Urban Social Changes: The Problem of Redefining the Urban Neighbourhood for Developing Country Context

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Abstract: Neighbourhoods are a universal condition of human settlement that can be found in all periods, in all cultures and urban contexts. But many researchers find difficulties in defining the term neighbourhood as it is dynamic and multi-dimension term. To understand neighbourhoods as it is crucial to understand neighbourhood dynamic characteristics in which social changes with its factors is considered as the most important reason for the changes. The continuous social changes have taken us into the information society whereby information has gradually controlled people by providing different interaction patterns. Those situations seem to have opportunity to meet condition of futuristic a human-cantered society 5.0. Achieving highly integrates cyberspace and physical space, however, is difficult as the people will challenge issues to present a future neighbourhood model. By way of socio-spatial based concept, neighbourhood model is supposed to create communities that can meet all their necessary within walking distances. Even so, the consequences of urban social changes will modify socio spatial characteristic as the neighbourhood substance. The paper attempts to identify the impact of urban social mobility in the developing country context to its neighbourhood function. Analysing the socio-spatial mobility pattern and characteristic is expected to identify the potential model of a future urban neighbourhood. The case study of Bandung, Indonesia shows that the changes of urban socio behavioural due to the introduction of IoT culture still have a significant role in maintaining the idea of traditional neighbourhoods and have some positive aspects of adapting to future better neighbourhood.

1 INTRODUCTION

Neighbourhoods have been the focus of concern of city planners, architects, and urban designers for a long time It is an influential idea and has occupied a well-entrenched place in the minds of theoreticians and practitioners for many years. However, a close analysis of its meaning reveals an extremely elusive concept whose substantive characteristics ebb and flow over time. The meanings attached to the idea are continually being disassembled, shuffled, and reassembled according to the circumstances (Galster, 2019).

And Talen (2019) affirms that urban neighbourhoods as socio-spatial units in modern planning has fundamentally changed when urbanization process diminish the need for a local urban existence. Urban life became less about a localized-relationships, but more about movement and freedom, and neighbourhood was redefined accordingly. Freed from the requirement of proximity, a social connection that required physical contact, and daily life based on walking, the notion of a neighbourhood became open to broader interpretation. And by the time the neighbourhood slowly and continuously changes unstoppable until this time.

At this time, we have entered the era of information. A period in which its society so-called Society 4.0., is characterized by a fusion of technologies that distorts the lines between the physical, digital, and biological spheres (Moraes and Lepikson, 2017). However, there is still no common understanding upon the definition, but it is undoubtedly that nowadays life is such a result of the horizontal expansion of IT. However, to be defined entirely the Society requires a combination between technology and institution that change people

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mindset. Thus, it is a serious issue affecting political and economic stability and even the survival of humankind. Indeed, the changes in society mindset will become more noticeable and accelerated in the future due to the transformations of technology, economic, and geo-politic.

Taking into account the development process of human society, it is forecasted that in the future, people life's aspects will relate to the IT's innovation, and this stage is so-called the Internet of Things (IoT). In this era, it seems that all of the social systems are interrelated by smart devices. As a consequence many human life activities will depend on intelligence devices. Urban life problems such as city parking, traffic lights control, and even toll collection services, have been operated by smart machines. By now, digital technologies and data science are used to weave the very fabric of sociality and to shape societies (Moraes and Lepikson, 2017).

The proposed idea of Society 5.0 - as a rational continuation of Society 4.0 - by the Japanese government has indicated the future of smart technology. Keidanren or Japan Business Federation Report (2016) defines it as a human-centered society that balances economic advancement, and resolving social problems with a system that highly integrates cyberspace and physical space. In this society, the potential smart devices are becoming a part of the mainstream electronics culture, and people are adopting smart devices into their homes faster than ever. Of course, not all activities can be substituted by smart technology, but at least they will be more social works and activities that will be replaced by them. Compared to Society 4.0, the 5.0 one stresses its role to deal with social problem solving as it was not adequately provided in the Society 4.0, although it was expected.

The idea of Society 5.0 is perceived will significantly change the current community life. As it conceptualized the Society 5.0 will achieve a high degree of convergence between cyberspace (virtual space) and physical space (real space). However, people, things, and systems are all connected in cyberspace, and optimal results obtained by AI exceeding the capabilities of humans are fed back to physical space. This process brings new value to society in ways not previously possible. Achieving such a society, however, will not be without its difficulties of challenging to manage economic and physical issues to establish a future model community and its neighbourhood.

