The Structural – Functional Research of Rural Settlements change in the North of Mashhad Metropolis

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Abstract

One of the important shortages of the rural and regional plans in Iran, has been having no regular and compiled program for edges and fringes around the cities. In these fringes the living nature has withdrawal in front of the rush of physical development of cities and specially metropolises. The purpose of this research is a comparative study of the structural – functional dimensions of annexed settlements, in order to present a strategy and attain a desired and suitable framework to improve and settle an affair the situation of settlements encountering annexation. The research is applied and based on descriptive – analytic and inductive and the method of collecting data is field and document. Statistical population is 97 villages in Toos and Tabadkan rural district that has the largest number of annexed settlements and encountering annexation settlements. Data analysis has been done based on deductive statistics approach and Kruskal Wallis test. The theoretical approach of this study is based on the Structural – Functional Research. The result of this research shows that periphery rural settlements have not had desired conditions and has been seen discordant growth of Mashhad causes gradual annexation of periphery rural settlements. According to the findings, the most defects of annexation of rural settlements to city has been in social and cultural issues and the main benefits of annexation has been in functional relations and structural features. Therefore, by reforming the local structure and changing in spatial function of periphery rural settlements in Mashhad Metropolis, a rural–urban link is established. After all, considering the consequences of annexation and lack of concord of structure and function in these settlements, [according to UFRD Model ] by invigoration the structures of small town or central villages or even establishing township, the duty of serving to rural regions could be committed to them.

Keywords: Structure, Function, Rural Settlements, Structural- Functional Research, Mashhad.
Introduction and Statement of the problem:

In general it can be said that the issue of relations between town and country which from ancient times has been dealt with, has been a meditations theme from nineteenth century specifically about the rural mass exodus and despite the unprecedented pressure which cities have imposed to peripheral regions after the Industrial Revolution, has a reasonable fit. In Our time rapid mutations of urban and rural areas as well as increasing interactions between these two, was the subject of many studies From historians, geographers, economists, sociologists and logisticians, Architecture in the realms of theoretical and in practice (Shareyeh, 1373: 9). Unbreakable bond of urban and rural areas, especially in around of metropolises is in such a way that adjacent rural areas is mentioned as titles like Factor environmental sustainability (Modaleno, 2000: 1), Rural tourism center and capital of the periphery (Garrad, 2006: 17), Job growth and population seeking centers (Stockdale & et al, 2000: 243), and a bulwark against horizontal expansion (Fakhri, 1382: 175).

Human population changes settlements in the last half century is the witness of decline in rural population to urban, so based on estimates, the proportion of rural population in the world is 9/41 percent in 2025, and the urban population is 1/57 percent (UNPP, 2004: 21). Rural settlements metropolitan areas are such sectors that due to different systems of settlement relations and the presence and flow of different social forces, economic and political emanating from the metropolitan hub has a different aspect. In rural areas of Iran, especially metropolises from two or three decades ago, a similar change is started (Rezvani, 1386: 176). Thus rapid growth of urbanization in recent decades has caused to be widespread in urban areas and rural settlements around cities are also threatened. This threat, especially in the metropolises such as Tehran, Mashhad and large and medium cities is serious. So that each rural settlements that have been established in fringes and around of these urban centers, is Subject to physical expansion of the city and is faced with a double challenge: (1) due to the expansion and development of city structure, Surrounding villages are at risk of drowning and transformation in urban fabric. 2. Influenced by economic and social changes and external forces of villages are Subject to Structural and functional decay and disintegration (Islamic Revolution Housing Foundation, 1378: 15).

Structural and functional scanning believes that separated independent components phenomenon does not work. For example, we can’t intervene to physical texture residence and be oblivious to its operational limits. Similarly, you cannot expect a country to have a healthy city, without developed villages and vice versa or cannot see the dawn of agriculture, without active participation of industry and services (Saeedi, 14: 1390). A place is product of daily regionalism (Hofrel, 2011: 7). Overall, the rural areas surrounding cities can be considered as an ideal living space and opportunity and to prevent functional abnormal population changes, necessary forecast should be thought. Thus it seems that the process of development of rural settlements located in direct and indirect area of influence cities in proportion of their positions of different urban hierarchy levels, differences in results And each has taken a different process. In fact the main issue is structural-functional evolution between city and suburb settlements with emphasis on rural settlements at integration. It is located in periphery of urban areas. In this study, by given the importance of mobility and the integration of villages and regardless of any prejudice it is tried to analyze the effects of mobility and the integration of villages in the northern city of Mashhad. To finally be able to pursue and carry out such studies, the possibility of achieving specific strategies in order to provide favorable framework to regulate and improve
the conditions of human-bio settlements at integration, in the form of structural-functional features. The ecological, cultural, social, economic and also physical-spatial properties is provided.

