2012年度　修　士　論　文

The Role of Convenience Stores As Public Space
公共空間としてのコンビニの役割

Burgess, Andrew
バージェス　アンドリュー

東京大学大学院新領域創成科学研究科
社会文化環境学専攻

Abstract

In the 1990's reform of the public sector was initiated under Prime Minister Hashimoto to incorporate aspects of private management into public services in an effort to take advantage of perceived efficiencies. The Declaration of "New Public Commons" introduced by the Hatoyama government calls for a deepening relationship between private and public sectors to solve local issues by building a society of mutual support. Distribution Systems in the Context of Local Communities published in May 2010 by Study Group on the Role of Distribution Systems in Community Infrastructure, set up by the Ministry of Economy, Trade and Industry recognises the role of the distribution sector as a social infrastructure with the potential to address current social issues faced by Japan concerning the aging society and shrinking population. This document outlines the distribution sectors relationship to the National Spatial Planning and the integration of public services under the New Public mandate. Convenience stores are cited throughout the document.

Typologically speaking, convenience stores are in a unique position to resist pressures caused by population shrinkage and an aging society that face modern Japan. The ontology of convenience stores is in decentralisation and coverage; while other commercial and public entities tend to centralise and concentrate, convenience stores by their nature spread and disperse. They are able to transcend suburban and urban, commercial and residential boundaries. However, while thousands of convenience stores are scattered across Japan, they are neither universal nor uniformly distributed. As such they exist as an architectural space finely balanced between community accessibility and market forces.

The goal of this research is to understand the role of convenience stores as public space, the role convenience stores play as social infrastructure, and assess the ability of convenience stores to act as public spaces in an effort to understand how convenience stores, as a mechanism and as a form, contribute to the idea of public space.

As Japan continues to transform from a production-based society as manufacturing moves offshore and the service sector increases, towards a consumptive society the role of retail and leisure space as generators of social relations continues to grow in importance. Japan has one of the highest rates of commercial space in the world and convenience stores make up a large part of this. Their ability to transcend commercial/residential, urban/suburban/rural boundaries and resist

pressures caused by shrinkage has great influence on contemporary Japanese life.

One important aspect of public space is its role in forming networks. Networks are the basis of social structure. Therefore how networks are formed, our position in them, and our ability to influence them are key aspects to the construction and functioning of society. This research analyses the structure of public space, and what it enables or restricts us from doing.

Everyday spaces are important for the construction of weak ties. A survey of 56 people with known ties was carried out. Respondents were asked to provide information on their use of everyday spaces over the previous week in terms of the number of time each space was visited and the amount of time. From this social network analysis was carried out using a two-mode analysis to understand the underlying structures that these spaces support. The analysis showed train stations (0.618) and convenience stores (0.302) have high (eigenvector) centrality.

Secondly convenience stores were analysed in terms of their location. On average convenience stores are more dispersed than supermarkets and grocery stores by 0.215 on calculated Nearest Neighbour Index values. However, convenience stores were located closer to transportation routes than supermarkets and grocery stores by 52m on average.

This suggests that convenience stores occupy a paradoxical position by being both central and peripheral at the same time. This has some similarities with Amino's concept of the public sphere which is based on social non-attachment. Washizu also notes that relationships in convenience stores are similar to *keitai* conversations in that they are temporary and never reflected on afterwards. This is the opposite of conventional commercial space where shopowners try to establish long-term relationships.

Convenience stores resist this kind of interaction which helps to make them more accessible. This, and also there standardised design allow the public to appropriate them for their own use. One example of this in Safe Station, which is now a formalised activity by convenience stores to provide refuge for people in danger.

In this regard, this research searches for the location of convenience stores to try understand the position that convenience stores occupy in the community. By understanding the potential of convenience stores to adapt and be appropriated we can understand their relationship to community. Understanding this kind of commercial space is important for understanding the

nature of contemporary Japanese society.

The aim of this research is to understand the socio-cultural space of convenience stores which occupy a contradictory central but peripheral role in Japanese society. Understanding the way in which convenience stores act as public space is essential in the planning of cities in a shifting economic and political landscape.

Contents

List of Tables

List of Figures

Introduction

Typologically speaking, convenience stores are in a unique position to resist pressures caused by population shrinkage and an aging society that face modern Japan. The ontology of convenience stores is in decentralisation and coverage; while other commercial and public entities tend to centralise and concentrate, convenience stores by their nature spread and disperse. They are able to transcend suburban and urban, commercial and residential boundaries. However, while thousands of convenience stores are scattered across Japan, they are neither universal nor uniformly distributed. As such they exist as an architectural space finely balanced between community accessibility and market forces.

The goal of this research is to understand the role of convenience stores as public space, the role convenience stores play as social infrastructure, and assess the ability of convenience stores to act as public spaces in an effort to understand how convenience stores, as a mechanism and as a form, contribute to the idea of public space.

Recent government policy both in Japan and in other developed countries has been looking to utilise private sector strategies to provide public services. Convenience stores have been identified by both the government and owners as potential social infrastructure to provide public services to local communities. Logistically convenience stores are well suited to provide services because of their distribution network, economies of scale, and flexibility.

As Japan continues to transform from a production-based society as manufacturing moves offshore and the service sector increases, towards a consumptive society the role of retail and leisure space as generators of social relations continues to grow in importance. Japan has one of

the highest rates of commercial space in the world and convenience stores make up a large part of this. Their ability to transcend commercial/residential, urban/suburban/rural boundaries and resist pressures caused by shrinkage has great influence on contemporary Japanese life.

One important aspect of public space is its role in forming networks. Networks are the basis of social structure. Therefore how networks are formed, our position in them, and our ability to influence them are key aspects to the construction and functioning of society. This research analyses the structure of public space, and what it enables or restricts us from doing.

However, while the number of stores has been growing year by year there are stores constantly closing down. Convenience stores tend towards the temporary, springing up and then disappearing. Convenience stores recognise themselves as homogeneous and saturated. While there are some developments to evolve stores towards different target groups such the elderly and housewives the main customer base is still largely men aged between 20-40. The design of convenience stores is highly structured and non-structural use by both shop owners, customers and the general public is suppressed. Despite convenience stores representation as integral social infrastructure they are not necessarily seen as personal spaces.

This raises issues for convenience stores and their relationship to local community.

In this regard, this research searches for the location of convenience stores to try understand the position that convenience stores occupy in the community. By understanding the potential of convenience stores to adapt and be appropriated we can understand their relationship to community. Understanding this kind of commercial space is important for understanding the nature of contemporary Japanese society.

The first part of this thesis investigates the context of public space, its shift into the private sector, the various theories on the spatial qualities of public space, the nature of commercial as space as it relate to publicness, and finally the nature of convenience stores historically and as physical manifestation of a vast distribution network.

The second part of the thesis investigates the structure of convenience stores both socially and physically. A social network model is created to understand the social location of convenience stores. This research involves the development of a social network diagram of everyday space to reveal underlying urban structures. This research involves developing a social network map of

everyday space, and then analysing the location and centrality of convenience stores within this network.

Kashiwa City is used as a case study to understand the emergence and evolution of convenience stores in terms of their physical distribution. Finally the results of this analysis are used to locate convenience stores in the wider public sphere.

The third part of this thesis considers the results of the analysis in the wider context of public and commercial space, and posits that convenience stores constitute a new kind of space that represents a evolution in the urban maturation of Japanese cities.

The aim of this research is to understand the socio-cultural space of convenience stores which occupy a contradictory central but peripheral role in Japanese society. Understanding the way in which convenience stores act as public space is essential in the planning of cities in a shifting economic and political landscape.

The Rationalisation Of Public Space

The Privatisation of the Public Sector

Since the 1980's there has been a general shift in the developed world towards New Public Management (NPM) initially in the United Kingdom and New Zealand followed by the United States and Canada. This strategy aims to utilise aspects of the private sector by governments in order to continue to meet the needs of society. While relationships between government and private enterprise are not new, for example the public works projects of the New Deal in the United States of America in the 1930's, in recent decades there has been a trend for social infrastructure and welfare services such as health and education to be provided by private business. This represents a complex integration of the two sectors.

In economic terms a public good is defined as a good that is non-excludable and non-rivalrous. In pragmatic terms goods and services that are cost prohibitive or have little capacity for economic return have been referred to as public goods and have therefore traditionally been provided by the government. The privatisation of the public sector manifests in a number of ways, for example the sale of public assets, deregulation of markets and out-sourcing. Alternatively the public sector adopts private sector strategies such as competition to operate public services and projects[1].

In Japan, NPM was initiated under Prime Minister Hashimoto with major reforms of the public sector undertaken in the 1990's[2]. In 2010 Prime Minister Hatoyama published *Declaration*

1 Kay, J et al. pg 18.

2 Yamamoto, H, pg 2. Although based on the principles of the Thatcher administration in the United Kingdom, NPM in Japan has developed along a slightly different path due to the nature of business customs in Japan. See also Hori, M. *Japanese Public Administration and its Adaptation to New Public Management*.

of "New Public Commons" which outlined government policy to revive the idea of a public commons in Japanese communities. His declaration cites the falling and aging population as great challenges facing Japan that cannot be fully resolved by government alone. New Public Commons is seen as a mechanism to increase social capital through a combination of community, business and local government based activities. Suggestions for these activities range from supporting the homeless with small jobs to privately managed pension funds.

Institutionally, the Japan National Spatial Planning allows for the opportunity for private entities to assume public roles such as neighbourhood beautification activities, voluntary services such as community buses and so on.

In terms of built environment this evolution of publicness manifest in a number of ways. Two examples are Business Improvement Districts (BID) and Privately Owned Public Spaces (POPS).

Business Improvement Districts (BIDs) originated conceptually in the 1970's in New York and were formalised in 1983 as a strategy for local business and property owners to essentially tax themselves in order to fund enhancement projects for the benefit of the neighbourhood. These activities could take the form of anything from street cleaning to hiring security guards[3]. While the privatisation of traditionally local government services has been hailed as a great success questions have been raised over some of the less positive aspects of gentrification such as social stratification[4].

Privately Owned Public Space (POPS) is a mechanism to increase the provision of urban public spaces. It usually involves the construction and management of public spaces by private development projects in exchange for planning concessions such as relaxed building height and allowable floor area restrictions. SIO Site Shiodome and Roppongi Hills are examples in Tokyo.

The Publicisation of Convenience Stores

In 2010 the Study Group on the Role of Distribution Systems in Community Infrastructure published a report titled *Distribution Systems in the Context of Local Communities*. The group was formed to address the potential role of the distribution sector in dealing with social issues such as population shrinkage, increase of single occupant households, and aging as well as their

3 Zukin, S. pg 33

4 Zukin, S. pg 35-36

associated consequences such as reduction of community infrastructure and increase of food deserts.

The group identifies the need for new business models and trading areas to meet the new challenges facing Japanese society. The group specifically refers to *Declaration of "New Public Commons"* and recognises the changing role of government in providing public goods and services as well as the rise of public-private partnerships.

The report identifies existing modes of operation, efficiencies and strategies that can be utikised as well as new roles that the distribution sector could undertake. It recognises that the distribution sector plays a role in not only providing goods and services to the community but also the social aspects of networking and community building that exchange trade provides. Furthermore in response to New Public Commons the report acknowledges the role that the distribution sector could play in enabling local communities to build social capital by utilising their networks to connect communities with both NPOs and private enterprise. Ideas such as transportation services for people in depopulated areas, mobile supermarkets as well as mobile medical services are suggested. It notes that food deserts are arising in suburban areas and that small shops, such as convenience stores, located in strategic locations as one solution[5]. The report goes further by also using as examples the issuing of resident's cards, antenna shops and library services as well as the use of convenience stores as disaster relief centres as examples of the integration of public services into private space[6].

The Japan Franchise Association (JFA) also recognises the role of convenience stores as public space by stating in their documentation the importance of social responsibility and their commitment to community safety and contributing to the local economy as well as providing useful service to the community. In their manifesto *Convenience Stores as Social Infrastructure* they make the following commitments:

> *I. We will create "environmentally kind convenience stores" .*
> *II. We will contribute to making "safe and secure towns".*
> *III. We will contribute to the "revitalization of local economies".*
> *IV. We will pursue the "improvement of consumer convenience".*[7]

5 METI, pg 44.
6 METI. pg 27-28.
7 JFA pg 1.

The overlapping of the public and private sectors has produced a complex relationship where the public sector has integrated private sector mechanisms into its practices and at the same time the private sector, as can be seen with convenience stores, has incorporated aspects of the public sector. While public space manifests in many environments, including privately owned space, the conscious, formal integration of public (government) services into private space presents a structural change of public space. The distribution sector has a plurality that creates great economies of scope rather than scale. The study by METI promotes convenience stores as pieces of social infrastructure that are able to deliver community function to a variety of communities.

The Structure of Public Space

The relationship between structure and agency is one of the central themes in debates on socialisation. When socialisation is understood as a process or a means by which social and cultural norms are formed and disseminated the role of public space as structure for society becomes important[1]. As a space where people meet or interact it also forms part of a network. Social practice creates social norms which affect the processes of socialisation. Giddens theory of *Structuration* poses that structure is both the medium and product of social action; that we are at once restricted (or enabled) by social structures but at the same time creators of this structure by our individual actions. Therefore, our use of public space as a network, it's formation, our position within that network, and our ability to influence its construction are key aspects to ideas about community-making.

