WHAT DO NEW ZEALANDERS WANT FROM THEIR CITIES? RESULTS FROM DUNEDIN

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ABSTRACT

This paper presents the findings of research which identifies different perspectives on city liveability within New Zealand. For the purposes of this research liveability is defined as what people feel are the most important things that contribute to making a place a good or bad place to live (at the neighbourhood/ suburb and wider city scale), with a particular focus on elements of city form and design.

Based on previous theory, the authors hypothesised that while 'liveability' is ultimately a subjective concept, distinct perspectives on liveability can be identified. In order to understand these perspectives the authors used Q-methodology, a statistically-based method which allows different perspectives to be revealed, supplemented by a qualitative interview approach.

The Q-methodology phase involved presenting participants in Dunedin with opinion and preference statements on different aspects of city liveability relating to form and design, such as modes of transportation, provision of local services, dwelling density, and shopping preferences. These statements were sorted into a standard distribution which allowed patterns in preferences to be calculated.

The Q methodology exercise was successful in identifying several different perspectives on what makes a city more or less liveable in terms of form and design. This paper presents the results from the Dunedin study. It also interprets these findings in light of the prevailing theories and movements within the urban planning field, particularly in terms of the New Urbanism and contrasting free-market approaches.

The findings provide important insight into the debate that exists around New Urbanism as an appropriate approach for New Zealand. This is significant for urban planners tasked with managing growth in New Zealand and providing liveable communities for current and future residents of New Zealand's urban areas.

INTRODUCTION

Urban planning is about identifying and responding to the key drivers in our society (both reactively but more importantly proactively[3]) in a way that keeps us on track to our continually-evolving vision for the future of our settlements. Across New Zealand, this vision is fundamentally concerned with two key goals – sustainability and liveability. While much has been written about both of these concepts, our knowledge of what they mean in terms of "on the ground" solutions is still evolving.

Establishing what is liveable to New Zealanders is important as several commentators have noted that trying to apply one-size-fits-all planning solutions to the problems of

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[3] Myers and Kitsuse (1999)

urban growth in New Zealand is likely to meet with resistance and consequently fail to be effective. Therefore, it is important for those professionals and elected officials tasked with designing New Zealand's cities to better understand what New Zealanders want from their cities, in terms of city liveability.

This paper reports on the findings of the first stage of a research project which explores the concept of liveability as it relates to settlement form and design. By the term settlement form and design we are referring to the spatial arrangement of settlements as well as their 'look and feel'.

The research uses interviewing and Q methodology to uncover the patterns of views and preferences that exist within communities on what makes a place "liveable", in other words a good or bad to live. In particular, it focuses on how elements of settlement form and design contribute to perceptions of liveability. The objectives of this research are to:
(1) through interviews, explore how aspects of settlement form and design contribute to people's notions of what makes a place more or less liveable
(2) through Q methodology(which seeks responses to statements on form and liveability taken from literature), identify and reveal the patterns of preferences or opinions about aspects of settlement form and design important to settlement liveability
(3) explore the usefulness of Q methodology as a tool for exploring the concept of liveability.

This paper outlines the findings from the first (pilot) stage of this research, undertaken in Dunedin.

Overall, the results of this initial research show:
1. Both the macro and micro scale of settlements are important to liveability. The aspects of settlement form and design that contribute to people's perception of liveability range from: those at the neighbourhood scale (access to services, community life, amenity of neighbourhood, access to city centre/ parks/ services); to those at the city scale (ease of travel, services/things to do, community life); to those at the macro or regional scale. Interestingly, for Dunedin the location of the city, in terms of proximity to recreational/ scenic areas, as well the size of the city were very important to perceptions of Dunedin's overall liveability
2. Four distinct perspectives or voices in relation to key elements of settlement form and design preferences and opinions were revealed
3. Q methodology is a useful tool for identifying archetypal preference sets in relation to city liveability.

BACKGROUND LITERATURE REVIEW

While many authors have provided definitions and even indicators and measures of liveability, in reality liveability is a subjective and dynamic concept. This is recognised by Pacione (1991, p. 7) who states:

> *...urban liveability is a relative rather than absolute term whose*
> *precise meaning depends on the place, time purpose of the*
> *assessment, and on the value system of the assessor. This view*

> *contends that quality is not an attribute inherent in the environment but is [a] behaviour-related function of the interaction between environmental characteristics and personal characteristics....In other words we must consider both the city on the ground and the city in the mind.*

Likewise, Southworth (2003) argues that:

> *The concept of liveability is complex and encompasses many aspects of urban life: how well the city works for us, as well as how comfortable and enjoyable our neighbourhood and city are.*

He goes on to state that therefore…

> *Definitions of liveability will vary somewhat from neighbourhood to neighbourhood, and from city to city, depending on place and local values.*

Nevertheless, there are consistent themes about what makes a place more or less liveable – aspects of the environment that are regularly and consistently mentioned across the popular and academic media. Likewise, most of the planning solutions proposed to create "liveable communities" in the face of a changing and growing population (e.g. Smart Growth, New Urbanist) also carry certain assumptions about what is liveable, as do the arguments of the vocal critics of these approaches.