**Background research:**

As far as the author is aware of the internal and external research, rural areas settlements structural-functional scanning in frontage of Mashhad Metropolis. So far, there were not a basic study and research that consider characteristics and continuity of structural-functional of rural settlements particularly exposed to integrate settlements. A number of studies have been done in a way in relation to this issue and include the following:

Guangjin Tian and et al (2014), by doing a paper about the effects and intense changes of urbanization in structure and function rural periphery areas of China metropolitan and using Landsat TM data in 1978, 1988, 2000, 2005 and 2008 have come to this conclusion that urbanization in China destroyed more than 900 thousand of rural of China during the past 30 years. During this period 8/34 percentage of rural population has been declined and significantly increased the number of rural residential land settlements. The results also show that in periphery of China metropolises, In particular Beijing, the most important development in rural areas, has border expansion (Tian, Qiao & Gao, 2014: 237-246). Results obtained by Martha Gvraj and Alexandra Toole in Warmińsko state of Poland during 1998 and 2010 show the changes taking place in rural areas, especially performance management, the accession of Poland to Europe in 2004, how to make systematic changes and the formation of the spatial structure and functional changes in the rural settlements of country's? (Goraj & Thole, 2013: 53-58). Surrounding villages have addressed this issue (Cailer & Berry, 1999: 182-193). As well as Hamilton (1999), during the study concluded that "Creeping expansion of the big cities." destroyed environment with capabilities in rural settlements and also Highway network is increasingly expanded, that this issue caused destruction in environment and the ecosystem area (Hamilton, 1999: 37-52).

One of the most prestigious domestic studies in this field is an article entitled functional-structural exploration, a systematic approach in local-spatial study that in a comprehensive and detailed analysis by Doctor Abbas Saeedi, was conducted in 1390. He believes functional-structural exploration is a look to local-spatial study which is systemized by experience of field studies in several decades. He believes that there is a continuity system between structure and functions of local and spatial phenomena and one without the other proportional will not fulfill (Saidi, 1390).

Saeedi and the Hosseini Hasel(2008), in an analysis on the basis of locating and mapping of rural settlements, Have examined the issue comprehensively in their study. They believe that such addressing to rural centers can lead appropriate patterns in urban development and growth (Saeed Hosseini Hasel, 2008).

Rahmani Fazli and Parishan (2007) have written a Paper entitled structural and functional changes after transition from rural to urban areas in the city Kanisoor city of Baneh. This study was conducted in documentary, and field survey approach. The results suggest that the latest developments after Kanisoor being town is more positive (Rahmani Fazli and distraught, 2007).

Taleshi and Amirfakhrian (1389), in a comprehensive study investigate instability in rural settlements and the future of suburbanization in Khorasan Razavi. The results show that if suburbanization not be organized in frontage of urban settlements and if functional and physical...
quality Improvement role of rural settlements be ignored, this leads to a collapse in small rural settlements in periphery of urban settlements and there would be informal settlements phenomenon that the effects of that would be unstable regional system (Taleshi and Amirfakhrian, 2009).

Shayan and Hadizadeh (2009), have done an article about necessity analysis organizing frontage of metropolises village’s by emphasis of Mashhad metropolis. This study is conducted in library and documentary approach. The results show that weak management and planning is a basic factor causing the problem in the frontage of cities and with no special strategy for management and monitoring of urban frontages, Problems in these areas becomes increasingly more critical. So it is necessary for lands around these cities to be placed under a single management and close monitoring (Shayan and Hadizadeh, 2009).

Saeedi and Soltani (2006) in an article entitled "The role of metropolitan bonds and physical-spatial transformation of surrounding villages" discussed to rural - urban Links in Mashhad Metropolitan. The results imply that metropolitan flow as a result of inconsistent trends Urbanization and modernization, underlying various changes in surrounding area and capital as the most important factor in these trends, plays a prominent role in spatial development (Saeedi and Soltani, 2006).

The necessity of this research is that according to functional-structural continuity of spatial-local system it Can be expected that the demonstration change in one component of a structural features or a functional system based on systematic relationship may be transferred to other system components and causing a change in whole system. More importantly, the physical condition of outside part of old city of Mashhad that it constitutes the main area of it, in previous research less attention paid to it. While ten villages were transubstantiation to this part of the city. As it mentioned, in this study we have tried in other way, means by evaluating structural-functional condition investigate rural settlements at integration of metropolitan fringes.

