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Bricolage a Design Approach for Improving High Density Area

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Abstract

This study aims to arouse the awareness of designers on how to see bricolage as a design approach to improve the quality of life in informal kampung settlements. The study case is Kampung Cikini Kramat in Jakarta. Thispocket kampung surrounded by buildings and infrastructure that have been considered to be tidy and orderly established. Urban dwellers living in informal settlements such as kampung, favelas, pueblos jóvenes and gecekondu are mostly judged to be the people who are not well established and left behind. However, it appears that they tend to advocate innovation and sustainability from their own habits by using the concept of bricolage. Bricolage is a skill of using whatever at hands to create something new was depends on its locality. The method of this study is by finding the signs of bricolage as a part oflocalhabitsand knowledges, thentrying to utilize the inhabitant's knowledge to improve the kampung conditions.First, this study will find how bricolage can be found in the daily life of informal settlements. Second, we will discuss our real built projects, explaining the strategies of our involvement as a designer working together withthe local community to create the design approach by using the local knowledge of bricolage. The study concludes that bricolage is a continuous concept of self-help urbanism, which invigorates the quality of life in informal settlements.

Keywords: Bricolage; Craftsmanship; Resistance; Informal settlements; High density.

1. Introduction

This paper discusses the new way of participatory process of the local community in urban planning, through understanding the basic habits of the local community called bricolage.How we, as urban planners, could possibly enhance it. Bricolage is a term that was introduced by Levi-Strauss (1962) in a book called "The Savage Mind"; it aims to understand local environments and make use of whatever resources are available around them, no matter how they can be processed to create something new. According to the British Dictionary, the definition of bricolage is the construction or the creation something from a diverse range of available things. It is the way someone viewsof materials, classifies items loosely and puts them or holds around the house according to the bricolage of their areas (Levi-Strauss, 1962). The question is how the community thinking about bricolage? If so, how could an urban planner intensify these bricolage habits as the design method?

2. Aims and Previous Study

Previous studies about bricolage mostly explain in an economic contect. Ted (2005) explained that the idea of bricolage in entrepreneurship is to start new firms beginning with very limited resources, with the focus on the role of new combinations without withdrawing resources from any current use in the creation of economic value. Anita (2008) analyze the bricolage of market research, discussing how the development of new programs can create sales in the target market. The consideration of such strategies can overcome limited access to potential customers. Both of the authors talk about the strategies on whatever the limited resources.

There are numerous studies on the concept of the participatory process of local communities in terms of urban planning; for example, the concept of handmade urbanism by Marcos and Rosa (2013) relating to build projects in five cities, which are mostly high density areas. They explain how all of their studieson participatory processprojects might be successful because they know the social mechanisms and operational modes of community initiatives, which serve as a basis for creating participatory models. The study investigates series of grassroots initiatives that provide social infrastructures to neighbourhoods with shortages of all kinds. The main point is how community initiatives are very important reason in planning.

Another study of the participatory process called DIY "Do-it-yourself" urbanism, also known as "tactical", "pop-up" or "guerrilla" urbanism, by Talen (2005), who argue from the stand-point of the historical urban improvement.This brand of urban intervention is residence-generated, low budget, often temporary, and has been described as a process whereby "community activists are taking thecity planning into their own hands" (Talen, 2005). This type of urbanism considers that the government is not always there toprovideall of their needs. Instead of relying on an official planning effort, people considerwhy not start to improve cities in small-scale ways, from bottom-up initiatives, in an attempt to sustain the urban vibrancy that connects back to the earliest urban improvement impulses. Both studies about the concept of participatory process planning and DIY urbanismtrigger

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the question, why we,as a designer are not collaborating on these concepts.Collaborating on the participatory modelwith the community initiatives also important as a startinginitiativeto grant the effect of resident-generated,instead of rely only on an official planning effort.We need basic knowledge to understandthe localdaily habits who live with limited resources and how the urban planning can overcome this.

The concept of kampung was explained comprehensively by Tunas (2008). Kampung was built from the rise of the dual city, creating an ability to cope with the process of survival in an informal settlement. Tunas states that commonly the space in informal settlements is organized as an important tool of production. As a production area, Joko (2016) discusses KampungCikini as a slum, where the dwellers are able to produce self-help housing and improvement if they are provided with secure tenure. Titling the land can cause both positive and negative impacts on self-help improvement. Formal titlingwill encounters many tremendous obstacles with regard to time and cost due to administrative constraints.Formal land titling also increases rents and taxes, meaning the poor are likely to lose the rights to their properties. Someone must make the clear interventions to improve the kampung in the future to make the slum dwellers confident that eviction is unlikely.