Public Space and Social Space

Definitions of public space vary considerably. While definitions of "public" vary, two key thinkers that to this debate are Hannah Arendt and Jurgen Habermas. Habermas' writing on the transformation of the public sphere in early modern Europe out of the bourgeoisie contends that the public sphere was initiated out of a collective empowerment to communicate the will of a group of individuals. The public sphere emerged as a challenge to the authority of the state to represent the interests of the public. The structure of this public sphere as he called it was based on the salons and coffee houses that allowed citizens to communicate on equal terms, a space where status was suspended.

1 Structure is defined as the environmental and cultural conditions, i.e. social norms, customs, and spaces, that enable or restrict choices and opportunities. This is contrasted with agency which is defined as the capacity of indivduals to act independently.

Both Arendt's and Habermas' public sphere rely on participation but also rational debate. Indeed Arendt insists that individuals engaged in rational debate must put aside personal views. For Arendt public space exits outside of the natural world, it is a man-made construct that is only effective when participation is equal. Therefore, entry to this realm required the separation of the personal self and the public self; i.e. the suspension of individual status, religion, gender, and age. Arendt argues in the Human Condition that the agora, a representation of public space, should not be confused with a specific place but arises when people speak for a common cause.

Habermas builds on Arendt's ideas in more concrete terms. The public sphere developed out of private space to sit between individuals and the state. The coffee houses of London played a key role that enabled free and open discussion of shared concerns.

> *The fully developed bourgeois public sphere was based on the fictitious identity of the two roles assumed by the privatised individuals who came together to form a public: the role of property owners and the role of human beings pure and simple.*[2]

For Habermas the coffee house was a mechanism for the overlapping of social statuses where everyone was "a human being, pure and simple". This everyday space had the ability to connect the people and unite them under equal status.

> *The coffee house not merely made access to the relevant circles less formal and easier; it embraced the wider strata of the middle class, including craftsmen and shopkeepers ... the "wealthy shopkeeper" visited the coffee house several times a day, this held true for the poor one as well.*[3]

Importantly Habermas separates the rational debate of citizens in salons and coffee houses from the cycle of production and consumption, that is, the necessities of daily life. Once this cycle of production and consumption was integrated with this debate, meaning that the individual views or needs of the people, entered this debate, it became merely a private conversation in public[4].

In spatial terms, the public sphere was based on centralised, active participation but with the suspension of personal status.

2 Habermas, J. pg. 56.
3 Habermas, J. pg 33.
4 Habermas, J. pg 160.

Cassegard draws attention to the limits of Western thought in the Japanese context. There has been great debate over the application of Western thinking on the public sphere to the Japanese context. Amino and Higashijima problematise the term 'public' in the Japanese context by pointing out that it has connotations of being connected to authority[5]. In his counter-theory Amino identifies peripheral or marginal spaces as the origin of the Japanese public sphere[6]. For Hagashijima public incorporated scattered people not bound to a particular village or place.

Up until the 16th century temples had the ability to provide sanctuary for marginalised persons including women seeking divorce. In these spaces, known as *muen*, norms and hierachies were suspended. *Muen* or *kugai* can also be applied to markets. Rights in these places were bound to places and specific people, so unlike Habermas' public sphere equality was not a prerequisite condition. Public events such as markets took place in these marginal spaces. These *muen* spaces such as temple and shrine entrances, markets, riverbanks and bridges developed as free spaces of social non-attachment that eventually disappeared in the Tokugawa period but remained in distorted form as pleasure quarters on the fringes of urban society[7].

For Amino, there was a physical separation between daily life and public space. In Edo it manifested in the watersides, bases of bridges and later fire break areas. These places became places of free activity separate from the state[8]. An example of this can be seen in Ryogoku Hirokoji which was an open space created to act as a fire break. It was in this physically detached space that markets took place. There was a physical separation of daily life and this idea of public.

While both ideas of public involve a separation from everyday life there are important distinctions to be made in terms of space. In the coffee houses of London this separation was made by the suspension or detachment of personal status and in Edo the separation was made by physical separation. Furthermore, where personal status was suspended in the coffee house, in the shrines of Edo individuals to maintained their status[9]. Arendt's and Habermas' concept of the public sphere is one of participation and personal detachment which manifested in a bracketing of inequalities such as wealth, gender, or status in order to create a space of equal footing. This is directly opposite to Amino's public sphere which is based on nonparticipation, marginalisation, and the tolerance of difference.

5 Hayashi, K pg 615. Hayashi points out that translations of the word 'public' traditionally use the character 公 (*oyako/ko*) . However, this character is associated with subordination to a master, therefore 'public interest' connotes 'the master's interest'.

6 Hanada, T. pg 613

7 Jinnai pg87-88

8 Jinnai pg90

9 Cassegard, C. pg 405

Public Space and Social Practice

In contrast to Habermas and Arendt, Sennet and Zukin include everyday interactions in their concept of public. They define public space is an accessible space full of acquaintances and strangers[10]. However their assessments on the value of public space differ. Sennet argues that the public has reduced in active participation which weakens constructed public opinion and that the public has become a powerless space disconnected from humanity. For Sennet, the collective has been lost to individualism[11]. Zukin also has a wider definition of public culture as socially constructed by social encounters in everyday life in places such as shops, streets and parks[12]. She also describes this space as symbolically and physically central. She believes that the idea of 'public' and 'private', in light of the increasing privatisation of public space, for example shopping malls, needs to be reevaluated.

One unifying factor in various ideas above is the role of the inhabitant or user in the creation of public space. Public space is the product of user actvity. For Lefebvre the role of the user is of critical importance in the production of space. As users consume space they simultaneously reproduce it. Each action reproduces space in an endless cycle; space is the both the medium and the product. De Certeau writes that space is produced by everyday actions and slippages in understanding contribute to user control over the production of space. Repeated everyday actions create routines and these form social space. In *The Practice of Everyday Life* he defines *strategies* as actions employed by institutions to control and maintain power. These institutions are the holders of power and employ *strategies* to maintain control. These *strategies* are counteracted by the *tactics* of users who in the act of consumption resist this control. An example of this can be seen in walking through the city where by choosing alternate routes the *tactics* of the user can resist the controlling *strategies* of arterial routes and maps[13]. The importance de Certeau's work lies in the empowerment of people to reproduce space through their everyday actions, and that they can do this despite little influence of the institutions surrounding them. By using spaces and objects in ways unintended by their producers users are able to generate counter-social structures thus empowering themselves.

The affect of the influence of the users or inhabitants of these spaces is that each community

10 Arnold, R. pg479
11 Sennet, J. pg 261
12 Zukin S. pg. 10
13 de Certeau, M. pg 36-37.

is reproduced to its own ends. These spaces are crucial for forming and maintaining relationships that are useful and relevant. As an example, Jinnai refers to Maki's *hidden depth*, the opposite of Europe's hardlined streets. Homes were made in the backstreets of Edo to form semi-public spaces. These everyday spaces consisted of a series of backstreet alleys that functioned as semi-public spaces. Signs were placed at the entrance to alleys on the street side advertising various businesses located within. It was in these micro-spaces that, according to Jinnai, localised rules were established and a certain level of self-government took place[14]. Spatially, community was based on place at this time.

While connections and relationships within communities are important, relationships between communities are essential for the sustainability of communities. Jane Jacobs argues that relations between neighbours and people on the street not only crucial for security and safety but also making connections within an area but also between districts. People who know unlikely people are able to form bridges[15]. This linking is also crucial for self management[16]. While Jacobs refers to the establishment of a network of formal organisations such as PTA this networking can be applied to less formal social networks. Jacobs goes on to say that stability is essential for building up long-term relations.

> *Even a ghetto ... after it has remained a ghetto for a period of time builds up its social structure and this makes for more stability, more leadership, more agencies for helping the solution of public problems.*[17]

This was picked up by Granovetter as crucial for the survival of groups. Cliques that are not exposed to outside influence can not evolve because they are not stimulated by new ideas and therefore become narrow minded. Granovetter identifies the cohesive power of weak ties as connectors between groups rather than dyadic strong ties that tend to be used to describe coherant, identifiable groups. Weak ties goes some way to understanding the wider network of familiar people and the connecting of micro and macro level networks.

Granovettor identifies three kinds of ties; strong, weak and absent. Everyday spaces are particularly important for bringing together different groups to create the potential for weak ties to propagate. Granovettor is careful to distinguish between weak ties and absent ties. He notes that

14 Jinnai, H. pg 124-125
15 Jacobs, J. pg 134-136.
16 Jacobs, J pg 117.
17 Jacobs, J pg136-137.

recognising someone in the street or even greeting local shop staff does not constitute a weak tie. Rather it is an absent tie. However, he goes on to say that these kinds of absent ties, in emergency situations, such as natural disasters or personal danger, have the capacity to be transformed into a non-absent tie[18].

Oldenburg picks up on informal places as places where people can mingle and interact. Describing them as *Third Places* they exist between home and work in a non-institutionalised context. He argues that these places are important for social interaction and establishing a sense of place.

The Role of Commercial Space as Public Space

Everyday spaces are significant because they are used indiscriminately by the community thereby making them a source of social interaction that transcends institutional boundaries and structures. Shopping for daily goods and services as a part of everyday life is important because it generates an unconscious use of public space. As opposed to other public spaces such as art galleries, museums, schools or clothing shops which are shared only by like-minded individuals who have made a conscious decision to participate, shopping for everyday goods is undertaken unconsciously by almost all sectors of the community. This brings about unplanned, varied interactions across a wide cross-section of the community, from children to the elderly, men and women, wealthy and poor. These spaces are therefore crucial for generating interactions and network bridges across social groups. Everyday practice transforms social practice into social structures.

As a space of everyday life, commercial space plays an important part in the life of the city as a means for interaction among members of a community and a generator of social structures.

> *We shop to supply ourselves with necessities and luxuries and to feel at home in the city, a part of its whirl of business and pleasure, its grand displays, its serial social transactions.*[19]

The increasing influence of consumption on contemporary lives has seen commercial space transformed into a form of leisure space. Examples can be found of other public spaces that have been integrated into shopping malls; squares, parks, streets.

18 Granovettor, M. pg 1361.

19 Zukin, S. pg 187.

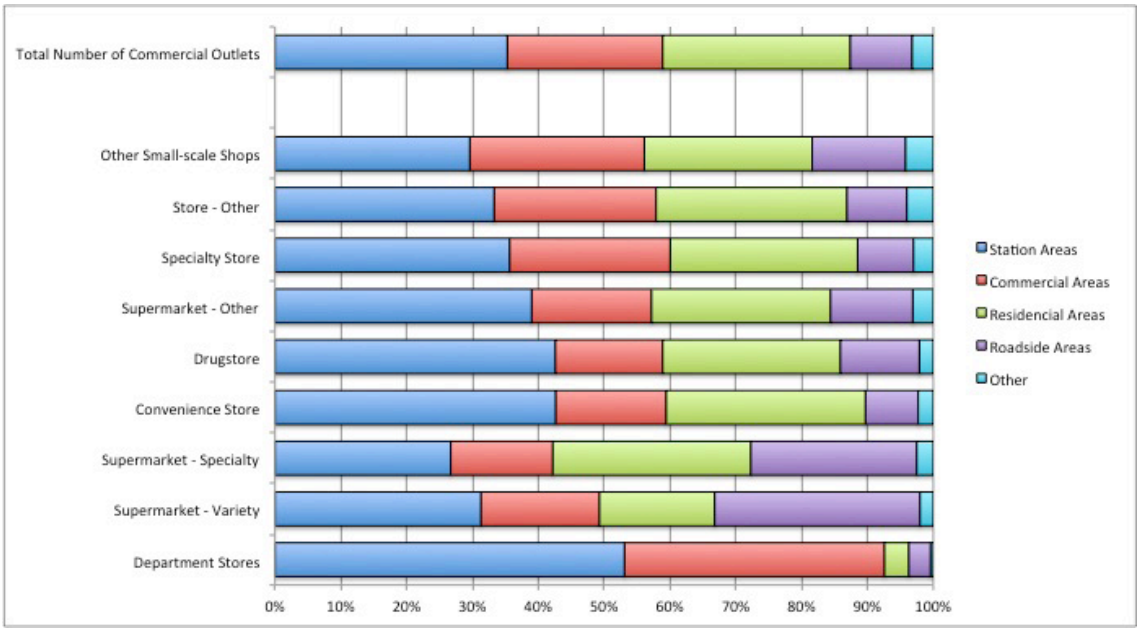


Figure 1. The Location of Commercial Spaces.
Convenience Stores have a relatively low proportion of shops in commercial districts of visits compared to other commercial spaces. (Source: METI 2004)

> *Many Americans, born and raised in the suburbs, accept shopping centres as the preeminent public spaces of our time.*[20]

However, as seen in the case of BIDs and POPs, difficulty arises with accessibility, participation and ownership of public space in commercial environments. Ritzer, who bases his work the thinkng of Max Weber, identifies the impact of rationalisation as a dehumanising process that ultimately becomes irrational.