For example, proponents of the New Urbanism school of thought feel that settlement liveability can be improved through the following settlement form and design features:
• well-structured cities and towns with clear edges and the preservation of surrounding agricultural land and environmentally sensitive areas
• transit-oriented nodal development with mass transit within walking distance of most homes.
• strong city centres and other community focal points with high quality public spaces and areas for community interaction
• neighbourhoods which are compact with networks of streets designed to encourage walking and cycling through inter-connected streets and traffic calming
• diversity of housing types in same neighbourhood (apartments, row houses, detached homes) and mixed use areas with stores and commercial activities/ workplaces provided alongside residential accommodation
• Use of design guides to control the look and feel of buildings and streets

Many of these suggestions have been taken up by national, regional and local authorities, as well as a few private developers. For example, the recent Ministry for the Environment (2005) *New Zealand Urban Design Protocol* states: "Liveable places provide choices in housing, work, transport and lifestyle opportunities. They are easy to move around, with accessible services and a variety of integrated transport options that include walking and cycling" (p. 13). This New Urbanist 'flavour' is also apparent in the earlier but more specific MfE (2001) *People + Places + Spaces: A design guide for urban New Zealand,* as well as in the Auckland City Council's

(2003) Growth Management Strategy and associated residential design guide and Liveable Communities Plans.

On the other hand, there have been many vocal critics of the New Urbanist approach both internationally and within New Zealand[4]. One opposing view, which we have labelled the "free-market approach", challenges many of the 'problems' that the New Urbanists are trying to address, as well as the proposed solutions. Overall, they support a laissez-faire attitude to urban planning and housing development and believe that for the most part the market should dictate how new development occurs. They do not consider car-oriented low density suburban development a problem and city expansion or "sprawl" a problem if that is what people want. They argue that restricting the land available for development as a way to curb sprawl drives up land and property prices within the permitted development area and leads to housing affordability issues. Therefore, they strongly disagree with Smart Growth/ New Urbanist urban boundary policies.

Others have also criticised New Urbanism for a variety of reasons, some on the political left have argued that some new Urbanist developments encourage social exclusion or lack attention to sustainability and environmental performance. On the other hand, some architects and planners have argued that New Urbanist design codes "restrict creativity and enforce bland uniformity"[5].

It is crucial for those seeking to make our cities more sustainable and liveable to know the range of views on liveability that are operant in the settlement that they seek to change. A method for doing this was developed then trialled in Dunedin.

METHODOLOGY

This research investigates people's perceptions of liveability using two distinct but complementary techniques:
- Interviews using an "appreciative inquiry" style approach
- Q-methodology.

Interviews

Structured interviews were used to identify (in an open-ended fashion) what aspects of settlement form and design contribute to people's notions of what makes a place more or less liveable

Participants were asked about the places they currently live, including: why they chose to live there, what makes their neighbourhoods and wider cities a good place to live, what future changes they would see as beneficial/ adverse in their communities, and if they were to go somewhere else where they would go and why.

Q-methodology

Q-methodology was then used to identify and reveal any patterns of preferences or opinions about aspects of settlement form and design discussed in the international literature as important to settlement liveability

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[4] See for example: the Demographia site http://www.demographia.com/ as well as Owen McShane's Centre for Resource Management Studies http://www.rmastudies.org.nz/
[5] *Rhythm and Blues*, The Guardian Wednesday 21 September, 2005

Q methodology is a research method which allows for the systematic study of subjectivity i.e. the different viewpoints, opinions, beliefs, attitudes, 'ways of seeing' or 'discourses' that individuals hold about a subject. The assumption behind Q is that while perspectives are both subjective and individual, there are enough similarities among individual views to be able to articulate a limited number of social narratives on a topic (Webler et al. 2003). The purpose of Q methodology is to identify those social narratives or discourses by exploring patterns within and across individuals (van Exel and Graf, 2005; Barry and Proops, 1999). This is done by having individuals reveal their subjectivity operantly through a process of sorting a sample of usually 36-64 statements about a topic. Respondents (called the P-set) are asked to rank order the statements (called the Q-set) into a quasi-normal distribution, usually from most agree to least agree, based on their individual point of view.