Study on Cikini was elaborated by Ellisa (2016) who discussed how to cope with crowding in high density areas. Surveys and questionnaires on the characteristics of houses in Cikini kampung revealed that the building construction approach was typically self-help, without any particular design method, and was refreshingly free from spatial constraints. The houses were extended in such a way that residents found difficulties to cope; even local residents often added some building extensions in their own house. The study focused on how local residents utilized the lack of space to accommodate their needs and activities.

Several studies on the kampung conclude that the kampungis an ideal site of production and the inhabitants get used to do self-help improvement. Therefore bricolage should correspond to natural kampung habits.

3. Background

Figure-1.1. Representation of *self-help* housing

Source: by Author

Kampung Cikini Kramat, Jakarta, is a high density area where about 3,200 inhabitants/ha live. If we count temporary residents all together, the number can reach about 5,000 people. They live together in the neighbourhood called RW. It consists of small packed contiguous housing.Kampung Cikini Kramat is located in the city centre, which provided abundant economic opportunities, especially informal jobs.The low living costs and the rich ambience of neighbourhoodmakemanypoor people want to stay there. However, there are many problems of degradation, such as lack of sanitation, polluted ground-water, littering, gutters blocked by fat, and so on. Since it is far from an ideal place to live, they tend to resist an inadequacy as their problems to make sure they survive. However, most of the inhabitants feel very comfortable living there.

In order to keep alive, they must be able to quickly respond to the surrounding areas. If we look at the wider area, the site is located next to the biggest hospital in the country, close to the train station, and is surrounded by commercial areas. As the site also have traditional market, Kampung Cikiniis very tightly packed and compact with a high intensity of strangers who are the passer by. This providesabundance opportunities for the local inhabitants. They tend to overcome the economic problem by responding to the surrounding needs. For example, someone opens a barber shop as part of a living area, many food stalls installed in front of houses, or an aged woman living with her grandson rented out her ex-husband's rooms for income to support their lives.

4. Methods

In 21st – 29th August, we participated the annual program of JKTWS 2017 or the international joint studio workshop conducted by Universitas Indonesia in collaboration with the University of Tokyo. Our target is micro intervention in Gang Ampiun", a narrow main through-fare across Kampung Cikini that resided by six different small community (RT).

As a part of the micro intervention at Kampung Cikini, first we tried tofind techniques with which local residents can make use of limited resources in the process of bricolage. Bricolage, according to Levi-Strauss (1962) is a collection of 'pre-constrained' elements that have many possible combinations, and which may lie halfway between perceptions and concepts.As An intermediary between images and concept is namely 'signs'. Signs resemble images by being concrete entities, but they resemble concepts in their powers of reference (Levi-Strauss, 1962). In this first step, we will create a diagram of a scenario that could possibly occur in the future, and map the

visible bricolage signs from local residents themselves in a micro scale neighbourhood called RT (RT is a smallest unit ofneighbourhood consisting of 10-20 houses).

Furthermore, we tried to explain the steps of our involvement as planners with the community to create a participatory model of intervention. Thishad beendone throughseveral steps: 1) by observing the site through a set of conversations and analysis; 2) give presentation to the local community the signs of bricolage that we have found, to remind them that our intervention is very close to their habits; 3) presentthe scenario and create a proposal about imminent commons with the local residents; 4) present the final proposal for intervention; 5) engagewiththe local residents to get along the process of making the intervention; 6) present the projects to the other stakeholders for discussion and evaluation. These steps will be elaborated later in the discussion section.

5. Results

5.1. Signs of Bricolage

Bricolage is part of the slum dwellers' habits. We found the techniques with which the local residents make use of limited resources in the process of bricolage, especially in a shared domestic area. For example, we found an activity outside a house of local people who repaired a fan or utilize the left-over components from the fan to create something new (figure 1.2). In this activity the man (1)is the owner that have the things and want his fan to be repaired. The man with yellow clothes (2) is his neighbour who is helping him finish his task. This sceneshowed an activity in a communal space in which neighbouring people have been invited to participate. The kid (3)is his grandson, which indicated that the activity to use left-over things has been learned from an early age.

