

How are old places different from new places? A psychological investigation of the correlation between patina, spontaneous fantasies, and place attachment

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ABSTRACT

What is ‘age value’? Or conceptualised slightly differently, what is the fundamental difference in the experience and affect of old and new places? In order to answer this question, this study compares historic Charleston, an authentically ‘old’ place and I’On, a ‘new’ place designed on new urbanist principles; both places share essentially the same design but differ in age by over 150 years. A sequential mixed-method approach, consisting of a phenomenology (interviews) followed by a measure of four dimensions of place attachment provided the data for this study; both methods employed photo elicitation techniques. Age value is only associated with patina and spontaneous fantasy in historic Charleston; both of these variables correlate with increased levels of general attachment or dependence. Residents of both neighbourhoods exhibit very high levels of general attachment, dependence and identity, but rootedness is higher in Charleston. Place attachment is correlated with more environmental variables in historic Charleston than it is in I’On. It is important to protect masonry patina because of its association with place attachment. This study lends evidence for why we need to understand the values, perceptions and experiences of civil experts in balance with the objective art/historical values of conventional experts.

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Introduction

In the century and a half since John Ruskin wrote about the ‘deep sense of voicefulness’ (Ruskin 1849/1907) of old buildings, little or no research has attempted to define the experiential construct of age value. Or reframed in the context of attachment – a concept that deals with the cognitive and affective bonds between people and places – why do people feel a different quality and degree of place attachment to new versus old places? The answer to this question is fundamental to why we wish to conserve the historic environment, but it has never been adequately addressed. In the 1970s, the humanistic geographer, Yi-Fu Tuan (1977, 193), observed that ‘old ... buildings have a special value bestowed by time’, yet today we still fail to understand the fundamental nature of this ‘special value’ in relation to the age of buildings, places and landscapes.

This study is therefore an attempt to understand age value – or, put in another sense, to determine if people perceive the physical age of urban cultural landscapes and how this experience leads to the valuation and subsequent emotional attachment to these kinds of places. In simple terms, age value is related to how everyday people experience aged places which contrasts with historical value and

The OLD place

- (1) What physical characteristics of this place positively and negatively affect attachment?
- (2) How is attachment influenced by the age of this place?
- (3) How does the experience of spontaneous fantasy influence place attachment?

The NEW place

- (1) What physical characteristics of this place positively and negatively affect attachment?
- (2) How is attachment influenced by the age of this place?
- (3) How does the experience of spontaneous fantasy influence place attachment?

Différance
(Derrida,
1982) ≈
Age value

Figure 1. The use of différance to elucidate age value.

its dependence on expert rule, objectivity and authority. Specifically, this study explores how the age of traditionally designed, urban residential environments affects the degree and character of place attachment for residents. It is based on an earlier, qualitative study (Wells & Baldwin 2012); what is introduced here is a mixed-method approach that attempts to generalise important aspects of phenomena uncovered by this earlier study.

An ideal way to understand age value would be to have two environments with the same or extremely similar design, but with radically different ages. One could then determine what the difference in people's perceptions and emotional attachments to the 'new' and the 'old' environments are and from these data come to conclusions about how the physical age of place impacts people. This concept can be reduced to a pseudo-mathematical operation in which the meanings and experiences of the new environment are 'subtracted' from the meanings of the old environment. What remains must therefore reveal the nature of age value. This difference can be framed in what the philosopher Derrida (1982) refers to as *différance* – a concept that not only means difference, but includes a temporal component to how difference can manifest in a critical context of multiple meanings. This is an important idea in the pluralistic dimension of culture: there is never a moment when one can say the meaning is complete because it is slightly different at each 're-reading' of experience. *Différance* refers to the impact of time and space on meaning and how the meaning of something is always referent upon another thing. For the purposes of this study, *différance* is framed in terms of three questions that relate to the physical characteristics of an environment, place attachment and spontaneous fantasy, which is a phenomenon that arose from the first phase of this study. Figure 1 encapsulates how *différance* is therefore used to guide this study in order to understand age value.

This study focuses on residential environments because people are most strongly attached to these places compared to other environments (Werner, Altman, and Oxley 1985; Cuba and Hummon 1993; Groat 1995; Manzo 2003). For the purposes of this study, a 'new' place contains buildings that have all been built in the past fifteen years or later. An 'old' place is essentially synonymous with what is commonly known as an 'historic' district – a place that has buildings with sufficient art/historical values to qualify it for listing on the United States National Register of Historic Places (and therefore must normally be aged fifty years or older).

Remarkably, in the Charleston, South Carolina (United States) area, two places exist within a ten-minute drive of each other that meet the requirements for a new and old residential environment, including nearly identical urban design characteristics. The old environment is historic Charleston, which is the location of the nation's first historic district and the new environment is l'On, a new urbanist development in Mount Pleasant, South Carolina. The new and old residential environments have been purposely selected to reflect extremely similar urban design practices that were common in the early- to late-nineteenth century in Charleston: dense, eclectic collections of detached homes in a variety of styles from Georgian to Queen Anne with small yards and many secluded spaces.

Literature relating to the physical age of places, patina and place attachment

The concept of 'age value' is well known in built heritage conservation because it relates to the way building materials and landscapes naturally change and degrade over time. Ruskin (1849/1907) is often credited with creating the concept in the middle of the nineteenth century, which he described as

the 'golden stain of time'. The first use of the actual phrase, 'age value', is credited to Riegl (1903/1996, 73, 74), which he defined as a phenomenon that 'addresses the emotions directly' by experiencing the 'imperfection, a lack of completeness, a tendency to dissolve shape and colour' and 'decay and disintegration' of building materials. This emotional affect is an essential characteristic of age value (Appelbaum 2007, 104), which is different from the 'historical value' of buildings and places or the objective facts related to the fabric of buildings and places (Riegl 1903/1996).

In order to be judged 'authentic' by most people, an historic building or landscape requires a certain degree of decay or patina (Lowenthal 1985, 151). An extreme example of this phenomenon are ghost towns whose primary characteristic is 'antiqued patina' that makes these places feel real, genuine and authentic to visitors (DeLyser 1999, 614). Patina is different from decay in that it usually has positive connotations; it is, as Bernard Feilden (1994, 247, 248) describes, 'precious because it can only be acquired by time.' In addition, patina is associated with the processes of nature and entropy (Edensor 2005, 72) and not the direct interventions of people. Patina, therefore, exists at a boundary between nature and culture where nature, in the form of a catalyst for decay or more directly through the appearance of plants (e.g. mosses, lichen) growing on buildings and places, slowly assumes a more central role in humans' interpretation and experience of the environment (Kellert 2005, 146).

There is a small body of literature on the aesthetic qualities of patina on stone primarily based on survey (quantitative, correlational) methodologies, but also using qualitative interviews. Most of these studies address the relationship between the economic value of buildings and masonry cleaning; in these studies, cleaning buildings (i.e. removing or reducing their patina) results in a small increase in value (Urquhart et al. 1996; Laing and Urquhart 1997; Ball, Laing, and Young 2000), no doubt because of the association between value and cleanliness and maintenance (Webster et al. 1992; Ball, Laing, and Young 2000). There is a small, but positive correlation between the aesthetic value of buildings and blackened sandstone (Andrew 2002). Quist et al. (2008) found a similar correlation between small-scale damage to stone and increased aesthetic qualities among lay people. In surveys of laypeople and professionals, the degree of aesthetic value is related to the amount and distribution of soiling, with aesthetic quality increasing with minimal soiling and when it is distributed in ways that tend to mirror and not obscure architectural details (Grossi and Brimblecombe 2004, 204). Interestingly, there does not appear to be any empirical studies on the perception or affect of patina on people from the field of environmental psychology even though this is a fundamental, defining characteristic that differentiates old places from new ones. Andrew, Young, and Tonge (1994, 25), however, attempt to create a psychological theory that the appearance of masonry patina may have the power to 'evoke images in the minds of observers' and adds a sense of 'mystery and surprise' to townscapes.