These individual viewpoints or personal profiles (sorts/ ranking) are then subject to factor analysis. This allows the correlation between personal profiles to reveal any similar viewpoints or 'segments of subjectivity' or families of similar viewpoints which exist (Brown 1993; van Exel and Graaf 2005). This is referred to by Clarke (2002, p.73) in terms of revealing a "taxonomy of significantly different beliefs, or belief types, based on inter-correlations of individual belief patterns".

The results of a Q methodology study are "the distinct subjectivities about a topic that are operant, <u>not</u> the percentage of the sample (or the general population) that adheres to any of them" (van Exel and Graaf 2005, p.3)[6]. Therefore, in this case, Q methodology is being used to identify typologies or sets of preferences about city liveability rather than the percentage of a city's population that holds each perspective.

For this study we asked 20 people from Dunedin to sort a set of 42 cards each containing a statement related to one of the key aspects of settlement form and design in relation to settlement liveability (as identified in the international literature). These included preference and opinion statements about:
• The broader city environment (CBD, form)
• Different types of residential environments
• Transport and mobility
• The social environment.

Sample – Dunedin Pilot
As part of the objective of this research is to explore the usefulness of Q-methodology for exploring the perceptions of city liveability, a pilot of the research was first undertaken in Dunedin. Twenty respondents participated in the Dunedin pilot. The P (or participant) set was taken from a sample of convenience in accordance with Q-methodology which does not require a representative sample. Nonetheless, an effort was made to obtain a sample of respondents from different locations within the city and with different socio-economic characteristics. Furthermore, in line with the convention for Q-methodology studies, the researchers made an effort to identify people that they felt would have a range of different opinions about liveability.

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[6] Due to the limitations of space available in this paper we will not describe this methodology in more detail nor provide any details of how the statements were developed or results analysed in this study. These details are available by contacting the authors.

RESULTS

Interviews

The results from the interviews indicate that for the respondents interviewed the key aspects of liveability for Dunedin are[7]:

Current strengths:
- The high level of amenity in most residential areas (including many 'mature' suburbs with character houses, views, access to green space) with few concerns about change or loss of amenity due to the limited amount of development pressure on existing residential areas
- A well located city that is close to recreational opportunities and surrounded by beautiful landscapes
- A city that, by comparison to other New Zealand cities, does not suffer from the same traffic and congestion problems (though still needs to pay attention to this issue)
- A city that is easy to get around and has a lot of easily accessible recreational and leisure activities, nightlife/restaurants, and retail services relative to its size/ population.
- A city which offers a range of housing opportunities to suit a variety of tastes including: inner city suburbs that are considered generally safe and offer high amenity, outer suburbs which offer greater proximity to recreational, green and open space, and lifestyle properties with high rural amenity and rural culture but still within a reasonably short commute to the city centre.

Areas for improvement:
- The public transport is not well-utilised, considered of a poor quality and needs improvement
- There is some concern for the age of the housing stock as well as the ability of current stock (primarily detached houses) to meet the needs of an aging society.
- Safe walkways and cycleways
- Revitalisation and protection of historic buildings and key parts of the city (Princes St./ South Dunedin/ Harbour side Precinct).

Q-method

The 20 Q sorts were analysed using the 'PQMethod' software. Four factors were analysed[8]. The interpretation of Q-methodology is usually done by examining the differences in the factors (often referred to as discourses or perspectives) based on the composite Q sort for each group. The analysis of Q-methodology results usually concentrates on the:

(1) characterising statements - statements ranked at both extreme ends of the composite sort of a factor (ranked +/- 4 or +/- 3 on a scale from 4 strongly agree to -4 strongly disagree). These are used to produce a first description of the composite point of view represented by that factor.

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[7] A full list of the themes identified, including the number of comments coded under each theme is provided in Appendix 1.
[8] The initial factor analysis revealed up to 6 statistically distinguishable factors, however, focusing on 4 factors was considered to provide for a clear picture

(2) <u>distinguishing statements</u> - statement scores which are statistically different from those of other 'factors'

(3) <u>consensus statements</u> – statements which all the factors had a similar score on (van Exel and Graaf, 2005, p.10).

Perspective 1 – the inner city pedestrians

This perspective or voice is characterised and distinguished by its strong support for designing residential areas for walking, and seeing walking and cycling as means of getting around. The support for walkability is also potentially reflected in the preference for living close to work/study. On the other hand it is neutral on the statements about the walkability of the city centre, whereas Perspective 3 saw this as important.

This perspective also shows reasonable support for Public Transport, reacting strongly to the pro-road building over public transport statement (as did most perspectives) and being distinguished by its relatively positive support for public transport and relative negatively support for the pro-driving statements.