> *Yet for many people, lacking the intensity and immediacy of a public culture, the shopping experience is a means of overcoming alienation...*[21]

Clammer notes that in the urban Japanese context social networks are formed by consumption, work and school ties, and links to other activities that occur outside of the neighbourhood. Despite moving neighbourhoods, families tend to maintain old links rather than form new ones. Furthermore, these ties are usually related to institutions such as work or school which have

20 Zukin, S. pg 45.
21 Zukin, S. pg 187.

specific rules or norms[22]. This makes spaces of daily routine critical for forming relationships within the local community and also suggests that networks may be a more appropriate unit of analysis than place[23].

Caballero analyses karaoke and manga-kissa spaces as public spaces of non-attachment in the heart of urban life. Using Turner's theory of liminality Caballero shows how public space is appropriated for private use in order to temporarily suspend social status and obligation. These spaces are generic dividual spaces that have meaning imposed on them by each user.

At a human scale, Venturi's writing on the bazaar he points out the lack of signs and proximity which leads to exchanges and the formation of social practices[24]. Ohno notes in his analysis of customer to staff relations that department store owners take on a servant-like role while local grocers or *shotengai* shopowners establish a friend-like relationship. In both situations there is a desire to create a long-term relationship.

22 Clammer, J. pg 35.

23 Clammer, J. pg 30-31.

24 Venturi et al. pg 9.

The Social Development of Convenience Stores

The first conveniences stores were established in Japan over 40 years ago. Since then they grown to become over 45,000 in number and their ubiquitous presence now forms an iconic part of Japans urban landscape.

The History of Convenience stores

Convenience stores were introduced into Japanese mainstream culture in the 1970's under great social change. According to the Distribution Economics Institute of Japan there were three main factors that influenced this introduction.

Firstly, Japan's growing economy had transformed the labour market, increasing the average number of working hours as well as the number of single-member households. This led to a change in consumer lifestyle patterns which convenience stores could accommodate with longer hours of business and provide all necessary daily goods in one location.

Secondly, the Distribution Economics Institute identified the need for modernisation in order to utilise distribution systems that could reduce costs and risk, support Japan's growing economy, and also give shops greater flexibility in adapting to consumer needs.

Finally, one of the impacts of the rapidly growing economy was the decrease in the availability of labour. The convenience store model was considered a solution to maintaining appropriate standards of service with minimal staff numbers[1].

1 *Konbiniensu Sutoa Manuaru* pg 1-7.

Initially convenience stores were established by the conversion or transference of local stores, grocers and liquor store owners in particular. One additional reason that influenced local shops into converting was the issue of family succession[2]. Historically, a large number of shopowners were made up of rural people who migrated to urban areas for work and freedom during Japan's economic development. Shops would become family businesses that were passed down from generation to generation. As it became difficult to convince family members to continue the family business convenience stores became an easy mechanism to sell discrete from personal property into an established brand[3].

Although there are many regulations affecting retail development, one of the important triggers for the establishment of convenience stores was the The Large Scale Retail Law which was significantly strengthened in 1973 (coming into effect in 1974) in order to protect small business. The law stipulated that retail space of over 1500m^2 would require assessment by a council made up of stakeholders comprised of merchants, consumers and representatives of the local community. This council had the power to suggest amendments to the floor area, opening day, hours of operation as well as annual days of operation[4]. The effect of this law was twofold; large retail stores were pushed out into the suburbs, and convenience stores were seen as a way for large retail companies to avoid the Large Scale Retail Law while utilising their economies of scale and established distribution infrastructure. This led to the domination of convenience stores by big business.

Another factor that led to the conversion to convenience stores was the increase in public works spending at the same time. This effectively made it easier to travel to suburban areas and made more locations viable for shops. It also led to development along roads and bypasses.[5]

In 1972 the Ministry of International Trade and Industry (MITI)[6] described convenience stores as follows:

-located around residential areas

-of less the 300m^2

-providing a limited range of goods for daily consumption

2 Arata, M. pg 141.

3 Arata, M. pg 141

4 Grier, J. This law was progressively revised and diluted in the following years; in 1992 the maximum floor space was increased to 3000m^2, and in 2000 was repealed.

5 Arata, M. pg 179.

6 MITI was replaced by the Ministry of Economy, Trade and Industry (METI) in 2001.

-using a self-service system

-having extended hours of operation (more than 12 hours per day)

-open throughout the year

-have a small number of employees and utilising family labour

-with close contact to customers.

Convenience stores were first officially counted when they were entered into the census of commerce in 1982[7]. One point of difference between the descriptions of Japanese and United States models was that Japanese convenience stores were not required to provide carparking.

Convenience stores Mechanism

The great innovations of convenience stores are their flexibility. Typically, modern convenience stores carry 3000 goods and utilise a complex distribution network that employs and 'point of sale' and 'just in time' supply chain strategies to adapt to changing consumer needs fluidly. Nationwide, 48% have licquor licenses, 41% have tabacco licenses. The top three firms (Seven-Eleven, Lawson and Family Mart) account fro 44% of the market[8].

However, this fluidity also leads to a rapid succession of openings and closures. Especially since the world economic crisis of 2008 there has been an increase in competition that as driven a scrap and build strategy where convenience stores that are not turning are profit are closed and new locations are tested[9]. The increased competition in a tightening market has also led to the evolution of the convenience stores type into shops catering for a wider range of markets such mothers and the elderly. Lawson acknowledges in their annual report 2010 that the convenience store market is at saturation point and that new forms of the convenience stores type must be found[10]. This can be seen in the establishment of Natural Lawson and Lawson 100 stores. Another manifestation of recent competition is brand saturation where companies will attempt to dominate an area to push out competition[11].

Despite the rapid turnover of stores convenience stores try to build community spirit through their social infrastructure plans and marketing which recalls familiar, traditional values. Washizu contends that convenience stores transforming into "watering holes" for elderly and students. Rather than discouraging the killing of time, convenience stores encourage this behaviour, using

7 Terasaka, A.

8 Arata, M. pg 190

9 Hirano, K. pg 62.

10 Lawson Anual Report, 2010.

11 Hirano, K. pg 132.

Rank	Complaint
1	Shortage of items
2	Lack of product knowledge
3	Too expensive
4	Lack of range of products
5	Taste of bento
6	Imperfect display
7	Hard to find items
8	Employee does not say "Thank you"
9	Dirty store
10	Employee talks too much
11	Too crowded
12	No public bathroom
13	Items on the floor
14	Difficult to reach items
15	Expired goods
16	Store too small
17	Strange smell
18	No receipt
19	Employee does not say "welcome"
20	Employee looks at face too much

Table 1. Complaints Made by Customers at Convenience stores
Table lists the most common complaints made by customers at convenience stores. Four of the top twenty relate to personal relations.

slogans such as "hotto station" etc. in marketing campaigns[12]. He also cites that places to meet for casual conversations have disappeared leading to the transformation of convenience stores into public spaces.

However, as opposed to other retail stores the strategy of convenience stores is slightly different. In contrast to Ohno's analysis of the relationship between customers and clerks in boutiques and local stores, convenience stores have little desire to create long-term relationships[13]. In a 1997 survey conducted by Manufacturer Convenience Store Researcher it was found that of the top 20 complaints about a convenience store four were related to personal relationships. Another

12 Washizu pg 57
13 Ohno, H. pg. 77

particular feature of convenience stores is that they are self-sufficient in that unlike shotengai they don't rely on neighbouring retail for foot traffic.

Number of Lawson Stores

Years ended February 28 and 29	2010**	2009*	2008	2007	2006
Number of stores	9,761	9,527	8,587	8,564	8,366
Openings*	607	501	452	700	717
Closings*	373	414	429	502	428
Net increase (decrease)	234	940	23	198	289

* Since Ninety-nine Plus Inc. was made into a consolidated subsidiary from the year ended February 28, 2009, stores operated by Ninety-nine Plus Inc. are included in the data above from the year ended February 28, 2009 onwards.
** Figures for the year ended February 28, 2010 include 136 stores operated by LAWSON Okinawa, Inc.

Table 2. Openings and Closures of Lawson Convenience Stores
In a highly competitive market there is a high turnover of stores. (Source: Lawson Annual Report 2010)

Convenience Stores and Social Infrastructure

Despite a negative side, where convenience stores have been criticised for selling alcohol in residential areas and being open 24 hours, encouraging late night deliquency. convenience stores, in fact, are acting as social infrastructure is a number of ways.

Convenience stores have been used as disaster emergency points where water and power can be distributed. The stores themselves can be used as command posts and the distribution networks can be utilised to transfer goods as well as information by rescue and emergency services.

Safe Station is another example of the publicisation of convenience stores. As many conveniences stores are open late they are useful as places of refuge. This led to convenience stores becoming safe stations at the request of the National Police Agency. This initiative lead to the structural integration of safe station into convenience stores business model. In 2008 over 15,000 stores reported providing refuge to women or children[14]. The safe station program is a result of active

14 Meti pg. 86.

agency. The use of convenience stores as a place of refuge prompted the establishment of the safe station program. This is an example of the cross over of chain store/ commercial operation and community centre.

Another example is No-son where a NPO has taken on the form of a convenience store in order to provide daily services and goods to a rural community. Although not strictly a convenience store, the operators have consciously modelled their business on the convenience store, filling a gap left by an uneconomical store.

The Structure of Everyday Space

Social network analysis provides an opportunity to understand the underlying structure that a series of spaces and their interactions construct. Rather than analysing the characteristics of each space, network analysis looks at how position within a network influences behaviour. The study of everyday spaces and the built environment in general usually concentrates on *what is produced*. Utilising social network analysis techniques to investigate the built environment offers an opportunity to analyse *how spaces are used*.

Granovettor's work on the value of 'weak ties' created a paradigm shift in the way theorists viewed social groups and there formation. His work exposed the bias towards the study of strong ties in research on social groups. While the this kind of research was useful, he believed that it limited research into either micro-scale or macro-scale investigations. *The Strength of Weak Ties* highlighted the need to understand firstly how social groups related to each other and secondly the relationship between macro and micro-scales.

Social network analysis has been used extensively to understand the structure of social groups. However, one of the difficulties with research into social networks is that a population must be understood in its entirety for the analysis of ties to be useful. This limits the scope of social network research to specifically defined groups with tangible, measurable relationships. Moreover this kind of research tends to focus on what relations exist rather than how they exist. An alternative strategy that incorporates non-human entities is two-mode (or bipartite) analysis. By analysing the relationship of actors and events it is possible to determine underlying social structures that cannot be found with conventional social network analysis methods[1]. This strategy is particularly

1 Davis et al. analysed a group of women in the southern states of the United States. By recording and analysing their participation at a series of social parties, which ladies attended the same events and so on, Davis was able to infer not only underlying social patterns

appropriate for the analysis of everyday spaces.

Two-mode analysis allows the social network of everyday spaces to be constructed by extrapolating peoples daily activities. Building on de Certeau's writing on the role of unconscious daily routine as a generator of social space, the common use of spaces suggests the potential for interactions and the construction of shared values and world views. Rather than conscious relationships this form of analysis will reveal the underlying social structures that bridge between different sectors of society. In this form of analysis, ties do not necessarily imply implicit connection, rather the potential for connection and interaction. Simply put, two mode analysis identifies overlapping of actors' activities. Moreover, this form of analysis can reveal how everyday spaces are 'networked' together as well as the position of the various entities within this network. This can determine levels of embeddedness, isolation and capacity.

The following analysis investigates the role of everyday spaces, that is, spaces that are used as a part of a daily routine unconsciously. These goods and services provided by these spaces are largely indistinguishable and interchangeable and are used for specific tasks that are part of a daily routine. The spaces analysed are:

-Convenience Stores
-Shopping Malls
-Department Stores
-*Shotengai*
-Local Shops (butchers, grocers, fishmongers etc.)
-Train Stations
-Supermarkets
-Internet Shopping

Methodology

A survey was carried out on-line between June 1 2012 and June 30 2012. 56 respondents answered questions about their daily activities of the previous 7 days[2]. The survey recorded information about the number of times a space was visited and how much time was spent there.

Respondents were found through a snowballing technique where a respondent introduced the

but also understand the role of the events in structuring these relationships. See Davis, A., Gardner, B. B. and M. R. Gardner (1941) **Deep South**, Chicago: The University of Chicago Press.

2 See Appendix A

survey to friends and acquaintances. Therefore each of the respondents are related either by strong or weak ties.

The results of the survey were then analysed using UCINET 6[3]. Two mode data was initially projected in two ways; firstly based on number of visits where each tie is weighted by the number of times a space was used, and secondly on time where ties were weighted by the total amount of time spent in each space.

This data was then used to extrapolate an 'everyday space' that calculated theoretical ties between the spaces based on user patterns. An Eigenvector centrality measure was used to understand the position each actor occupied in the network, and an k-core analysis was carried out to identify any sub-groupings.

Findings

In the analysis of everyday space by number of visits convenience stores, supermarkets and train stations show greatest centrality while shotengai and local stores are isolated. Figure 3 shows that train stations (0.618) and convenience stores (0.302) have a greater centrality than the other spaces[4]. This suggests that convenience stores are significant not only because of the frequency of their use but also that they share important relations with other spaces. The K-core analysis (shown in colouring of nodes) shows one general sub-grouping with a smaller number of actors isolated in the periphery. Actors are evenly distributed suggesting that these everyday spaces do not form subgroups (despite the respondents to the survey having weak to strong ties). In figure 4 the extrapolated network of everyday spaces shows again that train stations (0.769) and convenience stores (0.527) have the greatest centrality[5]. This can also be seen in the weighting of their tie.