There is a large body of case study literature on the emotional attachment to place or place attachment that address many different kinds of environments, primarily from psychology and tourism and leisure studies, but also from anthropology (e.g. Rowles 1980, 1990; Hummon 1992; Low 1992; Moore and Graefe 1994; Bricker and Kerstetter 2000; Blake 2002; Williams 2002; Brown, Perkins, and Brown 2003; Kyle et al. 2003, 2004). With very few exceptions, however, none of this literature addresses emotional attachments that people have for the historic environment and its defining characteristic of patina. This is not to say that literature on the historic environment does not mention or discuss concepts of 'sense of place' or the unique qualities of historic places; rather, there is no focus on the 'phenomena of person-environment relationship' (Bonnes and Secchiaroli 1995, 177) and understanding the experience of 'affect, emotion and feeling' (Low and Altman 1992, 4) with a focus on 'biological, environmental, psychological and/or sociological processes' (Low and Altman 1992, 8, 9) that defines the concept of place attachment.

In terms of the few examples of literature that do address the historic or older environments, we know that when people feel that an historic place is more authentic, they tend to have higher levels of emotional attachment to that place than to other places that are not considered to be historic (Ram, Björk, and Weidenfeld 2016). Traditional (i.e. pedestrian oriented, pre-automobile) urban places are also associated with increased levels of place attachment (Shamsuddin and Ujang 2008) as is living in a World Heritage city (Vong 2013). Beyond these few studies and their tentative conclusions, there is

a significant lack of empirical evidence in terms of the way people are emotionally attached to historic places; at this point all that is possible is to make suppositions about the person-place relationship in historic environments based on literature that addresses other types of environments.

Cases

Historic Charleston is located in the city of Charleston, South Carolina, United States and is the location of the country's first historic district, established in 1931. The neighbourhood is located south of Broad Street (Figure 2). English colonists founded Charleston in the 1670s on the southeast corner of the Charleston peninsula along the Cooper River, just north of what is today known as White Point Gardens and established a small fortified, walled city roughly bounded by present-day Cumberland, Bay, Water and Meeting streets (Rosen 1997, 11, 12, 14, 18, 30). The study area is located partially within the old walled city, although none of the original buildings from that era survive (the majority of the buildings in the study area date between about 1780 and 1860).

I'On is a new urbanist development located in the city of Mount Pleasant, South Carolina, United States across the Cooper River from Charleston (Figure 2). I'On is the brainchild of Vince Graham, developer and founder of the I'On Group. Graham desired to create a new development based on the 'best models of urbanism in the region including Savannah and Charleston, as well as the historic areas of lesser known coastal towns like Beaufort, Rockville and the Old Village of Mt. Pleasant' (Graham, 2008, personal communication). According to the promotional materials for the I'On development, it was named after Jacob Bond I'On (1782–1859), a veteran of the War of 1812, who operated a plantation on the future development's land in the first half of the nineteenth century.

Planning for the I'On development commenced in May 1995 and construction of the first house began in March of 1997. Dover Kohl and Duany Plater-Zyberk and Company created the development plan that incorporated existing natural vegetation, a modified grid pattern with curved streets and a design code (the 'I'On Code'). From 1997 to 2003, about 300 homes were built (Graham, 2008, personal communication). While many older trees – especially live oaks – were saved, the majority of existing trees were cleared as a prelude to construction. All new construction and modifications to existing buildings must adhere to the I'On code, which ensures adherence to 'traditional neighbourhood design' principles. In this fashion, the I'On Code functions in much the same way as design guidelines do for a local historic district, such as in historic Charleston, including design review under the purview of volunteer citizens.

Historic Charleston and I'On are very similar in terms of urban design. Other than physical age, the chief difference between I'On and historic Charleston is that the latter is more dense by about a third. Refer to Table 1 for a comparison of density, building footprint, orientation to the street, setback, road widths, architectural styles and sidewalks between historic Charleston, I'On and nearby suburban development. Refer to Figure 3 for a figure-ground comparison of historic Charleston and I'On, which shows how close, in plan, both neighbourhoods are to each other. In addition, it is possible to find historically accurate versions of the styles of Charleston Single House, Georgian/Federal, Gothic Revival, Neo-Classical, Colonial Revival and Queen Anne in both neighbourhoods (Table 2).

Methodology

This study is designed as a comparative case study using a sequential mixed-methodology (Creswell 2003); the first phase used a third-person existential phenomenology (Merleau-Ponty 1962; Van Manen 1990) while the second phase used a survey methodology. Interviews with residents of historic Charleston and I'On provided the data for the phenomenology with a photo-elicitation process (Harper 2003) supplementing these interviews. Similarly, residents provided data via a survey instrument, which was also supplemented by a photo-elicitation process.

For the first phase of the research, upon introducing the study to the informant and receiving consent to participate, I provided him or her with a disposable 35 mm camera (with 27 exposures)