The other <u>characterising</u> elements of this perspective include:

- <u>Residential environment</u> - having a variety of housing styles/ not living in an area with themed houses.

- <u>Social environment</u> - strong preference for social diversity. It also, like other perspectives, feels safety is important.

- <u>City environment</u> - disagreement with the anti-design codes statement, however, it is unclear/neutral on the pro-design code statement. In terms of high density housing, it is similar to other perspectives in disagreeing with one of the statements which dismisses high density housing in low socio-economic areas.

The other <u>distinguishing</u> elements of this perspective include:

- <u>City Environment</u> - This perspective is distinguished in their strong disagreement with the anti-design codes statement. This perspective is also relatively neutral/unclear about having a strong city centre and about pedestrian malls although it prefers this to other types of shopping areas.

Perspective 2: Car-oriented

This perspective is characterised and distinguished by it strong preference for car-based travel and dismissal of walking and cycling as a means of transport. They are also the only perspective to prefer (score higher) retail parks for non-food shopping, followed by main street shopping, although this was not a characterising statement for the group. This indicates a preference for convenience shopping easily accessible by private car.

The other characterising elements of this perspective include:

- <u>Residential environment</u> - Similar to Perspective 1, this voice shows a preference for living in a residential environment with a mixture of housing styles (rather than a themed neighbourhood).

- Social environment - This perspective very clearly disagrees with the preference for living with like-minded people.
- City environment - In terms of high density housing, this perspective is similar to others in *disagreeing* with the statements which dismiss high density housing.

Perspective 3: Urbanites

This perspective or voice is characterised and distinguished by its strong feelings about the city environment, in particular this perspective sees it important to have a strong city centre and strongly supports the idea of having pedestrian-oriented shopping.

The orientation toward the city environment is also reflected in the preference for inner city residential environments. This perspective is characterised by a preference for living near to work/study and conversely not feeling a need to 'get away at the end of the day' by living far away from work/study. Interesting however, like perspective 4, it shows a very strong disagreement with the statement expressing a desire to live in an apartment in the inner city. Likewise this perspective is distinguished by its strong disagreement with the 'preference for living at a distance from work/ study' statement. It is also distinguished by its moderate disagreement with the preference for greenery open space nearby statement, where other perspectives moderately to strongly agreed with this statement.

In terms of city form, similar to Perspective 4 this perspective strongly *disagrees* with densification as a means to curb sprawl statement, but in contrast did not show strong agreement with the two anti-high density housing statements.

The other characterising elements of this perspective include:
- Social environment - Similar to other perspectives safety ranked highly for this perspective.
- Transport, travel and accessibility - Like perspectives 1 and 3, this perspective had a strong negative reaction to the anti spending on public transport statement, however, they were the only perspective besides Perspective 2 to express a clear preference for driving over public transport. Travel time was also important in relation to proximity to work.

The other distinguishing elements of this perspective include:
- Social environment - This perspective is distinguished by their neutral/unclear preference regarding diversity of people in their neighbourhood.

Perspective 4: Suburbanites

This perspective or voice is characterised and distinguished by a preference for living in what could be described as traditional outer suburban areas. This is seen in its support for living near green/open space, not feel strongly about having lots of places to go in the evening within walking distance, not having a preference for living near work/study, and strong disagreement with the apartment living preference statements.

Another characterising element of this perspective is the negative reaction to design codes agreeing that they "restrict creativity". This perspective is also strongly against

densification as a means of curbing urban sprawl. These elements could perhaps reflect a 'free-market' view on planning controls. This perspective can also be seen as expressing more "conservative" values in its relative preference for having friends and extended family nearby but likewise being distinguished by its relative agreement with the statement about nosiness and gossip in tight knit communities.

The other <u>distinguishing</u> elements of this perspective include:

- <u>City Environment</u> - strong support for having a city centre that is easy to walk around, however, this may reflect a strong concern for safety as expressed about statement 38.

- <u>Transport, travel and accessibility</u> - In terms of transport, this perspective is distinctive in that it feels more strongly that the city centre should be easy to walk around, but it is more neutral than the other perspectives about whether neighbourhoods should be designed for walking and cycling. Interestingly, it is the only perspective strongly supportive of cycle paths but its neutrality about statement 30 (walking and cycling a means of transport) indicates that perhaps this is seen more as a recreational pursuit then a means of regular travel, this is supported by its disagreement with wanting to live near work/study.

