

Analytical Tools

Semi-Public Space Conflicts and Alliances in primary Metropolitan Centres: Sylvia Park, Mt Wellington, Auckland

SPATIAL ANALYSIS REPORT

Auckland semi-public space: A comparative analysis of the urban contexts of the integrated enclosures of spectacle and consumption

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Abstract

This chapter discusses the findings of a research project concerning the relations between urban form and people's usage of urban public space. In low density cities within a neoliberal political framework, an increasing disjunction of urban places, polarisation of amenities and commodification of commons, has produced spatialities that transform social relationality. Among the main places for people to interact there are the new integrated urban enclosures of lifestyle and consumption, the latest evolution of suburban shopping centres. These urban enclosures are key manifestations of the new form of complicity between the leading economic powers and the wider society. They are places mobilised by spectacle that quickly subsume the fundamental changes occurring in the relations between architecture and associative life in our contemporary post-consumerist, digital society.

This chapter presents the findings of a comparative analysis of the urban morphology of six selected areas around new shopping centres in Auckland, documenting the important challenges they pose to architecture and urban design in defining the future of public space. The investigation of the spatial aspects of the architecture of a selected sample of new enclosures in Auckland aims to provide an insight into the scarcely explored effects of urban design on social life in New Zealand, where the privatisation of public space proposes new idiosyncratic models of "depoliticised spaces" with sophisticated transductive characters and the finely tuned physical, social and cultural effects of displacement.

Keywords

Semi-Public Space; Shopping centres; Depoliticisation of the Centre; Urban Form; Wellbeing; Resilience; Auckland.

1. Introduction

The high segmentation of some contemporary patterns of urban form has been correlated to increased inequality and diminished relational life of urban communities. This challenges the sustainable development of cities that, as specifically stated in the United Nations' SDG 11, relies on integration and cohesion, access for all to basic services, adequacy and universal mobility, and, importantly, provision of universal access to safe, inclusive and accessible public spaces. To inform approaches, policies, methods, and actions that appropriately address these issues and institute strategies and tactics for the sustainable development, it is paramount to understand the emerging relationships between physical space structure, social infrastructure patterns and human activities. A combination of advanced methods of spatial analysis enables to produce both quantitative and qualitative evidence regarding individual and collective spatial conditions that are crucial to physiological, psychological, cultural, and social well-being.

Like many modern cities, contemporary Auckland is concurrently increasing its socio-spatial polarization and privatisation of quality public space, exposing a conspicuous part of its residents to multiple hardships in accessing basic services. The progressive displacement of urban commons from central public places to semi-public spaces of advanced commercial enclosures is particularly critical for both local and translocal communities, since the social effects of their spatial disjunction are aggravated by their financialisation. This endangers the effectiveness of re-combinant factors that the pervasion of digital communication grants to our everyday experience, by obstructing the intimate intertwining of the virtual and the actual public spheres (Castells, Fernandez-Ardevol and Sey, 2007; Kang and Cuff, 2005; Foth, Brynskov and Ojala, 2015; Fuchs, 2014). A peculiar characteristic of the new semi-public spaces is their highly transductive capacity, which finely tunes physical, social and cultural processes of de- and re-territorialisations, bringing to a new level the "hyperreal" dimension of the modern city of the spectacle (Baudrillard 1994, Coyne, 2010; Eco, 1995). This includes also the convergence of some activities of production and consumption (Fuchs, 2013; Ritzer, Dean and Jurgenson 2012), which arguably is one of the main components of the incepting hybrid and participatory digital culture (Miles, 2010, 2012; Sacco, 2011). The new enclosures create continuums of "interrealities" (Stikker, 2013) that conflate the traditional mall's hedonic shopping (Nijhuis 2013) and eventful entertainment and lifestyle components into platforms for public life and socialisation that are antagonistic to the traditional civic realm. Their development is underpinned by the retreat of the state from the management of both suburban commons (Garnett, 2012; Hodgkinson, 2012) and infrastructural systems occurring in environments with a neoliberal political framework. There, the question emerging from the atrophy of the modern political life and "loss of public space" discussed by Hannah Arendt (1958) opens to the critique of the contemporary dimension of the public culture elaborated by Chantal Mouffe (2005) and Anna Minton (2009). As idiosyncratic models of "depoliticised public space," these places are possibly the most representative instances of the "complicity" between the private and public parties of the contemporary post-consumerist era (Manfredini, 2017, Miles, 2010, 2012).

2. The contemporary public space transition in Auckland

Auckland's steadily accelerating growth over the last fifty years has produced distinctive spatial patterns that combine a distributed, low urban density with a complex structure of human geography (Auckland Regional Council, 2010; Bloomfield, 1967; Gilbertson and Meares, 2013; Gomez, King and Jackson, 2014). The city, which has experienced a complicated implementation in coordinating the "liveability" agenda developed to integrate the recently amalgamated eight constituent cities (Lewis and Murphy, 2015), has a complex structure of segmented components grown on the original network of towns and villages distributed on an asperous landscape with added coastal lines. This structure, as in many of the modern distributed western cities, is integrated by a capillary mobility infrastructural system – mainly designed for private vehicles – that guarantees a comparable and efficient condition of connectivity to most of the existing urban and peri-urban areas.

The "transportation palimpsest" emerged as a crucial constituent of the modern diffused and intertwined system of urban ecologies and was brought to international attention by Reyner Banham

(1971) with his seminal book describing the gridded metropolis of Los Angeles. The infrastructural metropolis with its dynamic system of flows has subverted the old hierarchical centre-periphery relations described by the Chicago School models into a spatial condition typical of many of the modern metropolises (Amin and Thrift, 2002; Castells, 1996; Graham, 2001; Sieverts, 2003) of seamlessly interconnected “isotropy,” where accessibility has very little variation across the urban area (Secchi, 2011; Viganò, 2008). If the most extended portion of its land area is a reticular “carpet of domesticity” (Manfredini and Leardini, 2014), this is actually a connective fabric filling the spaces between the diffuse impervious boundaries of the natural environment and the dispersed set of large discrete elements. Indeed, as in many other international cases, Auckland’s isotropic condition favours the increasing geographic polarisation that produces discontinuous growth of locally disjointed components. The urban paradigm described as “elemental” (Viganò, 1999) and “enclavic” (Shane, 2011), extensively developed in Asian post-metropolitan city-regions (McGee, 1995), emerges as a local variation in Auckland’s recently conurbated archipelago-like ensemble.

