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Smell and sound expectation and the ambiances of English cities

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Abstract. *This paper examines the role of expectation of two different aspects of urban ambiance (smell and sound), on people's experiences and perceptions of urban environments. It draws from two separate sensewalking studies of English cities. The first, examining expectations of odor in Doncaster, Manchester, Sheffield and London: the second, expectations of soundscapes in Manchester and London. In drawing from these investigations, sensory expectations are found highly influential in urban place experience and perception, providing different layers of meaning and understanding of place. Furthermore, perceptions of odors and sounds themselves (their detection and mental processing) are also revealed as influenced by the environmental context within which they are, or are not, detected.*

Keywords: expectation, perception, sensewalking, smell, sound, urban

Introduction

Although western cities are generally designed by architects and urban planners with an emphasis on visual components, urban ambiances are created and experienced as a product of different, sometimes unique, blends of sights, sounds, smells, textures, tastes and thermal conditions, resonating with our individual and collective memory. It is only in relatively recent years that scholarly activity has provided more detailed illumination on the unique characteristics of non-visual senses, with this frequently being focussed on individual senses and organised within specific disciplines e.g. acousticians, thermal researchers, perfumers. Although studies into sensory expectations of consumer products and retail and entertainment environments have started to emerge (see for example the work of Lindstrom, 2005a, 2005b), research into people's expectations of urban environments and the different types of spaces within them, remains limited. This paper examines the role of expectation with respect to interactions between urban environmental context and perceptions of odor and sound. It will do so by drawing from the findings of two distinctly separate, yet over-lapping studies carried out in English Cities. Before moving on to describe the methodolological context of these studies and examine similarities and contrasts in their findings, it is first useful to outline what we mean when we describe sensory expectation and perception.

Expectation is defined in the Oxford English Dictionary (2010) as "*A strong belief that something will happen or be the case in the future, or the series of events which are anticipated prior to an experience*"[1]. Huron (2007) likens expectation to a cliché; a stereotype for a context or situation, and Nikolopoulou & Steemers (2003) apply such an understanding of expectation to that of the environmental context describing it as relating to *"what the environment should be like, rather than what it actually is"* (p. 97). The term expectation is

1. http://oxforddictionaries.com/definition/expectation?region=us

therefore used in this paper to compare or draw a distinction between the likelihood of events happening, and people's anticipation of the occurrence of events, within particular environmental contexts. Furthermore, given the focus of this paper upon sensory expectations of ambient urban environments, such "events" are considered with regards to olfactory and auditory aspects of the ambient environment specifically. Put plainly, this paper is interested in what smells and sounds people expect to detect in urban environmental contexts and how this relates to people's perceptions of both those smells and sounds and the environments within which they are, or are not perceived. Perception of a context forms part of competence or tacit knowledge (Truax, 2001) of the structural relationship, between a sensory environment and activity within that environment. These structures relate to the context of an area in which a person is present. Context is defined as the *"circumstances that form the setting for an event, statement, or idea, and in terms of which it can be fully understood and assessed"* (Burke, 2005).

Rodaway (1994, pp. 10-13) notes that sensory perception is referred to across disciplines with two different meanings; perception as the detection of information through the senses, and perception as mental insight made up of sensory information combined with memories and expectations. This paper thus refers to perception as both the detection of smells and sounds in the urban ambient environment and their respective mental processing. Sensory perception thus refers to the insights that people gain into the physical and socially constructed environment, by attaching meaning through association, following the potential detection and identification of sensory information. One cautionary note however, as Engen (1991, p. 86) observes of the perception of odors, *"…perception is situational, contextual, and ecological"* and thus perception of any one smell or sound has potential to change from place to place according to expectations.

Methodology

This paper draws from two separate, but related sensewalking studies implemented in English cities. The first, examined expectations of smell in the ambient urban environment in Doncaster (52 participants), Manchester, Sheffield and London (82 participants across the three cities) including fieldwork implemented in 2004, 2005 and 2009 as part of the Vivacty2020 Project[2] on urban sustainability and 24 hour cities; the second, examined expectations of sound in the ambient environment in Manchester and London (42 participants), with fieldwork implemented in 2008 and 2009 as part of The Positive Soundscapes Project[3]. Although these two studies followed two separate lines of enquiry, each focused upon one specific sensory aspect of urban ambience i.e. smell and sound, the authors regularly communicated regarding methods, analysis and findings. Differences and similarities in the studies were examined as they progressed; further developing ideas and understanding regarding the phenomena observed, with observations regarding expectation being reported here.

