

The walking tourist: How do the perceptions of tourists and locals compare?

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Abstract: Walking is known to be a healthy and sustainable way of moving about the city, particularly in comparison with motorised forms of transport. For these and other reasons, there is a growing interest amongst urban planners and policy makers in enhancing conditions for walkers. Growing the number of people walking makes sense from the perspectives of public health, reducing pollution and greenhouse gas emissions and social sustainability. This also applies to people visiting a city; tourists are increasingly walking to get to know the places they visit from the footpath. However, there is little known about their experiences. This research addresses the question of how visitors perceive and evaluate the city they are visiting when they walk. Comparisons are made with the experience of local residents. The paper examines the relatively overlooked domain of tourist walkability and investigates the extent to which accessibility and topography may influence walking experiences. Data was gathered from a Walk Diary in which respondents evaluated the environment along a single walk. Responses were received through convenience sampling from 132 people in two New Zealand cities: Christchurch and Wellington. The Walk Diary provided an effective way of capturing differences between locals and tourists when they walk. Insights from this study will be particularly useful to those tasked with enhancing people's urban walking experience.

Keywords: walking; tourists; accessibility; walking experience.

1. Introduction

Walking is recognized as an active transport mode that contributes to a wide range of benefits to both individual and society (Gehl 1987; Frank and Engelke 2001; Leyden 2003; Litman 2003; Forsyth and Southworth 2008; Ewing and Handy 2009; Hall, Le-Klähn and Ram 2017). Walking increases physical activity and thus improves health, well-being and quality of life and is accompanied by less vehicle travel and thus less traffic, air pollution, and other environmental impacts.

“Walkability” studies have measured and analyzed walking based on the time spent walking by individuals. Other research has dealt with pedestrian movement using empirical quantitative approaches that often deal with collective patterns of behaviour and their relationship to the physical environment (Cao, et al., 2006; Dihingia, et al., 2022). In terms of sustainable urban design, walkable places are regarded as preferable for locals and tourists alike (Ram & Hall, 2018). Nevertheless, a number of differences between locals and tourists walking have been identified (Hall, Le-Klähn and Ram 2017). Tourists are often found to wander about with an exploratory attitude at a lower speed in an unfamiliar environment, whereas, the walking behaviour of locals are characterised by frequently taken paths with ample knowledge about the topographical features of the city (Vojnovic 2006; Gorrini and Bertini 2018). However, there is still a lack of knowledge on the effects of walking environment on walking tourist in urban areas (Tong, Wang and Chan 2016; Vandenberg, et al. 2016; Gorrini and Bertini 2018; Yun, Kang and Lee 2018), especially a comparison between locals and tourists’ walking experience. Understanding and providing an appropriate level of walkability is a challenge for civic authorities, as they have to try to balance the demands of various users and uses of public space (Henderson 2018).

With the current literature on tourist walking, accessibility, connectivity, comfort, safety, aesthetics and appeal have been identified as significant factors for tourist walking behaviour (Samarasekara, et al., 2011; Ujang & Muslim, 2015; Mansouri & Ujang, 2016). Before a pedestrian proceeds to walk anywhere, these walking needs have to be catered for (Talavera-Garcia & Soria-Lara, 2015). Alfonzo (2005) developed a hierarchy of walking needs to be considered in the walking decision process. These needs ranged from the most basic, such as feasibility and accessibility to higher-order needs (related to urban form) and were based on priority of fulfilments. An individual would not typically consider a higher-order need in his or her decision to walk if a more basic need, such as accessibility was not already satisfied (Alfonzo, 2005). In their study of visitors in Kaula Lumpur, Mansouri & Ujang (2016) found that spatial features such as accessibility, connectivity and continuity strongly determine tourists’ expectation and satisfaction while walking. This supports the findings by Supitchayangkool (2012) who noted that accessibility to tourists spots is an indicator for tourists to revisit a destination.