The progressive spatial segmentation of its urban territory transversally affects all scalar levels with a multidimensional involvement of social, cultural and economic matters (Johnson, 2012; Spoonley and Meares, 2011). It results in an increasing strengthening of the boundaries of the elements, be those single buildings or clusters, which increase their introversion and independency, sometimes even reflecting in their internal cellular mosaic the fragmentation of the external environment. The semi-enclosures, which have emerged across all sectors throughout suburbia, concern: employment in spatially finite office parks, such as the ones on the main urban arterial south-north axis (Smales Farm, Central Park Corporate and the Millennium Centre); dwelling in master planned communities, such as the two major new exurban developments in the northern sector (at Hobsonville Point and Long Bay); and consumption in consolidated retail enclaves that punctuate the territory and create new geographical and social suburban centres, such as the regional mall in the Albany town centre),

The integrated retail enclosures, introduced in Auckland in 1963 with the opening of the first shopping centre, LynnMall, located at the core of the western suburb of New Lynn, are in a phase of important growth as recent studies on retail economics have confirmed, forecasting a strong increase of retail space in the city for the coming decades (Colliers, 2014; Fairgray, 2013, Gibson, 2015), mainly as a result of the combined effect of the steadily increasing population (Auckland Council, 2012) and the currently moderate availability of retail area per capita (we estimate New Zealand having approximately two thirds that in the US).

The positive trend (Scentre Group, 2015) is concentrated in the biggest, most functionally articulated and integrated shopping centres of the city, where it is growing a “new breed” of retailer adept at adapting to changes (Colliers, 2014). Indeed, these top malls, with a very high and above average lifestyle component (Manfredini and Jenner, 2015; Manfredini, Tian, Jenner and Besgen, 2017), are in a phase of relevant growth in number and size. New developments, such as the Westgate town centre (part of the 156-hectare new regional town centre planned by Auckland Council and New Zealand Retail Property Group in the north-west expansion of the city; Gibson and Schoultz, 2015) are accompanied by major expansions, such as the two major central malls, namely Westfield St Lukes and Westfield Newmarket. Particularly relevant is the current creation of the Westgate town centre, since it is a major urban transformation in the north west of the city, with a public-private partnership development of 156 hectares aimed to “deliver a compact town centre that avoids sprawling,” through a large retail and consumption compound with low residential density (2,500 people per square kilometre) and minimal office development.

The development of larger centres, which dominate the retail market of large parts of Auckland’s suburban areas, progressively catalyses the “rationalisation” of the retail sector, providing a more efficient and socially controlled “environment of consumption.” Through the combination of malls and large retail-format clusters with dominant – often category killer – anchor tenants (in the grocery sector an acute polarisation has brought the market to an exclusive duopolistic control by two rival supermarket chains with an estimated 85% of the total supermarket and grocery store sales in 2012; Parsons and Wilkinson, 2015), has gradually pervaded and radically transformed some of the older suburbs (like the semi-central Mount Albert, where, in 2010, the St Lukes Town Centre was created around the mall) or shaped new major greenfield urban expansions (like in the northern Albany

Regional Centre), threatening or inhibiting the development of the traditional fine-grained pattern based on locale agencies that spontaneously aggregated at the centre of the towns and villages now conurbated.

Our research intends to provide evidence to evaluate the potential creation of a kind of “mobile urbanism” (McCann and Ward, 2011), where the urbanised territory somehow resists becoming an “undifferentiated grid of opportunities” with semi-random rules of growth (Dear and Dahmann, 2008). It looks at the criticalities emerging in the main consumption nodes of Auckland’s urban network, considering the spatial segmentation of the urban form, the conditions of public space and commons, and the new spatial distribution of physical and social infrastructures.

To provide a description of the relations between the new infrastructural networks and people’s everyday lives in Auckland, this area of the study explores the physical form of the identified case studies using the armature-enclave and corridor-patches pattern approach. Typo-morphological patterns of spatial diffusion and integration, accessibility and connectivity of the selected urban enclaves in their context will be studied and mapped focusing on urban grain (block and building size), spatial configuration (buildings and open spaces) and land use (urban planning zoning classification). Accessibility and connectivity will be studied by mapping public spaces (both interiors and exteriors) to focus on the effects on movement spaces resulting from the urban inversion proposed by shopping mall enclosures. This considers the hypothesis that accessibility and convenience of urban amenities, and in particular those pertaining to consumption, support associative life development, contributing to the quality of urban life experiences and increasingly influence people’s residential localisation choices (Rappaport, 2008). This analysis, ultimately, is intended to provide empirical evidence for a discussion that draws upon the theoretical body elaborated in the last decades concerning the conflicting relationships between the city and its parts. In particular we look at descriptions of the urban phenomenon as critical negotiation between elements and their reference frame, as proposed through the notions of “city of parts” (Rossi, 1982), grid-object paradox (Chuihua, Chuihua, Inaba, Koolhaas, and Tsung Leong, 2001; Koolhaas, 1978) and finite element-debris collisions (Rowe and Koetter, 1978). We will also elaborate on the theoretical speculation proposed by Henri Lefebvre (1991, 2004) with observations on how segmentation emerged in cities after the disappearance of formal boundaries (between their homogeneous parts such as citadel and city, town and country, centre and periphery). There, he signalled the contradiction between processes that have “homogenised” and “rationalised” city space and the correlated constraints, resulting in the creation of utterly dislocated configurations with the separation of “everything (‘public facilities,’ blocks of flats, ‘environments for living’)” and the consequent relegation of the elements in an “isolated fashion to unconnected ‘sites’ and ‘tracts’” (Lefebvre, 1991: 97-98).

In order to understand the issues facing the development of Auckland’s urban environment, a comparative analysis of representative metropolitan centres has been undertaken. The research focuses on areas of major city centres and emergent metropolitan centres, as defined by the new Auckland Plan (Auckland Council, 2012), focusing on shopping enclosures and the way in which they integrate in their urban pattern. To provide empirical evidence to the study of the differences in the provision of public realm for social exchange between the older town centres and the emergent ones, the study explores the spatial attributes of the built environment. Key variables for the comparative analysis concerning population characteristics and the physical features were selected by conducting a literature review of contemporary public space research. They include: people factors, concerning demographic and socio-economic variables; and spatial factors, concerning urban connectivity, street network, distribution of residential buildings, street activity, and active/inactive/invaded space. Urban connectivity refers to ease of movement, walkability and accessibility, considering both private and public transport. Street network and distribution of residential buildings looks at the relationships between houses and streets, considering two main aspects: road hierarchy and connection to sidewalks. Invaded public space refers to how motor vehicles take over and fragment public space to the detriment of social space (Carmona, Tiesdell, Heath and Oc, 2010).

The empirical research reported below provides evidence to validate the following hypothesis: newer developments centred around dominant retail and entertainment complexes appear to harvest strong social bonds, assisting in developing a “sense of community and identity” within their

neighbourhoods, while – when compared to traditional centres – they show: limited connectivity and accessibility, reduced percentage of houses located along main streets and of houses disconnected from the sidewalks, and higher presence of unfriendly pedestrian public space (carparks and inactive sidewalks).

