Research on the Formation Process of a Multi-ethnic Network in Urban Mixed-use District by Ethnic Minorities Living in Mixed-use Buildings, Wanchai, Hong Kong

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Abstract

The function of urban space in multi-ethnic network formation by ethnic minorities in urban mixed-use district, in Wanchai, Hong Kong, was studied in this paper. A hearing survey was conducted in February 2004 to collect the chronology of network development with people in HK, as fundamental analysis. It was found that five urban space components are important for formation of a multi-ethnic network in the mixed-use district. These are (1) Entertainment business (tourism) related - bars, discos, nightclubs, ethnic restaurants; (2) Construction related - architects, engineering firms, interior material retailing showrooms; (3) Public leisure facilities - open public parks, basketball grounds, playgrounds; (4) Public places - streets, market places; (5) Residence - self or others. Sequences of multi-ethnic network formation in these places were analysed in a networked graph, though the representation of "an ethnic minority gather with acquaintances in one place (X) has his acquaintance network extends and gather in other place (Y)" by a directional network relationship between sender (X) and receiver (Y). It is found that among these components, (1) and (2) are the major places, which attract ethnic minorities to form multi-ethnic networks in Wanchai. From networks formed in these places, further networks are induced to form in places (3) and (5) and further to (4). A directional relationship of multi-ethnic formation in these places suggests the process of multi-ethnic network formation and extension in the mixed-use district.

Keywords: urban space component; function of urban space; multi-ethnic network formation; mixed-use district; ethnic minority

1. Background

Ethnic minorities (EM)*1 residing in foreign cities are increasing as globalization proceeds with increasing international mobility. Their community formations have been studied in the form of ethnic enclaves where people of similar ethnicity gather in order to maintain a style of living and culture similar to that of their homeland. As ethnic complexity increases, the interaction of ethnic minorities will no longer be confined to their own countrymen, and multi-ethnic interaction will inevitably become the trend. At the same time, inescapable conflicts will arise among them as well as with the local population. It is therefore necessary to clarify how people of various ethnicities get together to form multi-ethnic networks in urban districts, and the significance of urban context to such network formation.

1.1 Purpose

The main purpose of this study is to clarify (a) the process of ethnic minorities forming multi-ethnic networks since they began living in Hong Kong; (b) the process of their multi-ethnic network formation in Wanchai; and (c) the combinations of urban spaces in relation to the multi-ethnic networks formed.

1.2 Wanchai as representative research district

The Wanchai District in Hong Kong (Fig.1.) was chosen to be the background of this investigation. Foreigners of

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various ethnicities started trading, living and working there since the harbour was opened in the 19th Century. Foreign related business and religious facilities bloomed and spread in tandem with the penetration of people of various ethnicities and cultures. It has now become a mixed-use district with the old inner area near the hillside on the south and extensive commercial development near the shore following a number of land reclamations. Ethnic minorities now comprise 18% of the district population (Fig.1), which is the highest proportion among the other districts. However, with the Chinese population being the majority, the formation of ethnic enclaves in Wanchai is believed to be impossible. After all, the population of a single ethnic group is not sufficient to establish domination. Thus, ethnic minorities of various ethnicities are exposed to people of other ethnic groups, if not they confine themselves to the limited population of the same ethnic minority.

Up to the present, it is observed that many ethnic minorities reside in the Wanchai district, particularly in high-rise mixed-use buildings. These mixed-use buildings were mostly built after the 1960s, and are scattered mainly along both sides of Hennessey Road, Johnston Road and Lockhart Road within the research area (Fig.2). These main streets were developed during the early period to link the financial and commercial centres in the Central district with the subsidiary commercial district in the Causeway Bay district. Mixed-use buildings are characterized by structures of approximately 20 floors combining a random combination of commercial and residential use. (Figs. 3 and 4). There are flats for single households and flats which are further divided into low-rental rooms or bedspaces. Ethnic minorities are observed residing randomly throughout the building, sharing a flat with fellow countrymen or acquaintances, or boarding with their employer families.