Sensewalking is described by Adams and Askins (2009) as a varied method by which researchers can *"investigate and analyse how we understand, experience and utilise space"*[4] and usually involves a researcher walking alone, or with participants through particular, often urban environments, and focussing upon one or more aspect of the sensory environment. The method emerged in the late 1960s and early 1970s and is generally accredited to Schafer and his colleagues at Simon Fraser University, who used soundwalks as a means of exploring and recording urban soundscapes as part of the World Soundscapes Project (Schafer, 1994). Sensewalks have subsequently been incorporated into a number of differ-

2. www.vivacity2020.eu
3. www.positivesoundscapes.org
4. www.sensescapes.co.uk/RGSSensewalkingCFP2009.htm accessed 1st July 2009

ent studies and have been argued to present distinct advantages in examining perceptions of sensory information within the environments within which they are perceived. For more detailed observations on the usefulness of sensewalking in exploring urban soundscapes, see Adams (2009) and Bruce & Davies (2009); for urban smellscapes, see Henshaw *et al.* (2009).

Of those sensewalks considered in this paper, the majority were walks with individuals, implemented on a pre-determined route and carried out in silence to allow participants to focus upon olfactory/auditory information. The walks took between 45 and 90 minutes and included stopping points in different types of urban areas (e.g. public urban squares, markets, international districts, primary retail areas, mixed use areas, green spaces and busy roads). At each of these stopping points, silence was broken and participants in both studies were asked questions regarding: the smells/sounds detected whilst walking and whilst stood within the stopping point area; whether these matched their expectations of the particular areas and why/why not; and whether these might change depending upon different times of the day or year. In addition, the 52 participants in the smell study in Doncaster were asked to rate their liking of each stopping point area on a five point scale, and their liking of the smells they detected, with their reasons for these ratings being further investigated through qualitative interviewing.

Smell and sound expectation

"…noisy traffic, noisy people, noisy buses, people footsteps, girls with high heels make clack, clack sounds, it's what you'd expect in the city centre."

Participants of the two studies were found to associate both the smells and sounds of vehicular traffic and people with generic English urban environments. Food was also mentioned in both studies, directly with respect to smell in the form of food products such as those sold in local shops and markets, and those of cooking food, whether being cooked, sold or eaten in the street or released from indoor environments through the use of modern ventilation systems. The sounds of such ventilation systems were also associated with generic urban environments, as were odors of coffee, factories and waste. Occasionally, odors of construction were associated with cities however, people were more likely to associate construction sounds with towns and cities than related smells. Similarly, sounds of nature such of those of birdsong, wind and trees blowing were often mentioned, whereas smells of nature were expected more frequently by participants from some cities (London and Sheffield) than others (Manchester and Doncaster).

These findings match those of studies in other countries with respect to sound (see Guastavino & Dubois, 2006; Dubois, Guastavino & Raimbault, 2006). Few previous studies have examined those odors specifically associated with generic urban environments although authors such as Ivan Illich (1986 *in* Zardini, 2005, p. 268) outline stereotypical modern smellscapes: *"…Increasingly the whole world has come to smell alike: gasoline, detergents, plumbing, and junk foods coalesce into the catholic smog of our age."* Although participants did detect many of those odors that they had expected of urban environments once walking through the city, they also detected a much wider variety of additional odors than they previously outlined. Similarly, those sounds associated with generic urban environments were also detected during the walk and in most areas.

It is worth noting here too that expectations of both sound and smell have changed over time; although cities have become increasingly noisy places to be, as was highlighted as far back as the 1960's (Southworth, 1969), the smell environment has been increasingly controlled through processes of separation, deodorization, masking and scenting (Henshaw, 2011, adapted from Rodaway, 1994), influenced by wider forces of globalization and capitalism. As a result, the variety and strength of manufacturing odors detected in cities today has declined both in number and concentration, accompanied by changing expectations, *"You*

got smells from factories as well… I think that was the norm, but you accepted it then didn't you, nowadays if you got it you'd think it was different wouldn't you?" People's expectations of the sensory stimuli that they will detect in areas also changes according to time of the day, week or year, influenced by activities, environmental changes such as that of local vegetation and animal migration patterns, and with behaviors as people open their doors and windows out into the street in hotter weather and indoor smell and sound environments bleed out into the street.