Given the importance of accessibility and with the current effort of making cities walkable, this paper aims to understand whether there is a difference in how locals and tourists feel while walking in two New Zealand cities: Christchurch and Wellington. The two cities are popular with tourists yet differ in terms of their topography, building density, architecture, views, street characteristics and patterns. Hence, they provide different environments for walking. The city councils in each city have identified various walking routes with various themes to explore within and around the city. This paper particularly focuses on the attributes of accessibility and legibility: how easily a person is able to access their destination, and the physical barriers encountered. The working hypothesis is that the accessibility attributes have an effect on the tourists’ satisfaction with their route.

2. Methodology

A diary was adopted to capture the perceptions of locals and tourists about their walk experience. It was designed in the form of a A5 size booklet named the “Walk Diary” for the central city areas of Christchurch and Wellington. This Walk Diary was based on the idea of a walk with respondents filling it in while conducting the walk or soon after. The survey (lasting five and seven weeks in Christchurch and Wellington, respectively) was conducted in late summer to the start of autumn during the school holidays to capture visitors. Ultimately, 81 and 51 diaries were completed and returned with a response rate of 53% and 56% in Christchurch and Wellington respectively.

2.1. Data gathering tools

The data was gathered through convenience sampling by placing the Walk Diary on the front desks and counters of visitor accommodation, such as hotels, hostels and motels, cafés and restaurants, tourist attractions, educational institutions and student accommodation. As the target sample of the study was people visiting a place, these outlets seemed to be an effective way of recruiting them. The respondents were awarded with a coffee voucher after completing the Walk Diary. The protocol of the survey administration was based on the contact between the outlets' staff and the respondents rather than the respondents and the first author.

2.2. Walk Diary

The Walk Diary consisted of 14 A5 size portrait pages with a folded A3 size tourist map of each city centre with street names and labelled attractions. The diary was divided into sections with a set of instructions on how to fill it in and the estimated time it would take to complete each section. The first two sections consisted of close-ended questions probing individual and walk trip information. These sections obtained information about respondents' demographic details and information regarding the trip of the particular day. It was then followed by the route information about accessibility, safety, comfort, and pleasantness based on activities and built environment and for each walk conducted the respondents recorded their perceptions on a five-point agreement Likert scale. The respondents were left with space to write any additional feedback or to comment on any feelings about their walk.

Finally, the respondents were asked about their level of satisfaction with their walking trip, which was measured by the statement, *"I was satisfied with the route that I took"*. This part also investigated the importance and their general expectations of walking.

2.3. Attributes selected for the study

As noted in Section 2.2, the walkability assessment criteria selected for the main study were accessibility, comfort, safety and pleasantness based on activities and built environment. In this paper, only the influence of the five sub-attributes of accessibility on the walking behaviour/route satisfaction will be discussed. The five sub-attributes for accessing accessibility were the presence of a sufficiently good and wide walkway condition, absence of closed roads (culs de sac), enough signs to understand the route, presence of a flat terrain, and universal design, such that people with baby buggies, wheelchairs, and older people could easily use the paths.

3. Walking experience

3.1 Personal information

The personal characteristics of the respondents in Christchurch and Wellington are summarised in Table 1. The respondents were of mixed ages and the percentage of females was slightly higher than that of males in both cities. A wide range of age groups was captured from under 25 to 70 years and above. However, almost half of the respondents in both cities were between 25-39 years old, again with a higher percentage of women respondents in this age group. The next highest group were respondents under 25 years with a slightly higher percentage of women in Wellington. This meant the survey data was somewhat skewed to younger age groups, particularly women. The final participation rates were different

(Christchurch, n=81; Wellington, n=51), and the two cities also differed in the split between locals and tourists. The Christchurch survey captured more tourists than locals (55.6% were tourists), while in Wellington only one-third of the respondents were tourists (27.5%). City resident respondents in both cities were asked about their familiarity with the city with 3.7% and 2.7% in Christchurch and Wellington respectively being not at all familiar (Table 2). For tourists, in Christchurch most were somewhat or not at all familiar with the city with only 6.3% being familiar with it. Interestingly, in the case of Wellington, most visitors were not at all familiar with the city.

These differences should reflect the attitudes and the perception of walking in two major cities.