Such a high proportion of ethnic minority populations, interacting among other ethnic minorities in Wanchai, makes it a significant source of people and interaction styles for investigation of multi-ethnic network formations. In addition, due to the higher concentration of ethnic minorities living in mixed-use buildings, there is a better opportunity to approach those living in Wanchai.

1.3 Past studies

There is worldwide research, which looks into the issues of ethnic minorities in host cities from various perspectives. Okuda (2000) and Tajima (2000) carried out research over a period of 10 years on the formation of multi-ethnic communities by Asian immigrants in rundown areas of the Tokyo inner city since the late 1980s. It suggested that rundown areas, as a "Third Space", make possible the settlement of newcomers and further development of multi-ethnic "hybrid communities", which bring about the transformation of these areas. His paper tries to focus mainly on the social aspects of such communities with little consideration given to the physical settings of these areas in which multi-ethnic communication takes place.

Blokland (2003) conducted an investigation into the formation of a personal network among ethnic minorities in Rotterdam and presented an argument regarding the locality of community in neighbourhoods of the city. The research focused mainly on personnel composition in the community and stated that community is formed by significant personal networks which transcend the confines of geography. Further to such statement, this paper tries to look closer into those networks formed by ethnic minorities in the local neighbourhood, and how components in the urban context have a relation to the multi-ethnic network formed locally.
1.4 Research method and investigation details

To investigate the process of multi-ethnic network formation by ethnic minorities living in mixed-use buildings in Wanchai and the relationship with the locality of such network, a door-to-door interview with ethnic minority residents inside mixed-use buildings was conducted to achieve a higher rate of contact. The possible locations of mixed-use buildings in Wanchai were first extracted from the latest (2002) "Building Age Plan (~1995)" of the Wanchai district prepared and updated by the Planning Enquiry Counter, Planning Department, HKSAR. According to the plan, buildings constructed from the 1950s to 1970s were extracted from the plan, and visited to confirm their actual existence and use.

The life history investigation method was adopted for this study. The investigation focused on interaction chronologies regarding personal networks with other ethnic minorities, to reveal the process of multi-ethnic network formation during their stays.

In February 2004, interviews based on the following list of interview items (Table 1.) were conducted.

Table 1. List of Interview Items

| A. Personal information | Name, Age, Ethnicity, Language spoken in HK and in hometown, Religious belief, and Occupations throughout the stay in HK |
| B. Background of arrival in HK | Duration and purpose of stay in HK |
| C. Hearing subjects | Personal interaction changes regarding these aspects: a. Residence & household composition b. Occupation & colleague composition c. Acquaintances composition d. Other personal interactions in HK e. Satisfaction in living conditions and in the personal network in HK, Intention of stay in HK. |

| Nationality Generation | I | II | III | IV |
|------------------------|---|----|-----|-----|
| South-east Asian (21 persons; 53%) | Job | Reunion | HK Born |
| Filipino | 15 | 3 | 3 | 1 |
| Indonesian | 8 | 4 | 2 | - |
| Thai | 3 | 3 | - | - |
| East Asian (15 persons; 38%) | Job | Reunion | Job | Reunion | HK Born |
| Nepalese | 8 | 2 | 1 | 2 | 1 |
| Indian | 4 | 2 | - | - | - |
| Pakistani | 3 | - | - | - | - |
| Intercontinental (5 persons; 9%) | Job | Reunion |
| British African | 2 | 1 | 1 | 1 |

Table 2. Nationality and Generation of Interviewed EM

| Nationality | Generation |
|-------------|------------|
| South-east Asian (21 persons; 53%) | Job | Reunion |
| Filipino | 15 | 3 | 3 |
| Indonesian | 8 | 4 | 2 |
| Thai | 3 | 3 | - |
| East Asian (15 persons; 38%) | Job | Reunion | Job | Reunion |
| Nepalese | 8 | 2 | 1 | 2 |
| Indian | 4 | 2 | - | - |
| Pakistani | 3 | - | - | - |
| Intercontinental (5 persons; 9%) | Job | Reunion |
| British African | 2 | 1 | 1 | 1 |

Inside a total of 20 mixed-use buildings within the research area (Fig.2.), 39 ethnic minorities were successfully interviewed (Table 2.). The interviewed ethnic minorities consisted mostly the Filipinos, then Nepalese and Indians followed by Thais, Indonesians, Pakistanis, British and African. There is a higher proportion of Asians in Wanchai, compared to the overall percentage" in HK, according to the 2001 Census.