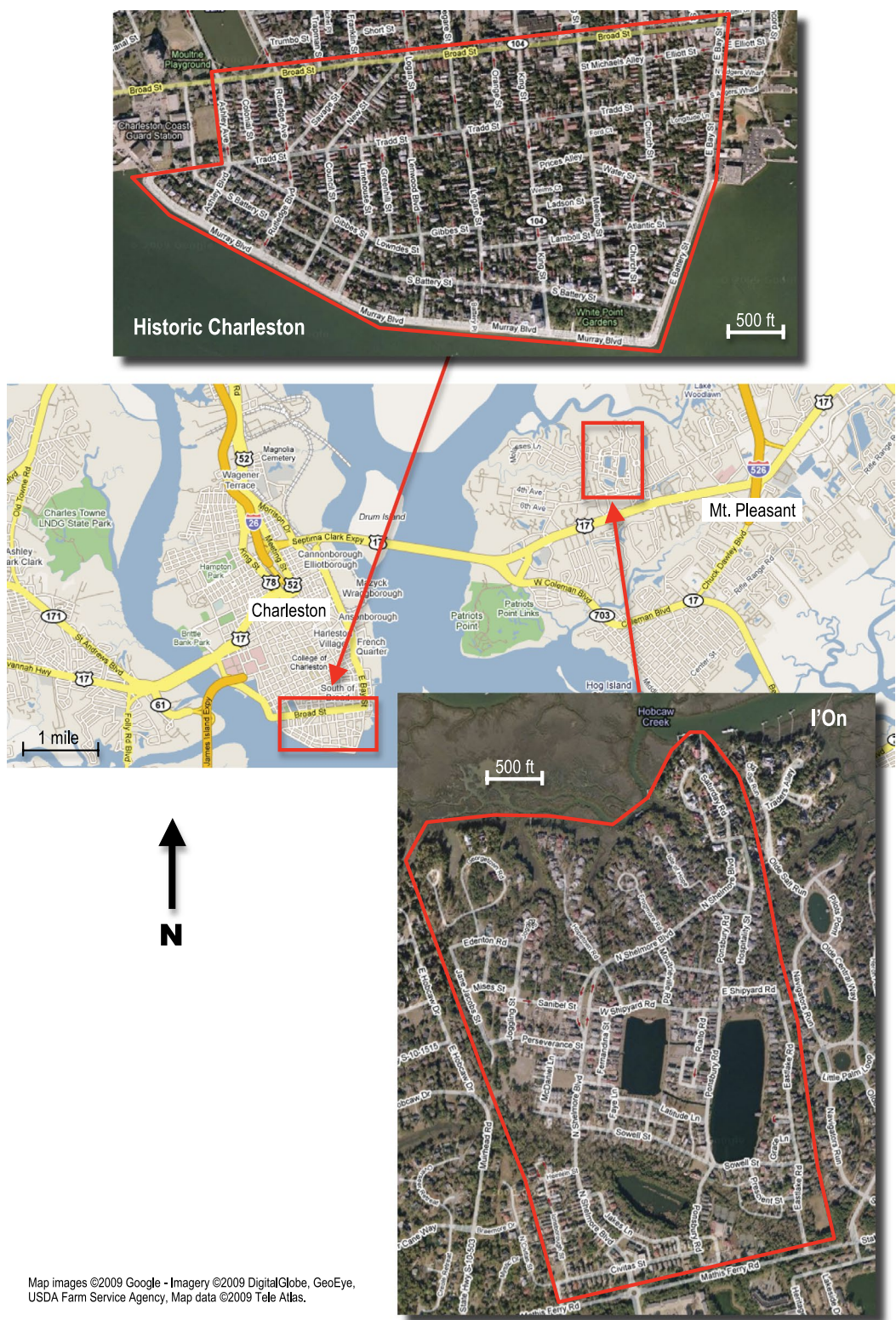


Figure 2. Location, boundary and general plan of historic Charleston (case 1) and l'On (case 2).

Table 1. Comparison of historic Charleston and I’On to the suburban development to the west of I’On.

	Suburban development	Historic Charleston	I’On
% of land occupied by buildings (a measure of density)	13%	41%	33%
Typical building footprint	Square	Rectangular	Rectangular
Orientation to street	Random	Always short side to street	Always short side to street
Typical setback	30 to 35 feet	0 to 10 feet	0 to 10 feet
Typical road width	~22–28 feet	~15–20 feet	~15–20 feet
Architectural styles	Modern/contemporary	Traditional with Charleston Single House styles predom- inating	Traditional with Charleston Single House styles predom- inating
Sidewalks	Sometimes present	Always present	Always present

along with open-ended instructions to take photographs of objects or landscapes of any scale, without people or animals, that were particularly meaningful. I collected a first name, phone number and e-mail address in order to contact the informant for an interview after the photographs had been developed; a letter corresponding to each camera was linked to the informant. When the film was exhausted, the informants then mailed the disposable cameras back to me using pre-addressed, postage-paid envelopes. After I developed the film, I then scheduled an interview with each informant.

The interviews used open-ended questions that sought the experiential essences of being in either I’On or historic Charleston, south of Broad Street. I utilised the photographs that each informant took in the interview process to elicit responses and trigger the informant’s memories (Harper 2003). The informants used the photographs to guide their responses and in this manner, they were fully aware that they controlled both the specific direction of responses as well as the overall length of the interview. The following questions guided the general direction of the specific, contextual questions that I used in the interview process:

- (1) What physical characteristics of this place positively and negatively affect attachment?
- (2) If the physical age of the environment is perceived, how is attachment influenced by the age of this place?
- (3) How does an imaginary history of a place that a person has created influence attachment?

I recorded the audio of each interview and transcribed the responses for further analysis.

The second phase of the research was based on a survey instrument. I used the meanings from the first research phase (the phenomenology) combined with a secondary literature review based on these meanings to inform the development of questions for a web-based survey instrument which was then administered to residents of the same neighbourhoods. The survey instrument also used a photo elicitation process using the same images captured by the informants in the qualitative phase of the study. In total, the maximum number of questions presented to an informant was 29. Most informants answered fewer questions than this due to the skip-pattern logic in the survey instrument. Due to skip pattern logic, the survey instrument only presented photographs of Charleston to respondents from Charleston; in a like manner, only those informants from I’On were presented with photographs from I’On. All photographs and survey questions were vetted through a focus group to help ensure the internal validity of the study.

A list of independent (*X*) variables is in Table 3 and a list of dependent (*Y*) variables is in Table 4. The meanings shared by informants in phase one of the study informed the development of these independent variables. Literature in environmental psychology makes it clear that place attachment is dependent on an individual’s perception of his or her environment (e.g. Altman and Low 1992; Manzo 2003). Therefore, increased levels of place attachment (*Y*) should positively correspond to increased perception of valuation of the measured elements (*X*) of the townscape of historic Charleston and I’On. The wording of questions to measure general attachment, dependence, identity and rootedness were based on the work by Williams and Roggenbuck (1989), Williams et al. (1995) and Williams and



Figure 3. Representative samples of the suburban development immediately to the west of I'On, historic Charleston and I'On. Source: Figure/ground drawings by author. Map images ©2009 Google - Imagery ©2009 DigitalGlobe, GeoEye, USDA Farm Service Agency, Map data ©2009 Tele Atlas.

Vaske (2003). The following demographic variables were also used: age, sex, race, ethnicity, income, location of residence, number of months out of the year that a person resides in the neighbourhood and the total length of time that a person has resided in the neighbourhood.

For this study the sample frame and the population are equivalent and consist of the two units of analysis for this study: (1) residents of historic Charleston and (2) residents of I'On. Using available census data, approximately 1800 adults live in historic Charleston and 1200 adults live in I'On.

Table 2. Comparison of architectural styles and urban design of historic Charleston and I’On.

Historic Charleston	I’On
	
	
	

Informants for phase one of the study were selected based on the following two requirements: they had to (1) be at least part-time residents of either I’On or historic Charleston and (2) be familiar with their neighbourhood and regularly walk in it. This purposeful sample was designed to collect relevant meanings from the neighbourhoods to inform the survey instrument and thus the results are not directly generalizable to the population.

A multimode approach was used to solicit for survey participants in I’On and historic Charleston in order to maximise response rates and reduce self-selection bias. The methods

Table 3. Independent (perception) variables.