Consensus Statements

The analysis showed that all perspectives had a similar opinion about 7 of the statements. However, as neutrality can reflect either true neutrality or an unclear view on the issue there was only real consensus on the 2 issues:

<u>Residential environment</u> - All perspectives agreed strongly or very strongly with statement 38 *One of the most important considerations for me is living in a neighbourhood where I feel safe.*

<u>Transport, travel and accessibility</u> - All perspectives disagreed with statement 39 *The council should build more roads to make it easier to drive, rather than putting money into public transport which people won't use.*

DISCUSSION AND CONCLUSIONS

Overall, the pilot study was a success in that it showed that the methodology used for this study is able to provide useful and valid information about New Zealanders' understanding of city liveability. This information is important to professionals and elected decision-makers who are tasked with planning for the future of our cities.

The pilot study also provided preliminary results that can contribute to the growing body of theory on liveability and the limited research on perceptions of liveability within New Zealand. Some of the key findings are highlighted below.

How do aspects of settlement form and design contribute to people's notions of what makes a place more or less liveable?

The results from the interviews highlight the importance of both residential amenity factors (quality of home and neighbourhood) and issues of accessibility to valued spaces and activities (recreational, social, city services etc) to perceptions of liveability. However, they also show that there is a wide spectrum of notions of what is liveable, in terms of preferences for 'inner-city', 'traditional suburban', 'outer

suburban', or 'rural residential' style living. This indicates that there is general support for provision of a range of housing choices, though arguably there is still a significant association of liveability to traditional detached housing. The results also highlight the importance of the geographic elements of the overall city environment that can not be designed but need to be protected as valued aspects of the city.

In the case of Dunedin, the surrounding hills, vistas, and green and open spaces in the city, as well as the accessibility of the city to recreational areas in Central Otago were raised. In light of the liveability debate this perhaps highlights the potential importance of the wider city environment, both in terms of those elements of settlement form and design, but, importantly, also those elements of the natural (vs. human-made) environment which affect perceptions of liveability. This raises the question that if Vancouver was situated in a region with little inherent natural beauty would it still be considered one of the most liveable cities[9], even with its urban containment/ increased residential density policies and overall low home affordability? The question, therefore, is, in terms of the social acceptability of potential changes to valued aspects of settlement form and design 'liveability', how much is it a matter of weighing up various aspects of liveability and how can losses in some traditionally valued aspects of liveability (for example residential amenity associated with traditional detached homes on relatively large sections) be compensated for by gains in other areas, for example: improved public spaces, recreational and leisure facilities, community services (quality of schools) etc.?

Are there any clear patterns of preferences or opinions about aspects of settlement form and design in relation to settlement liveability?

The results from this pilot indicate, as hypothesised, that there are clearly distinct (and statistically identifiable) perspectives on liveability as it relates to settlement form and design. The researchers chose to focus on 4 voices or perspectives that were identifiable from the sample of respondents. These 4 perspectives were characterised by clear differences in their positions about:

- Design codes
- Pedestrian-oriented neighbourhood design
- Walking-accessible services
- Pedestrian-oriented city centre design
- Having a "strong" CBD
- Preferences for pedestrian vs. car-oriented shopping
- Preferences for inner city vs suburban living
- Preferences for cars as their dominant mode of transport
- Support for more cycleways and feelings about cycling/walking as a means of transport.

From the standpoint of the debate surrounding New Urbanist principles, the results indicate that there is not a clear division between those supporting these principles and those who do not. The perspectives identified through the Q methodology results indicate that support for particular aspects of this approach is spread throughout the perspectives, though perhaps most clearly apparent in the inner-city pedestrian perspective (Perspective 1). Support for other aspects of the New Urbanist approach,

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[9] http://www.citymayors.com/environment/eiu_bestcities.html

not addressed in the Q-methodology statements, also arose in the interviews and often in conjunction with positions that were clearly different to the overall New Urbanist perspective. For example, one respondent who clearly identified himself as a car-oriented traveller and shopper, and a suburban dweller passionately argued in their interview the importance of providing a greater range of housing choice. He felt there should be a greater range of apartment-style living for retirees and also complained how the Dunedin City Council makes it very difficult to build ancillary buildings to house elderly relatives (both elements of the New Urbanist Design approach).

Nonetheless, in interpreting the results from this research it is important to be mindful of the limitations of this pilot study, particularly in respect to the location of the study. The Q-methodology statements often were drawn from sources which were reflecting on issues relevant to New Zealand's larger cities and other centres experiencing high rates of growth and higher density development. Dunedin as a city does not exhibit (to any significant degree) many of the urban issues that are facing these other settlements and that have fuelled the academic, practitioner and public debates about appropriate urban form and design. As a result some of the statements representing these issues did not find a clear voice in the sample of respondents. For example, there was an unclear perspective on the positions of densification to prevent urban sprawl vs. taking a free-market approach.