All interviewed ethnic minorities have legal entry to HK with proper visas during their stays. Most of the interviewed ethnic minorities (30 persons) were first generation migrants when they arrived (Table 2). The main purpose of coming to HK was for employment (31 persons), in particular Filipino, Indonesian and Thai domestic helpers, while and the rest (6 persons), Nepali and Pakistani, for reunion with family who have been working or are settled in HK.

2. Process of network formation in Wanchai

In this section, we first discuss the process regarding multi-ethnic network development throughout Hong Kong in general, in order to clarify the characteristics of ethnic minorities who form multi-ethnic networks during their stay in HK. The purpose and personnel composition of such multi-ethnic networks will also be clarified. Later, we will focus only the characteristics of multi-ethnic networks formed in HK. By extracting the trigger places of multi-ethnic networks formation in the Wanchai district, the relationship between network formation and the urban context of Wanchai can then be discussed.

2.1 The process of multi-ethnic network formation

By extracting the network composition of the 39 interviewed ethnic minorities and dividing all styles of network into "networks with countrymen" and multi-ethnic networks with people of other ethnicity", it is found that there are three common process patterns of multi-ethnic network formation (Table 3.). The first process pattern is "I-Confinement multi-ethnic network development". These Nepalese and Pakistani migrants, and some domestic helpers from the Philippines, Thailand and Indonesia tend to form confined multi-ethnic networks in Hong Kong during their years of stay. Nepalese and Pakistanis have stronger and sufficient connections with their countrymen through family networks throughout Hong Kong. They live with their family members (sister or parents) in Wanchai and have relatives visiting each other's places of residence during holidays or family occasions.

Outside the Wanchai district, they form multi-ethnic networks with other ethnic minorities such as Pakistanis, Filipinos, and local Chinese in the schools or workplaces. These networks are however limited to a small number of people such as schoolmates or colleagues. The place of interaction is also confined, either in the school (S) or in the workplace (W). These people are not going to meet again on other occasions. Once they graduate from the school or leave their job, they are not going to meet these people again.

The other group of ethnic minorities in this category are those who came to work as domestic helpers in private households. Although they have multi-ethnic connections with their employer and family in Wanchai during weekdays, they tend to form a stronger network with their countrymen who are also domestic helpers throughout Hong
They gather in open public places and churches if they have religious beliefs during the holidays and extend their networks with their fellow countrymen in those places.

These belong to the second process pattern named "II-Developed from confined to extended multi-ethnic network" and are ethnic minorities having similar initial stages to Pattern I in extension of multi-ethnic networks. In the early days of their stays in HK, they have a tighter network with their countrymen and acquaintances through the family network. After they begin to go to school or get a job, they come in contact with a limited number of schoolmates or colleagues in the school or workplace, who are usually of similar ethnicity. While maintaining a network with their fellow countrymen, they expand their multi-ethnic network by extending known acquaintances (i.e. size of network) to work-related clients, customers, or developed from another place with a new network of multi-ethnic acquaintances in places such as bars (B), residing neighbourhood (N), open public parks (O), sports facilities (P), voluntary organization (R), parent teacher associations in their children's school (S) and children's playground (Y).

They are provided with frequent encounters and chances to deepen relationships with work-related people or new acquaintances of various ethnicities there. Those who formed multi-ethnic networks in workplaces are people such as secretaries in international business firms, architects in local studios, and restaurant managers, bar tenders in pubs in the tourist districts (e.g. Central, Tsim Sha Tsui and Wanchai).

These belong to the last pattern named "III-Extended multi-ethnic network from the beginning" and are ethnic minorities who came to HK for job appointments or reunion with spouses who are Hongkongers. They have an extensive increase of multi-ethnic acquaintances in workplaces as managers in the Hong Kong branch offices of international firms (IA08F), as musicians in pubs in tourist districts (FP00M, FP06M) and as chefs in famous Indian restaurants and airport-catering kitchens (IA21M). These occasions also provided them with many chances to develop networks with work-related people or new acquaintances of various ethnicities as mentioned before.