Figure 5 shows the analysis of everyday spaces by time spent. Again train stations, convenience stores and supermarkets show strong centrality. Although convenience stores have a number of ties the wights are small. This is due to the low amount of average time spent there.

Figure 6 shows that train stations, convenience stores and shopping malls share strong ties while internet shopping and supermarkets share their own strong tie.

3 Borgatti et al.

4 Refer also to Appendix B.

5 Refer also to Appendix B.

In all of the analyses local stores and *shotengai* are isolated. Train stations and convenience stores have strong centrality which suggests that there is a higher likelihood of actors sharing these spaces. Therefore convenience stores play a central role in the transfer and flow of information and interaction. There is a greater likelihood of ties forming around these spaces.

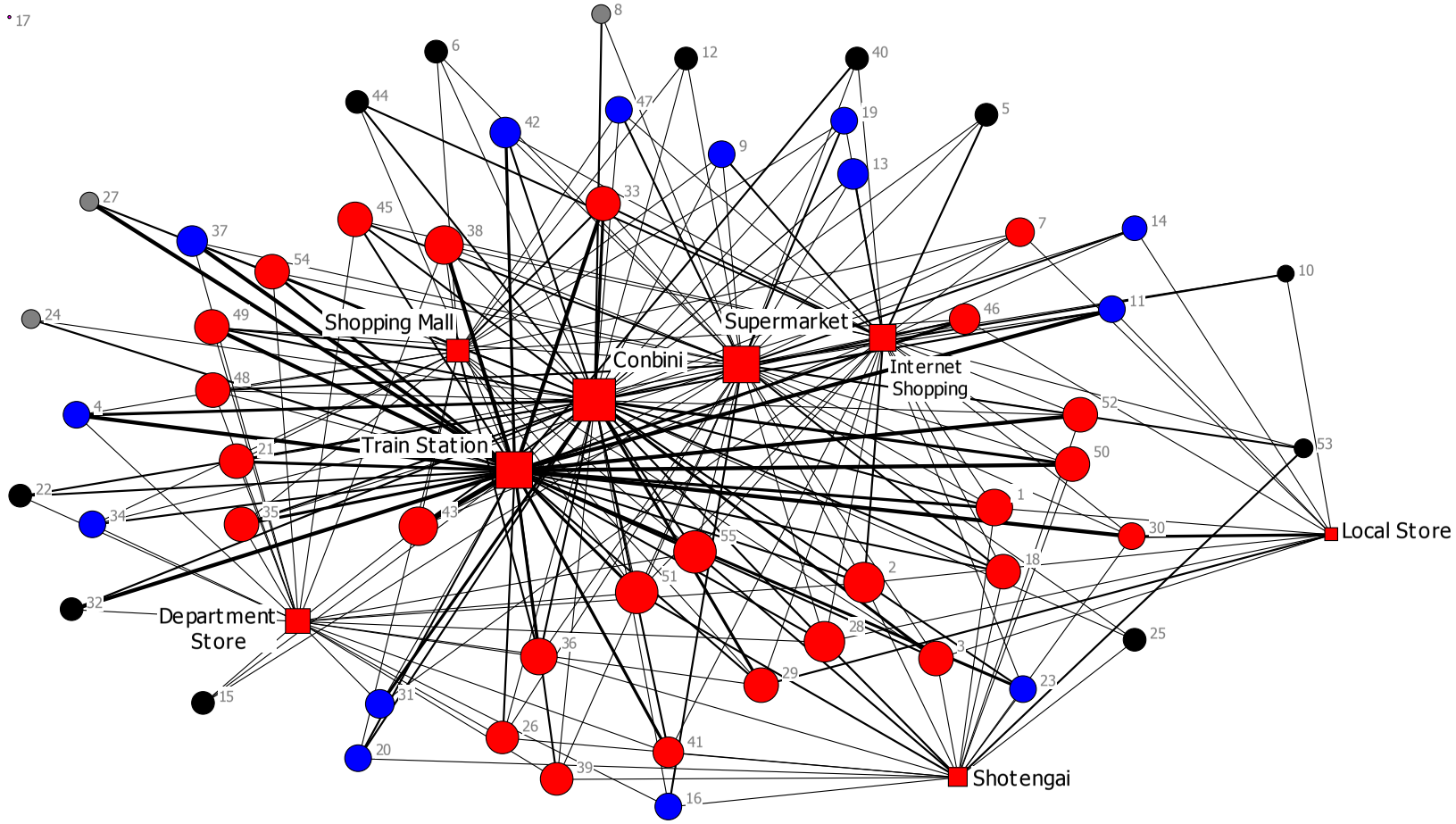


Figure 2. Social Network Diagram of Everyday Spaces by Number of Visits.
Created in Ucinet 6 spring-embedded. Node size reflects centrality (eigenvector). The thickness of the lines reflects the weight of the ties. The colour of the nodes reflects the k-core analysis. See also Appendix B.

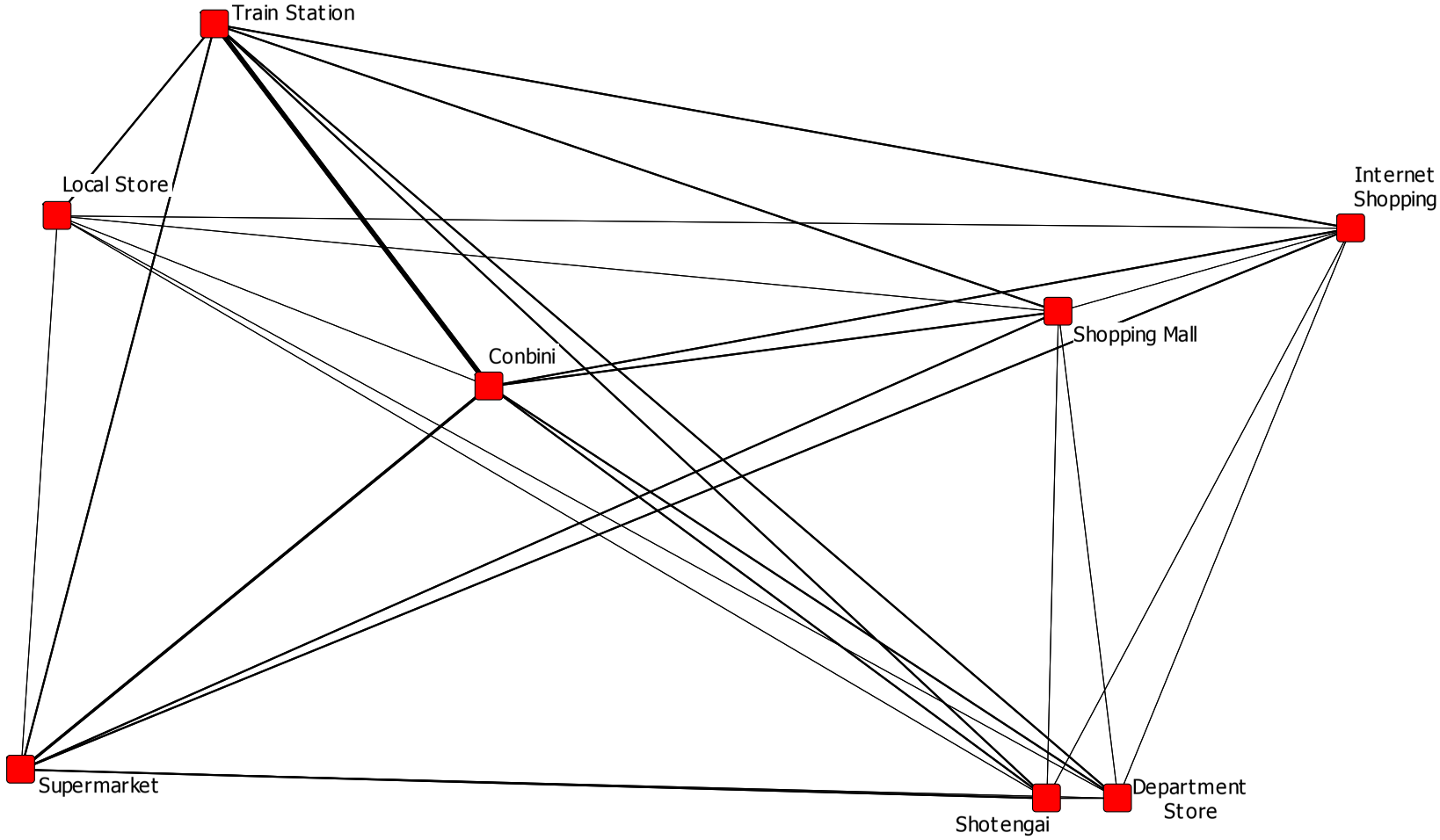


Figure 3. Network Diagram of Everyday Spaces by Visit.
Extrapolated network of everyday spaces by number of visits. Created in Ucinet 6 spring-embedded. See also Appendix B.

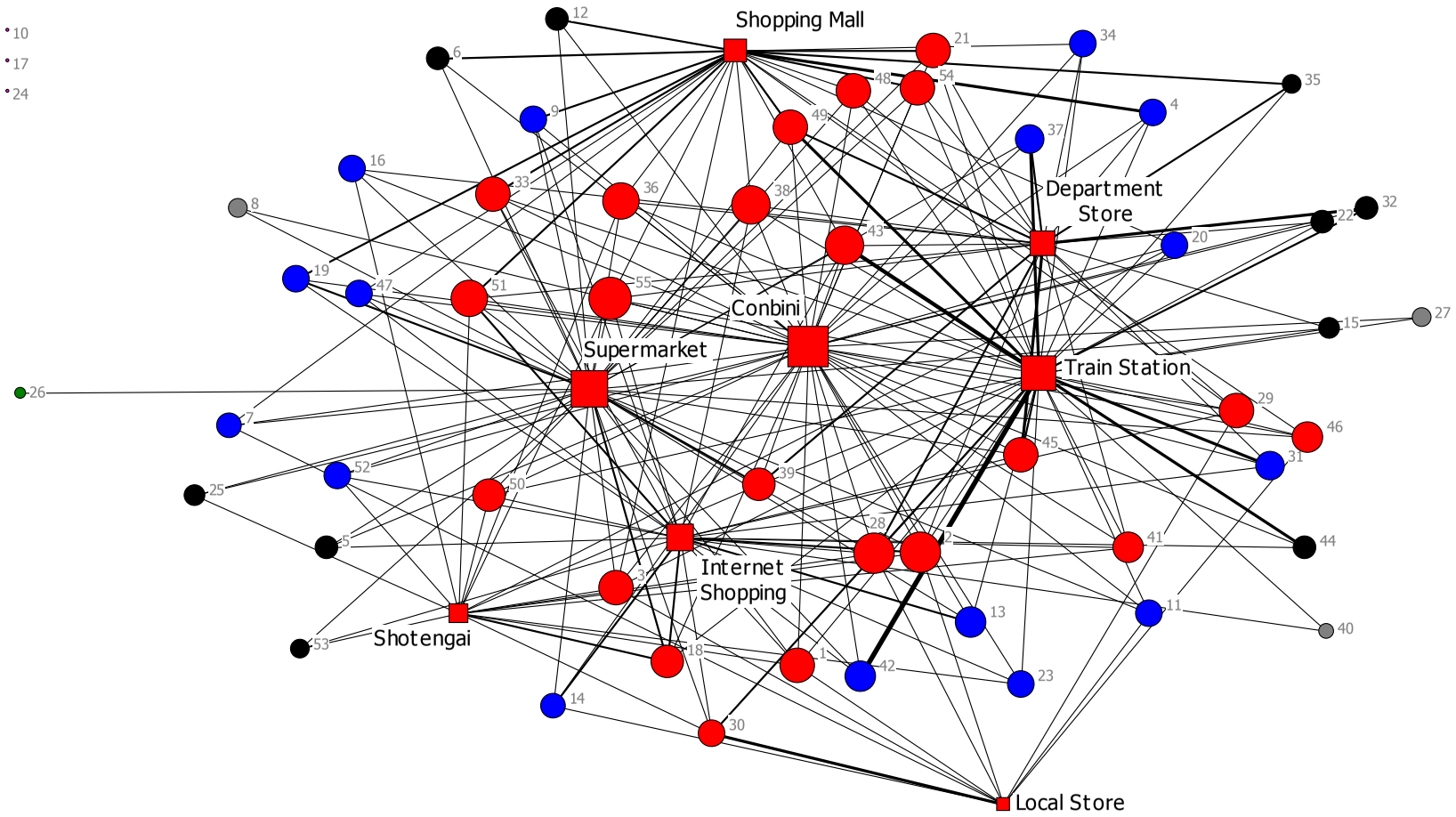


Figure 4. Social Network Diagram of Everyday Spaces by Time.
Created in Ucinet 6 spring-embedded. Node size reflects centrality (eigenvector). The thickness of the lines reflects the weight of the ties. The colour of the nodes reflects the k-core analysis. See also Appendix B.