Qualitative theme	Independent variables (Type)	Support in the literature
<i>(1) What physical characteristics of this place positively and negatively affect attachment?</i>		
Goal: Measure aesthetic preferences to specific photographs of historic Charleston, l'On, and controls		
Townscape experience	(1) Holistic townscape (nominal)	Walter (1988); Grange (1999)
Elements of townscape	(All ranked individually as ordinal; Likert scale)	Cullen (1961/2007); Bell (1999); Smith (2003); Wilson (1984); Orians (1986); Appleton (1975); Ulrich (1979, 1981, 1984); Kaplan and Kaplan (1989); Thayer and Atwood (1978); Herzog (1989); Sheets and Manzer (1991); Herzog and Chernick (2000); Kuo, Bacaicoa, and Sullivan (1998); Zhang et al. (2007); Sullivan, Kuo, and Depooter (2004); Heerwagen and Orians (1993); Lohr and Pearson-Mims (2006); Real et al. (2000); Marcus and Barnes (1999); Stamps (1999, 2000)
	(1) Walls, fences, or gates	
	(2) Fountains	
	(3) Trees	
	(4) Gardens	
	(5) Buildings	
	(6) The road	
	(7) The sidewalk	
Building experience	(1) Holistic building experience (nominal)	Stamps (1999, 2000); Nasar (1994); Herzog and Gale (1996)
Elements of buildings	(All ranked individually as ordinal; Likert scale)	Stamps (1999, 2000); Nasar (1994); Herzog and Gale (1996)
	(1) Doors	
	(2) Shutters	
	(3) Windows	
	(4) Balcony	
	(5) Roof	
Landscape layers, mystery, and discovery	(1) Perception of layers (ordinal; Likert scale)	Salingaros (2006); Kaplan, Kaplan, and Ryan (1998); Kaplan and Kaplan (1989); Hagerhall (2000); Herzog and Miller (1998); Lynch (1981)
	(2) Perception of mystery (ordinal; Likert scale)	
	(3) Perception of discovery (ordinal; Likert scale)	
Unseen effort	(1) Perception of unseen effort (ordinal; Likert scale)	Nassauer (1995); Lay and Reis (1994); Hagerhall (2000); Imam and Motloch (1997)
<i>(2) How is attachment influenced by the age of this place?</i>		
Goal: Measure perception of patina, decay, and the tendency to read landscape elements from specific photographs of historic Charleston, l'On, and controls		
Patina	(1) Valuation of patina (ordinal; Likert scale)	Milgram and Jodelet (1976); Galindo and Hidalgo (2005); Freewald (1989); Herzog and Gale (1996); Herzog and Shier (2000)
Reading the landscape	(1) Ability of certain landscape or building elements to tell a story of their origins (ordinal; Likert scale)	As method: Meinig (1979), Lewis (1970); Kniffen (1965); Glassie (1969); Jackson (1984); Spirn (1998)
<i>(3) How does the experience of spontaneous fantasy influence place attachment?</i>		
Goal: Measure the tendency to experience spontaneous fantasy in general and to specific photographs of historic Charleston, l'On, and controls		
Spontaneous fantasy	(1) Previous experience of spontaneous fantasy – general (ordinal; Likert scale)	Lowenthal (1998); Bell (1999); Riley (1997)
	(2) Previous experience of spontaneous fantasy – in case study area (ordinal; Likert scale)	
	(3) Experience of spontaneous fantasy from presented photo (ordinal; Likert scale)	

that were employed included community organisations asking their members to participate (the Charlestowne Neighbourhood Association and the l'On Trust), flyers left at every home in the neighbourhoods, flyers left at local businesses and articles in local newspapers advertising the survey.

For the phenomenology, the author recorded the audio of each interview and transcribed the responses for further analysis. The analytical framework of Van Manen (1990) was used to analyse the textual data with a focus on integrating the author's auto-phenomenological research (through literature and personal experiences), describing expressions of meaning and interpreting meanings

Table 4. Factors related to residing in Charleston relative to I’On^a.

	Baseline demo- graphic model (1)	With landscape elements (2)	With spontaneous fantasy (3)	With place dependence (4)
Age > 54 yrs.	3.172***	4.620***	5.009***	5.396***
Income > \$150K	2.121**	1.980*	2.185*	2.190**
Part-time resident (< 12 mo./yr.)	3.008***	2.597**	2.134	2.033
Resided > 5 yrs. in neighbourhood	5.212***	4.946***	5.480***	5.316***
Neighbourhood has high mystery		4.297***	3.173**	2.973**
Neighbourhood has unseen effort		4.431***	3.807***	3.579***
Spontaneous fantasy in own neighbourhood			5.363***	4.704***
High level of place dependence				2.162**
Pseudo R ²	.325	.505	.567	.580

^aExponentiated coefficients, 1 = no impact, <1 = negative impact, >1 = positive impact. *N* = 199.

p* < .1; *p* < .05; ****p* < .01.

within specific contexts. The goal was to uncover themes as a way to describe the ‘structures of experience’ (Van Manen 1990, 79) using a ‘wholistic or sententious approach’, a ‘selective or highlighting approach’, and, where necessary a ‘detailed or line-by-line approach’ (1990, 93). The author listened to the interviews repeatedly to extract particular essences from the narrative.

Quantitative data in the form of dependent and independent variables derived from the survey instrument was processed using the SPSS version 16 software programme. Because all data consisted of nominal or ordinal variables with no continuous variables, the choice of techniques was limited to non-parametric statistics. Chi-square tests were used to determine if there were any statistical differences in the responses of Charleston or I’On residents to the same questions. Binary logistic regression provided an opportunity to understand the degree of correlations between independent and dependent variables. Lastly, Spearman’s rank correlation coefficient was used to help explore which variables might have meaningful correlations.

Phase one results: the qualitative experience of historic Charleston and I’On and spontaneous fantasy

The following section is a summary of the qualitative results; see Wells and Baldwin (2012) for a full exploration and description of the experience of historic Charleston and I’On. The data is based on interviews with four males and three females from Charleston and two males and three females from I’On. The age of the informants ranged from approximately 25 to 75 years of age. On average, each interview lasted approximately thirty to forty-five minutes.

There was very little difference in terms of how the informants perceived and described their experiences of historic Charleston and I’On. Both groups described the townscape in terms of discrete, layered elements. Buildings, while important, were less so the following landscape elements: fountains, iron fences, masonry walls, ornamental gates and vegetation such as trees and gardens. Specific elements of buildings that informants found important included doors, windows, shutters and especially balconies. This layered quality of the landscape created a sense of discovery and mystery as informants described a strong desire to explore their neighbourhood. I heard many stories of people pausing to peep through a gate or a vegetative porthole to see what lay beyond. The informants often used phrases like ‘discovering secret places’ in their stories. In this sense, the landscape was a kind of mental puzzle – a pleasurable challenge to decipher and reassemble in the mind’s eye. A number of informants compared the richness of this experience to the visual poverty found in typical suburban environments, which are much more predictable. Informants from historic Charleston described an



Figure 4. Ruts in flagstone as catalysts for fantasy. Source: Dave.



Figure 5. These stairs catalysed a story about Civil War soldiers in Charleston. Source: Roger.

additional quality to this mental puzzle by deciphering the age of various landscape and building layers, mentally peeling back them back and then reading these layers as one would read the pages of a book. In this sense, the informants were creating a story about the past by reading the layers of age of building and landscape fabric. None of the informants from I'On described an experience like this in their neighbourhood.

Informants from historic Charleston and I'On also sensed the unseen effort required to maintain the beautiful gardens and houses in their neighbourhoods. The phrase most often connected with this experience was that 'people care' about their homes and yards and are willing to spend great effort in their upkeep in maintenance. In other words, the participants realised that the visual appearance of the townscape of both study areas requires much human effort to create and maintain, but this effort is rarely seen unless a resident happens to be walking by someone gardening or maintaining his or her house. This expression was unselfconscious and was never tied to things like increased property value; rather the informants simply felt good about being in a place in which people would expend the extra effort in maintaining the quality of place.

Entirely unique to historic Charleston is a phenomenon that I have termed a 'spontaneous fantasy' (Wells 2010). Informants described how, upon encountering an aged landscape or building element, an image or vignette from the past spontaneously appeared in their minds' eye. The experience was quite unlike a daydream, because the informants appeared to have no direct, conscience control over this phenomenon. In addition, these vignettes did not necessarily have a relation to an objective or known past, even though the depth of an objective past is much deeper in Charleston than it is in I'On. Whether or not a spontaneous fantasy occurred seemed to be most dependent upon seeing an appropriately decayed object in the right environmental context, which then acted as a catalyst. Most importantly, from the perspective of emotional attachment to place, an informant who described a spontaneous fantasy related a highly emotional experience that helped to bond him or her to historic Charleston.