When a member of an ethnic minority has a strong network with his/her ethnic group, it is more difficult for them to have extended multi-ethnic networks in Hong Kong. Nepalese, Pakistani and Filipinos, who tend to have a larger number of fellow countrymen living in Hong Kong, tend to have weaker connections with local residents or people of other ethnicities. Other participants, who are exposed to places with an unlimited number of people of various ethnicities, have a higher chance of becoming involved in multi-ethnic networks with their extensions.

Table 3. Processes of Multi-Ethnic Network Development by Interviewed Ethnic Minorities
In addition, it is important to know that multi-ethnic networks are being formed both inside and outside Wanchai when the participants are residing there. It is also important to note that multi-ethnic network formation is independent from residence in Wanchai. People residing in Wanchai but having no formed multi-ethnic network there, have the following reasons for choosing to live in Wanchai (Table 4.).

Table 4. Reasons for Residing in the Wanchai District

| Known countrymen in Wanchai | Convenience to workplaces near Wanchai (Location) |
|-----------------------------|--------------------------------------------------|
| IA08F                       | O                                                |
| IA22F                       | O                                                |
| NP06M                       | O                                                |
| NP07F                       | O                                                |
| NP01F                       | O                                                |
| NP08F                       | O                                                |
| NP07Ma                      | O                                                |
| NP11Ma                      | O                                                |
| PK07Mb                      | O                                                |
| TH10F                       | O                                                |
| UK13M                       | O                                                |

Total 11 3

Regarding the relationship of context of the Wanchai district as a residential neighbourhood and place for multi-ethnic network formation, UK13M (a Briton living in Hong Kong for 13 years) claimed that "I socialize and drink with my friends in bars and things like that. In Central, never in Wanchai though" I just live in Wanchai. It would be the same as living in Causeway Bay or Mid-level. I think, I am just in the town, in the city [no matter where I live]." This statement suggested that the place of residence does not have any significance regarding multi-ethnic network formation. Instead, the places of gathering and workplaces play the important role for such formation. It is a phenomenon coinciding with the "community without propinquity" theory by Melvin Webber. In addition, UK13M claimed, "I have all my network of acquaintances in Central." There is an implication that there must be some important places in Wanchai where significant networks are formed by other ethnic minorities to induce them to adhere to Wanchai.

2.2 Multi-ethnic network formation in Wanchai

It is known that out of 39 participants, 16 had formed extended multi-ethnic networks in Wanchai during their stay in HK (Table 3., column "With extension"). By further investigating these multi-ethnic networks in regards to location of formation, in particular in the Wanchai district (Fig.6. & Table 5.), it can be summarized that their multi-ethnic networks were mainly formed in places such as: (1) Entertainment business (tourism) related - Bars, discos, nightclubs, ethnic restaurants; (2) Construction related - architects, engineering firms, interior materials retailing showrooms; (3) Public leisure facilities - open public parks, basketball grounds, playgrounds; (4) Public places - streets, market places; (5) Residence - self or others. It can be said that these places are the major components regarding the urban context of Wanchai in which multi-ethnic networks can be developed. These components are combined to sustain the peculiar mixed-ethnic image of the Wanchai district.

It is also found that, multi-ethnic networks formed by multi-ethnic people in Wanchai were triggers for their moving and working in the district. Six participants admitted that their reason for moving into Wanchai was the proximity to places at which they gather with their acquaintances. It can be observed that, from the chronologies of their multi-ethnic network development (Fig.5.), entertainment places such as discos, pubs and basketball courts are the major triggers.

IA21M who has worked in the airport-catering kitchen since 1997 claimed, "I like to live in Wanchai. It is close to the pubs and basketball courts where I can meet my friends after work. They are from various countries, almost from around the world. Although Wanchai is a bit farther away from my workplace compared to the last place I lived [in Sheung Wan], I would like to live in Wanchai for as long as possible." This shows the phenomenon of how an ethnic minority's attachment to a particular place in the district can induce him to become further involved as a resident and worker in the same district. The collection of these five components above may suggest part of the explanation for the high multi-ethnic population in Wanchai.