3. Empirical research

The comparative analysis uses quantitative methods to investigate representative case studies in the greater Auckland region, considering the major metropolitan and the emergent town centres. The selection of case studies identified four metropolitan centres – the four major consolidated centres that had autonomous councils until the 2010 “supercity” amalgamation: the city centres of Auckland, Takapuna-North Shore, Henderson-Waitakere and Manukau – and two emergent town centres: the ones located in the growing southern and northern urban areas with larger regional malls, Sylvia Park and Albany. The selection also considered shopping mall size (four regional centres and two neighbourhood/town centres), urban context (mall location within the centre and land use mix of its area) and position of the area within the Auckland strategic road network (Auckland Transport, 2013). The selected areas are representative of the three main urban pattern types:

- (1) Traditional: Auckland central and Takapuna mall areas have medium-size shopping centres integrated in a composite mix of traditional retail, office and residential uses with minimal large-format retail (LFR) and are served by secondary arterial roads.
- (2) Modern: Henderson and Manukau mall areas have large regional shopping centres with a moderate mix of uses that, although profoundly different in traditional retail (respectively high and low), has a sizeable component of LFR and offices, but very limited residential areas, served respectively by secondary arterial roads and motorway.
- (3) Emergent: Sylvia Park and Albany are areas dominated by new large regional shopping centres with a limited mix of uses that includes a little traditional retail, large clusters of LFR, moderate offices and disconnected residential areas, served respectively by motorway and primary arterial roads.

To determine the characteristics of the public realm in the identified centres, considering users, uses, urban morphology and building typology, a preliminary investigation concerns the definition of the extension of the involved study areas, establishing the perimeter of the various catchment areas. Catchments can be defined based upon a number of factors including distance, travel time, geographic and social characteristics. With reference to the malls, catchments typically concern areas from which they derive most of their patronage. This study defines three catchment areas: driving and walking times, and gravity (retail attractiveness). The catchments by driving time and gravity are used to estimate the users’ base area. The pedestrian catchment (Pedshed) is used to estimate the extension of the areas people are willing to cover on foot from shopping malls to reach other amenities, transport, office and residential places, starting from main exits and using accessible street sidewalks and public thoroughfares.

Catchment areas

Considering the dominant private vehicle transportation, catchments were estimated using driving time and identified with network area analysis of ArcMap GIS 10. According to literature, primary, secondary and tertiary areas were identified setting travel time at 5, 10, and 15 minutes, and speed at various values according to the speed limit of each road and related traffic. Results were tested against the results obtained using the Huff model (Dramowicz, 2005; Huff and McCallum, 2008) with reverse attractiveness value (number of visitors per year), and simulations made using various free online web mapping services considering real-time conditions and averaged ones. The catchment areas of each shopping mall environment were then exported from ArcMap to be elaborated with Rhinoceros 5. The catchment areas with attributes regarding properties (land parcels and building footprints) and streets (street shape and kerb lines) were aligned with the mesh-blocks area maps of Statistics New Zealand. Any mesh block that possessed less than 50% of its residential buildings within the catchment curve was excluded. A limited number of areas below that ratio was included geographically as historically belonging to the district (e.g., a group of households in the north west of Albany that has no other

significant amenity set in their proximity). It is worth noting that the resulting high variability in the extension of the areas reflects both the uneven geography and distribution of road infrastructure.

Walkability and granularity

To estimate what is comfortably reachable, in the studied areas, from the mall entrances, pedestrian and cycling catchments were identified using traditional mapping methods and using common standards of 5-minute (400 metre distance) and 10-minute walk (800 metres), and 5-minute cycling (1200 metres) (New South Wales Government 2004; Ewing and Handy, 2009; Ewing, Handy, Brownson, Clemente and Winston, 2006). The study used a manual procedure that enabled to introduce into the mapping process a relevant number of missing information (informal but stabilised paths through green areas, shortcuts through publicly accessible parts of private buildings, land and garages, privately owned public spaces, and non-walkable public spaces). Results were tested against those provided by the same digital systems used for the driving catchment analysis.

Pedestrian and cycling catchments were used for the evaluation of urban block and building grain, and road network configuration. A Grasshopper script was created to analyse the size and shape of the urban blocks, size and shape of the building footprints, and the position of street junctions in the six study areas and to organise data in both graphic (shape charts) and numeric format (MS Excel spreadsheets) with geographic references. Results of urban block analysis show a greater connectivity and accessibility in older town centre patterns. This is due to the combination of block size (low average and median block area) and shape (uniform and compact) of their open and homogeneous Cartesian grids, in which higher permeability offers more options for pedestrian to get from “A to B.” On the other hand, the amorphous and dendritic patterns of the emergent ones showed a lower connectivity, featuring a collection of large “mega-blocks,” with irregular shape, and a high street hierarchy, with multiple cul-de-sacs. The minimal number of thoroughfares contributes to the low permeability, making it difficult for residents to walk to local amenities. Moreover, while a common characteristic of both patterns is that blocks become larger when the distance from the centres increases, the difference is much higher in the emergent centres, where the irregularity of the patterns features sudden shifts in block sizes between the three radii.

Walkability and street network

The assessment of connectivity also considered the number and density of street junctions since this affects walkability by increasing visual legibility and orientation, and improving pedestrians’ place legibility (Carmona et al, 2010). Older town centres have a high node count and density for each catchment radius, with a progressive count reduction moving away from the core. Modern centres have a lower quantity of nodes within the 400-metre radius as a result of a coarse urban fabric; the node count increases significantly for all town centre types at the 800- and 1,200-metre radii. Another factor in the walkability of shopping mall areas is the accessibility of amenities, offices and residential places outside the mall property boundaries. This is particularly relevant due to the high variation in size and connectivity of the studied centres (in some cases with large open-air carparks surrounding them). The walkable area ratio located outside the property boundaries, within a 5-minute walk from the main entrances, was hence introduced to measure and assess it. Findings show high values in older centres (CBD and Takapuna at more than 90%) and low in the newer and emergent ones (in Sylvia Park and Albany they are less than 60%). Concerning the reachable places in these areas, the most relevant results were found in the number of parcels, with the older centres having a much higher value than the newer ones. Among them, it is worth noting that the residential sector shows, in the newer and emergent town centres of Henderson, Manukau and Albany, very few to no households, while in older centres, the value becomes sizeable (Auckland central is very high due to the numerous collective residential buildings and medium- and long-term rental apartments).

Building grain, streetscape and invaded space

To evaluate the relations between the block and building scales concerning urban granularity in the built environment of the six study areas, an assessment of the variation in size of their buildings, considering the building footprint area, was made. Results showed a strong correlation between the two scales, with the emergent centres having higher heterogeneity both in shape and size of urban

blocks and buildings, and the older centre lower. This reflects the formal disproportion in the emergent centres between the central shopping environment (composed by the large malls and LFR clusters), and the surrounding urban fabric (mainly formed by single detached residential houses), with a high extension of the size range and a distribution that abruptly drops in size after the few larger retail structures. Moreover, these areas show inversion of the urban block granularity distribution, with a coarse-grained core and a fine-grained periphery. In contrast, older centres show a lower size range and a uniform distribution (e.g., the footprint of the shopping mall located in Auckland central is not easily recognisable in the area), particularly in the proximity of their core, which reflects that of the urban blocks.