By relying on the facts mentioned and explaining new problems in structural-functional settlements changes, this research is going to answer following main question: How to integrate the northern metropolis of Mashhad villages’ good organized due to structural-functional changes and the forces that influence it? This study has tried to design the right research questions. Review and suggest possible ways of the problem.

**Theoretical foundations of research:**

One of the characteristics of human settlements is its dynamism. This dynamics in space in time trends through exchanges, deforms and transfers show always itself as a displacement of the population. The flow of goods, energy, information and funds (theoretical, 2003: 190).In city-village relation chain, the highest dynamics of rural development is around the city that often is as a transitional zone, a mixture of urban activities to the village (Totzer, 2008: 1). However, the patterns and the factors that cause the inversion in urban and rural areas has long been neglected (Tian, Qiao & Gao, 2014: 237). Villages in city fringe dependence on location proximity and because of physical-spatial dependence to the city have possibilities, constraints, opportunities and numerous challenges that there is not such intensity in other villages in the country. Deployment around the city and taking advantage of appropriate communication network, the use of infrastructure and municipal services, particularly in terms of economic and cultural -social is possible for these villages. Employment opportunities, mainly in the service sector, have provided income and employment in rural areas at fringe of cities. So that a group of these
villages, have “Hostel" function. Villager work as construction worker and in industrial workshop or have employment services jobs at days, and remain peripheral villages at night. The cause of migration from rural to urban areas, especially in the hostel villages located around industrial cities and metropolises has a decisive impact. Refugees driven from remote villages that migrate with hope of finding jobs in big industrial cities. Due to the high cost of land and housing in the inner and text cannot be inhabited in city, therefore looking for affordable land and housing and Possibly away from the legal and regulatory constraints of urban construction, refuge to villages in suburb And in a sense driven from the countryside and are left from city. By the effects and consequences of the industrial revolution a large part of the inhabitants of rural areas go to the cities. This trend followed in addition to the density of cities horizontal development and unbridled of cities. The recent trend in most cases leads agricultural and potential land to infrastructure and urban construction. While this trend increased production cost make a large section of population jobless who employed in the agricultural sector. Thus The size of the cities to the rural areas not only show itself as its lands destruction but also droved out of employed and productive rural population from rural area. This process, however, was accepted a substantial part of city producers and even landless and unoccupied villagers. But scholars and those who were concerned about environmental issues, considered the imbalance created dangerous not only for rural and peasants but also In connection with city and the citizens. These concerns gradually developed to such an extent those even Missionaries who encouraged urban life and industrial production approach, that became skeptical about continuous development of urban areas. It was then that creeping from urban areas to rural areas and pristine natural became as one of the most challenging issues With introducing related challenge, horizontal expansion of cities and removal of fertile lands, villagers protest and opposition who believed that urban areas exploit of them to achieve advanced Industries and wealth creation and also intensify. These conditions also necessitate discussion in connection with this creep. These conditions led to extensive research in this area. But all of these researches were not in one direction and orientation, but each of them considers some aspects of this large volumetric issue and then they put their own views and impressions. In a general category this research can be divided into several main categories: A group of researchers who were entered into this field believed that urbanization and horizontal and vertical expansion of cities is a forced and historical process and continued regardless of politicians and planners views and in fact, this process was considered a historical inevitability This group believe that Planning and control is meaningless and without any results. Research Examples that has been done in this specified format can name Chicago urbanization theory, concentric circles, radial development city building, link growth of cities, multi-core development theory and etc. Although each of these researchers' are dependent on specific range of political and ideological but the main focus of the discussion rotate surround this thinking that cities as centers of wealth and prosperity inevitably digest village and its villagers And eventually the world will move toward a kind of private accommodation Which is also a city residence. With this view, even if we want to keep rural life for a while finally, this approach is doomed. In terms of this group, we can’t prevent urban sprawling and countryside integration and only need to be managed. The team proposes that we should not interfere in this matter and should be left to take its same procedure and eventually all rural areas turn into city.

Another group of researchers and writers believe that rural are not affordable in horizontal and vertical expansion of cities and, finally, integration and accession of agricultural lands and total
destruction of villages, environmentally and economically and in transportation issues and commuting, etc. They believe that villagers relocation and fossil fuels consumption causes economic and environmental problems. So the second group believes that unbridled development of cities should be directed and should be guided to integrate rural areas in big cities and rural those are like rotten teeth and causing to lose should be take out.