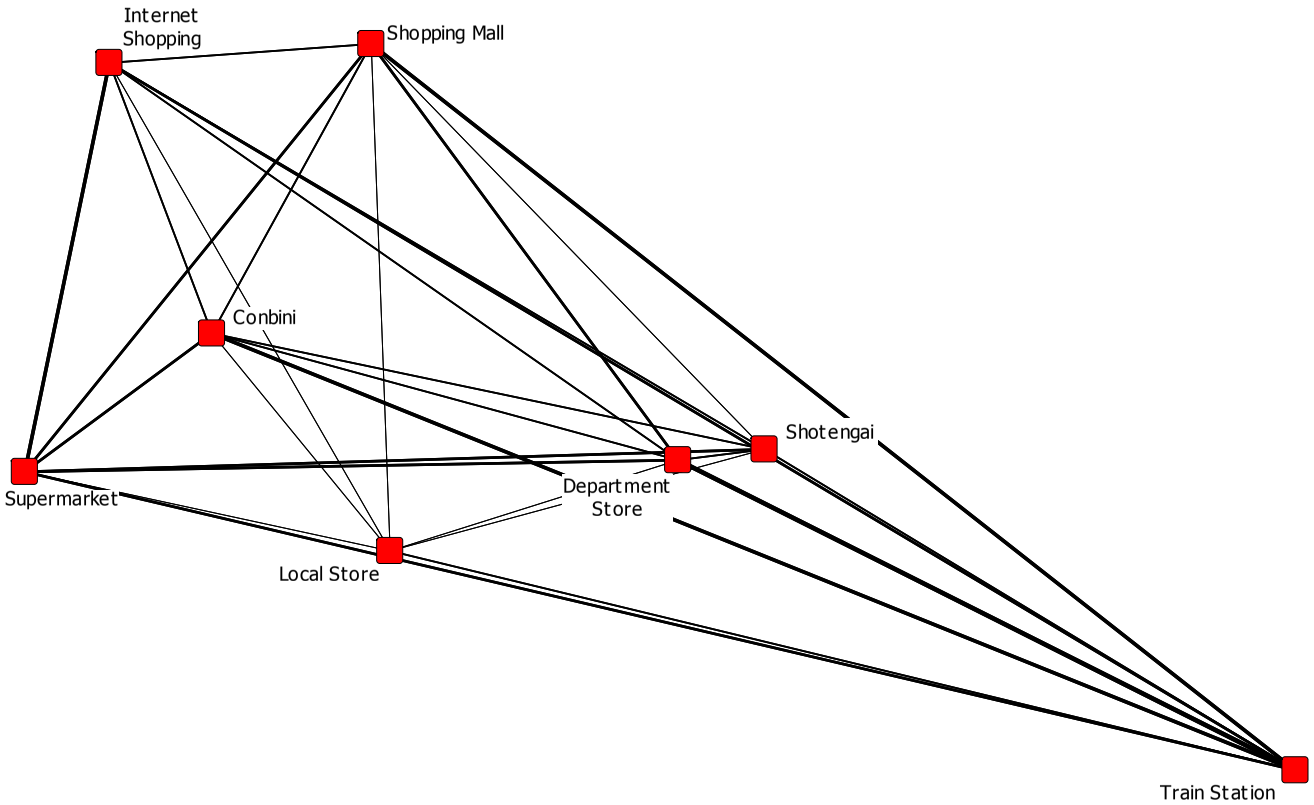


Figure 5. Network Diagram of Everyday Spaces by Time.
Extrapolated network of everyday spaces by number of visits. Created in Ucinet 6 spring-embedded. Aee also Appendix B.

Case Study: Kashiwa City

This case study analyses the emergence of convenience stores as a type, its physical location within the community, and its impact on other everyday spaces such as grocery stores. Kashiwa is a city of approximately 400,000 people and acts as a bedtown community to nearby Tokyo and Chiba City. In 1972 it became an express stop on the Joban line which prompted rapid development and population increase. In 2005 the Tsukuba Express Line was opened adding Kashiwanoha Campus and Tanaka stations to the area. In the same year Shonan was absorbed into Kashiwa City creating an area of approximately 115km^2 with an average density of 3,520 persons per km^2.

Methodology

This case study analyses the location of convenience stores over the space of 30 years in Kashiwa City and maps their spread and movement in terms of distribution, and also at a neighbourhood scale to assess their relationship to other everyday spaces. Listings from phone directories every 5 years from 1980 to 2010 inclusive were used to chart this transformation. Convenience Stores first appeared in the Kashiwa Area NTT Townpage business phone directory as a dedicated section in 1985. Convenience stores such as Seven-Eleven had existed for some years before but were listed variously under Supermarket, Grocery Store and Superstore. The following store types were collated:

-Convenience Stores

-Supermarkets[1]

-Household Goods

-Tobacconists

1 'Supermarkets' and 'Superstores' were separate listings until 1990 when they were combined under 'Superstore/Market'. Both listings were used in this analysis.

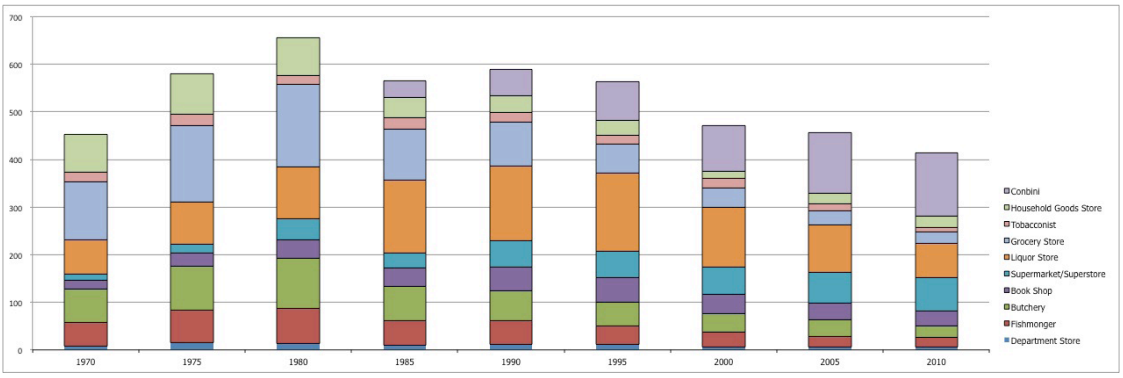


Figure 6. The emergence of convenience stores
The emergence of the convenience stores type contributed to the rationalisation of daily food goods into three main types; convenience stores, supermarkets and liquor stores (source: NTT Townpage Business Phone directory 1975-2010).

-Grocery Stores
-Liquor Stores
-Butchers
-Fishmongers
-Bookshops
-Department Stores

For further analysis, the three main types of shops for daily food items, convenience stores, supermarkets, and grocery stores were collated and georeferenced.

Using QuantumGIS 1.8.0 each shop was analysed for distribution. Listings for each of years were calculated using nearest neighbour analysis in order to understand the extent of clustering of stores. Listings between 1980 and 2010 were compared for the three spaces for the distance from the nearest shop of any type. Convenience stores were then analysed separately.

Secondly, the same stores were analysed for there relationship to transportation routes. Firstly the average distance to the nearest train station was calculated, then the average distance to stations or arterial routes (route 6 and 16), next including secondary roads, and finally including tertiary roads as defined in Zenrin Maps.

Year	1980	1985	1990	1995	2000	2005	2010
N	180	171	177	191	177	(187) 219	(173) 209
Observed Mean Distance	229m	222m	273m	266m	284m	(214m) 256m	(255m) 281m
Expected Mean Distance	386m	372m	571m	546m	567m	(338m) 465m	(349m) 454m
Nearest Neighbour Index	0.59	0.6	0.48	0.49	0.5	(0.6) 0.55	(0.73) 0.62
Z-value	-10.4	-10.1	-13.3	-13.6	-12.7	(-10.5) -12.7	(-6.8) -10.6
(Bracketted values exclude Shonan)							

Table 3. Spread of Food Stores in Kashiwa City
Table shows the distribution of food shops (supermarkets, grocers, convenience stores) in Kashiwa City between 1980 and 2010. The Nearest Neighbour Index shows the extent of clustering (values below 1 suggest clustering, values over 1 suggest dispersion).

Year	1980	1985	1990	1995	2000	2005	2010
N	0	36	56	81	96	(106) 127	(108) 132
Observed Mean Distance	-	439m	358m	359m	367m	(337m) 401m	(367m) 410m
Expected Mean Distance	-	506m	553m	489m	441m	(404m) 592m	(417m) 529m
Nearest Neighbour Index	-	0.87	0.65	0.73	0.83	(0.84) 0.68	(0.88) 0.77
Z-value	-	-1.5	-5	-4.6	-3.1	(-3.2) -6.9	(-2.3) -4.9
(Bracketted values exclude Shonan)							

Table 4. Spread of Convenience Stores in Kashiwa City
Table shows the distribution of convenience stores in Kashiwa City between 1980 and 2010. The Nearest Neighbour Index shows the extent of clustering (values below 1 suggest clustering, values over 1 suggest dispersion).

Finally each convenience store was analysed for its effective catchment. Convenience stores were considered for accessibility in terms of walkability, charting coverage at 200m, 300m, and 400m radius'. This was then assessed in terms of the effective catchment achieved as well as the gain and loss of services over each five year period.

Findings

Listings between 1980 and 2010 were compared for the three spaces for the distance from the nearest shop of any type. Convenience stores were then analysed separately. In each case the observed mean distance and nearest Neighbour index was evaluated[2]. Table 3 shows that shops expressed a relatively consistent level of distribution over the 30 years. The Nearest Neighbour Index values range between 0.48 and 0.62 suggesting a tendency towards clustering. Table 4

2 Nearest Neighbour index is calculated by comparing the Observed Mean Distance with an Expected Mean Distance which is the average distance between a point and its closest neighbour if N-number points are distributed randomly. The Nearest Neighbour Index reflects....

Year	1980	1985	1990	1995	2000	2005	2010
N	180	171	177	191	177	(187) 219	(173) 209
Train Station	1132m	1140m	1131m	1168m	1143m	(867m) 1043m	(879m) 1076m
Arterial Route	679m	653m	689m	657m	639m	(591m) 627m	(579m) 624m
Secondary Road	275m	252m	287m	278m	286m	(232m) 237m	(217m) 220m
Tertiary Road	140m	134m	156m	141m	143m	(101m) 109m	(105m) 109m
(Bracketted values exclude Shonan)							

Table 5. Distance to Transport Routes All Shops
Table shows the distribution of food shops (supermarkets, grocers, convenience stores) in Kashiwa City between 1980 and 2010. The Nearest Neighbour Index shows the extent of clustering (values below 1 suggest clustering, values over 1 suggest dispersion).

Year	1980	1985	1990	1995	2000	2005	2010
N	0	36	56	81	96	(106) 127	(108) 132
Train Station	-	987m	924m	1013m	1078m	(779m) 999m	(839m) 1064m
Arterial Route	-	512m	577m	577m	591m	(555m) 611m	(558m) 606m
Secondary Road	-	178m	222m	211m	235m	(225m) 214m	(216m) 211m
Tertiary Road	-	72m	70m	70m	84m	(89m) 89m	(91m) 95m
(Bracketted values exclude Shonan)							

Table 6. Distance to Transport Routes Convenience stores
Table shows the distribution of food shops (supermarkets, grocers, convenience stores) in Kashiwa City between 1980 and 2010. The Nearest Neighbour Index shows the extent of clustering (values below 1 suggest clustering, values over 1 suggest dispersion).

shows the distribution of convenience stores only. The values for Nearest Neighbour Index range between 0.65 and 0.87. Compared to the combined values in Table 3 Nearest Neighbour Index values are higher for convenience stores than the combined values on an average of 0.215. The values for 2005 and 2010 are significantly lower due to the influence of the inclusion of Shonan in the calculation. When the Nearest Neighbour Index is calculated without Shonan there is an average difference of 0.233. These values suggest that convenience stores are progressively dispersing as opposed to supermarkets and grocery stores that, while tending towards dispersion, show greater clustering.

