



Title	Introducing Side Setbacks in Residential Planning Policy in Iran based on Socio-psychological Evaluation of Side Setbacks in Japan [an abstract of dissertation and a summary of dissertation review]
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## 学 位 論 文 内 容 の 要 旨

博士の専攻分野の名称 博士（工学） 氏名 Amir Shojai

### 学 位 論 文 題 名

Introducing Side Setbacks in Residential Planning Policy in Iran based on Socio-psychological  
Evaluation of Side Setbacks in Japan  
(日本での社会心理的評価を踏まえたイランの住居地域計画政策への外壁後退による隣地間空地の  
導入に関する研究)

This research makes the assumption that there are links between attributes of the physical environment and the perceptions and activity of neighbors, the focus being on side setback areas. Side setback areas have been studied as being capable of supporting any likely or desired activity which open spaces of similar types in front or back of the buildings normally provide for; and then, for the notion of whether these spaces contribute, in any way, to the formation of social contact between the neighbors mutually connected to them, via windows, terrace and balconies, etc.

Series of questionnaires, online for scholars around Japan, and printed questionnaire were sent out to the volunteers recruited in Sapporo, followed by later field observation and interviews in Sapporo as both quantitative and qualitative research approaches.

Various types of inferential statistics – Factor Analysis, Analysis of Variance and Multiple Regression Analysis - were run in order to separately analyze the correlation between multiple variants such as housing types, floors and physical elements as physical properties of side setback areas and side facades with respondents' activities and perceptions related to side setback areas.

One of the purposes of this research it to set an example for reintroduction of open spaces in urban residential zones in Iran, which lately have suffered from congestion due to the disappearance of setbacks after the land prices rose up higher than ever and the fact that there are no provisions for keeping setbacks and terraces and balconies.

Citing the social and economic differences between Japan and Iran and the morphological distinctions between the residential neighborhoods, this research aims to study from residential urban planning laws in the Japanese example and the residents' perception towards small open spaces around and between their buildings in order to apply those planning practices which are applicable for the new residential developments in Tehran and other large cities in Iran in order to bring back the balance between built and open spaces in the Iranian residential context.

The results indicated that having a terrace/balcony, clothes-drying place and living/dining room windows onto side setback areas was significantly chosen by the respondents, followed by neighboring terrace/balcony, clothes-drying place and large window. Factor Analysis results also showed that the respondents were satisfied with the ventilation and amount of light in side setback areas, which was significantly the case why those whose side setback areas were very narrow expressed their discontent. The results of Multiple Regression Analysis shows that for a notable group of respondents, those who had their kitchen window or living room looking onto the side setback areas, having a terrace/balcony are regarded as a primary choice. The results from observation confirmed these results where the respondents mentioned their satisfaction with the matte glasses especially kitchen windows and did not think of changing the glasses to clear ones.

CHAPTER ONE gives an introduction to this research. First it reviews the disappearance of setbacks and balconies in newly constructed private housing developments in Tehran after policy relaxations. Later it summarizes the planning laws in residential neighborhoods in Iran and Japan.

CHAPTER TWO reviews planning policies and laws as well as planning governance in Tehran. This chapter also includes reviewing the previous literature on setbacks and side setbacks, in Japan and Australia where for example in the latter there are spaces of under 1 meter at the sides of the buildings and the effect the narrowness of the gaps between the houses has on airflow and residents perception, in case creating disadvantages of lack of vegetation and poor townscape.

A large number of studies have focused neighborly interaction and neighborhood satisfaction in connection with open spaces in the neighborhoods e.g. streets, front yards and back yards. Physical measures have been included as an important precedent to this study of how architecture influences casual social relations in the neighborhood scale.

CHAPTER THREE reviews the requirements for private housing development currently under the

effects of transitional planning policy in the absence of a master plan followed by a short introduction to new Tehran Detailed Plan to be implemented and critically assesses the current transitional planning policy followed by conclusion and policy recommendations. In conclusion this research suggests the following policies for private residential development; 1) Alternative designs for achieving high density such as high-rise apartment blocks with surrounding open spaces, enough parking spaces and highway access; 2) Flexible development policies for FAR and BCR for each district; based on their topographical location and history; and, 3) Provision of minimum setbacks from the streets and neighboring properties, and terraces and balconies.

CHAPTER FOUR is the theoretical framework and methodology of this study. Cross-sectional studies, such as the present study, assume that there are links between the attributes of a physical environment and the perception and activity of neighbours. The focus in our study was side setback areas as immediate open spaces around buildings and to study such spaces as possible places.

A set of relevant measures of the physical characteristics of adjacent neighbouring buildings was developed. As physical means of interaction, architectural features have been incorporated into existing models of neighbourhood perception and satisfaction. Side setback areas have been evaluated for their affordance in supporting any likely or desired activity for which an open space of a similar type to the front or back of a building normally provides. Whether these spaces in any way contribute to the formation of contact between neighbours mutually connected to them via windows, terraces, balconies, etc. has also been evaluated.

CHAPTER FIVE analyses the data collected from an online for scholars around Japan.

CHAPTER SIX analyses the data collected from an online for the volunteers in Sapporo.

CHAPTER SEVEN is assessing the cognitive knowledge on side setbacks among Iranian audience. This part of the research used a pictorial example of setbacks in Japanese neighborhoods in order to assist conceptualization of everyday living scenarios for the Iranian audiences. It was assumed that having more semi-open spaces surrounding the buildings and more chances for building orientation and configuration would increase the need for incorporation of such spaces for sunshine and ventilation, while at the same time raising issues such as challenges to one's privacy posed by these spaces.

CHAPTER EIGHT concludes that side setback areas have a different meaning to Sapporo respondents than that of front or backyards. While notably seeing narrow side setback areas as merely a boundary marking the distance with the neighboring building, for those who had more wide setbacks, instrumental functions such as storage and gardening were practiced. This study suggests implications on policy review and practice on side setbacks in higher density suburbs. Once side setbacks are established to provide spaces for desired activities, instead of mere boundaries, they can be studied for their neighborhood social contributions and micro-climate in further research. In the following, this study concludes that if side setback areas, and in Iranian case, backyard included, are offered more special configurations and architectural articulation they can offer extended locations for daily activities based on their locale and culture.

In Tehran, having neighboring terrace or balcony towards side areas was perceived to promote neighborly ties while their concern about security and maintenance in side setback areas remain. In terms of individual land lot developments this study suggests minimum side setbacks from adjacent residential blocks based on their height in order to allow for minimum light and ventilation and the following provisions: 1. Side setback areas to be guarded by clear not eye blocking fences; 2. Terraces or balconies faced side setback areas preferably with high guards; 3. Living rooms or kitchen windows to be carefully placed and guarded facing side areas but with an attention to not placing the window opposite to the neighbors window; 4. Opposite windows are provided by matte glass.