According to the proposal, human interest will be put in the centre of community life and place supportive AI and robots. This idea exactly is different from the new life situation where a priority has been placed generally on social, economic, and organizational systems. These changes enable humans to undertake daily heavy work and tasks that they are not particularly good at, through the creation of new social value and organizational system. In the future, society will incorporate advanced technologies in diverse industries and social activities and foster innovation to create new value.

The creation of new values will be certainly followed by socio-behavioral changes. The use of smart devices will primarily generate alternation of activities' patterns, and relationships of persons and their communities that are different from those in which they engaged in some time before. Thus, new value of smart devices will increasingly modify the way people work, nurture a family, educate their children, govern them, and seek ultimate meaning in life. If these processes happen, then in one time, there will be new human culture, and it means that the behavioral changes as a function of social mobility has occurred. However, the cultural transformation will not be processed globally, instead, it will depend on many local conditions that play fundamental role in the development of local socio-cultural values (Betancur and Smith, 2016).

Logically local socio-cultural value will play essential role in transforming the character of neighbourhood. In that context, the neighbourhood is considered as an alternative concept to deal with urban housing and settlement problems. The concept considers urban community as a critical element to achieve a better quality of living environments as the idea inwardly focused on neighbourhood cell from the greater urban context. Thus, in explaining neighbourhoods, it is very crucial to consider locality and process as significant aspects.

Due to the globalization process, the idea of human-centered society has continuously inspired developing countries people. It, however, has to face a particularly different situations when it deals with current urban social changes in the Indonesian context. And the circumstances will be more complicated as Indonesia is facing challenges of managing urban social changes toward a human-focused society. Nowadays, the influence of smart technology development has been part of Indonesian urban community life. People in the city of Bandung, for instance, are already very familiar with such smart devices to fulfill their daily life demands and services. The question then to what extent multidimensional urban social changes as the consequences of the society 5.0 idea introduction will modify the current

physical spaces character and function of an urban neighbourhood.

This paper is aims to observe the correlation between social changes and urban neighbourhood socio-function as to the reference of society 5.0. In more detail, it expects to explore the possibility of neighbourhood socio-spatial transformation concerning such multidimensional urban community change. In the end this paper will explain problems of re-defining the neighbourhood concept in the context of developing countries. For the purpose, it takes a look at Bandung city with its housing and settlement development to represent of dynamic problems of an urban neighbourhood in developing countries, especially Indonesia

2 THEORY AND RESEARCH METHODS

2.1 Research Theory

The unique term of neighbourhood, in fact, can be found in so many places all around the world. In the Indonesian context, neighbourhood is used to entitle *rukun warga* as it is described in Bahasa and Javanese language (Talen, 2019). Although, as living space, it can be recognized by all of its inhabitants, but it is hard to describe the term. However, the importance of the neighbourhood is undeniable. As it is pointed out in some places throughout early 20th century, that neighbourhoods maintained to hold meaning and relevance despite technological changes.

There are so many descriptions on it that illustrate neighbourhood as such a multi-dimensions entity. Gold (2002) summaries that there are four approaches to study the neighbourhoods through the ecological neighbourhood, neighbourhood resources, symbolic and subcultural neighbourhood. In addition, neighbourhood also has several functions, for instance, as a source of mutual aid, center for impersonal influence, some functions arena for interaction, the base for formal and informal organizations, reference group, and status arena.

The typical neighbourhood has physical, social, and political aspects with processes in between their correlation. In a comprehensive and simple way, Betancur and Smith (2016) explain neighbourhood as real space with its cultural meaning that derived from the imagination which transforms symbols and images into meaningful place. While from the sociologist' viewpoint, Gold (2002) adds very important insight that neighbourhoods are critical part for such a comprehensive understanding of urban life. Moreover, Timms (2010) stresses that the neighbourhood is a locally based social system that is part of urban society. At that point he also explains that neighbourhood represents an area, its inhabitants, relationship between inhabitants, the friendship between inhabitants. He also says that the cultural dimension of the neighbourhood is reflected by the values of the population concerned. It indicates that the community plays an important role in the neighbourhood life. Betancur and Smith (2016) also list some indicators of neighbourhood related to community life such as social status, income, ethnicity, educational background, family size, housing status, security, and social cohesiveness. Those indicators then will intrinsically interact with other features of public services, physical environment, and economy to fabricate the real neighbourhood.