Such samples and research which is done at this point includes: Megacities growing limitation theory, satellite development theory, and metropolitan corrosion theory and …. In contrast, a broad group of scholars believe that villages were the basis of cities creation and if you take a village, there would not a city and to numerous reasons, village also should be offered

In the process of national and urban development, Considering to villages and rural development planning is important. In fact, according to the principle of spaces and places complementarity, national development and urban development without rural development, is meaningless. Habitats operate as open system today. Especially, Urban and rural settlements because of Varies widely relationships that they have with each other heavily are influenced by each other and need each other and are dependent. As a result, urban planning and rural development is essential and inevitable in national development process (Rezvani, 2003: 8).

The group has a special attention in expanding and encroaching uncontrolled urban to agricultural land periphery villages and nearby village integration and accession. And believe they should Plan and take right decision to cope with urban uncontrolled influx and statesmen and officials and planners should prevent this unbridled expansion with necessary policy formulation And looking for solution and plan for their negative and harmful effects.

Such obvious example of researches can be outlined as follows: Ibn Khaldun's theory of anti-urbanism, Hans Bobek theory of capitalist exploitation, Great theory of city and mental life, rural- urban development theory, rural comprehensive development theory, Theory of urban functions and Rural Development (Yoffred) and .... On this basis perhaps one of the most popular approaches to avoid uncontrolled growth and the influx of Urban Development is Yoffred model that based on structural functionalism theory with its help by strengthening the structures of small cities Or central villages and even the city, awarded giving back task of rural areas to them. But in general the complexity of urban growth process and the factors influencing it especially natural conditions, Political, economical, social and city culture and surrounding rural environment prevent to analyze all aspects of urban growth phenomenon in context of a theory. Because emphasis on one or a number of factors that is usually normal in urban growth theory neglects us from considering other factors which may be important.

**Research methodology:**

The overall objective of this study is that by exploring the structural characteristics of rural areas, and attending to its functional aspects and by identifying better and more accurate of opportunities and threats and integrated villages problems by providing proper enforcement mechanisms to integrated settlements in fringes of cities In a desirable way and in direction with improving the conditions of human Bio be planned. This research is an applied research that acts by analytical descriptive and deductive way to investigate north part of Mashhad city and all rural settlements and villages of Tous and Tabadakan Rural district located at Service fringe and shielding scope of Mashhad city. According to the research questions raised in this article and in line with scientific answer to these questions it is tried to explain how and why the problem and its dimensions are discussed.
In this study systematic approach to the city is intended. But since structural and functional study of Mashhad and its suburb has great complexity, Only from a scientific point of view cannot be paid to the quality and quantity of subject matter in different dimensions, but in order to better explain the issue, in connection with investigation views and opinions Such as structuralism and functionalism Or other scientific opinion that is effective on understanding the subject process have been used.

Collect information on this research is by two Library and field methods that involves repeated observations of the study area, Interviews and questionnaires administered by local managers and also utilizing statistical information in the census statistics, required Findings prepared and conceptual framework of this research has been provided. According the need of achieving needed information three types of questionnaire with 80 questions of rural settlements have been prepared: functional Relationship Questionnaire and physical- spatial characteristics, Economic questionnaire and social questionnaire. The considered questions have significant role in order to review and evaluate the social, economic and physical - spatial settlements and urban and rural households.

To prepare and drawing maps, by using maps1:50,000 and 1: 25,000, National mapping agency for two villages Tabadakan and Tus and Map 1: 2000 in north part of Mashhad city, of (Geographic Information System Arc GIS) is used. Data analysis was mainly based spatial analysis and using buffering techniques and Tysen in GIS environment.

Data analysis method by using descriptive statistics (Frequency table, mean, median, mode, etc) and inferential statistics based on survey method results and by using correlation coefficient and factor analysis to summarize variables and indicators in a number of specific factor, and also cluster analysis techniques for classification of villages is used in such a way that villages within the group which have many similarities with each other and major difference with other groups have been used. Among other data analysis tools software SPSS is used in this research. Finally, in this study, to investigate the effect of different social status, economic situation and living and functional relationships and physical-spatial characteristics in the study area in structure and function spatial, three types of settlements (merged and unmerged at integration) is used by Kruskal-Wallis test which has the ability to investigate and analyze several groups.

Field of study and Statistical society:
Mashhad city, city center of Mashhad and is located in the northeastern province of Khorasan Razavi (Rezvani, 1384: 27). Mashhad as the second largest metropolis in the world of religion with its Cross-regional role has a special role and place. And with almost 3 million inhabitants in 2010, in the hierarchy of Iran’s cities, after Tehran is in second place. The city of Mashhad by having the shrine of Imam Reza (AS) annually receives 33 million pilgrims and tourists and economically has very high potential and opportunity which leads to attract many immigrants from urban and rural areas to this metropolis (Ziyari, 2010: 203).