It might also be expected that the results in relation to the statements about public transport, the importance of travel time, and positions about road vs. public transport spending will be slanted by the lack of any serious problems of congestion in Dunedin. The lack of concern about traffic congestion is highlighted by the interview results which showed that many respondents feel that Dunedin is a good place to live precisely because it is easy to get around.

Similarly, the overall negative attitudes to apartment style living might be unique to Dunedin because of the relatively low number of apartment-style dwellings in the City and consequently the lack of choice in this style of housing. In addition, Dunedin is perhaps unique amongst New Zealand's main centres in still having a relative abundance of reasonably affordable inner-city traditional detached style housing.

Is Q methodology a useful tool for exploring preference sets in relation to city liveability?

The results from the Q-method study, particularly the clarity of the results, and the strong (statistically significant) perspectives or voices[10] that formed through the Varimax rotation process, support the usefulness of this methodology for studying perspectives on liveability as it relates to settlement form and design. Overall, the methodology shows significant potential for improving our understanding about views or perspectives on liveability. Ultimately, we feel that the study, if expanded into New Zealand's main centres will provide information useful to planners and policy makers to contextualise, interpret and understand the myriad of views, attitudes and beliefs on liveability they encounter through public consultation processes, the media and in professional and political circles. Furthermore, by revealing that there is

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[10] The strength of the results was confirmed by an external reviewer Amanda Wolf (Victoria University, Wellington)

no one idea about liveability but rather distinct sets of preferences, it will help planners understand how different planning solutions will affect different interests.

We also feel from a theoretical standpoint, the methodology presents a unique means by which to contribute to the generally polarised discourse about appropriate settlement form and design, particularly as voiced in the debate between the New Urbanist and Smart Growth movement, on one side, and the free-market 'laissez-faire' position on the other hand.

However, the results from the pilot indicated that potentially some changes could be made to the statements to better capture perspectives on certain aspects of liveability. This might include some minor changes to the wording of some statements as well as the removal and/or addition of statements. These changes have now been made and the study is being continued in Wellington, further results from this research will be published in a subsequent paper.

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Appendix 1: Summary interview results – number of respondents who mentioned themes identified for each question

Code	Description	q1	q2	q3	q4	q5	q6	Total
1.2	Amenity of street/suburb	8	10	0	2	5	3	16
6.6	Situation of city (climate, scenery, greenbelt, on South Island)	1	0	7	0	0	11	15
4.10	Ease of travel (how easy and how long it takes get from place-to-place, how close things are, amount of traffic)	0	0	13	0	5	0	14
5.3	Facilities, things to do, nightlife	0	0	11	5	0	3	13
4.9	Quality of public transport	0	0	0	12	4	0	13
6.1	Size of city/ size of population	1	0	9	0	4	2	12
4.4	Location of neighbourhood and proximity to city centre	7	7	0	0	0	0	10
2.7	Safety/ Crime	1	3	4	2	1	0	10
6.3	Architecture/ building design, Heritage, character buildings	0	0	0	6	7	0	9
6.2	Nature/ Design of CBD	0	0	1	6	4	0	9
2.5	Community life - friendly people/ sense of community/ community support/ interaction with people on the street/community spirit	2	5	3	0	0	1	8
2.2	Connection to friends, family, iwi	3	0	1	0	0	4	7
5.2	Recreational opportunities/ areas/ parks/ green space/ beach/ water	0	0	3	4	0	2	7
4.3	Location of neighbourhood and proximity to recreational opportunities/ areas/ parks/ green space/ beach/ water	1	6	0	0	0	2	7
2.3	Local residents and networks	0	4	0	1	1	0	6
3.3	Work opportunities	2	0	1	0	1	3	5
2.6	Diverse community, City "culture"	0	0	2	0	1	2	5
3.1	Housing affordability	3	1	0	1	2	0	5
4.8	Quality or roads, walkways, cycleways	0	0	0	5	0	0	5
4.6	Location of neighbourhood and proximity to local shops (corner store, supermarkets)	0	5	0	0	0	0	5
4.5	Location of neighbourhood and proximity to schools	2	4	0	0	0	0	5
4.2	Location of neighbourhood and proximity to work (also coded as 1.2)	4	3	0	0	0	0	5
1.1	Situation of house (views, sun, drainage, privacy, quiet, size of property)	5	0	0	0	0	0	5
1.4	Quality of house/ building	6	0	0	0	0	0	5
2.1	Laid-back lifestyle", easy going	0	0	2	0	0	1	3
5.6	Services other	0	0	0	3	0	0	3
5.1	Quality of schools	0	0	3	0	0	0	3
5.5	Housing choice	0	0	0	2	0	1	2
4.7	Location - other	0	1	0	0	0	1	2
4.11	Parking	0	0	0	2	1	0	2
3.2	Overall affordability	0	0	2	0	0	0	2
4.1	Location of neighbourhood and proximity to public transport	1	2	0	0	0	0	2
6.5	Air quality	1	0	0	0	0	1	1
5.4	Tertiary Education Opportunities	0	0	1	0	0	0	1