The analysis of people's experiences whilst undertaking sensory walks also revealed that smell and sound expectation varied from place to place and between individuals. Expectations were dependent upon people's prior experiences of specific areas visited, past experiences of similar places or activities undertaken within those areas, and related judgements made. This included seemingly mundane observations such as expectations of smells of sawdust outside a pet-shop or construction site, the sound of voices in highly populated streets or expectation of bird song in public green areas. It also included more generalised expectations relating to area characteristics such as those associated with "run-down" areas, believed to smell of traffic fumes, grease, smoke, urine and vomit. Areas dominated by the evening economy were associated with smells of smoke, beer, urine and vomit, even when such odors could not be detected, and sounds of music, shouting and revelry. Unlike sounds expectations, which were generally confirmed on a site by site basis, odor experiences of "run-down" or evening dominated areas frequently varied from expectations. When expected odors were not detected, participants often sought them out, explaining their absence as being a consequence of wind direction or temperature.

Some odors, such as those of cigarette smoke, traffic emissions or those emitted by food sources, were detected in most of the sites visited, although traffic emissions were detected to a lesser degree in partially or fully pedestrianised areas. Given that odors of traffic emissions were almost always perceived in negative terms, the reduction of such odors in pedestrianised areas was perceived as widely positive *"…you've got no traffic so you've nothing to conflict with those [more positively perceived odors]… if there are nice smells, they're there for the smelling"*. In contrast, the sound of traffic was present in all areas, but such sounds were not always perceived in negative terms, sometimes considered a positive aspect of urban ambience. The mixed traffic sounds of taxi's, cars and buses revving up, braking on major thoroughfare streets, were distinctive and characteristic of many urban environments. Similarly, the sounds of people, such as voices and footsteps were also detected and again considered positive yet odors of people, including their perfumes and body odor, were perceived in mixed terms.

Other smells and sounds were more specifically associated with particular places such as some of the industrial odors emitted from specific factories or odors of particular markets, distinctive in their strength. However, the enjoyment or dislike of odor types varied dramatically between places and regardless as to whether people usually liked or disliked that odor without context. For example, well over half of the participants in Doncaster's smell study detected odors from fish sold the local fish market, with some participants going on to suggest that these odors enhanced experiences of the market place, irrespective of their more general attitudes towards the smell of fish. Odors of fish were both expected and accepted as part of the experience of being in the markets area and when participants didn't immediately detect them, they frequently sought them out. The same is true of soundscape, where the background noise of the traffic at a distance in a London or Manchester park led to a sense of safety, place and choice, where participants felt they, as individuals, were part of the city and could choose to re-enter at any point. In its absence, the city *"felt like a ghost town"* and made participants feel unsafe.

If an area was expected to smell in a certain way and it did not meet that expectation, then this was reflected in the smellscape liking rating. As a result, differences occurred in the

rating of the same smell by the same person, but when experienced within a different environmental context. Effectively this meant that in some areas a lack of odor was perceived incongruent with expectations and thus out of place. Likewise, in other areas, people did not expect to detect any specific odors, therefore non-detection was more positively perceived in such areas, than in areas where odors were expected. Participants likewise did not expect to hear the sound of birdsong in city centre urban squares, and its presence was perceived positively, but as a result brought the soundscape into focus.

Conclusion

In both studies, the sensewalks facilitated access to participant's views and sensory expectations of different types of environments, offering opportunities to explore differences and similarities between various on-site experiences and responses. The use of sensewalks also created experiences, providing an immersive and participatory approach. Similar to the early soundwalks undertaken by Schafer (1994) and Westerkamp (2001), they included an educational element, stimulating responses and facilitating the sharing of ideas and the co-production of knowledge.

In drawing from these investigations, expectations of smells and sound were found highly influential in urban place experience and perception, intertwining to provide different layers of meaning and understanding of place, with sensory information sometimes aligned, sometimes contrasting. Not only were perceptions of environments found to be influenced by expectations of smells and sounds, but perceptions of the smells and sounds themselves (their detection and mental processing) were also highly influenced by the environmental context within which they were, or indeed were not, detected. This influenced participant's comfort, acceptance and overall desire to remain within an area; if the ability to leave that area was not possible, then this affected annoyance with an area or its component parts.

As a result, the authors advocate the more detailed and frequent consideration of sensory aspects of urban ambiance as part of mainstream urban design, development and management practices, also suggesting that attempts to alter or regulate olfactory and aural urban place characteristics, require prior critical reflection.

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5. http://smellandthecity.wordpress.com