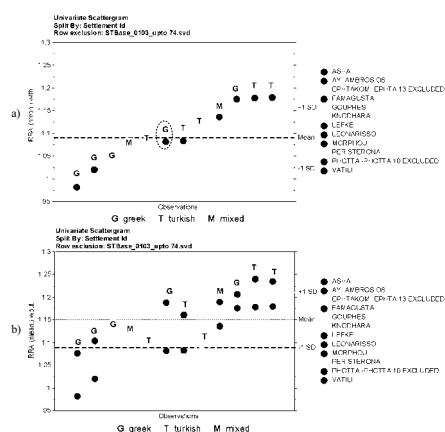Considering the RRA measures when exterior is excluded (Figure 6b), without changing the order of settlements, the general tendency is towards segregation except for Gouphes, which has been found virtually unchanged in terms of its graph properties earlier (Figure 5b). The graph shows the mean integration values with exterior as dotted to illustrate clearly the displacement when the exterior is excluded from the analysis.

57.12

Table 2: Basic syntactic data on settlement basis (a) "all" sample (top) (b) "syntactically clear" sample (bottom)

| ALL SAMPLE UPTO 74 | | | | | | | Mean Integration WITH Exterior | | | | Mean Integration WITHOUT exterior | | | |
Settlement Id	no. of cases	Identity of Settlement	Settlement type	Region	no. of convex spaces	SLR	Av. Depth	MEAN	MIN	MAX	(BDF) with	MEAN	MIN	MAX	(BDF) wout
MEAN LEONARISSO	23	GREEK	VILLAGE	KARPAS	14.391	1.420	2.515	0.982	0.429	1.597	0.670	1.078	0.449	1.728	0.648
MEAN ASHA	10	GREEK	VILLAGE	MESARION	16.800	1.171	2.681	1.020	0.459	1.768	0.675	1.104	0.479	1.875	0.673
MEAN PPERISTERONA	21	GREEK	VILLAGE	MESARION	15.143	1.123	2.632	1.024	0.454	1.599	0.719	1.112	0.484	1.727	0.710
MEAN EPHTAKOMI	30	MIXED	VILLAGE	KARPAS	13.300	1.136	2.775	1.052	0.441	1.657	0.694	1.107	0.457	1.725	0.690
MEAN KNODHARA	18	TURKISH	VILLAGE	MESARION	15.667	1.068	3.091	1.054	0.440	1.607	0.699	1.081	0.444	1.667	0.688
MEAN AY. AMBROSIOS	5	GREEK	VILLAGE	NORTHERN COAST	12.600	1.118	2.482	1.082	0.444	1.659	0.685	1.189	0.504	1.757	0.710
MEAN PHOTTA	30	TURKISH	VILLAGE	MESARION	13.767	1.083	2.639	1.084	0.421	1.720	0.657	1.161	0.448	1.829	0.655
MEAN GOUPHES	10	TURKISH	VILLAGE	MESARION	13.900	1.042	3.143	1.103	0.432	1.816	0.649	1.093	0.424	1.785	0.647
MEAN VATILI	19	MIXED	VILLAGE	MESARION	13.684	1.059	2.939	1.137	0.502	1.826	0.701	1.190	0.508	1.912	0.685
MEAN MORPHOU	10	GREEK	TOWN	NORTHERN COAST	15.300	1.130	3.360	1.176	0.572	1.714	0.756	1.207	0.596	1.718	0.778
MEAN LEFKE	21	TURKISH	TOWN	NORTHERN COAST	15.238	1.049	3.022	1.179	0.568	1.742	0.755	1.241	0.607	1.792	0.775
MEAN FAMAGUSTA	11	TURKISH	TOWN	MESARION	11.273	1.091	2.876	1.180	0.542	1.832	0.732	1.236	0.546	1.849	0.730
MEAN/ALL	**208**				**14.279**	**1.131**	**2.819**	**1.081**	**0.469**	**1.698**	**0.698**	**1.144**	**0.488**	**1.776**	**0.694**

| ALL SAMPLE UPTO 74 - SYNT. CLEAR CASES | | | | | | | Mean Integration WITH Exterior | | | | Mean Integration WITHOUT exterior | | | |
Settlement Id	no. of cases	Identity of Settlement	Settlement type	Region	no. of convex spaces	SLR	Av. Depth	MEAN	MIN	MAX	(BDF) with	MEAN	MIN	MAX	(BDF) wout
MEAN PPERISTERONA	15	GREEK	VILLAGE	MESARION	16.067	1.107	2.650	0.995	0.437	1.558	0.713	1.072	0.449	1.658	0.698
MEAN LEONARISSO	15	GREEK	VILLAGE	KARPAS	14.200	1.251	2.621	1.004	0.445	1.642	0.664	1.086	0.459	1.737	0.652
MEAN ASHA	8	GREEK	VILLAGE	MESARION	17.250	1.164	2.773	1.024	0.472	1.766	0.688	1.100	0.486	1.874	0.678
MEAN AY. AMBROSIOS	2	GREEK	VILLAGE	NORTHERN COAST	13.500	1.042	2.630	1.042	0.393	1.584	0.680	1.101	0.415	1.643	0.680
MEAN KNODHARA	15	TURKISH	VILLAGE	MESARION	15.267	1.067	3.068	1.055	0.438	1.592	0.700	1.080	0.446	1.642	0.692
MEAN EPHTAKOMI	15	MIXED	VILLAGE	KARPAS	14.133	1.137	2.846	1.078	0.466	1.698	0.706	1.139	0.491	1.773	0.709
MEAN GOUPHES	9	TURKISH	VILLAGE	MESARION	13.667	1.046	3.063	1.080	0.408	1.760	0.642	1.068	0.401	1.719	0.642
MEAN PHOTTA	21	TURKISH	VILLAGE	MESARION	13.048	1.088	2.621	1.081	0.409	1.708	0.652	1.177	0.442	1.835	0.654
MEAN FAMAGUSTA	9	TURKISH	TOWN	MESARION	12.222	1.111	2.922	1.130	0.532	1.781	0.734	1.192	0.540	1.814	0.727
MEAN VATILI	13	MIXED	VILLAGE	MESARION	14.462	1.069	3.088	1.139	0.515	1.872	0.695	1.175	0.523	1.923	0.686
MEAN LEFKE	15	TURKISH	TOWN	NORTHERN COAST	15.333	1.058	2.807	1.168	0.567	1.735	0.765	1.238	0.613	1.799	0.783
MEAN MORPHOU	10	GREEK	TOWN	NORTHERN COAST	15.300	1.130	3.360	1.176	0.572	1.714	0.756	1.207	0.596	1.718	0.778
MEAN/ALL	**147**				**14.544**	**1.110**	**2.857**	**1.081**	**0.472**	**1.700**	**0.699**	**1.140**	**0.491**	**1.768**	**0.698**

It seems that when settlement means are considered, all except Gouphes are exterior oriented. When the degree of segregation among Greek and Turkish Cypriot settlements is investigated, it is seen that all Greek villages experience a larger displacement compared to Turkish ones. Except for Photta, the integration values of Turkish villages experience little changes when the exterior is excluded. This can be an implication of the lesser degree of exterior–orientation in Turkish villages than in Greek ones.

The syntactic information based on the ethnic constitution of villages and towns has been tabulated in Tables 3(a) and 3(b). Table 3 (a) is for all examples up to 1974 from which two houses, with unclear ethnic identities, have been excluded. Table 3(b) is constructed only from syntactically clear cases.