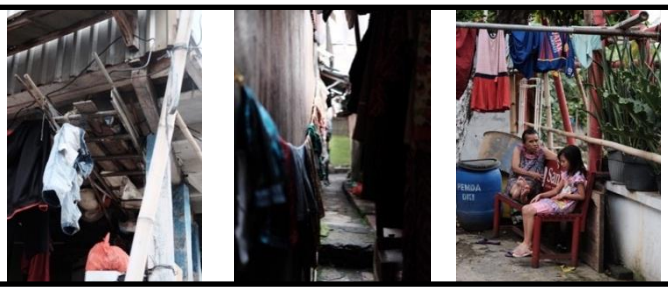
Figure-1.2. DIY activity

Source: by Author

Considering about their habits to make things from leftover, in some part of the *Kampung*, wefind more than one multiple families who like to put their unused things in the same place. In one RT consisting of 10-20 houses, there may be one to three leftover sites. As seen in section figure 1.3.1, people like to use broken things that are still in good shape, some pieces of similar materials and collections of unused things. Weassume that they like to stock some materials that might be used in the future.

Figure-1.3. Process of Bricolage

Figure 1.3.3 – Bricolage for drying clothes

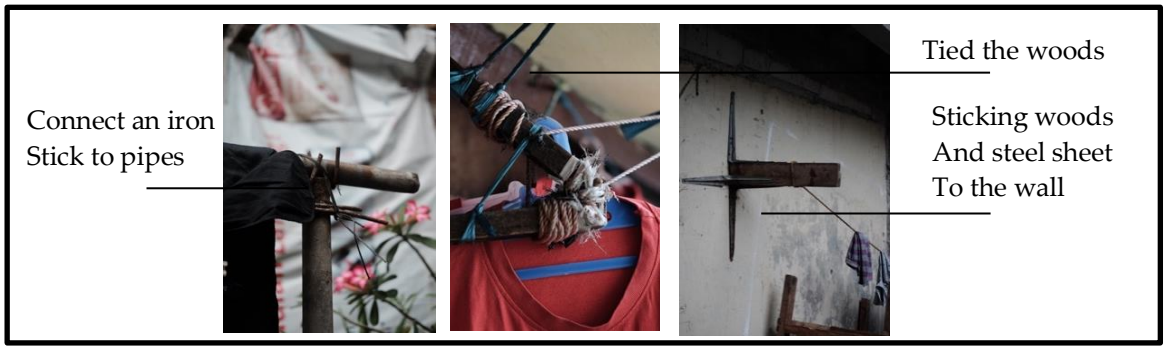


Source: by Author

The *Kampung* is a very appropriate place to arouse interest in production amongstit's inhabitants. If they like to put things in the leftover area, they would like to produce something with them. We can therefore find a collection of bricolage that was the result of items produced from scrap (Figure 1.3.2). All of these images shows that bricolage activities can be found in communal space areas. At almost every corner of the *kampung*, we can find different bricolage for different activities; some are different in how they are built, but they play the same roles (Figure 1.3.3).

The bricolage results depend on the local residents itself. According to Levi-Strauss (1962), bricolage is a collection of 'pre-constrained' elements that have many possible combinations. Something as an intermediary between images and concepts, namely signs. Images are things that people want to make; in the case of Fig.1.3.3, the sign is something which related to dry a clothes. Concepts means the power of reference; from common knowledge we know that if we want to dry clothes we need something like a clothes line, something that can hold the clothes for them to be dried by the sun. Therefore, the resulting shapes of bricolage will be very different from one to each other. To connect images and concepts, we need something that can be acted as guidance, namely signs. Asign is a guidance to make a plannerknows howto use slum dwellers knowledge to enhance their habits to work on bricolage.

Figure-1.4. Technique as a Bricolage Signs



Source: by Author

Fig. 1.4 are signs that we assume can connect the images and concept; of which the technique itself is a sign. We then attempted to focus on observing only one small neighbourhood. We mapped the techniques they used to shape the bricolage. We divided 18 bricolage signs into five categories: hang, connect, *mitateru*, stick and stock. *Mitateru* means new technique, inspired by our team from Japan.