Appendix 2. Summary of Q methodology results – statements and average score for each perspective (-4 to 4)

Statement Number	Statement	Summary	Theme	Perspective			
				1	2	3	4
14	An ideal settlement for me would be one where I am close to recreation opportunities e.g. near the beach/bush/ski-fields. I would sacrifice a lot to live somewhere like that.	City location: likes near recreation	City Environment	2	3	-1	-2
36	Design codes that dictate what new buildings should look like restrict creativity and enforce bland uniformity.	Opinion Building Design Policy: Design codes are bad	City Environment	-3	-1	-1	3
19	I think there are a lot of buildings going up in our cities that don't have much appeal. Council needs to better control the design of buildings.	Opinion Building Design Policy: Need more control over building design	City Environment	2	1	0	0
1	I get really frustrated by the amount of traffic lights and pedestrian crossings when I drive in the city centre. I'm forever stopping and starting. The centre should be easy to drive around.	Opinion City Centre Design: likes car-oriented	City Environment	-1	-1	1	1
6	The city centre should be nice and easy to walk around, and traffic lights should be green for pedestrians more often, even if it means cars have to wait longer at the lights.	Opinion City Centre Design: Pro-walking City Centre Design	City Environment	1	-1	-1	3
34	I don't mind developers building new apartment blocks as long as they are well designed and aren't allowed to turn in to slums.	Opinion High Density: High density can work if well designed	City Environment	0	1	1	1
10	I think there should be more provision for affordable housing in cities, even if it means more apartment blocks in a wider variety of locations.	Opinion Residential Design HD: HD if affordable housing	City Environment	-1	2	2	0

3	People are not designed to all live in close proximity to each other, it causes friction and problems.	Opinion Residential Design HD: High density doesn't work	City Environment	-1	-3	-3	-1
17	High density housing such as apartments and flats only works in wealthy or middle class areas, not in poor areas where it only takes a few years to become a slum area.	Opinion Residential Design HD: High density only works in rich areas	City Environment	-3	-3	-3	-1
31	It's better to move more people into the inner city in flats and apartment blocks rather than the city sprawling for miles over the countryside.	Opinion Settlement Form: Pro-control through densification and urban limits	City Environment	1	2	-4	-4
42	Everyone should have a detached house with their own garden if this is what they want, even if it means that cities and towns spread further over the countryside, using up open space.	Opinion Settlement Form: Pro-market-led even if sprawl	City Environment	-2	-2	1	-1
11	For my non-food shopping I like to shop somewhere like this: see photo A, its so much more enjoyable shopping when there's no traffic around. I don't mind parking a bit of a distance away or leaving my car at home to shop somewhere like this.	Preference City Centre Design SHA: likes pedestrian oriented design	City Environment	1	-2	4	0
41	For my non-food shopping I like to shop somewhere like this: see photo B, its really convenient to be able to park on the street right outside the shops and have a variety of shops in walking distance.	Preference City Centre Design SHB: likes traditional mainstreet design	City Environment	-1	1	-2	-2
4	For my non-food shopping I like to shop somewhere like this: see photo C; I just love those shopping places you can just drive straight to and park really easily. They're so handy.	Preference City Centre Design SHC: likes stripmall/ retail park	City Environment	-2	2	0	-1
28	It's important to me to have a strong city centre with lots of shops and amenities and things to do.	Preference City Centre Services: likes Centralised/ Strong	City Environment	1	0	4	0

		CBD					
25	Streets should be neat and tidy with a consistent theme to the house design and nice tidy gardens.	Preference Residential Environment DE: likes designed suburbs	Residential Environment	-3	-3	2	1
35	I like a neighbourhood with lots of variety in housing styles. I can't think of anything worse than living somewhere where all the houses look the same – it's dead end suburbia.	Preference Residential Environment DE: likes housing variety	Residential Environment	3	3	0	2
15	I wouldn't mind living in an apartment block if the apartments were quiet, with good recreational facilities and cheaper to live in (e.g. cheap electricity, close to public transport, etc)	Preference Residential Environment HD: likes high-density if high quality	Residential Environment	0	0	0	-3
22	I think it would be fantastic to live in an apartment in the city, everything on your doorstep and so much going on.	Preference Residential Environment HD: likes Vibrant community AND high-density	Residential Environment	-2	1	-3	-3
40	I can't imagine anything worse than living in an apartment. I would feel like I was living in a shoebox.	Preference Residential Environment HD: Strongly anti-apartment	Residential Environment	-1	-2	1	-3
7	I like to have lots of greenery and open space near where I live, even if it means I am a long way from shops, schools and other services.	Preference Residential Environment OS: likes green/open space	Residential Environment	2	2	-2	4
9	I don't mind having to drive to the shops/centre if it means I can have a house with a large garden on a quiet street.	Preference Residential Environment OS: likes traditional post-war suburb	Residential Environment	1	0	2	2