57.13

Table 3: Basic syntactic data for villages and towns for (a) "all" sample, (top), (b) "syntactically clear" sample, (bottom)

SAMPLE UPTO 74 - syntactically clear cases	no.of convex spaces	percent of a&b	percent of c&d	percent of a&d	percent of b&c	SLR	no. of floors	no. of entry	Av. Depth	Mean Integration WITH Exterior MEAN	MIN	MAX	BDF with	Mean Integration WITHOUT exterior MEAN	MIN	MAX	BDF wout
MEAN-ALL TOWN	14.500	0.662	0.338	0.535	0.465	1.093	1.471	1.471	3.000	1.161	0.559	1.741	0.754	1.217	0.589	1.779	0.767
MEAN-ALL VILLAGE	14.558	0.695	0.305	0.558	0.442	1.115	1.634	1.823	2.814	1.058	0.445	1.688	0.682	1.117	0.461	1.765	0.677
MEAN-GREEK TOWN	15.300	0.590	0.410	0.518	0.482	1.130	1.500	1.200	3.360	1.176	0.572	1.714	0.756	1.207	0.596	1.718	0.778
MEAN-TURKISH TOWN	14.167	0.692	0.308	0.542	0.458	1.078	1.458	1.583	2.850	1.154	0.554	1.752	0.753	1.221	0.586	1.805	0.762
MEAN-GREEK VILLAGE	15.475	0.562	0.438	0.570	0.430	1.169	1.525	2.500	2.663	1.007	0.445	1.632	0.688	1.084	0.459	1.730	0.676
MEAN-MIXED VILLAGE	14.286	0.707	0.293	0.554	0.446	1.105	1.536	1.643	2.958	1.106	0.489	1.779	0.701	1.156	0.506	1.842	0.699
MEAN-TURKISH VILLAGE	13.911	0.806	0.194	0.551	0.449	1.072	1.795	1.333	2.858	1.072	0.418	1.680	0.666	1.123	0.435	1.748	0.664
MEAN-GREEK TOWN HOUSES	15.222	0.573	0.427	0.520	0.480	1.137	1.444	1.222	3.266	1.145	0.543	1.693	0.743	1.178	0.568	1.686	0.769
MEAN-TURKISH TOWN HOUSES	14.240	0.694	0.306	0.541	0.459	1.077	1.480	1.560	2.904	1.166	0.565	1.758	0.758	1.231	0.596	1.812	0.766
MEAN-GREEK VILLAGE HOUSES	15.094	0.605	0.395	0.570	0.430	1.155	1.528	2.302	2.745	1.042	0.463	1.674	0.695	1.110	0.478	1.757	0.687
MEAN-TURKISH VILLAGE HOUSES	14.083	0.774	0.226	0.549	0.451	1.079	1.729	1.400	2.875	1.071	0.430	1.699	0.672	1.124	0.446	1.772	0.669
MEAN - ALL	**14.544**	**0.687**	**0.313**	**0.553**	**0.447**	**1.110**	**1.596**	**1.741**	**2.857**	**1.081**	**0.472**	**1.700**	**0.699**	**1.140**	**0.491**	**1.768**	**0.698**

SAMPLE UPTO 74 - ephtakomi 13 and photta 10 excluded	no.of convex spaces	percent of a&b	percent of c&d	percent of a&d	percent of b&c	SLR	no. of floors	no. of entry	Av. Depth	Mean Integration WITH Exterior MEAN	MIN	MAX	BDF with	Mean Integration WITHOUT exterior MEAN	MIN	MAX	BDF wout
MEAN-ALL TOWN	14.214	0.711	0.289	0.546	0.454	1.079	1.476	1.405	3.064	1.179	0.562	1.759	0.749	1.231	0.589	1.789	0.764
MEAN-ALL VILLAGE	14.295	0.677	0.323	0.564	0.436	1.144	1.606	1.880	2.757	1.057	0.445	1.683	0.685	1.122	0.463	1.773	0.677
MEAN-GREEK TOWN	15.300	0.590	0.410	0.518	0.482	1.130	1.500	1.200	3.360	1.176	0.572	1.714	0.756	1.207	0.596	1.718	0.778
MEAN-TURKISH TOWN	13.875	0.749	0.251	0.555	0.445	1.063	1.469	1.469	2.972	1.180	0.559	1.773	0.747	1.239	0.586	1.812	0.759
MEAN-GREEK VILLAGE	14.915	0.535	0.465	0.574	0.426	1.246	1.492	2.508	2.582	1.012	0.444	1.632	0.690	1.104	0.471	1.755	0.680
MEAN-MIXED VILLAGE	13.449	0.695	0.305	0.566	0.434	1.106	1.490	1.653	2.838	1.085	0.465	1.722	0.697	1.139	0.477	1.797	0.688
MEAN-TURKISH VILLAGE	14.379	0.805	0.195	0.553	0.447	1.071	1.825	1.431	2.866	1.078	0.429	1.701	0.669	1.124	0.443	1.771	0.664
MEAN-GREEK TOWN HOUSES	15.222	0.573	0.427	0.520	0.480	1.137	1.444	1.222	3.266	1.145	0.543	1.693	0.743	1.178	0.568	1.686	0.769
MEAN-TURKISH TOWN HOUSES	13.939	0.749	0.251	0.554	0.446	1.063	1.485	1.455	3.009	1.188	0.567	1.776	0.751	1.246	0.594	1.817	0.763
MEAN-GREEK VILLAGE HOUSES	14.368	0.591	0.409	0.572	0.428	1.201	1.506	2.218	2.675	1.042	0.455	1.665	0.694	1.118	0.477	1.766	0.685
MEAN-TURKISH VILLAGE HOUSES	14.215	0.772	0.228	0.555	0.445	1.080	1.718	1.506	2.847	1.073	0.434	1.702	0.674	1.125	0.448	1.781	0.668
MEAN - ALL	**14.279**	**0.684**	**0.316**	**0.561**	**0.439**	**1.131**	**1.580**	**1.784**	**2.819**	**1.081**	**0.469**	**1.698**	**0.698**	**1.144**	**0.488**	**1.776**	**0.694**

Proceedings . 4th International Space Syntax Symposium London 2003

The mean integration values and the base difference factors for both only "clear" and "all" samples show that villages are more integrated and are more structured than towns. Turkish town houses are more segregated than Greek ones and are slightly less structured. When the exterior is dismounted, Turkish houses are still segregated nevertheless slightly more structured compared to Greek ones. This again supports the implication that although both house groups seem to be exterior-oriented, the exterior is more essential in structuring town houses considered to be Greek. In villages, although Turkish houses are again more segregated compared to Greek ones, they are more structured. When the exterior is dismounted the trend still remains the same. This might be due to the fact that the relationship with the exterior does not imply a difference for both house groups in villages.

6. Spatial patterns across traditional Cypriot Houses

57.14

After the analysis of syntactic measures on global levels of settlements, the focus of investigation has turned into the house to the scale of constituent spaces, in search for a systematic relationship in the way individual spaces are embedded into the overall configuration. Thus, this step of analysis explores the spatial themes underlying the houses and the extent to which these relate to ethnicity together with their consistency across villages and towns. The investigation is furthered with the changes these patterns experience through time.

The spatial elements which make up the house are the "courtyards", multi-functional living spaces referred as "rooms" and "main rooms", multi-functional transitional spaces such as "central hallways" and "loggias", secondary spaces as "kitchens" and storage facilities for animals and goods.