The importance of community as primary agent of social change processes in the neighbourhood has been concerned some writers. According to Franklin (2006) the parameters of community have been even more resistant to exposition than those of homes. The community has been linked to the more explicitly physical dimension of neighbourhood, and together this concept has been underpinned numerous government-endorsed model for development and regenerations. It was also underlined that Howard's idea of neighbourhood unit has the function to foster good relations and a sense of community.

In relation to the urban community, it is essential to consider upon their socio-economic characteristics. Downs (1981) concludes that the socioeconomic status of urban neighbourhoods can change over time due to multiple processes. Some of these processes operate at the urban level, which causes neighbourhoods to change relative to one another within the urban area. These processes can generate changes in the distribution of socioeconomic characteristics of the population in an urban area, which can translate into neighbourhood change.

As neighbourhood encompasses socio-cultural aspects, therefore, it is subject to change aligned with such socio-behavioral changes. The influence of social changes on the dynamic's neighbourhood life is pointed out by Talen (2019) by describing that the history of systematic urban expansion is often a history of growth by neighbourhood. It is to indicate that the ideal place for discussing neighbourhood issues is in the local or urban level.

Social changes itself can be summarized as the process that refers to the transformation of the social

order in the community by making adjustments and variations to social institutions, behavior, and relations. It involves social evolution where the society makes amendments to traditional societal norms leading to the necessary change (Jack and Akujobi, 2017).

Concerning the global human society development stage, it is clear that the information era has globally and inevitably introduced all types of social changes. The current use of smart gadgets for shopping, ordering, servicing has started to alter the pattern of social activities, functional spaces as well as social values, mainly in the urban area.

Franklin (2006) illustrates and mentions that along with globalization, society has affected all areas of life, including economy, social relationship, built environment, and pattern of living. Reasonably as the physical dimension of neighbourhood is the product of cultural processes. This reversible process that involves structure, agency, and representation layers can be simple framework to understand how the cultural and social process will works as an engine for built environment creation.

In more detail, the structure level includes culture and society that consist of social-spatial and conceptual processes which inhere in a particular culture. The introduction of the information era certainly will alter the relation and spatial concept of the agency that consists of constituent elements of institution and organization; individuals; as well as people. The neighbourhood then can be perceived as a communicative action result of agents that transform social structure and express individual and organizational value. However, the process is reversible one, so, it is likely that in a certain time the neighbourhood's physical dimension will influence behavior or social changes etc.

To identify the changes Downs (1981) proposed common measures. The measure relies on the relative positions of the neighbourhoods within the city context, exclude the effect of overall growth or decline and confound the impacts of urban positional exchanges with the effect of an increase in inequality. By using the standard practices, it is impossible to estimate the effects of structural processes on neighbourhoods. It is also impossible to systematically compare processes of neighbourhood change across cities, while accounting for the ideal conditions in neighbourhoods.

In the context of Indonesia, the issues of defining neighbourhood closely relate to the character of urban housing. Based on the housing process, there are two main categories: formal and informal development. The informal settlement, in fact, is the majority in the Indonesian urban landscape. This informal category seems to become the clearest example of the process of physical neighbourhood alternation due to socio-cultural changes. In contrast, the formal process creates neighbourhood following the standard process of new housing development that meets conditions of SNI 03-1733-2004 on The Guideline for Urban Housing Development.

According to it, a neighbourhood unit - *rukun warga (RW)*, is a component of *kelurahan* or urban village that inhabited about 2500 peoples and consists of about 8-10 hamlet or *rukun tetangga (RT)*. The guideline also put on attention on public facilities and infrastructure fulfillment that indeed will depend on the number and characteristic of the inhabitant. In addition, the housing development must fulfill all requirements of administrative, technical, and ecological aspects. The development must provide public facilities, and infrastructure to support and enhance economic, social, and cultural social activities. In addition, the neighbourhood planning and design have to meet universal design criteria that allow all people in all limited physical condition to access all public facilities.