This analysis also provides information concerning streetscape configuration and activity. In relation to form, results show that, while in the older centres buildings are generally adjacent to streets and to each other, forming continuous frontages and defining the shapes of streets and squares, in the emergent centres buildings are scattered, free-standing objects with little to no reciprocal relationship. Concerning street activity, consolidated methods (Carmona, 2014; English Partnerships & The Housing Corporation, 2007; Gehl, 1987; Gehl and Gemzoe, 1996) were used to assess the occurrence and size of marginally sociable public space. “Invaded space” – i.e., the inactive open-air surface devoted to both stationary and moving vehicles (roads and carparks) and annexed street sidewalks (without active frontage) – in the defined pedestrian catchment areas was measured and compared to the other public active areas – sidewalks and squares with activated amenities and permeable building frontages. Results show older town centres have a lower percentage of non-accessible, unattractive or invaded spaces and a higher availability of active space, while in modern centres the situation is the opposite.

Access to amenities

To evaluate the access to urban amenities from household residences within the primary driving catchment area (the low number of residences located within the pedestrian catchment of most of the malls does not have statistical significance), four classes of facilities were created: (1) public open spaces (parks, reserves and piazzas), (2) public and community facilities (community centres, libraries, museums, recreation centres and schools), (3) semi-public facilities (churches, temples and culture and art centres), (4) and commercial, retail and hospitality services (food and beverage facilities, retail shops, services, shopping malls). To measure the distance between each household residence and the nearest amenity for each of the four groups a Grasshopper script was created. It measures the Euclidean distance between the geometric centre of the house and that of the closest facility or access to green area. Results show older town centres as having a lowest average and median distances to travel to public or semi-public amenities and newer centres as have the highest.

Mode of transport

Census data were used to assess modes of transport in the study areas. Results show that private vehicle transportation is the dominant mode of commuting. Henderson, Manukau, Sylvia Park and Albany all feature a high percentage (over 85 per cent, with Sylvia Park exceeding 90 per cent) of their population travelling to work using private vehicles. Older town centres have a lower percentage of their working population driving to work, and a greater proportion walking, cycling and taking public transport, with Auckland central having only 34 per cent use a private mode of transport to work.

Street network and distribution of residential buildings

To study street sociability in relation to the configuration of the built environment, a preliminary classification of buildings and associated land parcels, within the identified six primary driving catchment areas, was made identifying residential, commercial, public and semi-public elements. Identification and specification of attributes were made using information provided by Auckland Council maps and GIS Map Viewer, Google Maps, and field work. Residential buildings include single detached houses, townhouses, multi-unit houses and apartments. Buildings that only provided temporary accommodation such as motels, lodges and hotels were included in the commercial class. While the classification in five study areas was relatively free from ambiguity due to the minor

instances of mixed-use buildings, in the CBD, where it was complicated by the high number of mixed-use buildings, the residential building class was created including only the ones with a minimal mix. Subsequently, the study assessed two key street sociability factors: the position of the houses in the hierarchical street structure and the proximity of houses to sidewalks. Concerning the first, a Grasshopper script was created to count the number of houses accessed from each of the street categories defined by the Auckland Council in each study area. Particular attention was given to houses with plots abutting directly onto an arterial road, the number of which was verified manually to exclude system attribution errors. Results show that residential developments in emergent centres have lower percentages of houses directly adjacent to arterial roads (Sylvia Park presents the smallest proportion of houses adjacent to arterial roads). Yet those roads are often primary arteries with multiple lanes and heavy traffic. With regard to the proximity of houses to sidewalks, a Grasshopper script was created to measure the distance of each house (using the geometric centre of its footprint) and the closest kerb line of its access street. The threshold distance to consider a house connected to the sidewalk was experimentally set at 35 metres, to exclude, with negligible exceptions, all the houses situated on rear sections as well as those with major setbacks (characteristic of large introverted lifestyle properties). Findings showed most recent town centres having the highest proportion of houses directly abutting on sidewalks. This is the only result not aligned with our expectations, however, the finding does not suggest that we are assisting at increased interaction sociability, since, the newest developments often have streets lined with garage walls and high fences. It is worth noting that in older urban areas, this condition is the consequence of practices of further subdivision of sections with the creation of rear lots, following regulations and custom changes.

4. Conclusion

The findings of the empirical comparative analysis between the three types of urban centres confirmed our theoretical interpretation. The production of the new semi-public space is correlated to an increase of internal disconnections of the districts, where the most relevant centres of public life and urban amenities have moved into large consumption enclosures that are distantly located from local communities. The shift of the metropolitan centres from integrated (Type 1), to semi-malled (Type 2), and to outright *malled* (Type 3) has had a progressive impact on local residents. In the first place, it has disrupted their local patterns of movement, reducing walkability and intensifying car dependency. It has then perturbed the city image, mismatching building morphology and granularity. It has also made it difficult to access the necessary urban amenities, polarising and displacing them to the enclosures. This has diminished the spatial cohesion of the locale (fragmentation of physical spaces), the relational continuity of active public life (disjoined civic realms), and the integration of different everyday practices (functional polarisation). Ultimately, our study of changing spatialities has confirmed the importance of architecture and urban design to the performance, perception, relationability and usage of social infrastructure. Importantly, the permanence of the built environment patterns means they have long-lasting effects on urban communities that make them crucial to resilience building and the overall sustainable development of our cities.

5. Bibliography

- Amin, A. and Thrift, N. (2002). *Cities: Reimagining the urban*. London: Polity Press.
- Arendt, H. (1998). *The human condition*. Chicago: University of Chicago Press.
- Auckland Council. (2012). *The Auckland Plan*. Auckland Council. Retrieved 15/08/2018 from <http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/theaucklandplan/Documents/aucklandplanenglish.pdf>
- Auckland Regional Council. (2010). *A brief history of Auckland's urban form*. Auckland, New Zealand: Auckland Regional Council.
- Auckland Transport, Auckland Council. (2013). 2012 to 2041 Integrated transport programme. Retrieved 15/08/2018 from <https://at.govt.nz/about-us/transport-plans-strategies/integrated-transport-programme/>