6.1. Entire sample

When houses are investigated individually for their most integrated space, it is found that 67% of the sample (210 total) are "courtyard-integrated", 22% "central space-integrated" and 10% are "loggia-integrated" houses, (Figure 7 - 9). Of the two key spaces, "courtyard" is found to be significantly more integrated than "central space" (unpaired t-value=2.673 p-value=0.0082) statistically. Although "loggia" has been separated from the "central space"(9), it is in fact a semi-open outer hall lying in front of the rooms, which can be treated together with the central space theme.

Overall review of the patterns of integration of the spatial components without taking into account the effect of ethnicity, time and settlement type have been presented in Tables 4(a) and 4(b). The tables summarise the mean basic syntactic

values for the key spatial components of "all" house layouts up to 1974 as a group (Table 4a), and for the syntactically "clear" sample of the same period (Table 4b). The spaces are ordered in descending order of integration in each of the tables.

Table 4: Integration values for the main spatial components for (a) all sample up to 74 (left) and (b) syntactically clear sample (right)

SAMPLE UPTO 74-210	no.	md	Intgr/with	Intgr/wout	SAMPLE UPTO 74 74-synt. Clear - 14	no.	md	Intgr/with	Intgr/wout
courts	207	2.020	0.540	0.566	courts	144	2.080	0.538	0.556
c.c. hallway-grnd	79	1.734	0.611	0.666	c.c. hallway-grnd	65	1.754	0.621	0.679
loggia	59	2.186	0.636	0.651	loggia	34	2.294	0.648	0.658
s.c.c. hallway-grnd	41	1.317	0.755	0.838	s.c.c. hallway-grnd	28	1.250	0.748	0.832
m.room-grnd	129	2.473	1.085	1.185	kitchen	135	3.178	1.101	1.144
kitchen	183	3.153	1.106	1.154	m.room-grnd	85	2.541	1.118	1.212
ext	210		1.170		rooms-grnd	101	2.773	1.170	1.248
c.c. hallway-upper	34	3.971	1.175	1.205	ext	147		1.171	
rooms-grnd	131	2.705	1.178	1.264	c.c. hallway-upper	27	4.000	1.193	1.227
s.c.c. hallway-upper	2	4.000	1.270	1.280	m.room-upper	59	4.203	1.571	1.614
m.room-upper	87	4.126	1.576	1.633	rooms-upper	41	4.882	1.616	1.652
rooms-upper	49	4.850	1.615	1.653	s.c.c. hallway-upper	–	–	–	–
Mean RRA-for sample	**210**	**2.812**	**1.083**	**1.146**	**Mean RRA-for sample**	**147**	**2.857**	**1.081**	**1.140**

57.15

The emergent pattern expresses the dominance of "courtyard-integrated" theme across the overall sample. There is a strong consistency in the order of integration for both syntactically "clear" and "all" samples. In any case, the inequality genotype for the first four spaces are exactly the same which gives a rank order of Cy < CSc < Lg < CSsc(10). These are the spaces which fall on the integrated side of the mean. The rest of the spaces are on the segregated side and kitchens have integration values very close to the mean. Secondary rooms are more segregated than main rooms on the ground floor and the most segregated ones are the rooms on the upper floor.
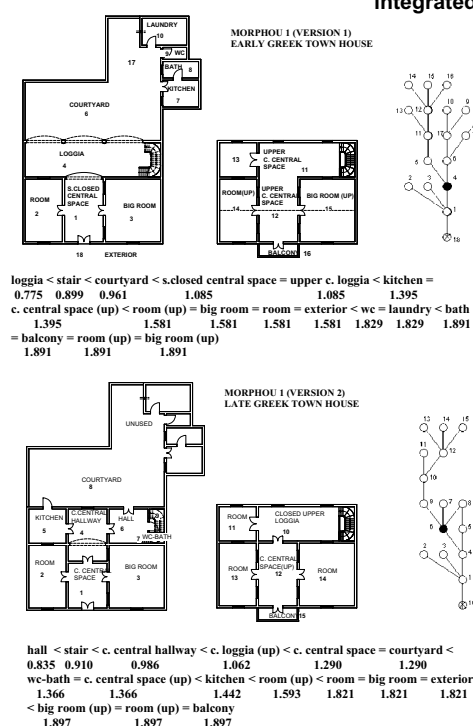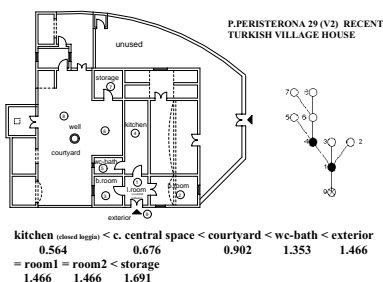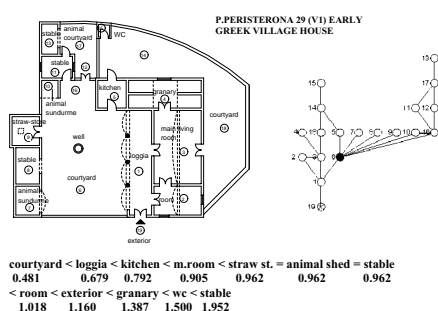
Figure 8: (a) Top. A "loggia-integrated" (central space) early Greek town house, and (b) Bottom. Second version of the house in (a), a late Greek town house – "central space-integrated".

Figure 7: (a) Top. A "courtyard-integrated" early Greek village house, and (b) Bottom. Second version of the house in (a), a "closed loggia-integrated" (central space) recent Turkish village house.

P.PERISTERONA 29 (V1) EARLY GREEK VILLAGE HOUSE

courtyard < loggia < kitchen < m.room < straw st. = animal shed = stable
0.481   0.679   0.792   0.905   0.962   0.962   0.962
< room < exterior < granary < wc < stable
1.018   1.160   1.387   1.500 1.952

P.PERISTERONA 29 (V2) RECENT TURKISH VILLAGE HOUSE

kitchen (closed loggia) < c. central space < courtyard < wc-bath < exterior
0.564   0.676   0.902   1.353   1.466
= room1 = room2 < storage
1.466   1.466   1.691

MORPHOU 1 (VERSION 1) EARLY GREEK TOWN HOUSE

loggia < stair < courtyard < s.closed central space = upper c. loggia < kitchen =
0.775   0.899   0.961   1.085   1.085   1.395
c. central space (up) < room (up) = big room = room = exterior < wc = laundry < bath
1.395   1.581   1.581   1.581   1.581   1.829   1.829   1.891
= balcony = room (up) = big room (up)
1.891   1.891   1.891

MORPHOU 1 (VERSION 2) LATE GREEK TOWN HOUSE

hall < stair < c. central hallway < c. loggia (up) < c. central space = courtyard <
0.835   0.910   0.986   1.062   1.290   1.290
wc-bath < c. central space (up) < kitchen < room (up) < room = big room = exterior
1.366   1.366   1.442   1.593   1.821   1.821   1.821
< big room (up) = room (up) = balcony
1.897   1.897   1.897

PHOTTA 2 (VERSION 1) EARLY
TURKISH VILLAGE HOUSE - COURTYARD INTEGRATED
courtyard < cy. entr < stair = animal cy. < wc = stable < exterior < m. room 1(up)
0.440   0.715   0.825   0.825   1.045 1.045   1.320   1.320
= kitchen = room (g) < straw store = animal shed < m. room 2(up)
1.320   1.320   1.430   1.430   1.925