Figure-1.5. Signs based on technique (1-7) hang; (8, 9) connect; (10 – 13) mitateru; (14 – 16) stick; (17, 18) stock.

Source: by Author

Table-1.1. Explanation of bricolage based on technique

Hang	**1. A leftover structure made from iron pipes, used for hanging plant pots.**
	2. Hanging bamboo as a leftover bamboo hanger, used for a bird cage hanger.
	3. Hanged bamboo as a hanger, used for drying clothes.
	4. Wood hung on a pole to extend a lamp hanger
	5. Signage board hung on a cut PVC pipe
	6. Hanging leftover fabric, used as a cover from direct sunlight
Connect	7. Connecting leftover wood and a cut plastic container to make a cleaning tool which can collect dust
	8. Joining two iron pipes to make a structure for hanging plants
	9. Roofing tiles put on top of a roof cover, to give more weight so it will not be easily blown away.
Mitateru	10. Using a scrap car door to cover half of the door access which could block access to the house; it then becomes a hole as a window.
	11. Using a gas pipe as a handrail, also used for drying clothes.
	12. Cutting bottles to represent a flower, used as a street decoration.
	13. A trolley as a display hanger, used for hanging bags to sell.
Stick	14. Sticking an aluminium bar to a wall to cover a messy wire.
	15. Attaching wood to the circulation hole in a wall, to make a hanger for drying clothes.
	16. Using a wooden pole to extending the position of a mosque speaker.
Stock	17. Stocking leftover items, then placing a wooden board on the sides to make box-like storage.
	18. Scrap concrete box from a bin, used as a planter box.

Source: Self-illustration

All these knowledge signs will be acknowledged as the basis to make a participatory model intervention with community initiatives.

6. Discussion

6.1. Design approach

(a) Our first move after acquiring basic understanding of everyday life in the *kampong* was to start focusing on a smaller area division called RT. We focus on RT 11, as one of 13 RTs exist in Kampung Cikini Kramat. First, we aimedto discover any specific activities or conditions that can be found in the shared domestic area through observation and short conversations with the local residents.

Figure-1.6. Existing condition of RT11

Source: by Author

(b) We started to communicate with the community leader, who is in charge to lead almost 30 houses in the area. We asked if there was any specific movement of the local community planned in the future. The main reasons for holding discussions with the RT leader were not only to obtain permission for our projects, but also to create a gateway to establish community initiatives.

Figure-1.7. Discussion held with RT leader

Source: by Author

(c) Aftertheobservation, we encountered two major problems in the communal space. The first was polluted water in a ditch, caused by the lack of grease traps and the high number of people who selling food that cause

blockages. The second was the lack of space for greening activities. Both problems also become the community concern to improve.

(d) We decided to choose the second problem; we know that the first is the most urgent issue that needs to be solved in the short term, but the second will have an influence over a long period of time. We focus on the problem that inspired the idea of a better system in a communal space, so that it would motivate other areas to followthe similar idea. We created good and bad scenarios for the future to raise awareness of the community, through discussionon these topics with the local community.

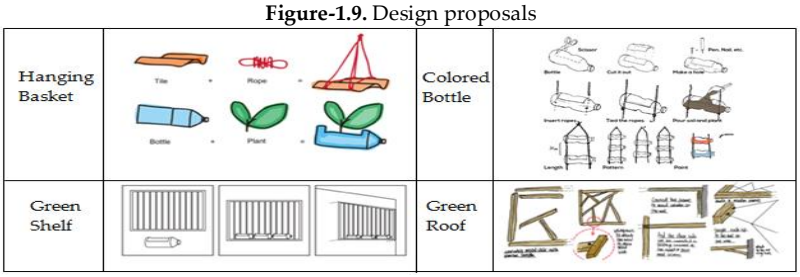
Figure-1.8. (1) Good scenario, greenery influence other areas. (2) Bad scenario, messy Kampung will be diminished

Source: by Author

(e) RT11 is the greenest RT area. When we talked to the local residents about hygiene and green areas, they showed a great enthusiasm for gardening. However, due to the lack of space, we started to think on how to overcome the situation by organizing the space more efficient for plants. We found some evidences;the local peopletended to create shade to protect themselves from direct sunlight using leftover banners. This is quite interesting, because the shaded area is the space that is more likely to become agathering site. They use banners to make shade, but this may not be sufficient. Wehelped localpeople to create a better performance.