Table 51: Respondent demographic comparisons for Christchurch and Wellington

Variable	Christchurch		Wellington		
	Frequency (n)	Share (%)	Frequency (n)	Share (%)	
Age					
	Under 25	21	25.9	12	26.3
	25-39	33	40.7	29	50.9
	40-54	8	9.9	3	6.2
	55-69	14	17.3	6	13.5
	70 and above	5	6.2	1	3.1
Gender					
	Female	42	51.9	29	55.7
	Male	38	46.9	22	44.3
	Others	1	1.2	0	0.0
Type of visitor					
	Locals	36	44.4	41	72.5
	Tourists	45	55.6	10	27.5
Familiarity					
	Very familiar	28	34.6	23	36.3
	Somewhat familiar	31	38.3	19	41.0
	Not at all familiar	22	27.2	9	22.0
Total		81	100.0	51	100.0

Table 2: Familiarity of locals and tourists with Christchurch and Wellington

	Christchurch		Wellington		
	Frequency (n)	Share (%)	Frequency (n)	Share (%)	
Locals	Very familiar	23	28.4	23	36.3
	Somewhat familiar	10	12.4	16	33.6
	Not at all familiar	3	3.7	2	2.7

Tourist	Very familiar	5	6.2	0	0
	Somewhat familiar	21	25.9	3	7.5
	Not at all familiar	19	23.5	7	20.0

Total		81	100.0	51	100.0
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3.2 Analysis Approach

The differences in the walking behaviour of locals and tourists emerge from the descriptive analysis. The study was able to capture different age groups from under 25 to above 70 with a dominance of respondents between 25-39 years old, and more females than males.

The aim was to understand the influence of the attributes on the walking route satisfaction of locals and tourists. Because of the ordinal polytomous nature of the dependent and the independent variables, ordinal logistic regression was adopted to estimate satisfaction with the attributes for both cities. Using the PersonMean imputation in RStudio the few missing values were filled for the estimation data set. Imputation methods are used to fill missing data with the variable mean score (Glaw 2010). Imputing the row mean (PersonMean) is mainly used in sociological or psychological research, where data sets often consist of Likert scale items (Schork 2019), as in the case of the Walk Diary. In order to analyse the data, a numerical code (from 1 to 5) was assigned to each point on the ordinal scale, based on direct determined quantification (De Luca, 2006). Specifically, a value equal to 1 was assigned to “Strongly Disagree”, and a value of 5 to “Strongly Agree”.

3.3 Respondents satisfaction

Table 3 lists the accessibility sub-attributes and the respondents’ satisfaction with their walking routes in both cities. The mean of the satisfaction level of the respondents differed city wise and on whether they were locals or tourists. A good condition of walkway was seen throughout Christchurch and Wellington by both locals and tourists. City wise, in Christchurch, both locals and tourists enjoyed their route due to the flat terrain and the absence of culs de sac. In Wellington, locals were moderately satisfied with the level terrain whereas the mean score for tourists was considerably lower at 3.00. This may reflect Wellingtonians’ familiarity with and acceptance of the city’s often steep topography surrounding the flatter central area. On the other hand, a proportion of the tourists experienced these steeper conditions as their walks took them further afield.

The Wellington responses to questions about the universal design attributes respondents may have encountered along their walks suggest that tourists expect public spaces to provide more opportunities for people with different abilities. This was the only mean score to fall below the neutral line, and it was significantly below that number in this survey.

Table 3: Respondent satisfaction with route attributes

Attributes	Christchurch		Wellington	
	Mean		Mean	
	Locals	Tourists	Locals	Tourists
Good walkway condition	4.33	4.42	4.07	3.80
Absence of cul de sac	4.16	4.02	3.58	3.10
Signs to create understandable route	3.97	3.64	3.82	3.10
Flat terrain	4.69	4.53	3.95	3.00
Universal design	3.72	3.95	2.95	2.30
Route satisfaction	4.48	4.18	4	4.3
Total	36	45	41	10

3.4 Estimation results

In the model, the dependent variable is the route satisfaction, while the independent variables are the respondent specific categorical variables and their satisfaction with the accessibility sub-attributes of the route. A two-way ANCOVA was used to determine if there was a statistically significant two-way interaction effect between the sub-attributes and the respondents being tourists on the overall route satisfaction. The results of the final estimates are shown in Tables 4. Ordinal logistic regression was estimated for the 81 respondents in Christchurch and 51 respondents in Wellington.