5	I like to live at a distance from where I work/study, I don't mind commuting because it's great to get away at the end of the day.	Preference Residential Environment OS: Prefer out of town	Residential Environment	-2	-1	-3	0
16	A liveable place for me has lots of places to go in the evening within walking distance (cafes, pubs, etc).	Preference Residential Environment V: likes vibrant community	Residential Environment	2	1	2	-2
38	One of the most important considerations for me is living in a neighbourhood where I feel safe.	Preference Social Environment: Safety key	Residential Environment	3	3	3	4
12	Increased diversity with people from a lot of different backgrounds makes a neighbourhood a more vibrant and interesting place to live.	Preference Social Environment DI: Likes Diversity	Social Environment	3	2	-1	2
27	It's important for me to live in a neighbourhood with like-minded people.	Preference Social Environment DI: Likes Likeminded	Social Environment	-2	-4	-1	-2
13	I don't like neighbourhoods where everyone knows each other, it encourages gossip and nosiness.	Preference Social Environment SC: doesn't like small community	Social Environment	-3	-1	-2	2
18	A sense of community is important to me and I like to know my neighbours.	Preference Social Environment SC: Likes Relationship with neighbours important	Social Environment	1	0	0	1
29	Having friends and extended family nearby is what makes a place good to live in for me, that's more important than what it looks like or how easy it is to get around.	Preference Social Environment: Friends and family most important	Social Environment	0	1	0	3
20	Neighbourhoods should be planned better so that people can walk to the shops instead of driving everywhere.	Opinion Residential Design WC: Pro-walking residential design with more suburban shopping	transport & mobility	4	-2	3	1

		centres					
2	All communities should have regular and convenient bus services so that people don't have to drive everywhere, even if we have to subsidise these services through rates.	Opinion Transport Policy PT: Council should spend on public transport	transport & mobility	2	0	2	2
39	The council should build more roads to make it easier to drive, rather than putting money into public transport which people won't use.	Opinion Transport Policy PT: Council should spend on roads	transport & mobility	-4	-2	-4	-4
32	Places where people live should be designed so people can walk around them easily and safely, even if it means cars have to drive more slowly.	Opinion Transport Policy WC: Pro-Walking Settlement Design	transport & mobility	4	2	2	1
23	I'd like ideally to live somewhere near to my work, so I don't have to spend a long time getting in each day.	Preference Residential Environment: Close to work	transport & mobility	3	0	3	3
8	I like to live near public transport routes.	Preference travel/transport and Residential Choice PT: PT important	transport & mobility	0	-3	-2	1
26	How close I live to public transport isn't a concern for me because I prefer to drive.	Preference travel/transport and Residential Choice PT: PT not important	transport & mobility	-2	4	1	-2
37	Even if public transport is available I prefer to take my car, it gives me more freedom and independence.	Preference travel/transport PT: Likes driving - freedom	transport & mobility	-1	4	3	1
21	Time is really important for me. I don't like to waste a lot of time getting to where I need to go. I like to be able to hop in my car and be there in 10 minutes.	Preference travel/transport PT: Likes driving - time	transport & mobility	0	1	1	1
33	If it is available I prefer to take public transport as I can just relax and not worry about traffic and parking.	Preference travel/transport PT: likes PT	transport & mobility	0	-4	-2	-2

30	Walking and cycling are fine for a bit of exercise, but they're not very good for getting me to where I need to go.	Preference travel/transport WC: Cycling/walking unrealistic travel mode	transport & mobility	-4	3	-2	-1
24	I wish cycling was safer in the city and there were more cycle paths. I would like to cycle more.	Preference travel/transport WC: likes cycling	transport & mobility	2	-2	-1	4
1	I get really frustrated by the amount of traffic lights and pedestrian crossings when I drive in the city centre. I'm forever stopping and starting. The centre should be easy to drive around.	Opinion City Centre Design: likes car-oriented	transport & mobility	-1	-1	1	1
6	The city centre should be nice and easy to walk around, and traffic lights should be green for pedestrians more often, even if it means cars have to wait longer at the lights.	Opinion City Centre Design: Pro-walking City Centre Design	transport & mobility	1	-1	-1	3