(f) As bricolage is our design method, the first act wasto find the nearest waste site and decided how to make use of the availability of materials found in surrounding site. There are two waste sites in RT11.Both waste sites contained items such as broken pieces of wood, unused roofing tiles, bamboo, broken fences and some leftover pet bottles. From the availability of materials, we started with four proposed designs to be discussed with the local community.

Figure-1.9. Design proposals



Source: by Author

(1) We created a pot holder from leftover roofing tiles to be hung on a blank wall, based on the idea of how the rope tension could be a good structure. In this metaphor, the pot can be placed wherever they want as long as there is a place to hammer a nail. **(Bricolage knowledge from *Mitateru*).**

(2) Colored bottles are a classic idea for creating a huge plant pot. The technique is sticking and hanging, and the idea is to also make children involved in the projects. **(Bricolage knowledge from hanging and sticking).**

(3) To reuse scrapped fences, we put them on blank walls in theneighbourhoodmainstreet, then filled the fence grids with vines. **(Bricolage knowledge from sticking)**

(4) Green roofing is our main idea for creating better shade. If there is no space to put greenery at a horizontal level, we couldutilize it vertically. We had made use of the existing leftover wood, whatever its shape, for hanging and interconnecting. **(Bricolage knowledge from connecting and hanging)**

(g) The next step was presenting our ideas to the local community for evaluation and discussion on siteand startedthe design process with each group of people who contributed to our projects.

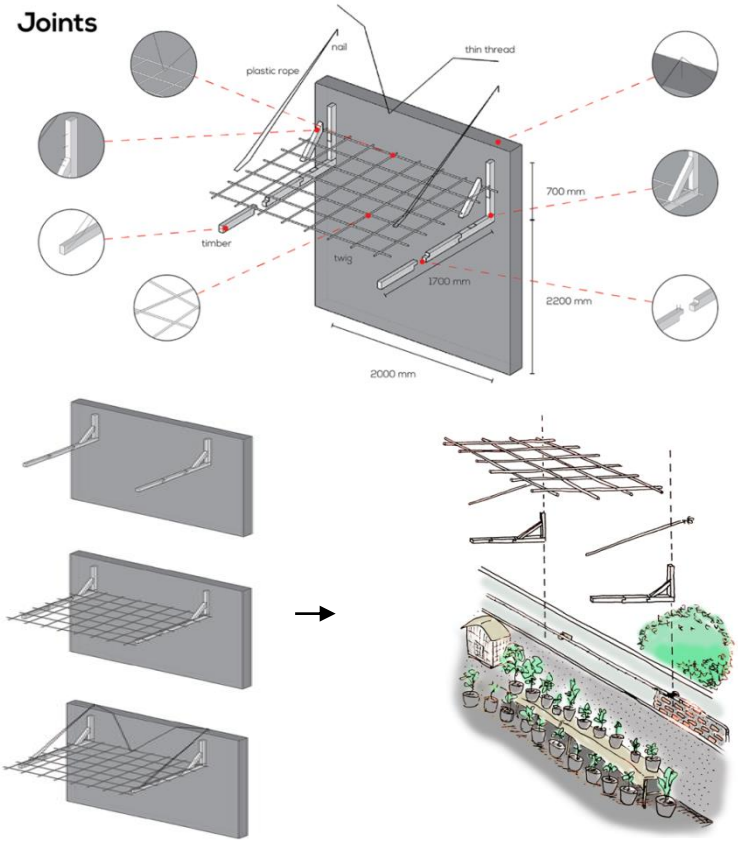
Figure-2.0. – (1) Children interested in helping to manage pet bottles. (2) Children paying attention to the presentation board. (3) Parents and teenagers helping to paint the installation.

(1) *(2)* *(3)*

Source: by Author

In this part, the transfer of knowledge between our perception and their the local habits was a unique issue. It is true that they did not have any difficulty in understanding how to take part, because our designs were based on using their knowledge of bricolage. The process of reusing scrap materials also took place in a communal space.The process of making things was trial and error. While the process of making continued, we exchanged our ideas with the community on how to interact with the materials.