The study area is in the central part of Mashhad. Central Rural district with a population of 400 thousand people in northern periphery part of Mashhad metropolis which has six Rural districts names Tabadakan, Mian velayat, Tous, Darzab, Kardeh and Kenvist. Natural position is in Kenvist Rural district, Tous and major part of Tabadakan are Plains and mian velayat Rural district is plain and almost part of the hill and mahour and kardeh Rural district is mountainous (Statistical Center of Iran, 2010: 25).
The study population of this article consists of urban settlements of Rural district six, zone Two of Mashhad municipality that mainly In Not so long of past was as rural settlements of city fringes and are integrated and rural settlements with a population of at least twenty households of northern part of Mashhad city located in contour of Ghaem highway in the south and North of Mashhad city bypass highway, includes some part of Tabadakan and Tous Rural districts which is in Privacy shielding area and the future development of the northern part of city Mashhad and also is composed of living population. Subject domain of research is investigate and Analysis of structural - functional changes of rural settlements due to local-spatial development of Mashhad metropolis
This collection in rural settlements area According to the General Census of Population and Housing in 2010, Contains about 45 villages of over twenty households of Tous Rural district with a population of over 74 thousand including 21845household and 52 Rural district of over twenty households in Tabadakan Rural district with a population of 77 thousand people, including 21 528 households in central part of Mashhad. The scope of samples settlements population was between 75 (Village Hassan Shahabi / Hassan Shaqa) and was fluctuated to 15420 persons (Gorji Sofla village). Since in target population ,all rural settlements with a population of at least twenty families of these two rural have been studied, for these reasons, the use of sampling is not necessary. But with regard to urban settlements of district six, zone Two of Mashhad initial estimates indicate the need to study and questioning of approximately 371 households in the urban of study area properly divided between households by ratio per method and is designed by using the questionnaire and is studied based on the parameters and variables. Table 1 shows the demographic characteristics of the population and distribution of sample households.
Table 1: The number of settlements, population, living households and sample size based on 2010 census

<table>
<thead>
<tr>
<th>Case study settlements</th>
<th>over twenty settlements households</th>
<th>settlements Status</th>
<th>number of settlements</th>
<th>Village name</th>
<th>Row</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>household Number</td>
<td>Population (people)</td>
<td>Number</td>
<td>Population (people)</td>
<td>Status</td>
</tr>
<tr>
<td>Settlements through census</td>
<td>21845</td>
<td>74189</td>
<td>3.40</td>
<td>21904</td>
<td>74394</td>
</tr>
<tr>
<td>Settlements through census</td>
<td>21528</td>
<td>77713</td>
<td>3.61</td>
<td>21611</td>
<td>77999</td>
</tr>
<tr>
<td>371</td>
<td>1825</td>
<td>10639</td>
<td>4.924/</td>
<td>10639</td>
<td>52306</td>
</tr>
<tr>
<td>43744</td>
<td>153727</td>
<td>54012</td>
<td>3.78</td>
<td>54154</td>
<td>204699</td>
</tr>
</tbody>
</table>

Source: Statistical Center of Iran in 2010 and Statistics management and Data Analysis - Mashhad Municipality in 2014.

Research variables:
In this study, to investigate and evaluate rural settlements three groups of A) not integrated, B) subject to integration and c) integrated and achieving a relative stability of this settlements 4 components, 25 composite measure and 68 indicators, including four geographical and environmental indicators, 18 social indicators, 18 economic indicator and 28 physical-spatial indices and functional relationships and the use of villages facilities information and statistics in census by survey method had been selected.

Findings and research data analysis:
Expansion of human settlements is in line with political, social and economic developments with physical transformation and the transformation of spatial organization and functional structure of these centers in general and rural settlements, in particular, especially in the neighboring villages and cities and has allowed countries villages show the maximum physical changes in the last two decades. In this regard, not conducted village’s physical growth caused forming unevenness outlook of residential areas in rural areas.
It seems that forgetting spatial and physical management and neglecting the role rural epicenter in economic and social developments caused forming bizarre physical changes as well as cultural and social clutter with disabilities in rural spatial and economical appropriate accountability (Saied, 2003: 16). According to utilizing used tool in this study, its findings are investigated in three areas of: social status, economical rural livelihood status and functional relationships and physical characteristics in study area and then different effects that have in structural and functional of three types of study settlements (integrated, subject to integration and none-integrated) is analyzed. For an explanation of causal structuralism, we must first have a clear understanding of "social structure" and know how its causal effect is (Little, 1994: 167). So first by using data and field studies, Social status of rural settlements is studied (Table 2).
### Table 2: Comparison social situation in under investigation village’s settlements