- Banham, R. (1971). *Los Angeles: The architecture of four ecologies*. Berkeley: University of California Press.
- Baudrillard, J. (1994). *Simulacra and simulation*. Ann Arbor: University of Michigan Press.
- Berman, M. (1982). *All that is solid melts into air: The experience of modernity*. New York: Simon and Schuster.
- Bloomfield, G.T. (1967) '*The growth of Auckland 1840-1966*', *Auckland in ferment*. Wellington: New Zealand Geographical Society.
- Calhoun, C. J. (1992). *Habermas and the public sphere*. Cambridge, MA: MIT Press.
- Carmona, M. (2014). Re-theorising contemporary public space: A new narrative and a new normative. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 8, 4: 373–405.
- Carmona, M., Tiesdell, S., Heath, T. and Oc, T. (2010). *Public places urban spaces: The dimensions of urban design*. Oxford: Architectural Press.
- Castells, M. (1996). *The rise of the network society, The information age: Economy, society and culture*. Cambridge, MA: Blackwell.
- Castells, M., Fernandez-Ardevol, J. L. Q. and Sey, A. (2007). *Mobile communication and society: A global perspective*. Cambridge, MA: MIT Press.
- Chuihua, J. C., Inaba, J., Koolhaas, R. and Tsung Leong, S. (2001). *Harvard Design School guide to shopping*. Cambridge, MA: Harvard Design School.
- Colliers International. (2014). *Retail adept at adapting, New Zealand retail 2014: Highlights*. Retrieved 15/08/2018 from http://www.colliers.co.nz/find_research/retail/nz_retail_report_2014/
- Coyne, R. (2010). *The tuning of place: Sociable spaces and pervasive digital media*. Cambridge, MA: The MIT Press.
- Davis, M. (2006). *City of quartz: Excavating the future in Los Angeles*. London: Verso Books.
- Dear, M. and Dahmann, N. (2008). "Urban politics and the Los Angeles school of urbanism". *Urban Affairs Review*, 44: 266–279.
- Dramowicz, E. (2005). "Retail trade area analysis using the Huff model". *Directions Magazine*, 2.
- Eco, U. (1995). *Faith in fakes: Travels in hyperreality*. London: Random House.
- English Partnerships & The Housing Corporation (2007). *Urban design compendium*. London: Urban Design Alliance.
- Ewing, R. and Handy, S. (2009). "Measuring the unmeasurable: Urban Design qualities related to walkability". *Journal of Urban Design*, 14, 1: 65–84.
- Ewing, R., Handy, S., Brownson, R., Clemente, O. and Winston, E. (2006). "Identifying and measuring urban design qualities related to walkability". *Journal of Physical Activity and Health*, 3: 223–240.
- Fairgray, S. (2013). *Auckland retail economic evidence base*. Retrieved 15/08/2018 from <http://www.aucklandcouncil.govt.nz/.../tr2013046aucklandretaileconomicvidencebase>
- Foth, M., Brynskov, M., & Ojala, T. (Eds.). (2015). *Citizen's right to the digital city: Urban interfaces, activism, and placemaking*. Singapore: Springer.
- Fuchs, C. (2013). *Digital labour and Karl Marx*. New York, NY: Routledge
- Fuchs, C. (2014). Social Media and the Public Sphere. *TripleC*, 12: 57–101.
- Garnett, N. (2012). "Managing the urban commons". *University of Pennsylvania Law Review*, 160, 7: 1995–2027.

- Graham, S. and Marvin, S. (2001). *Splintering urbanism: Networked infrastructures, technological mobilities and the urban condition*. London: Routledge.
- Gehl, J. (1987). *Life between buildings: Using public space*. Washington: Island Press.
- Gehl, J. and Gemzoe, L. (1996). *Public spaces – Public life*. Copenhagen: The Danish Architectural Press.
- Gibson, A. (2015). “Auckland’s Lynn Mall expansion gets under way”. *New Zealand Herald*. Retrieved 15/08/2018 from http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11383778
- Gibson, A. and Schoultz, R. (2015, 1 Sep). “Why West Auckland needs the \$160m monster mall”. *New Zealand Herald*. Retrieved 15/08/2018 from <http://www.nzherald.co.nz/business/news/article.cfm?cid=3&objectid=11506118>
- Gilbertson, A. and Meares, C. (2013). *Ethnicity and migration in Auckland*. Auckland Council technical report, TR2013/012.
- Gomez, D., King, R. and Jackson, C. (2014). *Demographic profile report 1: Census 2013 Auckland usual residents snapshot*. Auckland: Auckland Regional Public Health Service.
- Habermas, J. (1991). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society*. Cambridge, MA: MIT Press.
- Harvey, D. (2003). “The right to the city”. *International Journal of Urban and Regional Research*, 27, 4: 939–941.
- Hodkinson, S. (2012). “The new urban enclosures”. *City*, 16, 5: 500–518.
- Huff, D. and McCallum, B. M. (2008). *Calibrating the Huff model using ArcGIS Business Analyst*. Redlands, CA: ESRI.
- Johnson, A. (2012). *The contribution of housing policies in social polarisation in Auckland*. The Salvation Army, Social Policy & Parliamentary Unit. Retrieved 27/11/2018 from https://www.salvationarmy.org.nz/sites/default/files/uploads/_archive/housing-policies.pdf
- Kang, J. & Cuff, D. (2005). “Pervasive computing: Embedding the public sphere”. *Wash. & Lee L. Review*, 62: 93.
- Koolhaas, R. (1978). *Delirious New York: A retroactive manifesto for Manhattan*. New York: Oxford University Press.
- Lefebvre, H. (1991 [1974]). *The production of space*. Oxford: Blackwell.
- Lefebvre, H. (2004 [1992]). *Rhythmanalysis: Space, time and everyday life*. London: Continuum.
- Lefebvre, H. (1991). *The production of space* (Vol. 142). Oxford: Blackwell.
- Manfredini, M. (2017). “The augmented meta-public space: Interpreting emerging transductive territories in enhanced centres of consumption”. *The Journal of Public Space*, 2, 3: 111–128.
- Manfredini, M. and Leardini, P. M. (2014). “Existing stock for the future: Problems, opportunities and strategies for energy upgrade of 1940–1960 state housing in New Zealand”. *The New ARCH, International Journal of Contemporary Architecture*, 1: 36–42.
- Manfredini, M., Tian, X., Jenner, R. and Besgen, A. (2017). “‘Transductive urbanism.’ A method for the analysis of the relational infrastructure of malled metropolitan centres in Auckland, New Zealand”. *Athens Journal of Architecture*, 3, 411–440.
- McCann, E. and Ward, K. (Eds.). (2011). *Mobile urbanism: Cities and policymaking in the global age* (Vol. 17). Minneapolis: University of Minnesota Press.
- McGee, T. G. (1995). “Metrofitting the emerging mega-urban regions of ASEAN: An overview”. In T. G. McGee and I. Robinson (Eds.), *The mega-urban regions of Southeast Asia*, Vol. 1 (3–26). Vancouver: UBC Press, 1995: 3–26.