2.2 Method

Researches on neighbourhood include interest in structural issues (such as income, demography, and housing) and social issues (such as social networks and relationships, a sense of collective efficacy, daily patterns of activity, norms, and behaviors). Data on structural and social issues can be generated through observation, surveys, interviews, and other means, but some data are already available. Research in neighbourhoods often seeks to explore residents' perceptions and experiences or effects of social changes to spatial function of the neighbourhood.

To approach the issues, this research chooses exploratory to work in the interface between social and technical aspects. The study deals with community characteristics and their perception concerning the physical and spatial condition of their neighbourhood. To respond to such complicated issues the research was conducted using mixed-method that is a combination of quantitative and qualitative methods (Creswell, 2003). From the correlation study on community perceptions towards the introduction of public services and neighbourhoods socio-spatial function, it is expected to identify the issue of defining the urban neighbourhood.

To examine the research subject, two *Kelurahan* in Bandung that represents urban neighbourhood's

development processes and illustrates the urban socio-economic differences in Indonesia in relation to their engagement with technological change on public services provision is used.
Data was collected from 2018-2019 by distributing questionnaires and field surveys. The closed-ended questions using 1-5 likert scale by using purposive non-random sampling involved 178 respondents for all two urban villages with a confidence level of 95%.

3 RESULT AND DISCUSSION

3.1 The Case Studies

This research is conducted at *Kelurahan* Sukaluyu and *Kelurahan* Antapani Tengah in the city of Bandung, West Java (Figure 1). The cases were selected by considering regional characteristics differences that represent the practices of the neighbourhood concept in Bandung residential development.

Figure 1. Location of neighbourhoods' case studies
Source: Research Data, 2018

Based on its Detail of Spatial Planning), *kelurahan* Sukaluyu and Antapani Tengah are designated similarly as a residential zone. *Kelurahan* Sukaluyu consists of 11 RW with a population of 18,913 people and a total area of 71.58 ha. Meanwhile, *Kelurahan* Antapani Tengah slightly has different character in term of its development process. Indeed, most of the area in this kelurahan is lodged by formal housing of Griya Bumi Antapani established by Perumnas. The total area of the Kelurahan Antapani Tengah is about 93 ha and occupied 7,128 people.

3.2 Findings

The two *kelurahans* (urban villages) are inhabited majority by Sundanese (68.5%). Moreover, 69% of houses are occupied by owners, and the rest is rented. Meanwhile, most of the residents have educational background of high school level (31%) with their employment (34%) is "others." This other category represents informal workers (odd jobs), students, as well as homemakers. The data also reveals that some 57% were residents who had lived in their house for more than 20 years.
The observation indicates that the physical boundary of RW is defined by some streets in different hierarchies (secondary, collector, and local streets) as well as natural features (river). In addition, each *RW* has social facilities such as elementary school or kindergarten, mosque, community health center, mini market, open space. However, their conditions and availabilities differ according to people though they are in the same *kelurahan*. In general, those public facilities have played a significant role in neighbourhood social interaction (Table 1.). Playground, kindergarten, and elementary school are considered as potential meeting places. Indeed, more than 50% of respondents stated that these facilities often generate people interaction. Mosque, actually becomes the most place for interaction. But, recreational areas and community health centers are not considered as potential community places.

Table 1. Potential Spaces for Interaction

Variables	Kelurahan Sukaluyu				
	QD	D	A	QA	SA
Playground	0%	10%	39%	19%	4%
Shops	0%	10%	44%	36%	10%
Schools (Kg/ El.Sc)	0%	1%	11%	57%	16%
Place of Worship	0%	0%	31%	38%	30%
Recreation place	9%	39%	28%	23%	1%
Polyclinic	28%	62%	9%	1%	0%
Field	0%	8%	42%	39%	7%
Notes: SA (Strongly Agree), QA (Quite Agree), A (Agree), D (D					

Variables	Kelurahan Antapani Tengah				
	QD	D	A	QA	SA
Playground	0%	14%	61%	24%	1%
Shops	0%	3%	36%	49%	12%
Schools (Kg/ El.Sc)	0%	7%	61%	25%	7%
Place of Worship	0%	1%	30%	46%	23%
Recreation place	0%	1%	42%	53%	4%
Polyclinic	0%	22%	48%	27%	3%
Field	0%	0%	46%	44%	10%

The data (Table 2.) also shows that the residents of *kelurahan* Antapani Tengah tend to go out of their neighbourhood to fulfill their public services and facilities demands in compare to the Sukaluyu's community who strongly prefers to use public facilities within their neighbourhood. Some residents

of those two *kelurahan* are willing to go outside their neighbourhoods to get better school quality and health services. Some residents considered that their schools and health services are not good enough to accommodate their relatively high demands. For monthly domestic shopping, many people also prefer to buy their needs at supermarkets or markets outside their neighbourhood though it is quite far. In fact, they consider shopping as recreational activities since they could go to other places for family entertainment afterwards.