In order to understand the nature of this dispersion, the location of convenience stores was analysed for their proximity to transportation routes. Table 5 shows the mean distance of convenience stores firstly to train stations, then cumulatively to arterial routes (route 6 and route 16) secondary roads and finally tertiary roads. The mean distance of convenience stores to transportation routes is less than the average for all daily foodstuffs shops on average by 52m over

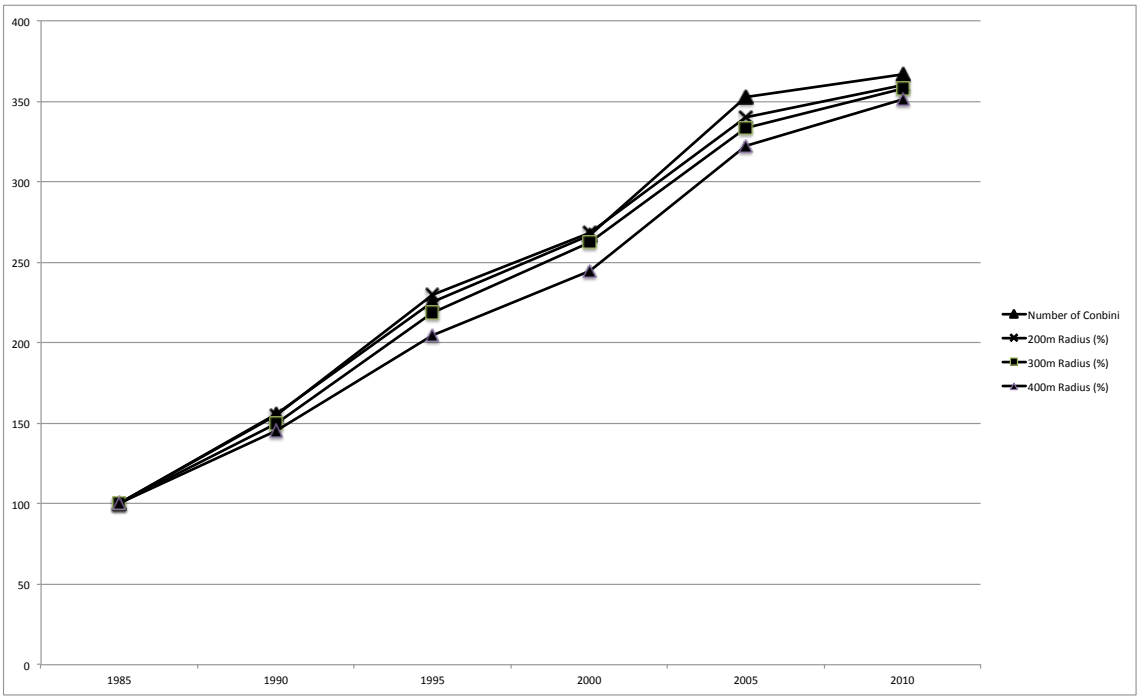


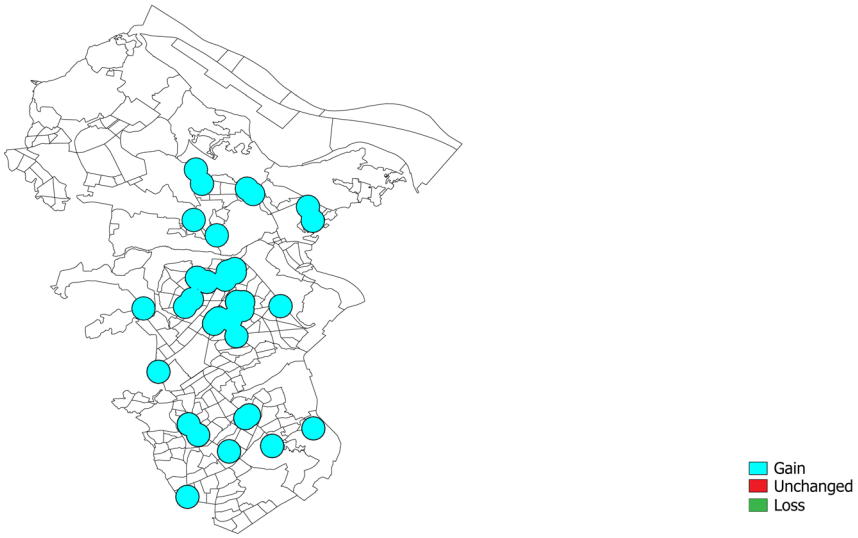
Figure 7. The Effective Coverage of Convenience Stores
The effective coverage of convenience stores at 200m, 300m, and 400m radius'. The graph shows a decreasing efficiency of coverage, i.e. greater overlapping (source: NTT Townpage Business Phone directory 1985-2010).

the 30 year period. This suggests that convenience stores are used en route, i.e. while commuting, rather than as specific destinations.

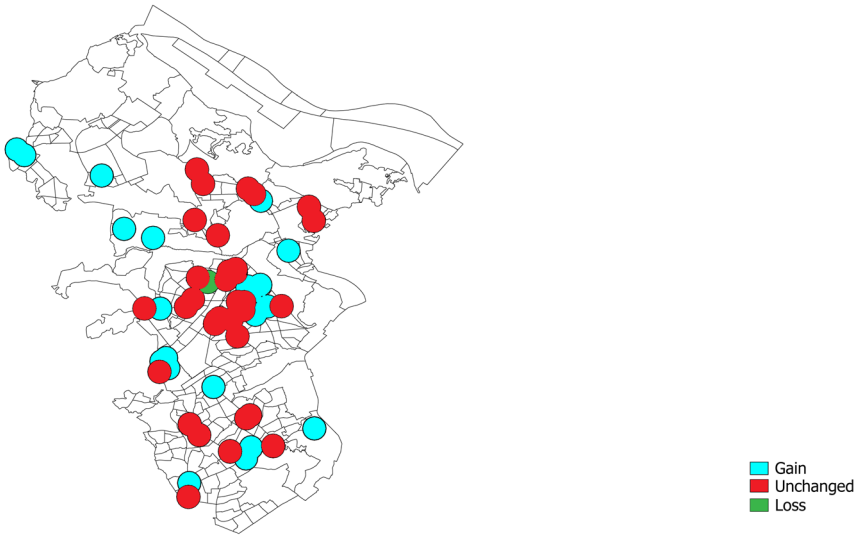
The rate of openings and closures of convenience stores is unprecedented. Figure 7 shows the effective catchment of convenience stores in Kashiwa City. Convenience stores were considered for accessibility in terms of walkability, charting coverage at 200m, 300m, and 400m radius'. These distances represent potential limits for customers on foot and are a way of understanding accessibility in real terms. Despite increasing numbers of convenience stores the efficiency of their coverage is decreasing. There is greater overlapping and competition for customers. Furthermore the extent movement of stores shows significant abandonment of certain areas, leaving them without reasonable access to daily foodstuffs. This loss of service could contribute to urban food deserts.

In the investigations above it is possible to see that convenience stores have greater dispersion

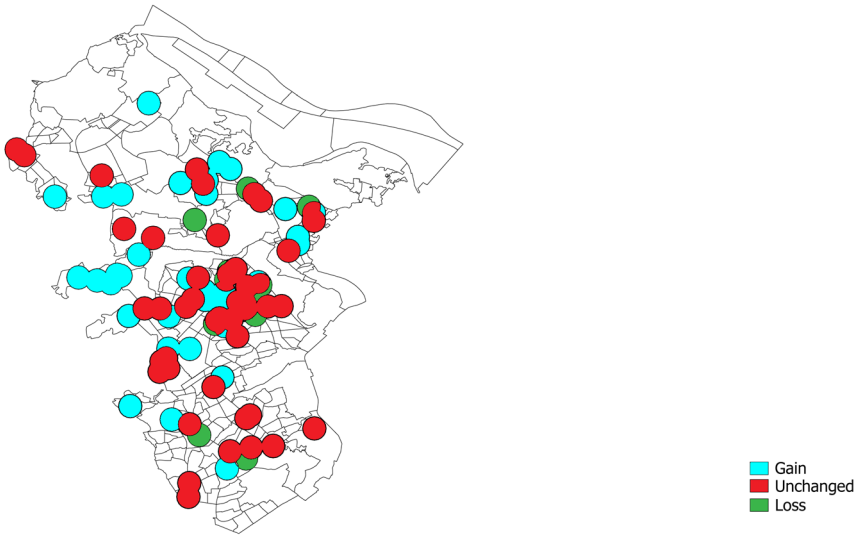
than average and that despite this dispersion convenience stores are located significantly closer to transportation routes. This implies that convenience stores are used while commuters are en route, rather than as a destination in themselves. While overall all there is a general tendency for dispersion with all three types, the higher level of clustering in the investigations that includes convenience stores, supermarkets and grocery stores is a reflection of conventional practices to locate shops together for mutual benefit, as can be seen in *shotengai*, and more recently shopping malls.



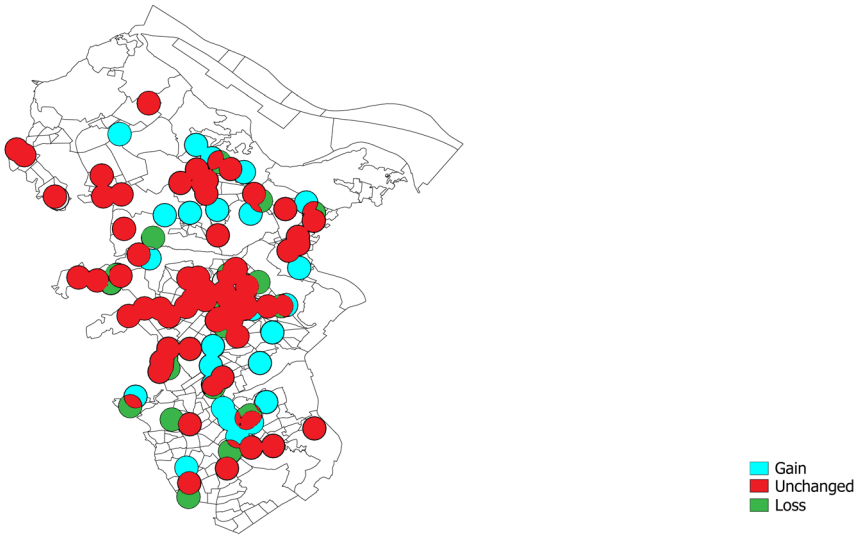
Catchment Area of Convenience Stores (km^2)			
1985	N = 36		
	200m radius	300m radius	400m radius
Area Loss In Previous 5 Years	-	-	-
Area Gain in Previous 5 years	3.66	7.31	11.73
Area Unchanged in Previous 5 years	-	-	-
Total Catchment Area	3.66	7.31	11.73



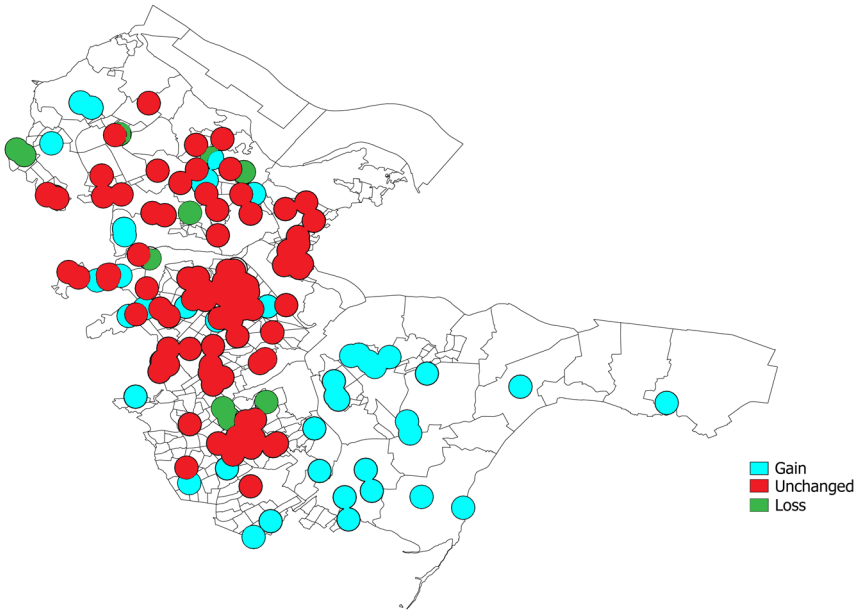
Catchment Area of Convenience Stores (km^2)			
1990	N = 56		
	200m radius	300m radius	400m radius
Area Loss In Previous 5 Years	0.12	0.13	0.06
Area Gain in Previous 5 years	2.25	3.92	5.46
Area Unchanged in Previous 5 years	3.54	7.18	11.67
Total Catchment Area	5.67	10.97	17.07



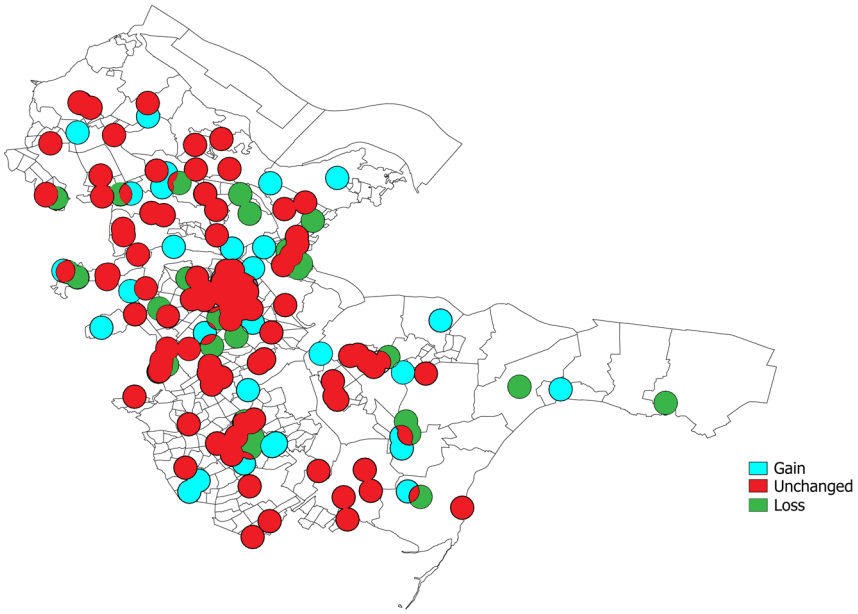
Catchment Area of Convenience Stores (km^2)			
1995	N = 81		
	200m radius	300m radius	400m radius
Area Loss In Previous 5 Years	0.79	1.1	1.29
Area Gain in Previous 5 years	4.31	7.24	9.55
Area Unchanged in Previous 5 years	4.88	9.87	15.78
Total Catchment Area	8.4	16.01	24.04



Catchment Area of Convenience Stores (km^2)			
2000	N = 96		
	200m radius	300m radius	400m radius
Area Loss In Previous 5 Years	1.47	1.86	1.92
Area Gain in Previous 5 years	4.36	6.9	8.45
Area Unchanged in Previous 5 years	6.93	14.15	22.12
Total Catchment Area	9.82	19.19	28.65



Catchment Area of Convenience Stores (km^2)			
2005	N = 127		
	200m radius	300m radius	400m radius
Area Loss In Previous 5 Years	2.44	3.95	4.57
Area Gain in Previous 5 years	7.5	13.1	18.26
Area Unchanged in Previous 5 years	7.38	15.24	24.08
Total Catchment Area	12.44	24.39	37.77



Catchment Area of Convenience Stores (km^2)			
2010	N = 132		
	200m radius	300m radius	400m radius
Area Loss In Previous 5 Years	2.57	4.19	4.86
Area Gain in Previous 5 years	5.88	10.16	13.12
Area Unchanged in Previous 5 years	9.87	20.2	32.91
Total Catchment Area	13.18	26.17	41.17

The Role of Convenience Stores as Public Space

Convenience stores occupy a paradoxical position in that they are at once central, in terms of their role as a conduit for everyday social practice, and at the same time peripheral in terms of their physical location en route. Compared to other shops that provide daily goods and services, convenience stores are used in transit, for example while commuting to work or school. Rather than being a focus of the community they are somewhat marginalised.