- Miles, S. (2010). *Spaces for consumption: Pleasure and placelessness in the post-industrial city*. Los Angeles: Sage.
- Miles, S. (2012). The neoliberal city and the pro-active complicity of the citizen consumer. *Journal of Consumer Culture*, 12: 216–230.
- Minton, A. (2009). *Ground control: Fear and happiness in the twenty-first century*. London: Penguin.
- Mitchell, D. (2003). *The right to the city: Social justice and the fight for public space*. New York: Guilford Press.
- Mouffe, C. (2007). “Public space and democratic politics”. *Laps*: 1–10.
- New South Wales Government. (2004). *Planning guidelines for walking and cycling*. Sydney: NSW Government.
- New Zealand Retail Property Group. *Westgate will be a complete destination to shop, work & play*. Retrieved 12/09/2017 from <http://www.westgatetown.co.nz/>
- Lewis, N. and Murphy, L. (2015). “Anchor organisations in Auckland: Rolling constructively with neoliberalism?” *Local Economy*, 30, 1: 98–118.
- Nijhuis, J. O. (2013). *Consuming mobility: A practice approach to sustainable mobility transitions*. Wageningen: Wageningen Academic Publishers.
- Parsons, A. and Wilkinson, M. H. (2015). “Retailing in New Zealand: Where are we and where to next?” *European Retail Research*, 28: 141–160.
- Rappaport, J. (2008). “Consumption amenities and city population density”. *Regional Science and Urban Economics*, 38: 533–552.
- Ritzer, G., Dean, P. and Jurgenson, N. (2012). “The coming of age of the prosumer”. *American Behavioral Scientist*, 56, 4: 379–398.
- Rossi, A. and Eisenman, P. (1982). *The architecture of the city*. Cambridge, MA: MIT Press.
- Rowe, C. and Koetter, F. (1983). *Collage city*. Cambridge, MA: MIT Press.
- Sacco, P. L. (2011). *Culture 3.0: A new perspective for the EU 2014-2020 structural funds programming*. European Expert Network on Culture (EENC).
- Scentre Group. (2015). *Annual financial report 2014*. Retrieved 15/08/2018 from <http://www.scentre.com/media/>
- Scentre Group. (2015). *2014 full year results*. Retrieved 15/08/2018 from <https://www.scentre.com/investors/financial-results-and-presentations/Financial-Results/2014-year/2014-Full-Year-Results>
- Secchi, B. (2011). “Isotropy vs. hierarchy”. *Landscapes of Urbanism*, Q5, 3, 1: 3–10.
- Sennett, R. (1992). *The fall of public man*. New York: WW Norton.
- Sepe, M. (2009). “PlaceMaker method: Planning ‘walkability’ by mapping place identity”. *Journal of Urban Design*, 14, 4, 463–487.
- Shane, G. (2011). *Urban design since 1945: A global perspective*. Hoboken, NJ: Wiley.
- Sieverts, T. (2003). *Cities without cities: An interpretation of the Zwischenstadt*. London: Routledge.
- Speck, J. (2013). *Walkable city: How downtown can save America, one step at a time*. New York: Farrar, Straus and Giroux.
- Sorkin, M. (1992). “Introduction: Variations on a theme park”. In M. Sorkin (Ed.), *Variations on a theme park: The new American city and the end of public space* (xi–xv). New York: Hill and Wang.
- Spoonley, C. and Mearns, C. (2011). “Laissez-faire multiculturalism and relational embeddedness: Ethnic precincts in Auckland”. *Cosmopolitan Civil Societies Journal*, 3, 1: 42–64.

Stikker, M. (2013). Public Domain 4.0. In D. Hemment, B. Thompson, J. L. de Vicente and R. Cooper (Eds.), *Digital public space* (32–33). Manchester: Future Everything.

Viganò, P. (1999). *La città elementare*. Milan: Skira.

Viganò, P. (2008). “Water and asphalt: The project of isotropy in the metropolitan region of Venice”. *Architectural Design*, 78, 1: 34–39.

Waitakere City Council (2007). *Massey North/Westgate, Adopted changes to Waitakere City District Plan*. Retrieved 15/08/2018 from <http://www.waitakere.govt.nz/abtcnl/pp/districtplan/dplanchanges/planchange15-fact6.pdf>

Zukin, S. (1995). *The cultures of cities*. Oxford: Wiley-Blackwell.

Zukin, S. (2005). *Point of purchase: How shopping changed American culture*. London: Routledge.

6. Images and captions

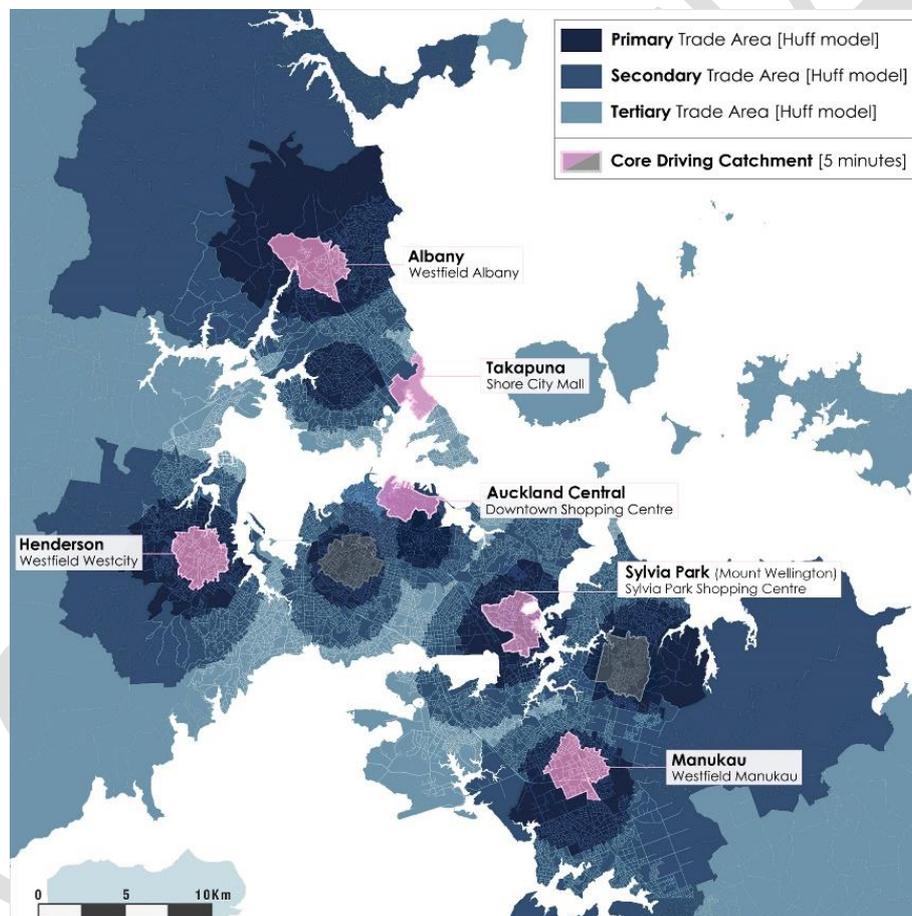


Fig. 1. Urban area of Auckland with identification of the six case studies and the retail trade area of the major shopping centres (Huff model). Courtesy of M. Manfredini, A. Hills and J. Jung.