Table 2. Social Interaction Locations

Variables	Kelurahan Sukaluyu		Kelurahan Antapani Tengah	
	Inside The Neighborhood	Outside The Neighborhood	Inside The Neighborhood	Outside The Neighborhood
Children play	88%	7%	45%	55%
Shop for daily needs	87%	13%	52%	48%
Children's school	38%	57%	49%	51%
Worship	99%	1%	45%	55%
Interaction with residents	84%	16%	42%	58%
Health Treatment	33%	67%	45%	55%
Exercise	71%	29%	45%	55%

In addition, the study displays that residents of both *kelurahan*s have a good quality of social interaction and sense of community although with different quality levels. The data indicates that the level of social interaction and sense of community at *kelurahan* Sukaluyu in general is lower than that of situation at kelurahan Antapani Tengah, and, more than 50% of respondents agree to upon that matters (Table 3).

Table 3 also shows positive responses upon smart technology in providing community services with some differences levels to it. The residents of Kelurahan Antapani Tengah consider getting advantages from the presence of an online transportation system. Most of the respondents agree to the significance of smart technology applications for daily live services. However, despite its high consumption, the smart system does not entirely replace the conventional public transportation yet. Some residents still use traditional urban transport for a relatively short distance.

Some others are still hesitated to use the facilities or not using it frequently as they still do not know how to use the application, especially for the elders. In addition, the introduction of transportation application does not seem to affect the security level of the neighbourhood; however several residents annoyed by the online drivers who gather in particular spot in their neighbourhood.s

Table 3. Neighborhood Characteristics and Mobility

Variables	Kelurahan Sukaluyu					Kelurahan Antapani Tengah				
	SA	QA	A	D	QD	SA	QA	A	D	QD
Ease of meeting other people	17%	25%	32%	22%	4%	12%	35%	45%	7%	1%
Having a new friend	24%	29%	42%	4%	-	10%	36%	51%	3%	-
Get to know many people through children	10%	23%	26%	27%	14 %	2%	16%	44%	32%	6%
Friends in neighborhood are part of daily activities	17%	28%	28%	19%	8%	7%	29%	52%	12%	-
Meet friends usually in public spaces	10%	31%	39%	16%	4%	1%	18%	62%	19%	-
Participate in social activities	18%	22%	37%	21%	2%	11%	24%	62%	3%	-
OL transportation apps in fulfilling demand	27%	28%	31%	6%	8%	22%	38%	40%	-	-
OL transportation reduces dependency on public one	15%	12%	50%	18%	5%	6%	20%	27%	37%	10%
OL transportation affect security negatively	1%	0	5%	15%	78 %	0	0	16%	59%	25%
OL Transportation apps fulfilling daily needs	54%	22%	22%	1%	1%	16%	36%	43%	5%	-
Notes: SA (Strongly Agree), QA (Quite Agree), A (Agree), D (Disagree), QD (Quite Disagree)										

Regarding social changes, the data denotes that *kelurahan* Sukaluyu and Antapani Tengah have a relatively similar level of housing occupancy rate. This situation describes one of importance condition for communicative action in the neighbourhoods. In those two kelurahans, the housing vacancy level generally is considered at a low rate (below 5%) and in fact, most of them are at very low level (less than 2%) with vacant period is less than three months. That figure indicates that social mobility in that neighbourhood is low. However, kelurahan Antapani Tengah is considered more stable than the other one. The people in and out at kelurahan Sukalyu are relatively high as it is about 9-12% of their population, while in kelurahan Antapani Tengah is only about 2-5% (Table 4).