KNODHARA 6 (VERSION 1)
EARLY TURKISH VILLAGE HOUSE - CENTRAL SPACE- INTEGRATED
c.central space < courtyard < stair < c.central space (up) < exterior < room 1 = room 2
0.675   0.779   0.831   1.039   1.091   1.143   1.143
< room 1(up) = room 2(up) < room 3(up) = balcony < kitchen = shop = wc < bath < granary
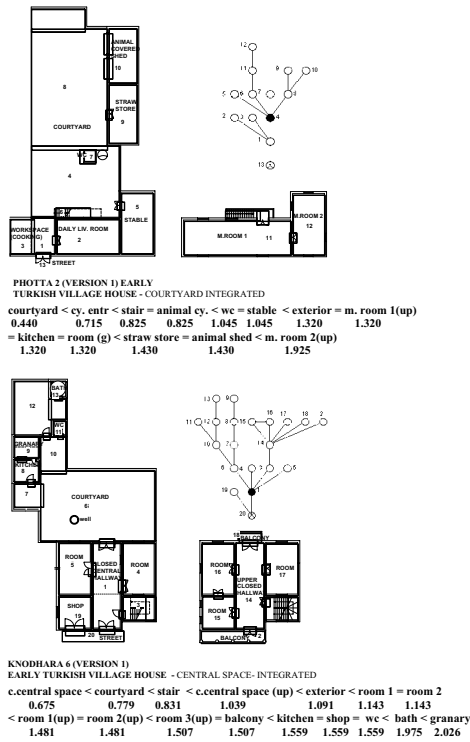1.481   1.481   1.507   1.507   1.559   1.559 1.559 1.975 2.026

Figure 9: (a) Top. A "courtyard-integrated" early Turkish village house, and (b) Bottom. "Central space-integrated" early Turkish village house)

57.16

6.2. Ethnicity (syntactically clear cases)

Ethnicity is then introduced into the overall sample of syntactically clear cases in order to explore varieties in the patterning of spaces. Table 5(a) demonstrates the spatial components for Turkish and Greek cases separately in a synchronic manner, ordered in itself from most to least integrated.

The ranked tables demonstrate very clearly that both Turkish and Greek houses are dominantly "courtyard-integrated". The average integration value of the Turkish sample is on the segregated side, (mean RRA for Turkish 1.099, mean RRA for all 1.081) whereas that of the Greek ones is on the integrated side, (mean RRA Greek 1.057, mean RRA for all 1.081) when compared to the mean integration of overall sample of both categories (for syntactically clear cases). However, neither Greek houses are significantly more integrating (one sample t-value=-1.051 p-value=0.2976) nor the Turkish ones are significantly more segregating, (one sample t-value=1.058 p-value=0.2931) when compared to the mean RRA for the entire sample. The difference in their integration values is still not statistically significant (unpaired t-value=-1.505 p-value=0.1344).

When Greek and Turkish Cypriot houses are investigated in their own context, the spaces which are integrated are exactly the same. However the genotype varies slightly as revealed in the rank order of both tables. While "kitchens" are more integrated in the Turkish sample, the "exterior" (unpaired t-value=-2.282 p-value=0.0239), "upper main rooms" (unpaired t-value=-2.439 p-value=0.0179) and "upper secondary rooms" (unpaired t-value=-2.114 p-value=0.0410) of the Greek sample are found to be significantly more integrated than Turkish houses (Table 5a).

The synchronic view has then been carried into the settlement types and regions in order to investigate the consistency of the above strong theme of "courtyard-integrated" configuration.

6.3. Villages – Towns (syntactically clear cases)

When the spatial components are investigated against settlement types, two dominant themes emerge corresponding respectively to houses, namely "courtyard-integrated" village house and "central space-integrated" town house. The former refers to "rural" and the latter to an "urban" or a "semi-urban" type, (Figure 9). It has been found statistically that the difference in integration values for village and town houses is highly significant (unpaired t-value=3.223 p-value=0.0016) with villages being more integrated than towns.

Villages have more spaces on the integrated side of their overall mean. These include courtyards, transitional and central spaces, kitchens and rooms, whereas towns have fewer spaces on the integrated side, limited only to the central hallways and courtyards. Rooms and kitchens are profoundly segregated in towns. Upper rooms together with the exterior form the segregated poles of the houses, whereas courtyards and central hallways form the integrated pole in villages. However in the case of towns, upper rooms and ground floor main rooms constitute the segregated pole of the house and the exterior, although more segregated in towns compared to villages, lies in between the integrated and segregated poles (Table 5b).

Taken as a set, the use of the difference factor for the main components of the house clarifies the key roles spaces play in structuring the house complex. "Courtyard" and "central space-integrated" themes have been investigated in terms of the difference factors of their key spaces, rooms and exterior in order to better understand the configuration of each individually.

For the "courtyard-integrated" theme while the difference factor between courtyard and the two rooms, is strong at 0.751, this weakens to 0.868 when courtyard is substituted for the central space. The degree of differentiation is still strong at 0.801 for courtyard, central space and room 1, whereas it is even stronger when room 2 substitutes for the first at 0.725. For courtyard, the exterior and a room the factor is strong at 0.797. When courtyard is replaced by the central space, the difference is weaker at 0.895. The emerging pattern for this theme is that, courtyard as the key structuring element not only structures the relations between main living spaces by bringing them together but also links them to the exterior.

When the difference factors among the three spaces in town houses are investigated, the difference between courtyard and the two rooms, is found to be 0.885, while it gets stronger at 0.849 when the central space replaces courtyard. Famagusta is the only town, which has more "courtyard-integrated" houses than the "central space-integrated" ones. When this town is excluded from the analysis for a

57.17

moment, it is found that the differentiation among courtyard and the two rooms, is even weaker at 0.911, while it gets even stronger at 0.843, when central space substitutes courtyard. The factor for the courtyard, central space and room 2 is still strong at 0.806. The differentiation among courtyard, exterior and room 1 is weak at 0.903, which gets stronger at 0.863 when central space replaces courtyard. Although the values are not as strong as the ones for villages, the role of structuring the complex has been undertaken by the central space in this group. Courtyard is more of a separator for the main living spaces within the overall configuration.

6.4. Ethnicity in villages and towns

The analysis of entire sample at this stage suggests that both Greek and Turkish houses are dominantly "courtyard-integrated", which together with loggias and central hallways form the integrated end, while upper rooms and the exterior are at the segregated end with the kitchen and ground floor rooms lying in between. Now that two distinct genotypes those of "central space" and "courtyard-integrated" themes have been found, the need to investigate its consistency across ethnicity under two settlement types remains. For this purpose, both villages and towns have been decomposed into Greek and Turkish samples individually.

Table 5c demonstrates that both Turkish and Greek houses in villages are "courtyard-integrated" while Turkish cases are slightly more segregated than the Greeks which is not a significant difference (unpaired t-value=-1.007 p-value=0.3161). Among the spatial components the only significant difference occurs for the exterior which is more integrating for Greek village houses than for Turkish ones. While the "exterior" together with the upper rooms, forms the segregated pole in the Turkish sample, it is replaced by the ground floor rooms in the Greek sample. On the other hand while all the rooms fall on the segregated side of the mean for Turkish village houses, main rooms on the ground level are on the integrated side for the Greek village sample. It is interesting to see kitchens on the integrated side for both groups.

Table 5d reveals clearly that the strong theme of "central space-integrated" configuration applies for both ethnic group houses in towns. However the limited number of clear cases for Greek town houses should be considered. If loggias are ignored, which occur only four times within the sample, closed central spaces are the most integrated across both ethnic groups. The number of spaces, which are on the integrated side of the mean, is exactly same for both ethnic groups. Main rooms on the ground level together with the rooms on the upper level constitute the segregated pole, whereas the central spaces and courtyard constitute the integrated

57.18

end, with kitchens and ground floor rooms lying in between. Turkish houses in towns are still slightly more segregated than the Greeks and are on the segregated side of the mean integration for entire sample.