<table>
<thead>
<tr>
<th>Kruskal-Wallis test result</th>
<th>None-integrated</th>
<th>Subject to integrate</th>
<th>integrated</th>
<th>variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2 = 9.88, P = 0.007$</td>
<td>$x \pm SD$</td>
<td>$x \pm SD$</td>
<td>$x \pm SD$</td>
<td>People's Solidarity village</td>
</tr>
<tr>
<td>$\chi^2 = 6.84, P = 0.033$</td>
<td>$3/81\pm0/98$</td>
<td>$2/89\pm0/83$</td>
<td>$2/65\pm0/99$</td>
<td>Turnout in village mourning ceremony</td>
</tr>
<tr>
<td>$\chi^2 = 7.49, P = 0.024$</td>
<td>$3/36\pm1/45$</td>
<td>$2/47\pm0/74$</td>
<td>$2/8\pm0/62$</td>
<td>positive performance of village council</td>
</tr>
<tr>
<td>$\chi^2 = 9.59, P = 0.008$</td>
<td>$1/93\pm1/12$</td>
<td>$2/44\pm0/7$</td>
<td>$2/95\pm0/94$</td>
<td>housing Foundation in the village</td>
</tr>
<tr>
<td>$\chi^2 = 17.09, P &lt; 0.001$</td>
<td>$1/56\pm0/89$</td>
<td>$2/28\pm0/75$</td>
<td>$2/95\pm0/89$</td>
<td>Agricultural Jihad activity in village</td>
</tr>
<tr>
<td>$\chi^2 = 10.49, P = 0.005$</td>
<td>$1/8\pm0/94$</td>
<td>$2/17\pm0/98$</td>
<td>$2/9\pm0/97$</td>
<td>Crime rates in the country</td>
</tr>
<tr>
<td>$\chi^2 = 10.25, P = 0.006$</td>
<td>$2/06\pm0/77$</td>
<td>$3\pm0/97$</td>
<td>$2/85\pm0/81$</td>
<td>rate of drug addiction in the village</td>
</tr>
<tr>
<td>$\chi^2 = 0.85, P = 0.65$</td>
<td>$2/69\pm1/08$</td>
<td>$2/44\pm0/86$</td>
<td>$2/5\pm0/76$</td>
<td>willingness of people to migrate to Mashhad</td>
</tr>
<tr>
<td>$\chi^2 = 19.53, P &lt; 0.001$</td>
<td>$1/56\pm0/73$</td>
<td>$2/28\pm0/83$</td>
<td>$2/95\pm0/89$</td>
<td>willingness of people to migrate to other places</td>
</tr>
</tbody>
</table>

Source: Research Findings, 2014

According to the table above between averages scores of under investigation village’s settlements in all items except for desire of people to migrate to Mashhad, there is a significant difference. Not integrated villages in solidarity with the people of the village items, Turnout in the social activities of village, Turnout in the village mourning ceremony, and the positive performance of the village council get highest score and in housing Foundation in village activity, agricultural Jihad activity in village, Crime rates in the country, rate of drug addiction in village and the willingness of people to migrate to other places get the lowest scores.