Table 4. Social changes

Variables	Kelurahan Sukaluyu		Kelurahan Antapani Tengah	
	No. of resident perceive vacant houses' rate	No. of resident perceive rate new residents in/out	No. of resident perceive vacant houses' rate	No. of resident perceive rate new residents in /out
Very low (< 2%)	**55%**	21%	**43%**	**43%**
Low (3-5%)	22%	24%	**39%**	**39%**
High (9-12%)	17%	**41%**	3%	3%

Meanwhile, the correlation analysis between related factors to the use of smart technology in the society to access public services – especially online transportation - indicates various results. In general, it shows the significant correlation of socio-economic factors and the utilization of smart technology. The housing types indeed play an important role on the perception of *kelurahan* Sukaluyu's community towards smart technology applications for public services but not for another one. In contrast, age and housing tenure have a central position for the perception of *kelurahan* Antapani Tengah's community. However, all correlations in two kelurahan show no high rate correlations (close to

1.00 or -1.00) as they are on average about 0.2 to 0.4 with positive or negative correlation.

The correlation model also has several significant factors that indicate the differences between those two *kelurahan's* characteristics (Table 5). For *kelurahan* Sukaluyu some parameters indicate its significance, but, its correlations between factors are at low rate (around 0.32 to -0.33), mainly the perception on the role of online transportation in altering urban transport services. Similarly, for *kelurahan* Antapani Tengah correlation is at level around 0.252 to 0.283 and -0.246 to -0.360 with 2-tailed sig. <0.01.

Table 5. Society Perception Factors Correlation

Variables		Kelurahan Sukaluyu					Kelurahan Antapani Tengah							
		1	2	4	5	7	2	4	5	6	7	8	9	11
9	OL fulfill demand	0.18	0.16	0.20	0.23	*-0.03*	0.28**	0.03	0.27**	*-0.07*	0.04	0.02	1.00	
10	Ol reduces depend on public	0.28	0.25	0.23	0.32	*-0.16*	0.28**	0.21*	0.15	*-0.25**	*-0.36***	0.23*	0.02	
11	OL put negative security	*-0.04*	*-0.04*	0.11	0.18	0.02	0.18	0.25*	*-0.01*	0.04	*-0.16*	0.11	*-0.08*	1.00
12	Ol fulfill daily needs	0.01	0.07	0.10	0.03	*-0.33*	0.04	0.10	0.13	*-0.23**	*-0.08*	0.06	0.48**	*-0.23**

Notes : (1) Housing type/size (2) House land area (4) Ethnicity (5) Education level (6) Age (7) Education level (8) House tenure status

3.3 Discussion

The objective of this study is to understand the problem of redefining neighbourhood concept in developing countries in the perspective of Society 5.0. As the Society 5.0 is futuristic concept therefore it is required to predict the possibility of neighbourhood spatial function alternation due to the socio-cultural changes as the introduction of smart technology in the primary concern of the Society. The picture is clear that there will be new values in the future as the result of the Internet of Thing (IoT). This socio-cultural value is established by the uses of the internet to connect all people, to free people from burdensome works, to integrate people, things, and systems in cyberspace. The question then to what extent these value changes will deliver new distinctive behavior patterns that makes spatial and functional impacts to their neighbourhood?

According to Franklin (2006) such a built environment form is the result of long and complicated transformation of social, spatial, and conceptual processes to produce communicative actions. The recent socio-cultural characteristics of the two kelurahan communities show the social dynamic patterns of modification towards their acceptance on the quality of public services that lead to socio-behavioral changes.

As the principal neighbourhood's component, the communities of *kelurahan* Sukaluyu and Antapani Tengah tend to be in the dynamics change process. The high rate of movement residents at these two kelurahan shows their capacity to adapt to changes. However, their shallow housing vacancy rate (less than 2%) displays that they are a very established neighbourhood. This stability seems in coincidence with their level of social interaction and sense of community. This is critical cultural factors to support social system and social processes as a basis for organizing principles of society that affect both social systems and in turn, spatial arrangements. This condition is in accordance to social relationship level in both *kelurahans* that have created such strong social bonding and sense of community.

Although most of them consider certain facilities as potential interaction spaces, but, the community at *kelurahan* Antapani Tengah seems more adaptive to responds to any public facilities insufficiency. Indeed minimum public facilities have been stated at the Urban Housing Development Guideline, but, it looks that the existing regulation unable to deal with such dynamic community changes. Hence it has raised the gradual adaptation of ways of life and associated artifacts in which people choose to find public facilities outside their neighbourhood. This trend illustrates the adaptive character of dynamic, flexible as well as better-off people at *kelurahan* Antapani Tengah. However all communities in those two kelurahans still considered the importance of strengthening the local community. This is a cultural viewpoint that meets to traditional or local value in Indonesia.