6.5. Ethnicity – Regional

Table 5e shows the Mesarion region as split into two categories of ethnicity across villages. Though the difference in the mean integration for Greek and Turkish cases in Mesarion is not significant, (unpaired t-value=-1.539 p-value=0.1277), yet again the Turkish sample is more segregated than the Greek ones. Kitchens, together with the central and transitional spaces form the integrated pole, while rooms and exterior are at the segregated end for Turkish sample. For the Greeks, the exterior is also included into the integrated end, leaving the segregated pole exclusively to rooms.

Table 5: Integration values for the main spatial components of syntactically clear sample for (a) Turkish and Greek houses, (b) villages and towns, (c) the ethnic composition of villages, (d) the ethnic composition of towns, (e) the ethnic composition of Mesarion Region

57.19

a)

SAMPLE UPTO 74-ETHNICITY -synt. Clear - 147		no.	md	Intgr/with	Intgr/wout	SAMPLE UPTO 74-ETHNICITY -synt. Clear - 147		no.	md	Intgr/with	Intgr/wout
courts	T	84	2.080	0.531	0.548	courts	G	60	2.070	0.547	0.568
c.c. hallway-grnd	T	31	1.839	0.644	0.699	c.c. hallway-grnd	G	34	1.676	0.600	0.661
loggia	T	15	2.533	0.686	0.698	loggia	G	19	2.105	0.619	0.626
s.c.c. hallway-grnd	T	17	1.353	0.702	0.792	s.c.c. hallway-grnd	G	11	1.091	0.819	0.895
kitchen	T	79	3.177	1.119	1.165	m.room-grnd	G	37	2.297	1.062	1.166
m.room-grnd	T	48	2.729	1.160	1.247	c.c. hallway-upper	G	10	4.100	1.073	1.079
rooms-grnd	T	56	2.897	1.203	1.278	kitchen	G	56	3.179	1.075	1.116
ext	T	85		1.221		ext	G	62		1.104	
c.c. hallway-upper	T	17	3.941	1.264	1.313	rooms-grnd	G	45	2.619	1.129	1.211
m.room-upper	T	39	4.115	1.621	1.693	m.room-upper	G	20	4.375	1.473	1.462
rooms-upper	T	24	4.767	1.700	1.765	rooms-upper	G	17	5.044	1.498	1.493
s.c.c. hallway-upper	T	_	_	_	_	s.c.c. hallway-upper	G	_	_	_	_
Mean RRA-T-sample (T)		**85**	**2.883**	**1.099**	**1.155**	**Mean RRA-G-sample (G)**		**62**	**2.820**	**1.057**	**1.120**
Mean RRA-for all	**T+G**	**147**	**2.857**	**1.081**	**1.140**	**Mean RRA-for all**	**T+G**	**147**	**2.857**	**1.081**	**1.140**

b)

SAMPLE UPTO 74-ST. TYPE - 113-synt. Clear cases - VILLAGES		no.	md	Intgr/with	Intgr/wout	SAMPLE UPTO 74-ST. TYPE - 34-synt. Clear cases-TOWNS		no.	md	Intgr/with	Intgr/wout
courts	V	111	1.940	0.475	0.493	c.c. hallway-grnd	T	20	1.700	0.645	0.710
c.c. hallway-grnd	V	45	1.778	0.610	0.665	loggia	T	9	2.111	0.666	0.697
loggia	V	25	2.360	0.642	0.644	courts	T	33	2.540	0.748	0.768
s.c.c. hallway-grnd	V	15	1.333	0.721	0.792	s.c.c. hallway-grnd	T	13	1.154	0.780	0.879
kitchen	V	101	3.010	1.045	1.092	rooms-grnd	T	32	2.611	1.247	1.346
m.room-grnd	V	67	2.560	1.053	1.141	kitchen	T	34	3.676	1.267	1.300
c.c. hallway-upper	V	15	3.533	1.088	1.130	ext	T	34		1.294	
rooms-grnd	V	69	2.848	1.134	1.203	c.c. hallway-upper	T	12	4.583	1.325	1.348
ext	V	113		1.134		m.room-grnd	T	18	2.472	1.357	1.476
m.room-upper	V	53	4.075	1.543	1.585	rooms-upper	T	14	5.321	1.724	1.761
rooms-upper	V	27	4.654	1.561	1.595	m.room-upper	T	6	5.333	1.816	1.877
s.c.c. hallway-upper	V	_	_	_	_	s.c.c. hallway-upper	T	_	_	_	_
Mean RRA-for VILLAGE (V)		**113**	**2.814**	**1.058**	**1.117**	**Mean RRA-for TOWN (T)**		**34**	**3.000**	**1.161**	**1.217**
Mean RRA-for sample (V+T)		**147**	**2.857**	**1.081**	**1.140**	**Mean RRA-for sample (V+T)**		**147**	**2.857**	**1.081**	**1.140**

c)

VILLAGE HOUSES UPTO 74 -ETHNICITY - 60 -synt. Clr cases		no.	md	Intgr/with	Intgr/wout	VILLAGE HOUSES UPTO 74 -ETHNICITY - 53 -synt. Clr cases		no.	md	Intgr/with	Intgr/wout
courts	T	60	1.960	0.463	0.479	courts	G	51	1.910	0.489	0.511
c.c. hallway-grnd	T	16	1.875	0.610	0.658	loggia	G	14	2.071	0.604	0.605
loggia	T	11	2.727	0.690	0.693	c.c. hallway-grnd	G	29	1.724	0.610	0.669
s.c.c. hallway-grnd	T	8	1.500	0.707	0.782	s.c.c. hallway-grnd	G	7	1.143	0.736	0.803
kitchen	T	54	2.981	1.052	1.100	m.room-grnd	G	33	2.333	1.016	1.119
m.room-grnd	T	34	2.779	1.089	1.162	c.c. hallway-upper	G	7	3.714	1.024	1.036
c.c. hallway-upper	T	8	3.375	1.144	1.211	kitchen	G	47	3.043	1.037	1.082
rooms-grnd	T	33	3.045	1.165	1.222	ext	G	53		1.060	
ext	T	60		1.200		rooms-grnd	G	36	2.667	1.106	1.18
m.room-upper	T	35	4.014	1.589	1.660	m.room-upper	G	18	4.194	1.452	1.43
rooms-upper	T	14	4.405	1.621	1.696	rooms-upper	G	13	4.923	1.495	1.487
s.c.c. hallway-upper	T					s.c.c. hallway-upper	G				
Mean RRA-for Tsample (T)		**60**	**2.875**	**1.071**	**1.124**	**Mean RRA-for Gsample (G)**		**53**	**2.745**	**1.042**	**1.110**
Mean RRA-for all	**T+G**	**113**	**2.814**	**1.058**	**1.117**	**Mean RRA-for all**	**T+G**	**113**	**2.814**	**1.058**	**1.117**

d)