The function of these five places, as components for multi-ethnic network formation in Wanchai will be discussed one by one in the next sections.

2.2.1 In the entertainment business related area

With its concentration of discos, bars and nightclubs, Wanchai has been one of Hong Kong's night spots since the Wanchai Pier was opened as a boarding port for international navies in 19th century. It became an attraction as a place of work for local and overseas
entertainers, musicians and prostitutes, as well as international visitors for entertainment.

Four ethnic minorities (Table 5.) worked there and extended their multi-ethnic network with other workers and customers of various ethnicities. These places also provide opportunities for businessmen to gather with their colleagues after work. E.g. IA21M and FP10M both claimed that they met in these places with job-related acquaintances from their workplace, and it is where further acquaintances of various ethnicities were introduced or encountered. Two ethnic minorities (NP09M and NP07Mc) frequented these places during the beginning of their stay and became further involved in the network, becoming disc jockeys in discos and guards at some of these discos and pubs. The entertainment area in Wanchai serves the function of securing the attachment of ethnic minorities and induces their further involvement with the networks of people in other structures and places, such as construction related workplace in FP10M's case or basketball courts in FP06M's and IA21M's cases (Table 5., last column on the right).

![Fig.6. The Five Components in the Wanchai where Multi-Ethnic Networks are Formed](image)

**Table 5. The Locations and Nature of Places in Wanchai where Interviewed Ethnic Minorities Form Extended Multi-Ethnic Networks**

| Migrant code/ Age/Generation | Process of multi-ethnic network (MeN) development in Wanchai | Nature of place of multi-ethnic networks in Wanchai | Remarks | Sequences of places where multi-ethnic networks formed |
|-----------------------------|----------------------------------------------------------|---------------------------------------------------|---------|---------------------------------------------------|
| III FP00M 23 I             | W ⇒ A                                                   | W                                                 | Nightclubs (as musician) | (1) ⇒ (3) |
| III FP06M 35 I             | W ⇒ A + W ⇒ A + P ⇒ A                                   | W P                                               | Pubs (as musician) + Basketball Court (as player) | (1) ⇒ (3) |
| II FP23F 23 II             | W ⇒ A                                                   | W                                                   | Bars, Pubs (as bar tender) | (1) ⇒ (3) |
| II FP08F 31 I              | W ⇒ A                                                   | W                                                   | Bars, Pubs (as bar tender) | (1) ⇒ (3) |
| II NP09M 30 I              | M ⇒ A                                                   | M                                                   | Bars, Pubs (as bar tender) + Home - Chinese (with flatmate) | (5) ⇒ (1) |
| II NP07M 25 II             | W ⇒ A                                                   | W                                                   | Bars, Pubs (as Customer) | (1) ⇒ (3) |
| III IA21M 46 I             | B ⇒ A                                                   | B                                                   | Bars, Pubs (as Customer) | (1) ⇒ (3) |
| II FP13M 43 I             | B ⇒ A                                                   | B                                                   | Bars, Pubs (as Customer) | (1) ⇒ (3) |
| II IA16M 28 IV             | B ⇒ A                                                   | B                                                   | Bars, Pubs (as Customer) | (1) ⇒ (3) |
| II FP10M 34 I             | B ⇒ A                                                   | B                                                   | Bars, Pubs (as Customer) | (1) ⇒ (3) |
| III AF02M 35 I             | W ⇒ A                                                   | W O N M                                           | Conc. firm (as engineer) | (1) ⇒ (3) |
| II UK15M 36 I             | W ⇒ A                                                   | W                                                   | Constr. firm (as engineer) | (1) ⇒ (3) |
| II FP03F 28 I             | Y ⇒ A                                                   | Y                                                   | Children playground - Pakistani | (5) ⇒ (3) |
| II PK07M 25 II             | W ⇒ A                                                   | W                                                   | Street market - Chinese (shopkeeper) | (5) ⇒ (4) |
| II PK07F 33 I             | A ⇒ A                                                   | A                                                   | Home of PTA member - Chinese | (5) ⇒ (4) |
| II FP15F 43 I             | W ⇒ A                                                   | W                                                   | Home of boss - Chinese (as domestic helper) + Int’l Marriage - Chinese (with spouse’s relatives) | (5) ⇒ (4) |