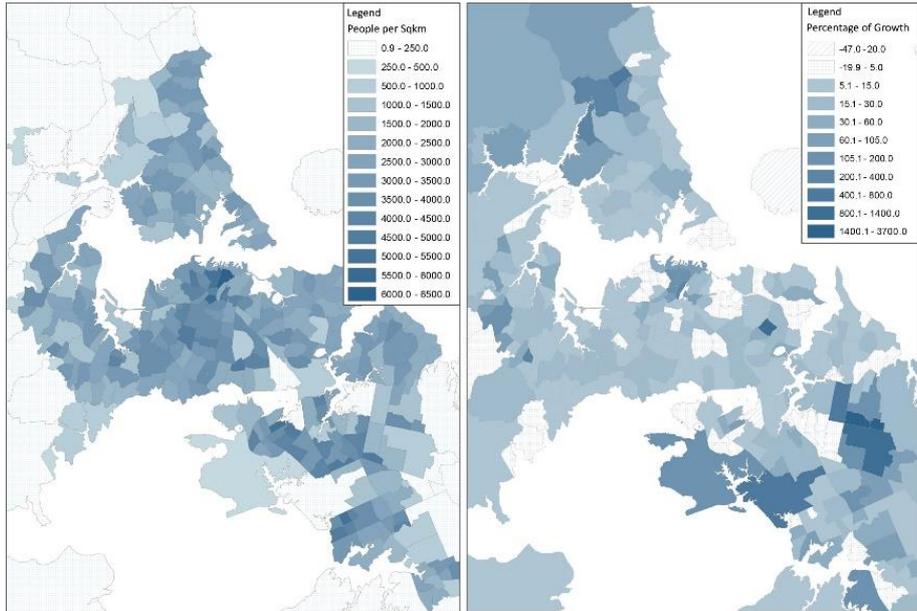


Fig. 2. Auckland's population density in 2013 (left) and growth 2001-2013 (right) maps (Census data). Courtesy of A. Hills.

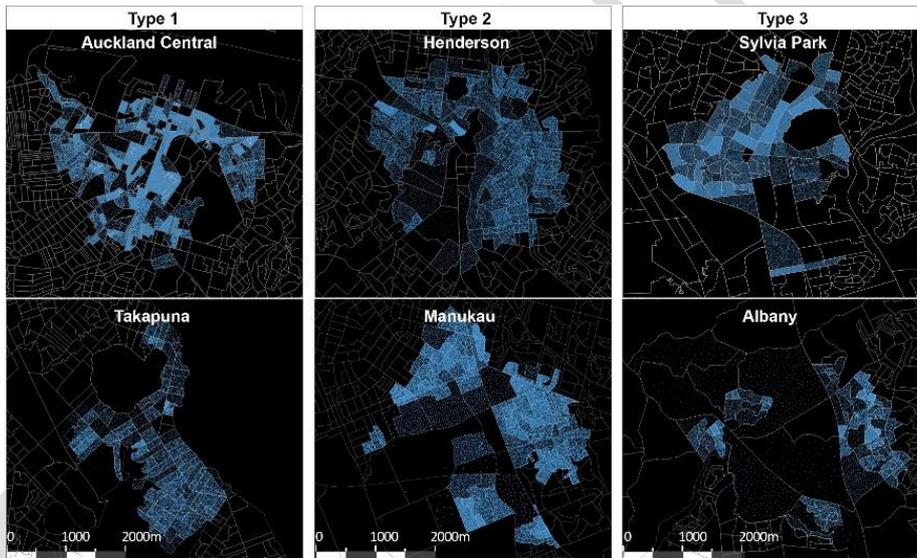


Fig. 3. Resident population count maps of the core area of each town centre driving catchment (census 2013 data). Courtesy of A. Hills.

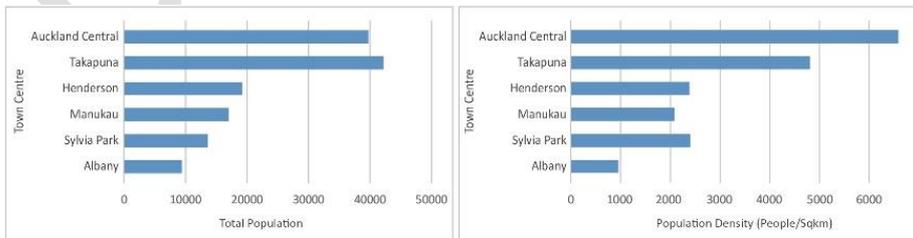


Fig. 4. Resident population count (left) and population density (right) charts of the core area of each town centre driving catchment (census 2013 data).

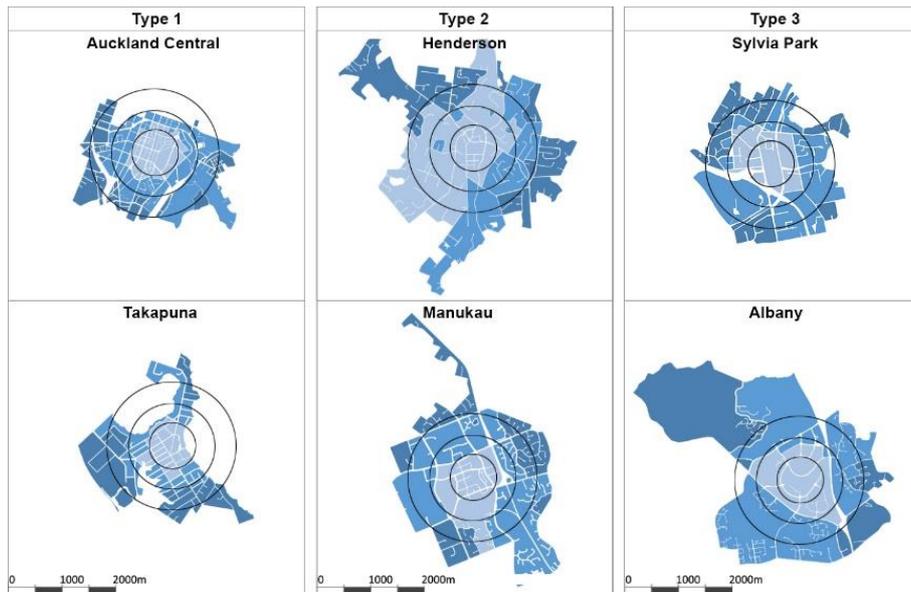


Figure 5. Urban block maps within radii of 400, 800 and 1200 metres from each shopping mall. Courtesy of A. Hills.

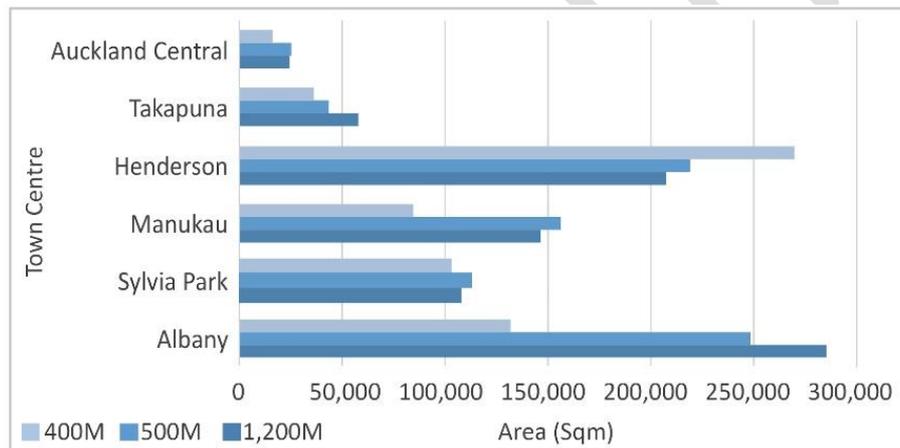


Fig. 6. Average urban block area charts within radii of 400, 800 and 1200 metres from each shopping mall.