TOWN HOUSES UPTO 74-ETHNICITY - 25-synt. Clear cases		no.	md	Intgr/with	Intgr/wout	TOWN HOUSES UPTO 74-ETHNICITY - 9-synt. Clear cases		no.	md	Intgr/with	Intgr/wout
loggia	T	4	2.000	0.674	0.713	c.c. hallway-grnd	G	5	1.400	0.537	0.612
c.c. hallway-grnd	T	15	1.800	0.681	0.743	loggia	G	5	2.200	0.660	0.684
s.c.c. hallway-grnd	T	9	1.222	0.699	0.801	courts	G	9	2.940	0.873	0.893
courts	T	24	2.390	0.701	0.722	s.c.c. hallway-grnd	G	4	1.000	0.964	1.056
rooms-grnd	T	23	2.683	1.258	1.358	c.c. hallway-upper	G	3	5.000	1.187	1.179
kitchen	T	25	3.600	1.265	1.304	rooms-grnd	G	9	2.426	1.222	1.317
ext	T	25		1.270		kitchen	G	9	3.889	1.272	1.289
m.room-grnd	T	14	2.607	1.332	1.454	ext	G	9		1.361	
c.c. hallway-upper	T	9	4.444	1.371	1.404	m.room-grnd	G	4	2.000	1.444	1.551
rooms-upper	T	10	5.275	1.811	1.861	rooms-upper	G	4	5.438	1.506	1.512
m.room-upper	T	4	5.000	1.893	1.979	m.room-upper	G	2	6.000	1.660	1.671
s.c.c. hallway-upper	T					s.c.c. hallway-upper	G				
Mean RRA-for Tsample (T)		**25**	**2.904**	**1.166**	**1.231**	**Mean RRA-for sample (G)**		**9**	**3.266**	**1.145**	**1.178**
Mean RRA-for all	**T+G**	**34**	**3.000**	**1.161**	**1.217**	**Mean RRA-for all**	**T+G**	**34**	**3.000**	**1.161**	**1.217**

e)

MESARION VILLAGE HOUSES - UPTO 74-ETHNICITY - 54 -Clear		no.	md	Intgr/with	Intgr/wout	MESARION VILLAGE HOUSES - UPTO 74-ETHNICITY - 27 -Clear		no.	md	Intgr/with	Intgr/wout
courts	T	54	1.980	0.464	0.476	courts	G	27	2.170	0.490	0.498
c.c. hallway-grnd	T	15	1.800	0.620	0.673	c.c. hallway-grnd	G	20	1.700	0.601	0.656
loggia	T	11	2.727	0.690	0.693	loggia	G	5	2.000	0.624	0.645
s.c.c. hallway-grnd	T	7	1.429	0.735	0.818	s.c.c. hallway-grnd	G	5	1.000	0.674	0.740
kitchen	T	49	2.980	1.069	1.118	kitchen	G	26	3.192	0.979	1.002
m.room-grnd	T	28	2.786	1.126	1.201	ext	G	27		1.013	
c.c. hallway-upper	T	8	3.375	1.144	1.211	c.c. hallway-upper	G	4	3.750	1.033	1.043
rooms-grnd	T	31	3.048	1.188	1.248	m.room-grnd	G	16	2.625	1.117	1.193
ext	T	54		1.217		rooms-grnd	G	23	2.609	1.133	1.218
m.room-upper	T	32	3.984	1.598	1.668	m.room-upper	G	8	3.875	1.445	1.39
rooms-upper	T	14	4.405	1.621	1.696	rooms-upper	G	6	4.667	1.487	1.512
s.c.c. hallway-upper	T					s.c.c. hallway-upper	G				
Mean RRA-for TURKISH (T)		**54**	**2.894**	**1.081**	**1.131**	**Mean RRA-for GREEK (G)**		**27**	**2.756**	**1.031**	**1.096**
Mean RRA-for all	**T+G**	**81**	**2.848**	**1.064**	**1.120**	**Mean RRA-for all**	**T+G**	**81**	**2.848**	**1.064**	**1.120**

57.20

Table 5: Integration values for the main spatial components of syntactically clear sample for (a) Turkish and Greek houses, (b) villages and towns, (c) the ethnic composition of villages, (d) the ethnic composition of towns, (e) the ethnic composition of Mesarion Region

For Turkish houses (all sample up to 74), the difference between the courtyard and the two rooms is strong at 0.722. When the courtyard is substituted for the central space the factor gets weaker at 0.855. The difference between courtyard, central space and a room is even stronger at 0.697. The exterior lies at the segregated end for the Turkish sample in Mesarion. When courtyard, exterior and room are investigated, the difference is strong at 0.713 while it gets weaker at 0.834 when central space replaces courtyard (Table 5e).

For the Greek houses in Mesarion, the differentiation between courtyard and the two rooms is strong at 0.798 while it gets weaker at 0.863 when courtyard is replaced by central space. The courtyard, central space and room 2 have an even stronger difference factor of 0.729. The differentiation between courtyard, exterior (which lies on the integrated end) and room 1 is strong at 0.796 while it gets weaker when central spaces replaces courtyard at 0.858. When Greek and Turkish values are compared in terms of differentiation across their main components, although the courtyard emerges as the key structuring element in both cases, the difference is in the degree of its functioning. It seems that the courtyard has a more powerful role in structuring the main living spaces and their relation to the exterior in the Turkish cases (Table 5e).

When Morphou and Lefke are considered (one Greek and one Turkish town respectively) from within the same region, (Table 6) it is observed that both have very close mean integration values. Central hallways, closed or semi-closed, loggias and courtyards, form the integrated spaces, which lie on the integrated side of the mean for both. While upper rooms and kitchen are at the segregated pole in Lefke, these are replaced by upper rooms and exterior in Greek houses of Morphou. It has been found that for both towns irrespective of their ethnic identities, central spaces including loggias are essential in bringing together main living spaces and secondary functions located around the courtyard and connecting them to the exterior. The courtyard is more of a separator between the main living unit and the secondary courtyard functions, whereas central spaces and loggia hold the system together and connect them to the exterior(11).

Table 6: Integration values for the main spatial components of syntactically clear sample of a (a) Greek (Morphou) (left) and (b) Turkish town (Lefke) (right) in Northern Coast region

MORPHOU -UPTO 74 synt. Clear-10-GREEK	no.	md	Intgr/with	Intgr/wout	LEFKE -UPTO 74 synt. Clear-15-TURKISH	no.	md	Intgr/with	Intgr/wout
loggia	5	2.200	0.660	0.684	c.c. hallway-grnd	7	1.714	0.636	0.715
c.c. hallway-grnd	6	1.333	0.662	0.751	s.c.c. hallway-grnd	8	1.000	0.673	0.787
courts	10	3.050	0.915	0.936	loggia	4	2.000	0.674	0.713
s.c.c. hallway-grnd	4	1.000	0.964	1.056	courts	14	2.360	0.730	0.752
c.c. hallway-upper	4	5.250	1.232	1.214	ext	15		1.204	
rooms-grnd	10	2.383	1.281	1.385	rooms-grnd	14	2.480	1.205	1.320
kitchen	10	3.800	1.289	1.313	m.room-grnd	9	2.444	1.272	1.402
ext	10		1.407		c.c. hallway-upper	7	3.857	1.275	1.326
m.room-grnd	5	2.000	1.519	1.641	kitchen	15	3.800	1.344	1.387
rooms-upper	5	5.650	1.554	1.554	rooms-upper	8	4.781	1.723	1.787
m.room-upper	3	6.333	1.739	1.737	m.room-upper	2	5.000	1.859	1.933
s.c.c. hallway-upper					s.c.c. hallway-upper				
Mean RRA-MORPHOU	**10**	**3.360**	**1.176**	**1.207**	**Mean RRA-LEFKE**	**15**	**2.807**	**1.168**	**1.238**

So far the analysis has been conducted in a synchronic manner by treating early and late cases together, having ensured that there is not a statistically significant difference between the two categories. So, what remains to be investigated is, whether the analysis of "early" and "late" cases individually can produce some insights into the trends of changes, the direction of evolution of these houses.