The main effects of the sub-attributes on the overall route satisfaction in Christchurch were not significant. The two-way ANCOVA revealed that for tourists, absence of culs de sac showed a positive correlation on the overall route satisfaction. The main effect of the presence of signs for understanding the route was significant in Wellington, however, we could not run the interaction with tourists due to the inadequate sample size ($n=10$). In this case, for Wellington, we are forced to conclude that the data do not support the hypothesis that the walking behavior of locals and tourists are different.

Even then, the different effects of the sub-attributes on locals and tourists were apparent from the respondents' feedback. Most of the sub-attributes were positive, but there was a weak correlation between tourists' satisfaction with the route and their overall satisfaction. Some tourists in Christchurch mentioned that the walkways were wide, however, for some, the footpaths in the city center were too narrow. This was rather surprising, as Christchurch has aimed to be a walkable city as it has been rebuilt following the 2010-11 earthquake sequence. The dissatisfaction with Christchurch footpaths was echoed by locals who reported that there were constructions which obstructed the footpath connectivity. Opinions differed between tourists regarding signs for understanding the route. Some tourists felt that there were enough signs, whilst the majority voiced their concern about lack of signage, especially at intersections. One tourist mentioned the presence of excessive billboards and advertisements was rather displeasing.

In Wellington, the presence of signs to help understand the route had an effect on the route satisfaction for both locals and tourists. This was a major concern voiced by locals as there were no signs, especially in areas connecting the motorways and in places of roadworks and construction sites. The majority of locals mentioned that they disliked the construction sites, which eventually led to narrower walkways. One local reported that they did not particularly liked walking through the temporary shipping container protecting the footpath and the presence of scaffoldings seemed threatening for another. A minority of locals mentioned that the footpaths were well connected and wide, however, the condition of the walkways received negative comments. A number of issues were identified by the locals who noted that the footpaths were damaged in areas and overflowed with surface water, thus creating unpleasant puddles and slippery surfaces. A few locals mentioned that their route satisfaction was affected due to their route being uphill.

Table 4: Estimation results

	Christchurch (n=81)			Wellington (n=51)		
	a _j	SE	Odds ratio	a _j	SE	Odds ratio
Strongly Disagree to Disagree	-2.38	2.25	-	-	-	-
Disagree to Neutral	-1.25	2.20	-	-0.39	2.15	-
Neutral to Agree	0.41	2.19	-	1.41	2.15	-
Agree to Strongly Agree	2.83	2.21	-	3.80	2.20	-
Attributes						
Good walkway condition	-0.18	0.70	0.83	0.51	0.37	1.67
Absence of cul de sac	-0.80	0.49	0.45	-0.24	0.24	0.79
Signs to understand route	0.28	0.34	1.32	0.83**	0.37	2.30**
Universal design	0.57	0.36	1.77	-0.19	0.27	0.83
Flat.terrain	0.82	0.62	2.28	-0.29	0.30	0.75
Tourist	-4.56	4.00	0.01	1.02	0.80	2.77
Tourist * Good walkway condition	0.67	0.92	1.96	-	-	-
Tourist * Absence of cul de sac	1.33**	0.63	3.79**	-	-	-
Tourist * Signs to understand route	-0.25	0.55	0.78	-	-	-
Tourist * Universal design	-0.21	0.63	0.81	-	-	-
Tourist * Flat terrain	-0.67	0.82	0.51	-	-	-

*p<0.1; **p<0.05; ***p<0.01

4. Discussion

The general findings from this study suggest both locals and tourists walk, with tourists in Christchurch and locals in Wellington being more vocal about their likes and dislikes. A possible explanation in the case of Christchurch might be that the Christchurch survey captured more tourists than locals. The locals were well acquainted and comfortable with the ongoing rebuilding of the city after the 2010-11 earthquake, which was not the case for the tourists who were in an unfamiliar environment. In the case of Wellington, the locals were more outspoken which might be due to their familiarity and regular usage of the public spaces.