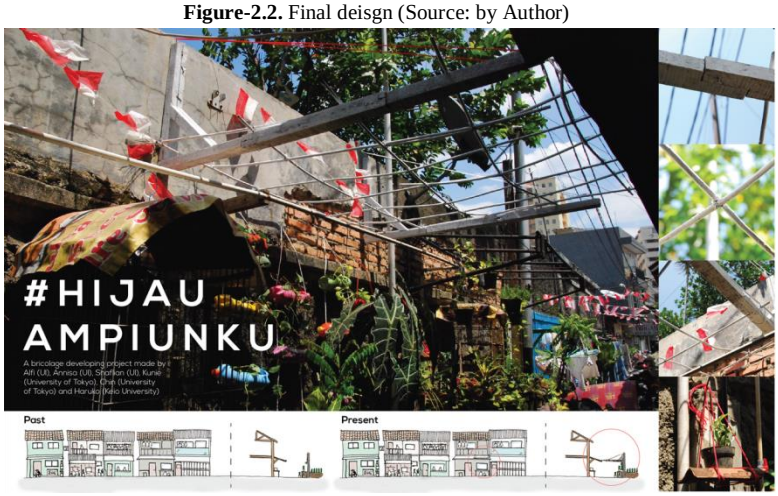
Figure-2.1. Magnified illustration



Source: by Author

(h) We propose the branding of "#HijauAmpiunku" (My Ampiun Green) as a social mission.In the future, if the plants already grow on this installation, people who passing by, or inhabitants of the other RTs would be interested in this project and publicize it on social media. By giving it a hashtag, hopefully it would became viral.This would make the local community proud of their environment andwouldinfluence the other *kampung* sites to do similar things.

Figure-2.2. Final deisgn (Source: by Author)



7. Conclusion

a.) This paper reflected our new design approach as designers, whether we are urban planners, artists or architects. Emphasizing the idea of bricolage is a way of imitating local people and finding a fruitful meaning from them. The approach was replacing the generalterms that designer generates fragments of structures for creating something. Using the bricolage, it is possible to find a new concept structure from signs in informal settlements. We cited some thoughts from the leader of this project (Akiko and Amemiya, 2018) that bricolage designconcept is potential to create a new alternative solution in the future.

b.) Bricolage is knowledge cultivated by imminent necessities, in contrast to engineers with their scientific minds, who might process something using un-affordable mass-produced materials and create an excess of unprocessed construction waste. The *bricoleur*, however, produces something fromwaste. This kind of thinking can invigorate sustainable design.

c.) Bricolage is a good way of thinking about design; we can handle simultaneously both images and concepts as signs. Signs can also be defined to be anything we want. Our project defined them based on technique, because it would be easier to apply them as our design in participatory model intervention. We can explain whether the sticking, connecting, hanging, *mitateru* or stocking are people's own daily habits. In the future, the local people can develop by themselves fromwhat we were doing as guidance in working using bricolage as design approach.

d.) As bricolage is knowledge from people's daily habits, this design method is regarded as a pilot project that potent to have a wider influence. This is possible because people would not have any difficulties in doing the same approach in other places, asbricolage approach are based on the local habits. Hopefully, the other RTs will do similar things and create a stronger system of self-help improvement in their living environment at*kampung*.

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Reference

Akiko, O. T. A. and Amemiya (2018). *Sensible high dencity, Megacity design studio indonesia-Japan.* Graduate School of Frontier Sciences, The University of Tokyo: Tokyo.

Anita, T. V. L. (2008). Failed survey the bricolage of market research. *International Review of Qualitative Research,* 1(2): 217-34.

Ellisa, E. (2016). Coping with crowding in high-density kampung housing of Jakarta. *Archnet-IJAR.,* 10(1): 195-212.

Joko, A. A. O. (2016). The tenure security and its implication to self-help housing improvements in the urban kampong, The case of kampong cikini, Jakarta. *Urban and Regional Planning Review,* 3:

Levi-Strauss, C. (1962). *The savage mind.* The Garden City Press Limited Letchworth, Hertfordshire: London.

Marcos, L. and Rosa, U. E. (2013). *Handmade urbanism.* JOVIS.

Talen, E. (2005). Do-it-yourself urbanism, A history. *Journal of Planning History,* 14(2): 135-48.

Ted, B. R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly,* 50(3): 329-66.

Tunas, D. (2008). *The spatial economy in the urban informal settlements.* International Forum on Urbanism: Netherlands.