Informants took photographs of the landscape elements that catalysed spontaneous fantasies, describing what was in their minds' eye as they were holding the camera, taking the photograph. For example, Dave (a pseudonym) described what was in his mind's eye while taking a picture of some ruts in flagstone along the street (Figure 4):

This is Longitude Lane. What I like about it is you can see the wagon ruts coming down. They would bring down the cotton, store the cotton before they exported it and you can see how heavy those wagons were because those are slate stones from Massachusetts. They put them there so they were strong enough to hold up those wagons. Down at the end, you can see the wagon ruts but on the right there is old wall of the warehouses. ... The docks were right off from there, they would load them up when the ships came up.

Dave admitted that he had no idea if the ruts were actually caused by waggons carrying cotton, but the veracity of the ruts was not important in terms of how he felt about the experience he was describing.

In a similar vein, Roger took a photo of some steps (Figure 5) because he imagined Civil War soldiers marching up and down the steps. Again, Roger had no idea if Civil War soldiers actually marched up these steps, but it was not important in its relation to the experience of his spontaneous fantasy.

Phase two results: measuring and correlating place attachment with environmental factors and spontaneous fantasy

The total number of survey responses from Charleston was 105 while the number of responses from I'On was 94, which corresponds to response rate of 5.6% for Charleston and 7.8% for I'On based on the total population of each neighbourhood, respectively. Both samples (historic Charleston and I'On) represent predominately older, white, affluent populations with a median gross family income in excess of \$150,000 per year and a median age of 55 to 64. Residents of Charleston are likely to be more wealthy, live part-time in their neighbourhoods and be older than their counterparts in I'On. There is no statistical difference in the proportion of men and women who live in either sample location.

A primary goal of this research is to understand the difference in environmental perception between residents of historic Charleston and I'On. Returning to the research design, revealing this difference is essential to understanding the nature of age value. One way to look at the degree of difference or similarity in variables related to environmental perception is through binary logistic regression. In order to accomplish the construction of this model, a dependent indicator variable representing residence in Charleston was created (i.e. 0 = a resident of I'On, 1 = a resident of Charleston). Additional independent demographic indicator variables were created to represent a respondent's age in excess of 54 years, family gross income in excess of \$150,000 per year, being a part-time resident (less than 12 months out of the year) and whether or not a respondent had lived in his or her neighbourhood for greater than 6 years. Additional independent indicator variables representing environmental perception were also created: whether or not a respondent thought his or her neighbourhood had a high level of mystery, unseen effort and if the respondent experiences spontaneous fantasy in his or her neighbourhood. Lastly, an independent indicator variable representing whether or not a respondent had a high level of place dependence was added into the model. With the exception of the demographics, these variables were chosen for their ability to reduce the model's overall error (expressed through the pseudo R^2 statistic). In a step-wise fashion, Table 4 represents the results of this model. The final model explains nearly 60% of the variance in the respondent's answers.

The majority of residents of both Charleston and I'On view their neighbourhoods as composed of layers and containing mystery, discovery and unseen effort (Table 5). In addition, the townscape was predominantly perceived as being atomistic versus holistic; the results were similar for building perception. Of the individual townscape elements, all features in both populations were highly valued with the exception of the road. In similar fashion, all elements of a building were also highly valued.

In the construction of the model in Table 4, four variables were found to be significantly different between respondents in Charleston and I'On: mystery, unseen effort, spontaneous fantasy and place dependence. These variables agree well with the results of the chi-square tests which can be found in the descriptive statistics of Table 5. Using model 4 of Table 4, residents of Charleston in comparison to I'On are three times more likely to experience a high level of mystery, unseen effort and spontaneous fantasy in their neighbourhood. Of particular importance is that residents of Charleston are five times more likely than those in I'On to experience spontaneous fantasy – this factor is the largest difference between the two populations. In addition, residents of Charleston are twice as likely to report a high level of place dependence for their neighbourhood. Place dependence can also be conceptualised in terms of uniqueness, a characteristic that often arose in participant interviews. For instance, Roger described places other than historic Charleston as 'boring'. For him, visiting an average neighbourhood is 'like walking into an art gallery and everything on the wall looks the same'.

There is no statistical difference between respondents' view of their neighbourhood as consisting of layers and in viewing buildings holistically and not as individual elements (see Table 5). Respondents' view of their townscape as holistic versus atomistic and a perception of their neighbourhood as full of mystery and discovery are statistically different in Charleston and I'On. These effects are most prominent in differences in how residents are attached to their neighbourhoods.

In the design of this study, 'generic' suburban controls with equivalent photo prompts were selected to test the concepts of layered townscapes, mystery, discovery and unseen effort and see if residents of Charleston and I'On would respond any differently to suburban landscapes versus their own neighbourhoods. The residents' responses are nearly a perfect inverse of the responses for their own neighbourhoods (refer to Table 5).

The independent variables that account for age value are the valuation of two kinds of masonry patina (pillar and wall) and the degree to which a respondent engages in reading the layers of age in the landscape. Overall, these variables accounted for very little reduction in error in the overall model (Table 4) and as such, are not included in this model. The descriptive statistics (Table 5) support the contention that residents of Charleston and I'On do not have different perceptions of these phenomena, based on the chi-square statistic.

Table 5. Descriptive statistics for landscape perception.

View townscape holistically or atomistically vs. location (%) ^a									
Atomistic view of landscape		Holistic view of landscape		Not sure					
Historic Charleston	65.7		25.7						
I'On	49.5		45.1						
Important and very important townscape elements vs. location (% out of 100% per column category) ^b									
Walls, fences, gates		Fountains ^b		Trees		Buildings ^b		Road	
Historic Charleston	91.0		71.5		98.7		97.3		91.0
I'On	80.0		90.0		98.0		87.7		91.4
View individual buildings holistically or atomistically vs. location (%) ^c									
Atomistic view of a building		Holistic view of a building		Not sure					
Historic Charleston	52.9		43.3						
I'On	59.3		40.7						
Important and very important building elements vs. location (% out of 100% per column category) ^d									
Doors		Windows ^d		Shutters		Balcony		Roof	
Historic Charleston	89.8		96.6		98.3		88.3		60.0
I'On	79.6		77.7		90.7		96.3		53.7
Viewing the townscape as composed of layers vs. location (%) ^e									
Strongly agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree	
Historic Charleston	22.1		53.8		13.5		4.8		5.8
I'On	29.7		51.6		7.7		6.6		4.4
Viewing the townscape as containing mystery vs. location (%) ^f									
Historic Charleston	52.9		33.7		10.6		1.9		1.0
I'On	15.6		54.4		18.9		10.0		0.0
Viewing the townscape as a place to discover vs. location (%) ^g									
Historic Charleston	39.0		39.0		17.1		3.8		1.0
I'On	33.7		58.4		4.5		3.4		0.0



<i>Viewing the townscape as containing unseen effort vs. location (%)^h</i>					
Historic	62.9	31.4	3.8	1.9	0.0
Charleston					
I'On	23.3	45.6	23.3	6.7	0.0
<i>Viewing suburban development as containing layers vs. location (%) – controlⁱ</i>					
Historic	0.0	13.5	31.7	30.8	19.2
Charleston					
I'On	1.1	5.6	17.8	38.9	3.3
<i>Viewing suburban development as containing mystery vs. location (%) – control^j</i>					
Historic	0.0	0.0	1.9	27.6	4.8
Charleston					
I'On	1.1	0.0	1.1	34.8	3.3
<i>Viewing suburban development as a place to discover vs. location (%) – control^k</i>					
Historic	0.0	0.0	2.9	31.4	0.0
Charleston					
I'On	1.1	1.1	6.7	30.0	0.0
<i>Viewing suburban development as containing unseen effort vs. location (%) – control^l</i>					
Historic	1.9	19.2	32.7	31.7	0.0
Charleston					
I'On	1.1	25.6	33.3	24.4	2.2

^aDifference between locations significant with $p < .005$ (chi-square); Chas.: $N = 105$, I'On: $N = 91$.