It is interesting to note that despite the issues raised, the majority of locals and tourists were satisfied with their overall route in both cities. As the tourist sample in Wellington was small, statistical information could not be derived from the population of tourists and a comparison between locals and tourists was not possible. However, in Christchurch, there were significant differences in the walking behaviour of locals and tourists. Comparing both the cities, respondents found better overall quality of walking conditions in Christchurch than Wellington. The likely cause for the better conditions in Christchurch could be due to the flat terrain, and hence it meeting the needs for universal design. At the same time, the positive correlation of being a tourist on the absence of culs de sac could be attributed to the fact that Christchurch has been rebuilt in a grid layout. Considering previous literature which stated that tourists wander around with an exploratory attitude (Gorini & Bertini, 2018; Davies, 2018), the benefit of having a serial vision, a concept conceived by Cullen (1961), proved helpful.

The resources for wayfinding include signage and information systems, point-of-decision cues and aids, such as street name signs, and indications of accessible pedestrian access. Surprisingly, past research on walking and walkability has given limited attention to wayfinding (Vandenberg, et al., 2016). In unfamiliar places, pedestrians often use mobile navigation tools or maps (Laurier & Brown, 2008). Based on the comments of the locals and tourists, the lack of signage surfaced due to temporary narrow passages with no indication of an alternative route owing to undergoing construction works in both cities. As researchers and practitioners both acknowledge that signage cannot compensate for poor design and, as a matter of practice, should be considered in the context of overall design and movement patterns and integrated with other information resources (Arthur & Passini, 1992; Passini, 1996), care should also be taken over signage for temporary events.

A view commonly expressed by locals and tourists in both cities was the absence of signs to help them understand how to get to where they wanted to walk. This finding is consistent with that of Farkic, et al. (2015) and Gorrini and Bertini (2018) who found that the level of tourist walkability was deeply affected by the lack of basic services, such as scarcity of road signs in their studies in Serbia and Venice respectively. However, the mean preference scores for understanding the route, aided by signage, were overall positive for the whole respondent group as well as in each of the distinct categories set out in Table 3 above. This could be an indication of the reliability of Lynch's (1960) concept of imageability. Lynch found that people develop mental images of the places they inhabit aided by five key physical attributes. Nodes and districts describe the imageability of neighbourhood centres and other urban clusters or punctuations in cities, whereas paths and edges relate to the influence boulevards and large natural features such as streams/rivers or harbours might have on mental images. Landmarks are the fifth element, with towers and mountains as examples. Both Wellington's and Christchurch's central areas are blessed with vivid examples of each; in Wellington it could be the clear edge of the harbour, the silhouette of the hills forming the amphitheatre around the city or it could be one of several landmark buildings. Christchurch has the Avon River tracing an organically shaped ribbon through an otherwise gridiron plan, the Port Hills to the south and key pathways such as Worcester Boulevard and Manchester Street. Further investigation of the influence urban form may have had on people's ability to navigate the city in the absence of wayfinding signage is warranted given these results.

5. Conclusion and Future research

As accessibility is the highest order walking needs, this paper aimed to report the findings of research looking into differences and similarities in the walking behaviour of locals and tourists in the central city areas of Christchurch and Wellington. To make these findings it was necessary to distinguish between tourists, daily visitors, and locals when interrogating their walking behaviours. The comparisons were made between two New Zealand cities, each with distinct physical geographies. It could also be argued that societal characteristics of the local populations are reasonably similar. This enabled the researchers to draw comparisons based on differences between local and tourist respondents and to look for possible explanations in the physical characteristics of the places people were walking.

The key findings of this part of the research are that both locals and tourists appreciated well designed level walkways with good signage to aid wayfinding. Connectivity is also important as this aids the exploration of a new place for tourists. When events like construction works disrupt normal footpaths much greater consideration needs to be given to alerting walkers to alternative routes so they can avoid these places, just as motorists are given detours when roads are disrupted. With this information, we recommend these issues be looked at carefully by urban planners and traffic engineers. Further research

will involve analysis of other attributes that affect the walking experience of locals and tourists that formed part of this survey.

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