The implications of this are important when considering convenience stores as public space. The clustering of traditional shops, whether in *shotengai* or neighbourhoods, created a destination (within walking distance in Arata's words) that as well as creating interactions between shops also influences the establishment of relationship building by shop owners and staff. As Ohno points out in his comparison of the relationship between customers and shop staff in markets and department stores. In department stores staff take on a 'servant' type role, subordinating themselves to the customer as a means of establishing long-term relationships. Likewise local shop owners or market stall operators aim to build long-term relationships, however, in a slightly different way. Their strategy is to build a 'friend' type relationship in order to maintain business[1]. Convenience stores, on the other hand, resist making long-term relationships. This is an important consideration when understanding the role that conveniences stores play in the community. Convenience stores are based on non-attachment. Of the 56 respondents to an online survey, less than 14% had a particular chain store that they preferred not use, but only 13% could recall the name of at least one of the workers at a convenience store that they use. The rationalisation of convenience stores from independent grocers to homogenised chain stores leads to diffusion and non-centralisation which requires people to approach this space in a new way.

1 Ohno, H., pg 77.

Convenience stores are shown to be approaching dispersion, but at the same time competition and overlapping is increasing making them inefficient as service providers. Market mechanisms of competition, domination and brand image hold stronger weight than providing accessible services. This leaves areas without service suddenly. While the convenience store mechanism is suited to spreading this very spreading requires a reunderstanding of what public space is and how it works. In a broader view this rationalistion can also be seen in the condensing of stores into three main types; supermarkets, convenience stores and liquor stores, which by numbers make up most of the everyday spaces investigated.

The paradoxical location of convenience stores as central and peripheral public spaces has interesting structural consequences. Washizu comments that convenience stores are similar to churches in that anyone can enter anytime[2]. One of the tenets of churches is that anybody is welcome to seek refuge within, whether a part of the community or not. This point is also picked up by Clammer in his analysis of consumption in Japan who notes that Japanese form social ties through work and school institutions rather than local neighbourhoods. In contrast to churches which are highly localised Japanese social structures are not necessarily local. Relationships with hometown temples, school or work places means that social relations, and therefore public space, are not only based on place but also on networks.

Washizu goes further by comparing convenience store experiences to *keitai*[3] communications where people will enjoy a conversation or e-mail chat while on a train for example, but once the train arrives at its destination the conversation will stop, and will not be continued. It is merely a light *communique* that once ended has served its purpose. Another example is the posting of photos on social network sites. People take photos 'in the moment' and share them within a group freely and without consequence. *Keitai* communications are interactions that do not imply further relations. This is similar to one of the conditions for Amino's public sphere; social non-attachment[4]. By resisting forming relationships customers of convenience stores are able to engage in a kind of social non-attachment.

This idea is reinforced in the structure of convenience stores by locating themselves in transitional, and therefore peripheral, spaces. This depersonalised space paradoxically becomes more accessible. Convenience stores have evolved into a detached type, separate from family

2 Washizu pg 103

3 *Keitai* is the Japanese word used for mobile phones, literally translating as 'portable'

4 Washizu pg 106-107

ties, church-like, approachable by anyone, and throw away like *keitai* conversations.

At an architectural scale, this is also reinforced by the design of convenience stores; brightly lit, transparent facades. It is the opposite of Maki's *Hidden Depth* that allowed for the creation of micro-spaces. Convenience stores are immediately understandable not only in terms of their facade treatment, but also in layout and service. The design and mode of operation of convenience stores allow them to be central but free spaces that allow publicness to be imposed on them. Compared to supermarkets and shopping malls they are outward facing and integrated into the community. Convenience stores have this unique dichotomy. This forms a new kind of public space in the process of urban maturation in Japan.

When convenience stores are understood in terms of their position in a network of everyday spaces rather than their place they can be discussed in terms of public space. This relationship between structure and agency can be seen in convenience stores. For example, each year thousands of people, mainly women and children, flee to convenience stores for safety and refuge. This non-structural appropriation of convenience store space eventually led to structural transformation in the form of Safety Station. People adapt their environment, finding opportunities with what is presented to them.

The construction of weak ties is important for the sustainability of communities and the nuturing of social capital. As such everyday spaces where people can interact are essential. Convenience stores are found to be central in connecting people and ideas in a paradoxical way that requires a redefinition of what public space is and how it is constructed.

Conclusion

Since the 1990's Japan has engaged in a strategy to utilise the private sector to deliver public goods and services to the community. At the same time, consumption has continued to become more prominent both economically and socially. Convenience stores have been identified as a potential solution as social infrastructure.

In fact, convenience stores are already involved in social activities. The Study Group on the Role of Distributions Systems in Community Infrastructure has identified activities such as Safe Station and integrated public services such as library functions as ways in which the public can utilise convenience stores' extensive logistical network.

One of the impacts of privatising public space is the affect on the ownership of these spaces. Convenience stores in particular regularly open and close in a highly competitive market.

A key aspect of public spaces is their ability to support and build relations. De Certeau stresses the importance of users in the construction of social space. This research investigated the role of convenience stores as social structure.

A survey on the use of everyday spaces was used to create a social network diagram. This social network analysis showed that convenience stores, as well as train stations, are an important medium for the transference of information and plays a central role in constructing social norms.

An analysis of the physical location of convenience stores in Kashiwa City showed that they occupy locations on the periphery of everyday life; namely on transport routes. Convenience

stores are spreading at a rate quicker than other everyday spaces. This spreading of commercial public spaces requires a re-evaluation of what public space is.

In the context of theoretical writing, both Western and Japanese, convenience stores create a public space that is based on social-nonattachment. This allow users to enjoy short, but finite experiences of public interaction.

The aim of this research is to understand the public space of convenience stores which occupy a contradictory central but peripheral role in Japanese society. Understanding the way in which convenience stores act as public space is essential in the planning of cities in a shifting social, economic and political landscape.

Bibliography

Arata, M. (2012) ***Shoutengai Ha Naze Horobiru No Ka: Shakai, Seiji, Keizaishi Kara Saguru Saisei No Michi***. Kobunsha, Japan.

Borgatti, S.P., Everett, M.G. and Freeman, L.C. 2002. **Ucinet for Windows: Software for Social Network Analysis**. Harvard, MA: Analytic Technologies.

Caballero, J., Tsukamoto, Y. (2007) **Tokyo Public Space Networks at the Intersection of the Commercial and Domestic Realms (Part II) Study on Urban Content Space.** Journal of Asian Architecture and Building Engineering, vol. 6 no. 1, May 2007 pg 143-150.

Cassegard, C. (2011) **Public Space in Recent Japanese Political Thought and Activism: From the Rivers and Lakes to Miyashita Park**. Japanese Studies, 31:3, pg 405-422.

Clammer, J. (1997) **Contemporary Urban Japan : A Sociology of Consumption.** Blackwell Publishers, Oxford.

de Certeau, M. (1984) **The Practice of Everyday Life.** University of California Press, Berkeley and Los Angeles, California.

Giddens, A. (1986) **The Constitution of Society: Outline of the Theory of Structuration.** University of California Press, Berkeley and Los Angeles, California.

Granovetter, M. (1973) **The Strength of Weak Ties**. American Journal of Sociology, Volume 78, Issue 6 (May 1973) pg 1360-1380.

Grier, J. (2001) **Japan's regulation of Large Retail Stores: Political Demands Versus Economic Interests.** University of Pennsylvania Journal of International Law (22:1, 2001)

Hanada, T. (2006) **The Japanese 'Public Sphere': the Kugai.** Theory, Culture & Society 23(2-3) pg 612-614.

Hatoyama, Y. et al. (2010) **Declaration of " New Public Commons"** (June 4, 2010) New Public Commons Roundtable, Cabinet Office, Government of Japan.

Hayashi, K. (2006) **The 'Public' in Japan.** Theory, Culture & Society 23(2-3) pg 615-616.

Hirano, K. (2011) ***Konbini Ga Nakunaru Hi***. Shufu No Tomo, Japan

Hori, M. (2003) **Japanese Public Administration and its Adaptation to New Public Management.** Ritsumeikan Law Review, No. 20 (2003).

Jacobs, J. (1992) **The Death And Life of Great American Cities**. Vintage Books 1st ed. Random House, New York 1961.

Jinnai, H. (1995) **Tokyo : A Spatial Anthropology.** University of California Press Berkeley and Los Angeles, California.

Kay, J., Thompson, D. (1986) **Privatisation: A Policy In Search Of Rationale**. The Economic Journal, Vol. 96, No. 381 (Mar., 1986), pp. 18-32.

Lefebvre, H. (1991) **The Production of Space.** Trans. Nicholson-Smith, D. Blackwell Publishing, Oxford.

Oldenburg, R. (1997) **The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community.** Da Capo Press, Cambridge, Massachusetts.

Ohno, H (1993) **Hong Kong: Alternative Metropolis.** SD 93:2, pg76-77.

Sennet, R. (1992) **The Fall of Public Man.** W.W. Norton & Co., New York.

Simmel, G. (1903) **The Metropolis and Mental Life.** Cited in Rethinking Architecture: A Reader in Cultural Theory. ed. Leach, N. Routledge, Oxon 1997.

Terasaka, A. (1998) **Development of New Store Types: The Role of Convenience Stores in Japan.** GeoJournal 45, pg 317-325, 1998.

Uehara, Y. et al. Study Group on the Role of Distribution Systems in Community Infrastructure (2010) **Report by the Study Group on the role of Distribution Systems in Community Infrastructure: Distribution Systems in the Context of Local Communities.** METI, Government of Japan, May 2010.

Venturi, R., Scott Brown, D., Izenour, S. (1972) **Learning From Las Vegas**. MIT Press, Cambridge, Massachusetts.

Washizu, T. (2008) ***Koukyou Kukan Toshite No Konbini: Shinka Suru Shisutemu 24 Jikan***

365 Nichi. Asahi Shimbun Publications Inc., Japan.

Yamamoto, H. (2003) **New Public Management - Japan's Practice.** IIPS Policy Paper 293E, January 2003. IIPS Publications Department, Japan.

Zukin, S. (1995) **The Cultures of Cities.** Blackwell Publishers Ltd, London

Konbiniensu Sutoa Manuaru (1972) The Distribution Economics Institute of Japan, Japan.

NTT Townpage Business Phone Directory 1975-2010

Shakai Infura Toshite No Konbiniensu Sutoa Sengen (2011) Japan Franchise Association, Japan.

Appendices

Appendix A - On-line Survey
The survey was carried out in Japanese. A translated version is provided below.

Dailylife Survey

Japan is changing. Japan's population is predicted to fall by 25% and the number of people over 65 is predicted to rise by 39.6% by 2050 (Medium-variant projection, National Institute of Population and Social Security Research, January 2012). This research is about how the way we live in our city will change.

This survey asks questions about your daily activities. There are nine parts.

Thank you for your support.

What kind of person are you? Please give us some general background information (This information will not be used for anything other than this research, nor will it be passed onto any third party).