^bDifference between locations significant with $p < 0.05$ (chi-square) – significance reflects entire response distribution and not just the 'important' and 'very important' responses; N varies between 48 and 78, depending on category.

^cDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 104$, I'On: $N = 91$.

^dDifference between locations significant with $p < 0.05$ (chi-square) – significance reflects entire response distribution and not just the 'important' and 'very important' responses; n varies between 54 and 59, depending on category.

^eDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 104$, I'On: $N = 91$.

^fDifference between locations significant with $p < 0.001$ (chi-square); Chas.: $N = 104$, I'On: $N = 90$.

^gDifference between locations significant with $p < 0.05$ (chi-square); Chas.: $N = 105$, I'On: $N = 89$.

^hDifference between locations significant with $p < 0.001$ (chi-square); Chas.: $N = 105$, I'On: $N = 90$.

ⁱDifference between locations significant with $p < 0.05$ (chi-square); Chas.: $N = 104$, I'On: $N = 90$.

^jDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 105$, I'On: $N = 89$.

^kDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 105$, I'On: $N = 90$.

^lDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 104$, I'On: $N = 90$.

Most of the respondents found both examples of masonry patina to be pleasant or strongly pleasant and engaged in reading the layers of age in the neighbourhood's landscape. This result is not surprising because informants in both I'On and historic Charleston expressed appreciation for older architectural styles and traditional urban forms; in other words, there is an appreciation for things 'old'. All of these responses are positively skewed. Variables associated with age value are related to certain place attachment measures and to the experience of spontaneous fantasy (Table 6).

Returning to the model in Table 4, the experience of spontaneous fantasy in a respondent's own neighbourhood was the largest difference between residents of Charleston and I'On with the former five times more likely to experience this phenomenon. An important question is what other variables are associated with the general phenomenon of spontaneous fantasy in historic places. In other words, do other elements of an environment seem to help catalyse spontaneous fantasy? To answer this question, two binary logistic models were built incorporating the independent indicator variables associated with finding masonry wall patina strongly pleasant and engaging in reading the layers of age in a landscape. These independent variables were chosen for their statistical significance and for the maximum reduction in error. The first model incorporates a dependent indicator variable that represents whether or not a respondent experiences spontaneous fantasy in any historic place (i.e. not specific to his or her particular neighbourhood). The second model incorporates a dependent indicator variable that indicates whether or not a respondent experiences spontaneous fantasy when looking at a specific photo of historic Charleston chosen to elicit this phenomenon. The results of both models are in Table 7.

The results indicate that finding masonry wall patina strongly pleasant and engaging in reading the layers of age in a landscape increase the chances of experiencing spontaneous fantasy by a factor of between two and five, depending on the independent and dependent variables. Therefore, it is possible to conclude that the age value appears to be associated with the experience of spontaneous fantasy. Ann provided some context to this relationship between age and fantasy, when she explained how in looking at the old buildings and landscapes, makes her imagine the 'end of the [neighbourhood] – the jungle is going to get it one day. [H]ave you ever seen the *Jungle Book*? ... There's this old city that's now inhabited by monkeys, but it's half vegetation and half old stones. You get a feeling that ... something is happening that's bigger than our little moment and you're kind of glimpsing some future where that could be a possible, you know, we're now going to the jungle or maybe not.'

Descriptive statistics for spontaneous fantasy variables are located in Table 8. It is interesting to note that the general experience of spontaneous fantasy in historic places and as catalysed by the photo from historic Charleston is not statistically different between residents of Charleston and I'On. Only the experience of spontaneous fantasy in a respondent's own neighbourhood is statistically different between the two samples.

In order to answer the question upon what phenomena or elements place attachment is dependent, a model to represent which independent variables are associated with a high level of overall place attachment (Table 9) was created followed by four models representing independent variables associated with general place attachment, place dependence, place identity and rootedness (Tables 10–13). Descriptive statistics for these models are in Table 14.

The first model in Table 9 uses a dependent indicator variable that represents the aggregate of all responses that are in the category of 'strongly agree' for general place attachment, place dependence, place identity and rootedness. The aggregation of place attachment measures resulted in the largest amount of error reduction for the model in comparison with examining each place attachment dimension individually. In addition to the same independent demographic variables used in the model for Table 4, indicator variables were created to represent whether or not a respondent experienced a high level of mystery, unseen effort, spontaneous fantasy in his/her neighbourhood and catalysed by a photo of historic Charleston and whether or not masonry pillar patina was strongly pleasant. In Charleston, while a high level of mystery and the experience of spontaneous fantasy catalysed by the photo are not statistically significant, the other independent variables are significant and represent factors between 8 and 10. Unseen effort is the only environmental perception variable that is significant for I'On. Of

Table 6. Descriptive statistics for age value.

	Strongly pleasant	Pleasant	Neither pleasant nor unpleasant	Unpleasant	Strongly unpleasant	Not sure
<i>Masonry pillar patina valuation, example 1 (%)^a</i>						
Historic Charleston	19.0	41.9	23.8	12.4	2.9	0.0
I'On	12.2	43.3	16.7	22.2	4.4	1.1
<i>Masonry wall patina valuation, example 2 (%)^b</i>						
Historic Charleston	21.0	40.0	19.0	15.2	4.8	0.0
I'On	16.7	32.2	20.0	28.9	2.2	0.0
<i>Engage in reading the layers of age in the townscape (%)^c</i>						
Historic Charleston	11.4	52.4	13.3	18.1	4.8	0.0
I'On	8.9	54.4	15.6	17.8	2.2	0.0

^aDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 105$, I'On: $N = 90$.

^bDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 105$, I'On: $N = 90$.

^cDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 105$, I'On: $N = 90$.

Table 7. Factors related to the experience of spontaneous fantasy^a.

	In generic historic neighbourhood (1)	Catalysed by Charleston photo (2)
Masonry wall patina strongly pleasant	4.871***	2.781**
Engages in reading the landscape	3.383***	2.463***
Pseudo R^2	.176	.101

^aExponentiated coefficients, 1 = no impact, <1 = negative impact, >1 = positive impact. $N = 199$.

** $p < .05$; *** $p < .01$.

Table 8. Descriptive statistics for spontaneous fantasy.

	Frequently	Somewhat frequently	Occasionally	Rarely	Almost never	Not sure
<i>Previous experience of spontaneous fantasy in any historic place (%)^a</i>						
Historic Charleston	38.1	22.9	36.2	2.9	0.0	0.0
I'On	35.2	34.1	27.3	2.3	1.1	0.0
<i>Experience of spontaneous fantasy in own neighbourhood (%)^b</i>						
Historic Charleston	32.7	22.1	34.6	8.7	1.9	0.0
I'On	2.2	11.2	33.7	34.8	18.0	0.0
<i>Spontaneous fantasy catalysed by photo of Charleston (%)^c</i>						
Historic Charleston	19.4	42.7	23.3	13.6	0.0	1.0
I'On	14.8	48.9	20.5	11.4	2.3	2.3

^aDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 105$, I'On: $N = 88$.