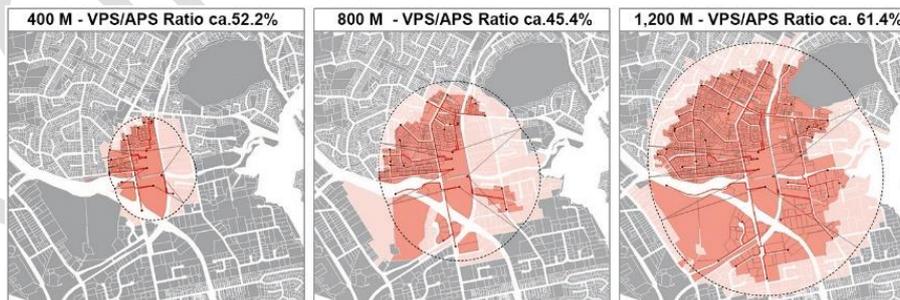


Fig. 7. Pedestrian shed of Sylvia Park shopping centre: comparison between virtual (VPS) and actual (APS) catchments from the five main entrances of the mall.

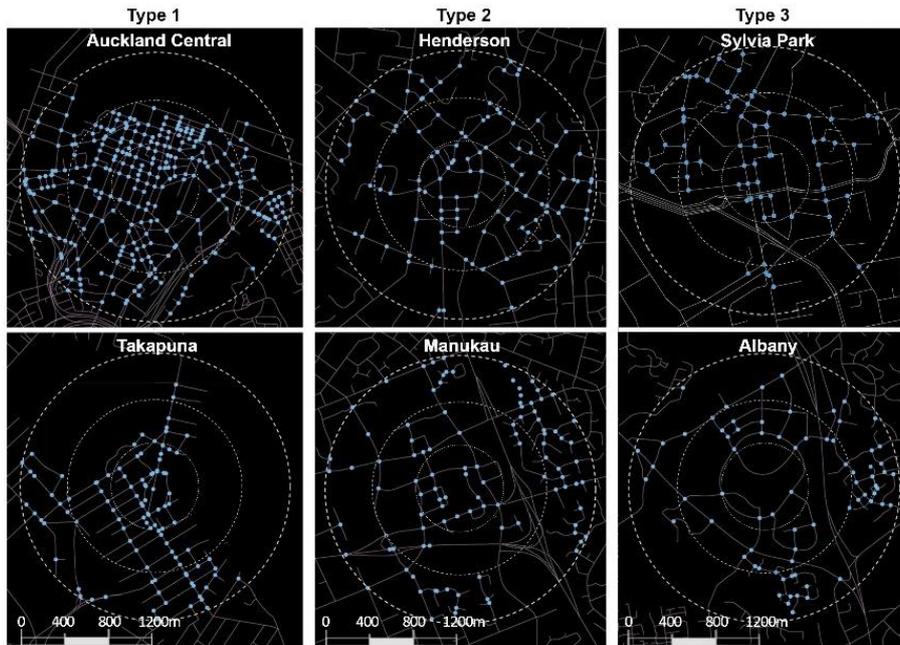


Fig. 8. Street intersections maps of the areas within 400, 800 and 1200 metre radii from each mall.

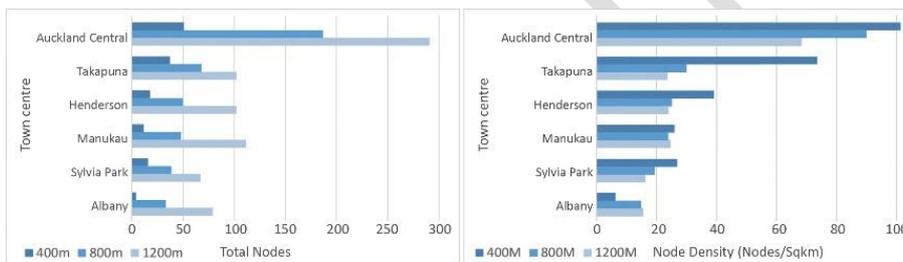


Fig. 9. Street intersection number (left) and density (right) charts within 400, 800 and 1200 metre radii from each mall.

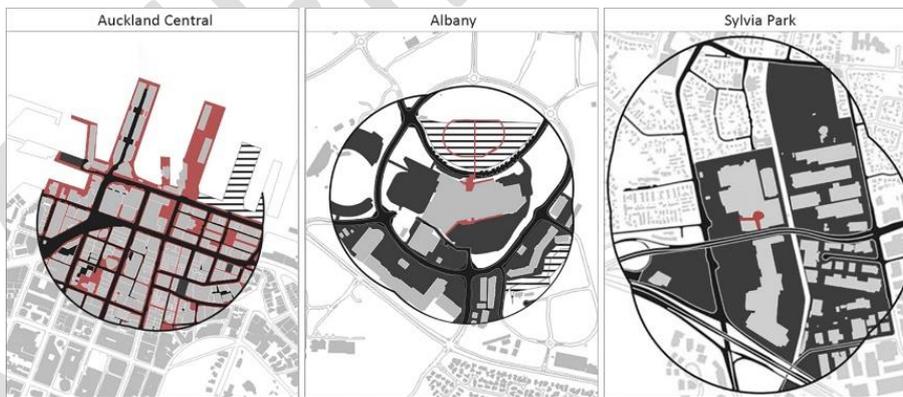


Fig. 10. Invaded space (dark grey) and active public space (light red) maps of Auckland Central and two emergent metropolitan centres, Albany and Sylvia Park.



Fig. 11. Comparison between all means of travel (left), and breakdown of public transportation usage (right) of residents in the districts of each mall (Census 2013 data).

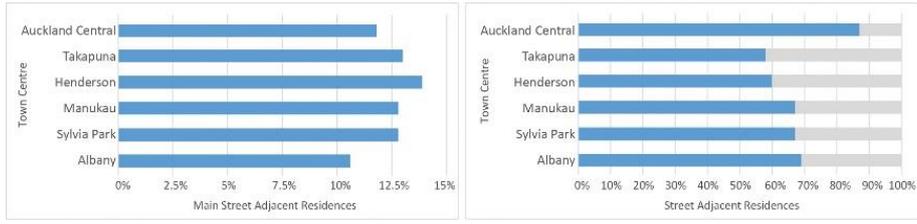


Fig. 12. Comparison between percentages of household residences adjacent to arterial routes (left) and to street sidewalks (right) in the core catchment area of each mall.

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