1a. What is your sex?
FemaleMale

1b. How old are you?
0-14 15-25 26-35 36-50 51-64 65-75 76+

1c. Where do you live? Please enter your post code.
(Post code)

1d. Please enter your work or school post code?
I don't go to either (Post code)

1e. Including yourself, how many people are there in your household?
1 2 3 4 5 Other (please specify)

Daily life Survey
2. In the last week, how many times have you been to a convenience store?
0 1 2 3 4 5 6 7 8 9 10 Other

2a. What was the total time you spent there?
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

2b. When do you use convenience stores? (please choose as many answers as applicable)
late at night commuting to work or school while at work or during a break
while on holiday other (please specify)

2c. In the last week, how many times have you been to a convenience store without intending to buy anything? (for example, to read magazines or comics, to smoke, to ask for directions, to take a break from driving etc.)
0 1 2 3 4 5 Other (please specify)

2d. Is there a particular convenience store that you don't like?
not especially yes, one yes, a few yes, I only use one

2e. Do you know the name of any of the staff that work in the convenience store you go to the most?
Yes No

3. In the last week, how many times have you been to a shopping mall?
0 1 2 3 4 5 6 7 8 9 10 Other

3a. What was the total time you spent there?
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

4. In the last week, how many times have you been to a shotengai?
0 1 2 3 4 5 6 7 8 9 10 Other

4a. What was the total time you spent there?
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

5. In the last week, how many times have you been to a Deprtment Store?
0 1 2 3 4 5 6 7 8 9 10 Other

5a. What was the total time you spent there?
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

6. In the last week, how many times have you been to a supermarket?
0 1 2 3 4 5 6 7 8 9 10 Other

6a. What was the total time you spent there?
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

7. In the last week, how many times have you been to a local shop (butcher, greengrocer, tobacconist)?
0 1 2 3 4 5 6 7 8 9 10 Other

7a. What was the total time you spent there?
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

8. In the last week, how many times have you been shopping on the internet?
0 1 2 3 4 5 6 7 8 9 10 Other

8a. What was the total time you spent there?
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

9. In the last week, how many times have you used a train station ? (please count a return trip as 2)

0 1 2 3 4 5 6 7 8 9 10 Other

9a. What was the total time you spent there? (including any time spent in a station cafe, bookstore or convenience store etc.)
Please specify time (for example, in the case of 3 hours 40 minutes please enter 3:40)

Appendix B - Centrality Measures for Social Network by Time

BONACICH CENTRALITY

Method: Slow

EIGENVALUES

FACTOR	VALUE	PERCENT	CUM %	RATIO
1	73.41	44.6	44.6	3.25
2	22.59	13.7	58.3	1.184
3	19.079	11.6	69.9	1.471
4	12.966	7.9	77.7	1.06
5	12.234	7.4	85.2	1.137
6	10.755	6.5	91.7	1.311
7	8.202	5	96.7	1.498
8	5.477	3.3	100	
9	0	0	100	1.04
10	0	0	100	1.276
11	0	0	100	1.181
12	0	0	100	1.238
13	0	0	100	1.028
14	0	0	100	1.062
15	0	0	100	1.199
16	0	0	100	1.161
	164.712	100		

Bonacich Eigenvector Centralities

	1	2
	Eigenvec	nEigenvec
1	0.107	15.164
2	0.094	13.327
3	0.115	16.212
4	0.161	22.82
5	0.012	1.73
6	0.008	1.101
7	0.02	2.839
8	0.03	4.281
9	0.01	1.44
10	0.01	1.437
11	0.144	20.348
12	0.015	2.065
13	0.037	5.277
14	0.016	2.322
15	0.022	3.08
16	0.015	2.171
17	0	0
18	0.077	10.832
19	0.016	2.223
20	0.078	10.967
21	0.099	14.065
22	0.076	10.759
23	0.115	16.228
24	0.08	11.275
25	0.009	1.294
26	0.05	7.017
27	0.151	21.384
28	0.081	11.463
29	0.081	11.473
30	0.128	18.033
31	0.06	8.436
32	0.156	22.126
33	0.174	24.624
34	0.056	7.935
35	0.118	16.69
36	0.114	16.093
37	0.125	17.641
38	0.136	19.166
39	0.048	6.733

40	40	0.038	5.438
41	41	0.121	17.089
42	42	0.115	16.324
43	43	0.197	27.813
44	44	0.058	8.192
45	45	0.081	11.414
46	46	0.115	16.318
47	47	0.018	2.496
48	48	0.034	4.814
49	49	0.158	22.321
50	50	0.164	23.249
51	51	0.106	14.99
52	52	0.131	18.588
53	53	0.016	2.289
54	54	0.093	13.107
55	55	0.082	11.544
56	Conbini	0.302	42.773
57	Shopping Mall	0.059	8.41
58	Shotengai	0.055	7.763
59	Department Store	0.048	6.778
60	Supermarket	0.105	14.827
61	Local Store	0.041	5.746
62	Internet Shopping	0.07	9.929
63	Train Station	0.618	87.419

Descriptive Statistics

		1	2
		Eigenvec	nEigenvec
		---	---
1	Mean	0.09	12.725
2	Std Dev	0.088	12.471
3	Sum	5.669	801.701
4	Variance	0.008	155.524
5	SSQ	1	20000
6	MCSSQ	0.49	9798.029
7	Euc Norm	1	141.421
8	Minimum	0	0
9	Maximum	0.618	87.419
10	N of Obs	63	63
11	N Missing	0	0

Network centralization index = 86.94%

Running time : 0:00:01

Output generated 2012/7/30 12:54

Appendix B - Centrality Measures for Everyday Spaces by Number of Visits

BONACICH CENTRALITY

Method: Slow

EIGENVALUES

FACTOR	VALUE	PERCENT	CUM %	RATIO
1:00	538.8	58.1	58.1	3.757
2:00	143.4	15.5	73.5	1.802
3:00	79.6	8.6	82.1	1.786
4:00	44.5	4.8	86.9	1.127
5:00	39.5	4.3	91.2	1.171
6:00	33.8	3.6	94.8	1.266
7:00	26.7	2.9	97.7	1.23
8:00	21.7	2.3	100	
	928	100		

Bonacich Eigenvector Centralities

		1 Eigenvec	2 nEigenvec
1	Conbini	0.527	74.471
2	Shopping Mall	0.118	16.704
3	Shotengai	0.124	17.475
4	Department Store	0.108	15.264
5	Supermarket	0.249	35.284
6	Local Store	0.075	10.667
7	Internet Shopping	0.152	21.564
8	Train Station	0.769	108.687

Descriptive Statistics

		1 Eigenvec	2 nEigenvec
1	Mean	0.265	37.514
2	Std Dev	0.234	33.055
3	Sum	2.122	300.116
4	Variance	0.055	1092.663
5	SSQ	1	20000
6	MCSSQ	0.437	8741.306
7	Euc Norm	1	141.421
8	Minimum	0.075	10.667
9	Maximum	0.769	108.687
10	N of Obs	8	8
11	N Missing	0	0

Network centralization index =130.76%

Running time : 0:00:01

Output generated 2012/7/30 12:57

Appendix B - Centrality Measures for Social Network by Time

BONACICH CENTRALITY

Method: Slow

EIGENVALUES

FACTOR	VALUE	PERCENT	CUM %	RATIO
1:00	22.178	35.3	35.3	2.042
2:00	10.861	17.3	52.6	1.225
3:00	8.866	14.1	66.7	1.207
4:00	7.348	11.7	78.4	1.543
5:00	4.763	7.6	86	1.188
6:00	4.01	6.4	92.4	1.389
7:00	2.886	4.6	97	1.542
8:00	1.872	3	100	
9:00	0	0	100	1.183
10:00	0	0	100	1.129
11:00	0	0	100	1.513
12:00	0	0	100	1.129
13:00	0	0	100	1.065
14:00	0	0	100	1.413
15:00	0	0	100	1.062
16:00	0	0	100	1.238
	62.784	100		

Bonacich Eigenvector Centralities

		1 Eigenvec	2 nEigenvec
1	1	0.022	3.179
2	2	0.053	7.506
3	3	0.035	4.907
4	4	0.053	7.554
5	5	0.003	0.41
6	6	0.01	1.421
7	7	0.008	1.111
8	8	0.003	0.399
9	9	0.011	1.523
10	10	0	0
11	11	0.033	4.7
12	12	0.01	1.42
13	13	0.017	2.407
14	14	0.016	2.223
15	15	0.012	1.734
16	16	0.005	0.656
17	17	0	0
18	18	0.065	9.167
19	19	0.023	3.315
20	20	0.004	0.496
21	21	0.032	4.457
22	22	0.019	2.743
23	23	0.034	4.835
24	24	0	0
25	25	0.003	0.492
26	26	0	0.035
27	27	0.017	2.421
28	28	0.03	4.221
29	29	0.034	4.744
30	30	0.135	19.06
31	31	0.189	26.738
32	32	0.13	18.423
33	33	0.072	10.154
34	34	0.035	4.932
35	35	0.054	7.585
36	36	0.019	2.7

37	37	0.235	33.257
38	38	0.058	8.218
39	39	0.037	5.244
40	40	0.017	2.364
41	41	0.024	3.457
42	42	0.377	53.379
43	43	0.311	43.952
44	44	0.187	26.478
45	45	0.15	21.273
46	46	0.039	5.517
47	47	0.013	1.797
48	48	0.036	5.116
49	49	0.191	26.953
50	50	0.026	3.63
51	51	0.025	3.564
52	52	0.003	0.467
53	53	0.003	0.417
54	54	0.036	5.155
55	55	0.026	3.657
56	Conbini	0.068	9.577
57	Shopping Mall	0.092	12.96
58	Shotengai	0.019	2.742
59	Department Store	0.169	23.869
60	Supermarket	0.068	9.669
61	Local Store	0.033	4.72
62	Internet Shoppng	0.073	10.283
63	Train Station	0.669	94.56

Descriptive Statistics

		1	2
		Eigenvec	nEigenvec
		---	---
1	Mean	0.066	9.364
2	Std Dev	0.107	15.158
3	Sum	4.172	589.944
4	Variance	0.011	229.772
5	SSQ	1	20000
6	MCSSQ	0.724	14475.65
7	Euc Norm	1	141.421
8	Minimum	0	0
9	Maximum	0.669	94.56
10	N of Obs	63	63
11	N Missing	0	0

Network centralization index =99.16%

Running time : 0:00:01

Output generated 2012/7/30 12:55

Appendix B - Centrality Measures for Everyday Spaces by Time

BONACICH CENTRALITY

Method: Slow

EIGENVALUES

FACTOR	VALUE	PERCENT	CUM %	RATIO
1:00	107.9	44.4	44.4	2.576
2:00	41.9	17.2	61.6	1.4
3:00	29.9	12.3	73.9	1.308
4:00	22.9	9.4	83.3	1.599
5:00	14.3	5.9	89.2	1.173
6:00	12.2	5	94.2	1.598
7:00	7.6	3.1	97.4	1.192
8:00	6.4	2.6	100	
	243.1	100		

Bonacich Eigenvector Centralities

		1 Eigenvec	2 nEigenvec
1	Conbini	0.225	31.866
2	Shopping Mall	0.325	46.025
3	Shotengai	0.133	18.835
4	Department Store	0.346	48.913
5	Supermarket	0.302	42.64
6	Local Store	0.068	9.559
7	Internet Shopping	0.25	35.424
8	Train Station	0.74	104.664

Descriptive Statistics

		1 Eigenvec	2 nEigenvec
1	Mean	0.299	42.241
2	Std Dev	0.189	26.753
3	Sum	2.39	337.926
4	Variance	0.036	715.715
5	SSQ	1	20000.01
6	MCSSQ	0.286	5725.716
7	Euc Norm	1	141.421
8	Minimum	0.068	9.559
9	Maximum	0.74	104.664
10	N of Obs	8	8
11	N Missing	0	0

Network centralization index =114.69%

Running time : 0:00:01

Output generated 2012/7/30 12:58

Appendix C - Convenience Store Ownership in Kashiwa City 1985-2010

Number of Convenience Stores by Brand (Source: Townpage Phone Directories 1980-2010							
Name	1980	1985	1990	1995	2000	2005	2010
AM/PM	0	0	0	1	4	4	5
MINI STOP	0	1	1	6	5	2	5
SUNKUS	0	0	0	4	6	9	10
THREE F	0	0	0	2	1	6	8
SEVEN ELEVEN	0	12	14	18	27	34	43
DAILY YAMAZAKI	0	1	1	0	12	13	13
Y-SHOP	0	0	0	0	0	0	1
FAMILY MART	0	2	4	6	8	20	21
LAWSON	0	3	4	8	10	19	13
LAWSON 100 STORE	0	0	0	0	0	0	2
POPLAR	0	0	0	0	0	2	2
LIFE MART	0	0	0	1	1	1	1
SHOP99	0	0	0	0	0	3	1
JUST SPOT	0	0	0	2	4	0	0
KURASHI HOUSE	0	0	1	3	3	0	0
BENRI	0	5	5	6	2	1	0
YAMAZAKI DAILY	0	1	3	4	2	1	0
SUN EVERY	0	3	4	8	1	0	0
K MART	0	0	1	0	0	0	0
SUN CHAIN	0	0	3	1	0	0	0
LAPORTE	0	0	1	1	0	0	0
M-MART	0	0	0	0	1	1	0
COSMOS	0	0	0	0	1	1	0
CLOVER	0	1	1	0	0	0	0
DAILY STORE	0	2	3	0	0	0	0
INDEPENDENT	0	5	10	10	8	10	7
TOTAL	0	36	56	81	96	127	132