(1) Entertainment business (tourism) related - Bars, discos, nightclubs, ethnic restaurants.
(2) Construction related - architects, engineers firms, interior material retailing showrooms
(3) Public leisure facilities - open public parks, basketball court, playground
(4) Public places - streets, market place
(5) Residence - self or others

Network with people of various ethnicities
Network with people of specific ethnicity
2.2.2 In the construction business concentrated area
Along Hennessy Road, Johnston Road and the streets nearby, there are buildings densely intermingled with construction related offices and businesses such as architectural or engineering offices, printing houses, and interior material wholesaling shops, etc. (Fig.6.). Three ethnic minorities became involved and formed a multi-ethnic network with colleagues or business-related persons due to frequent contacts through job co-ordination with people from abroad (Table 5.).

2.2.3 In the public leisure facilities
Four ethnic minorities lived in Wanchai and sequentially utilized the public recreation places in Southorn Park in the middle of the research area to form multi-ethnic networks with people of other ethnicities (Table 5. and Fig.7.). Southorn Park and Wanchai Park have football grounds with covered spectator stands, basketball courts, children's playgrounds and sitting areas. There are ethnic minorities of various ethnicities playing basketball or football, watching games or chatting with acquaintances in the spectator stands during lunch hours or after work or on holidays. Filipina, Pakistani, Western and Chinese women bring their own or employers' children to the playground in the morning or after school, etc. They are residents or workers in Wanchai and have leisure time in these places. Contrary to components (1) & (2), this component is the type of place where multi-ethnic networks are induced from other places, such as workplace or residence in Wanchai (Table 5.).

2.2.4 In crowded public places
Similar to the nature of component (3) mentioned above, public places like the streets and market places are other types of place where multi-ethnic networks are induced.

AF02M (Table 5.), who lived and worked in Wanchai, began to play basketball in Southorn Park. He claimed that, as a dense urban space, the streets of Wanchai provide him with more chances to make friends with multi-ethnic people. "In Australian cities, you have to travel far away to meet someone. It's not friendly [in the way of making friends]. But in Wanchai, you can't avoid meeting people, making friends. Everything just comes by itself. When you go to play basketball over there [in the Southorn Playground], there's lots of people come to you and say 'hi', 'how are you doing?' It's more friendly. We can meet a few times in a week. In Australia, you are not going to meet a person again after 50 years." Further he added, "It is easy to get friends here. Just get down [stairs] now, or [go] into the bar, you will run into someone."

To him, streets in an urban space make him feel at ease. "There are many westerners here and it is easy for me to get adapted... [People have different cultures so] I can keep my own tradition. I do not have to be blended in with the [HK] tradition." Although multi-ethnic networks formed with people on the street are induced by other attached places, these networks, once formed help to increase networking with people in the Wanchai neighbourhood.

2.2.5 In residences for people of various ethnicities
Residential buildings in the mixed-use district in Wanchai are blended in between commercial buildings or in the form of residential flats inside mixed-use buildings, for local Chinese and ethnic minorities, with sizes ranging from low rent shared flats for relatively low income migrant workers, to apartments for the single professional expatriates. Because multi-ethnic networks formed inside private flats are based on personal life encounters it is difficult to summarize them in one sentence. However, the sharing of flats or common areas in the same building with Chinese or people of other ethnicities provide chances for encounters and further network formation. Although such residence networks happen following networks in components (1) & (2), residency in Wanchai would induce network formation in components (3) & (4), mentioned in the previous sections.