6.6. Time – Ethnicity – Settlement types

Table 7 divides the syntactically clear sample into two time periods, "early" and "late". Although the most integrated space is still dominantly the courtyard and the integrated pole of the sample seems not to change, it has been found that the change in integration values of courtyards is the only significant change among spatial components. Courtyards become significantly more segregated in later cases (unpaired t-value=-3.314 p-value=0.0012). When both clear and unclear cases are taken into consideration, the change is even more significant with unpaired t-value=-4.087 and p-value=<0.0001. Kitchens on the other hand, which have the same value as mean integration for the early sample, fall on the segregated side in later cases. Central spaces open or closed, do not show a significant change in their integration values from early to late but their numbers increase dramatically, (Table, 7a and 7b). When the difference factor is calculated for the main living spaces, the secondary

spaces and the courtyard, it is strong at 0.778 and gets weaker when central spaces replace courtyards at 0.872. In later cases, this value corresponding to the courtyard is weaker compared to the early cases at 0.835 although it is still stronger than that of the central space, which gives a value of 0.858. Nevertheless the value of the central space is getting stronger compared to early cases. This is a clear implication of the weakening role of the courtyard as a powerful organising component between the parts which make up the whole complex. For the courtyard and the two rooms this value is again strong at 0.752 for early cases and it weakens to 0.862 when courtyard is substituted for the central space. For later houses these values are 0.819 and 0.850 respectively indicating the increasing role of central spaces and the weakening of that of courtyards.

Table 7: Integration values for the main spatial components of "syntactically clear" sample for (a) "Early" (left) and (b) "Late" cases (right)

57.22

SAMPLE UPTO 74- synt. Clear - EARLY - 58	no.	md	Intgr/with	Intgr/wout	SAMPLE UPTO 74- synt. Clear - LATE - 89	no.	md	Intgr/with	Intgr/wout
courts	57	1.850	0.462	0.486	courts	87	2.220	0.587	0.603
c.c. hallway-grnd	3	1.333	0.582	0.658	c.c. hallway-grnd	62	1.774	0.623	0.680
loggia	21	2.333	0.643	0.647	loggia	13	2.231	0.656	0.676
s.c.c. hallway-grnd	13	1.385	0.761	0.828	s.c.c. hallway-grnd	15	1.133	0.737	0.836
kitchen	47		1.073		kitchen	88		1.116	
c.c. hallway-upper	5	4.400	1.090	1.088	m.room-grnd	39	2.462	1.122	1.218
m.room-grnd	46	2.609	1.114	1.206	ext	89		1.158	
rooms-grnd	29	2.862	1.162	1.231	rooms-grnd	72	2.737	1.173	1.255
ext	58		1.192		c.c. hallway-upper	22	3.909	1.217	1.258
rooms-upper	11	4.841	1.481	1.481	m.room-upper	23	4.261	1.522	1.569
m.room-upper	36	4.167	1.602	1.644	rooms-upper	30	4.897	1.666	1.715
s.c.c. hallway-upper	_	_	_	_	s.c.c. hallway-upper	_	_	_	_
Mean RRA-for E-sample	**58**	**2.833**	**1.073**	**1.131**	**Mean RRA-for L-sample**	**89**	**2.873**	**1.087**	**1.147**

Figure 10: The change of spatial themes from early to late and among ethnic groups for (a) villages (top) and (b) towns (bottom)
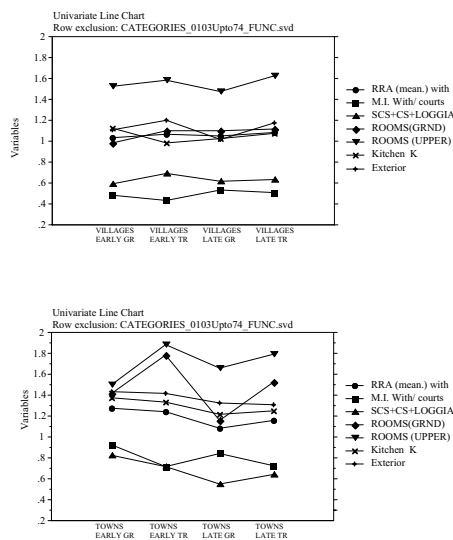

Figure 10 compares the sub samples of settlement types of different ethnic composition with each other in time. The graphs demonstrate visually the incline of each group towards becoming "central space-integrated" configurationally.

When the difference between towns and villages is analysed statistically through time periods, it is found that the difference is highly significant in early houses at a p-value of 0.0068 (t-value=2.809), whereas in late houses it is still significant but less pronounced (unpaired t-value=2.158 p-value=0.0337). If recent houses are included into the analysis for a while to better understand the tendency, it is seen that the difference is not significant at all. This implies the gradual weakening of the differences between town and village houses in terms of spatial configuration.

Another similar comparison has been made for the most integrated themes against time periods. While in "early" cases villages are 83 % "courtyard-integrated", towns are 60 % "loggia" and 13 % "central space-integrated". Loggias together with central spaces form 73% of the sample for towns. Still, 27% are "courtyard-integrated" in early towns. In the "late" sample, the change is pronounced towards "central space-integrated" themes with villages becoming almost 30 % "central space-integrated" from 4 %. Houses in Figures 6 and 7, show both visually and numerically the change of locus of integration from courtyard into the house. It should be noted that the unused spaces in later versions of houses have not been included into the analysis. The coloured representations are obtained through "Pesh", a software application developed for the convex analysis of buildings.

7. Summary and Discussion

This paper, which explains part of an ongoing programmed research, has shown through a series of analysis that the syntactical differences between towns and villages across a sample of Turkish and Greek Cypriot houses are more striking than that of cross-ethnic ones.

The first analytical section explores the configurational characteristics of plan layouts by analysing the properties of justified access graphs. Space-type distribution in these graphs has shown that although both groups' houses are dominantly tree-like structures (more "a" and "b" type spaces) indicating small number of circulation rings within their configuration, Greek houses seem to be relatively less tree-like, that is more distributed. This could be the implication of a difference in the privacy requirements between the two groups pointing to the weaker privacy requirements of Greek Cypriots. However, the increasing similarity in the space-type distribution of the minority group to the majority's in Mixed settlements through time, suggests a possible cultural influence between the two groups in a way that the minority follows the majority. The analyses of the evolution of houses across villages and towns have shown a similar tendency for both groups. In time, both Greek and Turkish houses of villages and towns become more distributed (ringy), maintaining the relative difference between themselves with villages being less distributed than towns. This investigation conducted for "only clear" and "clear and unclear" cases separately, shows that the resulting pattern is same for both data sets.

The analyses of the distribution of mean integration values have suggested a similar relationship between Turkish and Greek houses of villages and towns. This hierarchy shows that town houses are more segregated compared to village ones following the ethnic rule of Turkish being more segregated than the Greeks. However t-test results suggest that the differences in mean integration values of Greek and

Turkish Cypriot houses do not imply any significance for either villages or towns. It should also be noted that the differences between two ethnic group houses are much less significant for towns compared to the villages. The decrease in integration values when the exterior is excluded from the analysis implies that both groups' houses whether in a village or a town, are exterior-oriented. However the more structure invested in the Turkish houses compared to Greeks when the exterior is excluded, suggests that exterior is more essential in structuring Greek houses. Neither in mean integration values nor in base difference factors are the differences significant. These tendencies are found to remain the same for the sample of syntactically "clear" cases as well.