Upon the introduction of smart technology, people of those two *kelurahan* respond in different ways. It seems that socioeconomic plays a potential role in influencing the neighbourhood change. For Antapani residents, there is interesting hint that the usage of the application to fulfill transportation services needs shows a positive correlation with education level. It is indicated that in the future, along with the increase of human development index as well as social prosperity, the prospect of the uses of smart technology in society life is very encouraging. However, there are also negative correlations shown between the dependence on public transportation with age and duration of living. This socio-cultural problem indeed will resolve naturally by the changing generation in the future.

While for Sukaluyu residents, some socio-economic variables such as housing ownership and education level have a significant correlation with perception on the reduction of public transportation

dependency. The analysis shows a positive correlation between those variables, on moderate coefficient correlation, 0.28 and 0.32. It means the more affluent and higher the education level of a household and its members, the slighter the dependency on online transportation, and vice versa. It is indeed such a logical situation in which the wealthy people really depend on public transport services in the socio- cultural context of Indonesia.

Moreover, nowadays, the use of smart devices and technology has altered the pattern of urban social life. It has changed the way of communication, fulfill demand, as well as organize and manage daily jobs and duties. It can be seen in the neighbourhood surrounding how fast the phone box disappears as required public facilities from community life. To date, it is a common urban phenomenon, that all family members gather around the dining table but they busy with each gadget and have no communication between other family members.

This personal lifestyle is also revealed in their activities as a part of a community. Although the analysis shows various correlation rates, but, most people use online transportation services to help them to fulfill their daily life needs and services. The application of Gojek and Grab, for instance, is not only to provide transportation services but also already various services such as delivery, shop, food, health, cleaning, and many others that make easier and more efficient life in urban area. This technological acceptance, indeed, has gradually changed social value and culture. These services apparently will reduce the uses of a private car that has been many urban people's wishes. In simple case, if this trend going well then there will be socio-functional decrease in urban neighbourhood as the decline of private car ownership.

4 CONCLUSION

The established neighbourhood concept indeed is relevant in the changing socio-cultural context of Indonesia, especially in Bandung city. The study shows the existence of neighbourhoods' culture in Kelurahan Antapani Tengah and Sukaluyu. The study also reveals the correlation between heterogeneous with good inhabitants' social cohesion in the mid of dramatic cultural changes as the consequence of technological expansion.

The introduction of smart technology as the society 5.0's foundation indeed has altered the socio-cultural values of the community in developing countries such as Indonesia. In a certain extent, the introduction of new technological values has changed the urban societal behavior pattern mainly in fulfilling daily services. The decrease of mobility will alter the spatial function of the human environment. The positive responses toward the use of smart technologies indicate the openness of urban community to the new social value, and predictably it would put an impact on the neighbourhood spatial function. It seems that spatial function modification will follow the values alternation in terms of sizes, types, and number. However, transformation processes will depend on inhabitants' socioeconomic conditions.

Regarding the future shape of neighbourhood, urban behavioral changes are significant indicators in relation to popularity of smart technology use in providing community services in last seven years. Many people in Bandung now can obtain and fulfill their needs such as foods, transportation (car or motor), ticket, shopping, bill as well as package and many more only by using application on the phone cell. This trend has gradually change community behavior in their daily activities. However, in speculating about the future, the same contextual approach can be adopted as has been done for the contemporary situation. Undoubtedly the parameters of space provide an important context, but it is perhaps in the trajectory of the social system and social processes. Some new neighbourhood design concepts may emerge primarily based on cultural and social change, but more direct processes have been gradually done in the informal urban neighbourhood influenced by socio-spatial changes in relation to the introduction of IoT culture in the Indonesian urban society.

Indeed, not all people use smart technology, for some reasons, it means that the institution of social values will proceed slowly and diverges. However, by considering their socio-cultural condition, it seems that new social value will play an influential role in transforming the neighbourhood spatial function. Its role will depend on local Indonesian culture to control and direct the social value developments. Therefore, more attention must be paid on neighbourhood planning, especially in the very urban area as it will play a critical role on maintaining the integration of its community

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