3. The process of multi-ethnic network formation in Wanchai in terms of five components
From the previous section, it can be seen that each component of urban space in Wanchai serves the function of attracting ethnic minorities to form multi-ethnic networks or secure attachment to the place, hence inducing further involvement in other parts of Wanchai. There is a sequence to the forming of networks in these places. If we represent "an ethnic minority gather with acquaintances in one place (X) has his acquaintance network extends and gather in other place (Y)" by a directional relationship between the sender (X) and receiver (Y), by applying the network approach (Wasserman, 1994), a directional network relationship of the five components can be connected and represented in a graph, as shown in Fig.7. According to the nature and numbers of directional linkages among the components, these places can be represented in the Transmitter, Carrier and Receiver components of urban spaces in Wanchai. Transmitter components are the main attractions, which encourage ethnic minorities to begin multi-ethnic networks in Wanchai and to provide chances of network extension in..."
other places. Carrier components are places where multi-ethnic networks are formed by ethnic minorities from a sender component, and induce ethnic minorities to form multi-ethnic networks in other receiving component spaces. The receiver (components are places) where multi-ethnic networks are formed by ethnic minorities who have attachment to other places in Wanchai, before they come together to form further multi-ethnic networks. Entertainment related places and construction business related places are the core component spaces, which attract ethnic minorities to form multi-ethnic networks and induce multi-ethnic networks in other components.

There is a directional relationship among these five components regarding the sequence of multi-ethnic network formations in Wanchai. These directional linkages were found to be analogous to a network structure, and the function of each component was concluded. Ethnic minorities began multi-ethnic network formation in entertainment (1) related and construction (2) related urban spaces, consequently in other places like residence (5) when they moved into the district or in public leisure facilities (3) and public places (4). In addition, ethnic minorities who formed multi-ethnic networks in public places (4) are people who already have had multi-ethnic networks with other people in the district. The five component urban spaces act together in a network structure to maintain multi-ethnic composition in Wanchai. It can be said that representing the process of multi-ethnic network formation in a graph structure is a useful tool in ascertaining the function of components in urban spaces to a specific group of people, for particular functions.

A further investigation of the personal network of ethnic minorities in these five component spaces, is suggested in order to gain an understanding of the correlative structure among these places regarding multi-ethnic network formation, so as to grasp the holistic structure of urban spaces for multi-ethnic network formation in this mixed-use district.

4. Conclusions
The process of multi-ethnic network formation in Wanchai was clarified by the analysis of styles of network formation by ethnic minorities residing in mixed-use buildings in Wanchai, in terms of the "multi-ethnic network formation process" and "places where multi-ethnic networks are formed in Wanchai". It was found that there are three major patterns involved in the process of multi-ethnic network formation – (I) from the fellow countryman network to confined multi-ethnic network, (II) From the fellow countryman network to the extended multi-ethnic network and (III) the Extended multi-ethnic network from the beginning. By focusing on the multi-ethnic network formation processes, it was further summarized that multi-ethnic networks are mainly formed in five major component spaces in Wanchai. They are (1) Entertainment business (tourism) related - bars, discos, nightclubs, ethnic restaurants; (2) Construction related - architects, engineering firms, interior materials retailing showrooms; (3) Public leisure facilities - open public parks, basketball grounds, playgrounds; (4) Public places - streets, market places; (5) Residence - self or others.

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Appendix
*1 The foreign residents in Hong Kong are classified as ethnic minority according to the Census and Statistic Department referring to persons of non-Chinese ethnicity. Among 6.7 million populations in Hong Kong (HK) during Year 2001 Census, 0.34 million (5.1%) were ethnic minorities of various ethnicities. In the Census, the composition of ethnic minorities in HK is shown as below.

| Asian (other than Chinese) | 80.40% | European | 8.40% |
|--------------------------|--------|----------|-------|
| Filipino                 | 41.8   | British  | 5.4   |
| Indonesian               | 14.8   | Other European | 2.8 |
| Indian                   | 5.3    |          |       |
| Thai                     | 4.2    |          |       |
| Japanese                 | 4.1    |          |       |
| Nepalese                 | 3.7    |          |       |
| Pakistani                | 3.2    |          |       |
| Korean                   | 1.5    |          |       |
| Other Asian              | 2.2    |          |       |

| American/Canadian       | 8.30%  |
| Australian/New Zealander| 2.70%  |
| Others Mixed            | 5.50%  |
| Others                  | 0.80%  |