### Table 3: comparing the economic situation and living conditions in under investigation village’s settlements

<table>
<thead>
<tr>
<th>Kruskal-Wallis test result</th>
<th>None-integrated</th>
<th>Subject to integrate</th>
<th>integrated</th>
<th>variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2 = 17.06, P &lt; 0.001$</td>
<td>$x \pm SD$</td>
<td>$x \pm SD$</td>
<td>$x \pm SD$</td>
<td>Agriculture's role and activities in the creation of rural income</td>
</tr>
<tr>
<td>$\chi^2 = 6.17, P = 0.04$</td>
<td>$1/13\pm0/34$</td>
<td>$2/17\pm0/71$</td>
<td>$2/5\pm1/23$</td>
<td>employment and labor market situation in village</td>
</tr>
<tr>
<td>$\chi^2 = 8.95, P = 0.01$</td>
<td>$2/13\pm0/62$</td>
<td>$3/11\pm0/58$</td>
<td>$2/55\pm1/36$</td>
<td>Turnout in rural economic activities</td>
</tr>
<tr>
<td>$\chi^2 = 18.66, P &lt; 0.001$</td>
<td>$1/13\pm0/34$</td>
<td>$2/44\pm0/7$</td>
<td>$2/4\pm1/23$</td>
<td>role of self-employment workshops in rural income</td>
</tr>
<tr>
<td>$\chi^2 = 1.22 , P = 0.54$</td>
<td>$2/38\pm1/09$</td>
<td>$2/78\pm1/11$</td>
<td>$2/65\pm1/42$</td>
<td>role of agriculture in rural income</td>
</tr>
</tbody>
</table>
According to the table above on all the items except for of the role of agriculture in rural income, the role of services in rural income, having agricultural technology such as tractors, combines, the rate of having agricultural water and the increased price of residential land in the past decade in the village, There was a significant difference between mean scores of three groups. None-integrated villages in subscales of role and activities of Agriculture jihad in development of rural incomes, employment and the labor market in the village, Turnout in rural economic activities, The role of self-employment workshops in rural income, The role of industry in rural income, The role of services in rural income, The handicraft production in rural areas And increasing rental housing units over the past decade get the lowest score and in having sufficient land subscale get the highest score.

### Table 4: Comparison of performance relation and physical-spatial characteristics in under study villages

<table>
<thead>
<tr>
<th>Kruskal-Wallis test result</th>
<th>None-integrated</th>
<th>Subject to integrate</th>
<th>integrated</th>
<th>variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2 = 9.34, P = 0.009$</td>
<td>$x \pm SD$</td>
<td>$x \pm SD$</td>
<td>$x \pm SD$</td>
<td></td>
</tr>
<tr>
<td>$\chi^2 = 1.36, P = 0.51$</td>
<td>$1/40 \pm 0/74$</td>
<td>$1/89 \pm 0/68$</td>
<td>$2/5 \pm 1/23$</td>
<td>Having the required commercial centers</td>
</tr>
<tr>
<td>$\chi^2 = 0.97, P = 0.61$</td>
<td>$2/36 \pm 0/74$</td>
<td>$2/67 \pm 0/69$</td>
<td>$2/7 \pm 1/17$</td>
<td>Amount of Needful supply in village</td>
</tr>
<tr>
<td>$\chi^2 = 6.83, P = 0.03$</td>
<td>$4/0 \pm 0/84$</td>
<td>$3/67 \pm 0/69$</td>
<td>$3/60 \pm 1/60$</td>
<td>Amount of Needful supply in Mashhad</td>
</tr>
<tr>
<td>$\chi^2 = 15.5, P &lt; 0.001$</td>
<td>$2/40 \pm 0/83$</td>
<td>$3/22 \pm 0/65$</td>
<td>$3 \pm 1/17$</td>
<td>Amount of educational needs in the village</td>
</tr>
<tr>
<td>$\chi^2 = 12.19, P = 0.002$</td>
<td>$3/8 \pm 1/08$</td>
<td>$2/17 \pm 0/71$</td>
<td>$3/20 \pm 1/32$</td>
<td>Amount of educational needs of Mashhad city</td>
</tr>
<tr>
<td>&amp; $2/36 \pm 1/01$</td>
<td>$1/89 \pm 0/83$</td>
<td>$3/20 \pm 1/15$</td>
<td>Amount of Health Care needs of rural</td>
<td></td>
</tr>
</tbody>
</table>

. Source: Research Findings, 2014
Source: Research Findings, 2014

Between the rural settlements of all subscales except for amount of needful supply in village, amount of needful supply in Mashhad, amount of health care needs of Mashhad, amount of conversion of agricultural land to residential, there is a significant difference. None-integrated villages in subscales of having the required commercial centers, amount of educational needs in the village get the lowest score and amount of educational needs of Mashhad city, and quality of housing and housing resistance in village get the highest score. In sub scales of Amount of health Care needs of rural areas not integrated villages get the lowest scores and amount of daily commute of people to Mashhad is higher than the other two groups.