^bDifference between locations significant with $p < 0.001$ (chi-square); Chas.: $N = 104$, I'On: $N = 89$.

^cDifference between locations *not* significant with $p > 0.05$ (chi-square); Chas.: $N = 103$, I'On: $N = 88$.

note is the fact that income is significant for both locations, although Charleston respondents are 5.6 times more likely to have a high income, while a high income in I'On decreases the likelihood of a high level of place attachment by a factor of 0.358.

The next step is to analyse the relationship between the four dimensions of place attachment and a variety of similar independent variables. As with the previous model, these models were constructed both for the significance of the independent variables as well as to reduce the overall error. Note that for all of these models, the R^2 value is indicative of a low amount of variation in how respondents answered the place attachment questions. In the case of a high level of general place attachment (see Table 10), significant variables for Charleston are a high age for an individual, the holistic perception of townscape, a high level of unseen effort, finding masonry patina strongly pleasant, the experience of spontaneous fantasy in a respondent's neighbourhood and attributing a high value to buildings.

Table 9. Factors related to high overall level of place attachment^a.

	Historic Charleston (1)	I'On (2)
Age > 54 yrs.	2.441	2.129
Income > \$150K	5.603**	.358*
Part-time resident (< 12 mo./yr.)	.425	1.971
Resided > 5 yrs. in neighbourhood	1.027	1.0
High level of mystery	1.513	2.259
High level of unseen effort	10.372**	2.673*
Masonry pillar patina strongly pleasant	8.057*	2.919
High spont. fantasy in own neighbourhood	8.161*	1.0
Spont. fant. catalysed by hist. Chas. photo	1.444	1.276
Pseudo R^2	.322	.259

^aExponentiated coefficients, 1 = no impact, <1 = negative impact, >1 = positive impact. Chas.: $N = 105$, I'On: $N = 94$.

* $p < .1$; ** $p < .05$.

Table 10. Factors related to high level of general attachment^a.

	Historic Charleston (1)	I'On (2)
Age > 54 yrs.	4.120*	4.010**
Income > \$150K	1.538	.497
Part-time resident (< 12 mo./yr.)	.959	1.970
Resided > 5 yrs. in neighbourhood	1.078	–
Townscape is holistic, not atomistic	3.857*	.931
Has sense of discovery	.497	3.289
High level of unseen effort	9.258**	2.726*
Masonry pillar patina strongly pleasant	8.559**	2.888
Spontaneous fantasy in own neighbourhood	4.170*	–
Spont. fant catalysed by hist. Chas. photo	2.634	.996
Buildings have high value	5.185**	.623
Pseudo R^2	.327	.309

^aExponentiated coefficients, 1 = no impact, <1 = negative impact, >1 = positive impact. Chas.: $N = 105$, I'On: $N = 94$.

* $p < .1$; ** $p < .05$.

Table 11. Factors related to high level of place dependence^a.

	Historic Charleston (1)	I'On (2)
Age > 54 yrs.	.301*	.694
Income > \$150K	3.253**	.314*
Part-time resident (< 12 mo./yr.)	.918	3.254
Resided > 5 yrs. in neighbourhood	.766	1.316
Townscape is holistic, not atomistic	2.973*	1.088
Has sense of discovery	1.821	1.093
Masonry wall patina strongly pleasant	.298*	.808
High spont. fantasy in own neighbourhood	2.464*	.913
Spont. fant catalysed by hist. Chas. photo	.777	3.576*
Trees have high value	3.027**	2.416
Pseudo R^2	.240	.160

^aExponentiated coefficients, 1 = no impact, <1 = negative impact, >1 = positive impact. Chas.: $N = 105$, I'On: $N = 94$.

* $p < .1$; ** $p < .05$.

For I'On, an individual's age and a high level of unseen effort are significant, but none of the other independent variables.

For place dependence in Charleston (see Table 11) high age and finding masonry wall patina strongly pleasant are associated with a decrease in dependence while a high income, the perception of the townscape as holistic, a high level of spontaneous fantasy and attributing a high value to trees are all associated with a significant increase in place dependence. The informants often commented

Table 12. Factors related to high level of place identity^a.

	Historic Charleston (1)	I'On (2)
Age > 54 yrs.	1.652	.774
Income > \$150K	2.488**	.317*
Part-time resident (< 12 mo./yr.)	.775	2.297
Resided > 5 yrs. in neighbourhood	1.893	2.396
Masonry wall patina valued	.407**	.533
Engages in reading the landscape strongly	4.113**	1.799
Pseudo R ²	.175	.160

^aExponentiated coefficients, 1 = no impact, <1 = negative impact, >1 = positive impact. Chas.: N = 105, I'On: N = 94.

* $p < .1$; ** $p < .05$.

Table 13. Factors related to high level of rootedness^a.

	Historic Charleston (1)	I'On (2)
Age > 54 yrs.	1.261	.583
Income > \$150K	2.144*	.350**
Part-time resident (<12 mo./yr.)	1.202	2.913
Resided > 5 yrs. in neighbourhood	2.723**	1.367
High level of unseen effort	1.972*	1.763
Pseudo R ²	.156	.096

^aExponentiated coefficients, 1 = no impact, <1 = negative impact, >1 = positive impact. Chas.: N = 105, I'On: N = 94.

* $p < .1$; ** $p < .05$; *** $p < .01$.

Table 14. Descriptive statistics for place attachment.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Not sure
<i>General place attachment (%)^a</i>						
Historic Charleston	75.2	22.9	1.0	0.0	0.0	1.0
I'On	62.0	29.3	5.4	2.2	1.1	0.0
<i>Place dependence (%)^b</i>						
Historic Charleston	52.4	20.0	18.1	6.7	1.9	1.0
I'On	23.9	25.0	29.3	19.6	2.2	0.0
<i>Place identity (%)^c</i>						
Historic Charleston	43.8	36.2	14.3	2.9	1.9	1.0
I'On	18.5	37.0	29.3	10.9	3.3	1.1
<i>Rootedness (%)^d</i>						
Historic Charleston	59.6	28.8	10.6	1.0	0.0	0.0
I'On	40.0	48.9	7.8	1.1	2.2	0.0

^aDifference between locations not significant with $p > 0.05$ (chi-square); Chas.: N = 105, I'On: N = 92.

^bDifference between locations significant with $p < 0.05$ (chi-square); Chas.: N = 105, I'On: N = 92.

^cDifference between locations significant with $p < 0.05$ (chi-square); Chas.: N = 105, I'On: N = 92.

^dDifference between locations significant with $p < 0.05$ (chi-square); Chas.: N = 105, I'On: N = 92.

on the quality of trees in historic Charleston, especially for their ability, as Sam described, to make a 'tunnel' effect as they grow over both sides of the street and created a completely enclosed canopy over the street. For I'On, a high income is associated with a decrease in place dependence while the experience of spontaneous fantasy catalysed by a photo of historic Charleston are associated with an increase in dependence.

Place identity in Charleston is associated with a high income level while the valuation of masonry wall patina is associated with a decrease in dependence (see Table 12). For I'On, a high income level is associated with a decrease in place dependence with no other factors being significant.

Table 15. Compatibility of findings by location for physical elements.