57.24

Village and town houses irrespective of their ethnic compositions are found to be significantly different in terms of their spatial configuration. Villages take place on the integrated side of the mean integration for the whole sample, whereas towns are on the segregated side. When the difference in mean integration values of villages and towns for the "clear" sample is investigated with respect to time, it is found to be more significant for early cases than later ones. On the other hand, the difference between Turkish and Greek village houses is not significant for either early or late cases. Similarly difference between the ethnic groups of town houses does not depict a significant variation from early to late. This could be an implication of the decreasing differences between village and town houses of both ethnic groups.

The distribution of integration across the spatial components of the house, has shown two common themes of "courtyard" and "central space-integrated" with former referring to a "rural" and latter to an "urban" type. The "courtyard-integrated" theme which stands dominantly for village houses is found to have more spaces in the integrated pole formed by courtyards, central spaces, ground floor rooms and kitchen, whereas towns have fewer spaces on the integrated side of the mean, limited only to courtyard and central spaces. Although the themes do not correspond to ethnic groups distinctly, and both are dominantly courtyard-integrated, there are some differences in the inequalities underlying the house groups, which are worth mentioning. Both have the similar integration cores of courtyard and central spaces, however while kitchen is more integrated, the exterior is significantly more segregated in the Turkish sample compared to the Greek. Looked at from the settlement point of view, the "courtyard-integrated" theme is seen to change across Greek and Turkish village houses. This change is observed for the Greek sample where the exterior is on the integrated side together with other common integrated spaces such as kitchen, central spaces, and courtyard. The comparison of the difference factors across Turkish and Greek village houses has demonstrated that the courtyard has a more powerful role in structuring the Turkish houses. Similarly, the exterior has a more critical

function, though not a key one, for Greek houses. The comparison of a Turkish and a Greek town has shown once again that exterior is lying almost on the integrated end for the Greek case. The difference in the mean integration values for these themes has been calculated for both "all" and "syntactically clear" samples and has been found to be highly significant in any case.

Finally the analysis has shown that in time although there has not been a dramatic change in the dominant spatial genotype, there has been a significant decrease in the integration value of courtyard. Although the central spaces do not show a statistically significant change in their integration values, their numbers increase dramatically in later cases. The changes in the difference factors for the three key spaces have clearly shown the weakening role of courtyard and the increasing role of central space in later cases. Both ethnic house groups in villages and towns have experienced a similar shift towards central space-integrated configuration.

The dominant theme of "courtyard-integrated" house is seen to be the result of key role courtyard plays in bringing together different functions embodied within the house complex. It is a locus of control, which holds the living and work-related functions of a self-sufficient house together. With modernisation and transformation of the agricultural economy there has been a transformation in the house complex as well, from a unique control of locus to a multi control one. The transformation of the self sufficient household is speculated to be the result of the separation of work related functions from the house. The changing needs to adapt to a contemporary life have resulted in a more elaborate living unit which is less dependent on the courtyard functions. This is achieved by the partitioning of existing simple rectangular space or adding new spaces to it, which evolved around a central space. The courtyard, which used to organise relations between the main living functions and also the relations between living and the secondary functions, becomes to serve for separating main living spaces from the courtyard spaces. Main living functions are controlled and organised by an enclosed, open or semi-open central space. The prevalence of the "central space-integrated" theme among town houses is conjectured to be the result of different occupation of the households and their way of life which are less dependent on the courtyard functions. These processes have been noted for both groups' houses in villages and towns. However variations across groups are still remarkable. Turkish sample being always on the segregated side of the mean integration value for whole sample and Greeks on the integrated, though not significant, is indicative of certain tendencies across groups, which needs further investigation. In parallel to this, the increased role of exterior for Greek sample is another variation that should be considered.

57.25

8. A final conjecture

The analysis presented in this paper as part of a larger study is indicative of certain consistencies and trends across the sample, which will guide the rest of the investigation. The two dominant spatial themes discovered so far seem not to have any implications for ethnicity but rather represent "village" and "town" house distinctly. The tendency of the "rural" type to turn into an "urban" one, noted for both house groups during a short period (1900's-1974) seems to have been driven by the social consequences of rapid modernisation and urbanisation in Cyprus rather than that of the ethnic conflict. This specific period has been marked as one of "dramatic" and "substantial" socio-economical changes by several researchers (Loizos, 1975; Volkan, 1979; Argyrou, 1996). It is interesting to know that the most important of these changes are given as:

- Transformation of subsistence economy based on peasantry into a cash economy of mechanised agriculture, light industry and tourism;
- Increase in literacy especially in villages;
- Influx of villagers to towns in search for employment and education;
- Changes in technology.

It is conjectured that the agricultural economy of the self-sufficient household at early stages, together with its transformation in later stages and the increasing relations of villagers with the towns have been built into the configuration of both ethnic house groups. The evolution of a "courtyard-integrated" theme which stands dominantly for rural type, towards a "central space-integrated" one of an urban house, in the specified time segment, seem to be the result of these social tendencies by which villagers take the town houses as models for themselves. Although the locus of control passes from the "courtyard" to the "central space" due to the embodiment of functions into the house, the coexistence of the "courtyard-integrated" theme together with the "central space" integrated one are indicative of the indispensable role of the courtyard in Cypriot domestic life.

Although the initial findings obtained so far do not provide any distinct themes representing ethnicity other than minor variations in the strength of the spatial genotype, a more thorough investigation on house basis and on the spatialisation of generic functions within the configuration is expected to provide a better understanding of ethnicity.

57.26

Notes

(1) Calotychos gives the number of mixed villages as being 346 in 1891, while this drops to 252 by 1931 and finally to 114 by 1960, (Calotychos, 1998, p. 5). Gazioglu, mentions only one figure for mixed villages in 1946 as 146 which well fits in Calotychos figures, (Gazioglu, 1994, p. 113). Volkan gives the figures for mixed villages as 230 in 1911, 221 in 1921 and 192 by 1946 (Volkan, 1979, p.81).

(2) Several authors emphasise the importance of 1930's for the Island as a turning point in the socio-economic and cultural history, which was accompanied in the subsequent years by substantial and dramatic structural changes. These are given as the transformation of the peasantry based on cereal cultivation and stock raising, into a cash, market economy; growth of literacy; the influx of rural population into urban centres to work, changes in technology, (Loizos, 1975 p. 42; Argyrou, 1996 p. 32).

(3) These are kitchens, storage facilities for animals and goods, and sanitary facilities.

(4) There are different labels given to this space. While Dagli, call it an "arcade" (Dagli, et al, 1997), Oktay refer it as "sundurma" a word in Turkish meaning a semi-closed space for daily functions, (Oktay and Onal, 1996).

(5) These are projections onto the street from first floor, which are typical elements of Turkish houses in Anatolia.

(6) GT=Greek Town; GV=Greek Village; M=Mixed; TT=Turkish Town; TV=Turkish Village.

(7) Low values indicate higher integration in this study.

(8) "Difference factor" is an entropy-based measure developed to quantify the difference between integration values of any three spaces. "Base difference factor" is the degree of differentiation for minimum, maximum and mean integration with lower values indicating strong differentiation and higher values weak differentiation (Hillier, et al, 1987).

(9) "Central space" is a multi-functional space used both for transitional and living purposes around which the room are located. It carries the properties of a "sofa" found in Turkish houses in Anatolia. Loggia is a semi-open outer central space serving for similar purposes accompanied with an arcade.

(10) Cy =Courtyard; CSc=Central Space (closed); Lg=Loggia; CSsc=Central Space (semi-closed).

(11) Difference factor for Cy, R1, R2 = 0.912; Cs, R1, R2 = 0.854; LG, R1, R2 = 0.844; Cy, Lg, R2 = 0.810; Cy Ex R1 = 0.927; Cs, Ex, Cy = 0.830.

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57.28