Table 5: Comparison the situation of Triple variables studied in rural settlements

<table>
<thead>
<tr>
<th>ANOVA statistical test result</th>
<th>None-integrated</th>
<th>Subject to integrate</th>
<th>integrated</th>
<th>variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>F=6.55, P=0.003</td>
<td>34/54±3/38</td>
<td>30/67±4/34</td>
<td>30/20±2/93</td>
<td>social situation</td>
</tr>
<tr>
<td>F=2.59, P=0.085</td>
<td>25/47±2/99</td>
<td>31/78±3/37</td>
<td>32/6±15/33</td>
<td>Economic and rural livelihood status</td>
</tr>
<tr>
<td>F=9.94, P&lt;0.001</td>
<td>23/54±1/86</td>
<td>25/78±3/33</td>
<td>28/15±2/7</td>
<td>performance Relations and physical-spatial characteristics</td>
</tr>
</tbody>
</table>

Source: Research Findings, 2014

According to the table above there is a significant difference in three villages between social and functional status and physical features. None-integrated villages get the highest score in social status and integrated villages in performance relationship and physical-spatial characteristics. There doesn't found significant difference between Economic and livelihood situation of three groups.
Discussion and conclusion:
Relations between cities and countryside can cause urbanization in rural areas and cause a change in population changes. In this context, recognizing of current patterns needs investigation in this field the (Pacione, 1985: 183-185). Explaining relationships, urban and rural links and was raised since the emergence of the first cities. Because cities owe their survival and establishment to villages, and Mashhad metropolis as a result of the influx of immigrants and also the pilgrims of Imam Reza (AS) has accelerates
development and growth, and have found diverse Social, economic and cultural structure in a way that impact of it can be clearly seen in body of city and rural settlements. Rural settlements around Mashhad, especially the northern part of the expanding fabric of city, surrounds them inside it or is still separate that forms main core of Mashhad metropolitan new suburbs that have come into existence through gradual build integration and new construction.

It can be concluded from the review and analysis that there are significant differences between social relations and functional status and physical features in three kind of rural settlements. Not integrated villages get the highest score in social status and integrated villages in functional relationships and physical-spatial features. So the greatest disadvantages of rural settlement in the city are in the social and cultural issues and the greatest benefits of integration are in terms of physical characteristics and performance relationship. The overall outcome of these changes which resulted in comprehensive changes in physical texture and socio-economic structure, stating that Surrounding rural settlements generally, doesn’t have satisfactory situation and the uneven development of the metropolis of Mashhad every day caused a gradual integration of rural settlements. So without increasing and more access to resources and facilities and improving the quality of surrounding areas life, Complexities and problems of these areas is worsening steadily.

By Summing what was said and according to Figures 1 to 3, it can be said that rural integration in numerous cases positive and negative effects on economic and social life and cultural functions of rural and urban settlements which should deduct the negative aspects of rural settlements integration in cities (especially due to social problems) by adopting and developing appropriate strategies strengthen positive aspects of it (especially physical issues). Thus, according to surveys and studies and analyzes made in previous discussions, the following should be noted: By modifying the spatial structure and evolution of the spatial function of rural settlements around the metropolis of Mashhad, rural-city link is established. With respect to consequences of integration and lack of structural and functional adaptation of these settlements and based on the Yofred model by strengthening the structures of small cities or Central villages and even creating City can Award Serving task to rural areas task to them. Meanwhile municipality and relevant organizations should make an additional due to fringe of Metropolis and recognized rural settlements as a part of the city, in relation with planning and creating infrastructure and the possession and control of the land in these areas. Finally, we can not only prevent from migration through rational, scientific, educational planning and rural participation of villagers in accordance with the geographical environment schemes and studies of relevant organizations especially, Housing Foundation by creating an appropriate infrastructure and the proper planning but also somehow transform the economy of rural and the region accordingly it can be expected that integration of rural settlements in cities with contexts and appropriate infrastructure in social, economic and physical dimensions provide regional and national development in addition with creating development in integrated villages and increasing in role and function of them. What is certain is that achieving the sustainable development of rural and urban settlements requires rethinking the planning system and enjoying a balanced spatial and regional development approach and taking into account the interaction between the settlements of development by adopting the right strategies.
References


17. Seyedi Farkhad, SM (2012), a look at the historical geography of Mashhad, Mashhad, Mashhad City Council Publication Research Center.


25. Writers Group (1332), Gazetteer of Iran, Volume 9, Tehran: Iran's military.


27. Madanipour, Ali (2001), the emergence of a metropolis, Tehran, Publisher: processing and urban planning.

28. Statistical Center of Iran (2005), Basic results of census 2005 of Khorasan, Tehran, PBO, the Statistical Center of Iran.
29. Statistical Center of Iran (2010), Basic results of census 1390 Khorasan, Tehran, PBO, the Statistical Center of Iran.

30. Mirfendereski and et al. (2001), the Strategic Plan of Reorganization suburb of Mashhad, Mashhad.


38. Hofrel, Thomas (2011), A place for Space in Risk Research, University of Hamburg, Germany.


42. Totzer, Tanja. (2008), Relationship between urban-preurban-rural regions: first findings from the eu-project plural. Available online at www.rurality near the city.com.