Qualitative theme (phase one)	Quantitative findings (phase two)	
	Historic Charleston	I'On
Perception of landscape is atomistic, not holistic	Majority of sample view landscape as atomistic	Even split between atomistic/holistic view of landscape*
Landscape elements are important, such as trees, fountains, gardens, and bounding elements	High (>90% of sample) preference for trees, gardens, buildings, bounding elements, and sidewalk; moderate (70% of sample) preference for fountains; low (40% of sample) valuation for road	High (>80% of sample) valuation of trees, gardens, fountains, buildings, sidewalk, and bounding elements; moderate (60% of sample) valuation of road
Building elements are important, such as doors, windows, shutters, and balconies	High (>88% of sample) valuation of shutters, doors, windows, and balconies; moderate (60% of sample) valuation of roofs	High (>90% of sample) valuation of balconies and shutters; moderate (<80% of sample) valuation of doors, windows, and roof
Neighbourhood landscape consists of discrete layers	Majority of sample perceive neighbourhood photo as layered	Majority of sample perceive neighbourhood photo as layered
Neighbourhood has a sense of discovery	Majority of sample think neighbourhood photo has a sense of discovery	Majority of sample think neighbourhood photo has a sense of discovery
Neighbourhood is full of mystery	Majority of sample think neighbourhood photo has mystery	Majority of sample think neighbourhood photo has mystery
Neighbourhood has high level of unseen effort	Majority of sample think neighbourhood photo contains high degree of unseen effort	Majority of sample think neighbourhood photo contains high degree of unseen effort

*Result appears to contradict qualitative findings.

Lastly, in Charleston rootedness is associated with a high income level, a greater time of residence and a high level of unseen effort (see Table 13). For I'On, as with place identity, only income is negatively associated with rootedness. No positive factors were located that were significant.

Discussion

The phenomenology in phase one exposed several important themes that focused on the individual elements of the townscape, including buildings and perception of a layered townscape full of discovery, mystery and unseen effort. Informants' discussions failed to describe the townscape in a holistic sense – in other words, specific townscape elements were prominent and could easily be differentiated rather than blending together into a singular composition. Without prompting, the informants immediately jumped into describing discrete elements of their environment, literally dissecting the townscape into quanta of meanings. The meanings shared by informants from Charleston and I'On were quite consistent with each other and there was no pattern of differentiation based on the environment.

Table 15 summarises the results of the quantitative study in relation to the qualitative meanings from the earlier study. With the exception of a finding in I'On in regard to overall landscape perception, these quantitative results are all consistent with the qualitative meanings. Based on these results, it is possible to generalise that the populations of historic Charleston and I'On place a high value on trees, gardens, buildings and bounding elements such as fences and gates. Moreover, these populations consistently perceive their neighbourhood's townscape as layered and full of discovery, mystery and unseen effort. These latter results are reinforced by the suburban controls wherein respondents indicated that a typical suburban environment *does not* have layering, discovery, mystery, or unseen effort. Differences in perception of these physical elements of landscape can therefore be attributed to the environment's design and form rather than differences in the population.

While the quantitative results mostly show no statistical difference between the independent variables for historic Charleston and I'On, two variables did have significant differences. Respondents from Charleston thought that their neighbourhood has more unseen effort and mystery than respondents from I'On by a factor of three or more (see Table 4). There are a number of reasons why this may be the case, including a slightly different demographic makeup in Charleston (people are older and more

wealthy and have lived in the area longer) to physical differences between the two neighbourhoods, chiefly in regard to age of the environment. This latter possibility will be explored in the next section.

The phenomenology in phase one revealed important differences between informants in historic Charleston versus I'On in regard to age value. Only informants from historic Charleston discussed the physical age of their neighbourhoods (e.g. patina) and engaged in reading the layers of age in their neighbourhood's townscape. These results make sense because I'On does not have physical age – at least not the 100 or more years of patina created by the influence of time. For comparison, all respondents from I'On answered the same questions as those from Charleston. In the case of I'On residents, the photo prompts consisted of images from historic Charleston.

The quantitative results indicate that residents from both locations positively value masonry patina and engage in reading the layers of age from the sample photo from Charleston, with no statistical difference between locations. The similarity between locations suggests that as far as age value is concerned, differences in perception and valuation are due to environmental factors and not necessarily to the characteristics of the individual population.

As with age value, the phenomenology in phase one indicated that only informants from historic Charleston revealed the phenomenon of spontaneous fantasy. The study in phase two confirmed that indeed, residents of historic Charleston experience spontaneous fantasy in their own neighbourhoods to a high degree; this phenomenon was not entirely absent in I'On, but less than 15% of the respondents indicated that they experienced spontaneous fantasy on a frequent basis compared to over 50% for residents from historic Charleston.

The important factor that relates to the experience of spontaneous fantasy is the environment and not the individual, based on the result that residents of Charleston and I'On responded in statistically identical ways to the same photo prompt from historic Charleston. In fact, the response to the photo prompt by residents of both neighbourhoods is strikingly similar. In addition, both groups of residents reported a statistically identical tendency to experience spontaneous fantasy in *any* historic environment.

The factors that correlate with spontaneous fantasy are exclusively those that relate to age value – namely the positive valuation of patina and the tendency to engage in reading the layers of age in a landscape. That this relationship exists should not be surprising as spontaneous fantasy is related to the experience of physical age in an environment. Therefore, spontaneous fantasy can be divided into two primary factors: (1) an individual must have a positive valuation of the patina in an environment and (2) be cognitively engaged in 'reading' this environment.

Conclusion

There is lack of empirical evidence to justify accepted practice in the conservation of the historic environment (Avrami, Mason, and Torre 2000, 10; Galindo and Hidalgo 2005, 25; Mason 2008, 315; Pendlebury 2009). This study provides such evidence by elucidating the fundamental differences in the experience of new and old urban residential environments. While the appearance of decay and patina clearly differentiate an old environment from a new one, it is the psychological impact of this decay on residents that has particular import for heritage conservation practice. Decay (or, in a more positive sense, patina) appears to be necessary in order for an historic environment to feel authentic. The phenomenon of people experiencing spontaneous fantasies, which are catalysed by this patina, is part of this unconscious process of people assessing the authenticity of their environments. Those who are charged with maintaining the authenticity of historic environments could use this evidence to substantiate efforts to maintain a certain degree and kind of decay in building and landscape elements. Further research, however, is necessary to establish the desirable balance point is between decay and patina in order to maximise people's emotional attachment to place.

The results of this study reinforce the importance of the spaces in between buildings in an urban context, which are as important – if not more so, in some cases – than the buildings themselves. The layered quality of the landscape in historic Charleston and I'On helps to create a sense of discovery

and mystery that led to increased levels of place attachment. While conservation practice has been moving toward a holistic view of landscape, rules and regulations are still based on buildings as the primary units of significance while largely ignoring the quality of landscape in the assessment and protection of authenticity.

Lastly, this study may provide evidence as to why it is essential that conservation planning processes seek an understanding of the values and perceptions of civil experts (everyday people) in order to balance expert rule that dominates the field (Mason 2006; Smith 2006; Kaufman 2009; King 2009; Pendlebury 2009; Schofield 2009; Harrison 2013). If we understand that the conservation of the historic environment is for the benefit of people, the natural conclusion is that we therefore ought to understand how people value the historic environment. The correlation between patina, spontaneous fantasy and place attachment could offer a powerful tool for conservation planning and a way to increase human flourishing in urban contexts.

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