Smellmap: Amsterdam – Olfactory Art & Smell Visualisation

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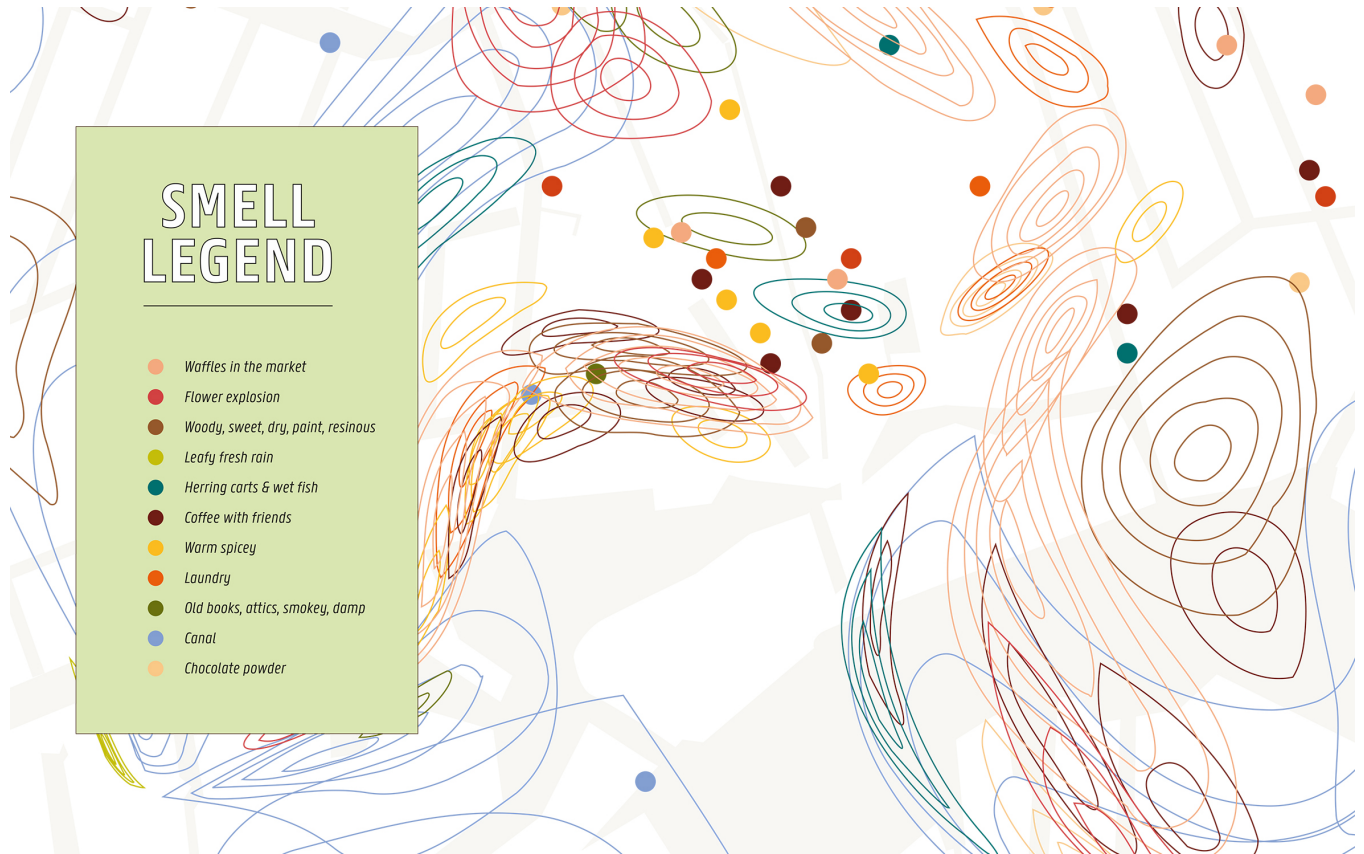Information Experience Design, Royal College of Art

Figure 1: Smellmap: Amsterdam Legend of selected smells

ABSTRACT

Creating a smellmap of a city is a collaborative exercise. During a series of smellwalks, local participants identify distinct aromas emanating from specific locations and record the description, expectation, intensity, personal association, and reaction. I then analyse this data, along with conversations arising from the walks, and select a set of smells that convey the smellscape of the city at that moment in time, visualsing the scents and their locations in the city as a "map". The resulting map visualisations are propositions: indications of what one might smell in a certain place. The map is accompanied by scents, which are the nasal stimuli, and a catalyst for discussion. This visualisation/olfactory art emphasises human interaction with a vast set of contestable sensory data.

Keywords: Smellmap, smellscape, olfactory art, Amsterdam, catalyst for discussion.

1 INTRODUCTION

Smellmap: Amsterdam is an artwork that explores individual and shared interpretation of place. Inspired by *toposmia* "which describes the spatial location of odours and their relation to particular notions of place." [1] the artwork aims to refocus sensory perception of a city by temporarily foregrounding the olfactory over the visual through a combination of visualisation and scents. In the Western ocularcentric world a focus on everyday smells can be both refreshing and revelatory, resulting in new knowledge of self and our individual relationships with the city. Smellmapping as research and experiential art practice explores this relationship and encourages a general public audience to do the same through active participation with the exhibited artwork.

Smellmap: Amsterdam is a multi-sensory and participatory experience including printed visuals, 12 individual scents and sticky notes onto which the audience inscribe their own smell associations with the urban smells on "display," leaving a trace of a personal olfactory journey.

As our senses work hard to make themselves invisible, so contemporary art, philosophy and everyday life enable us to use our senses to "rediscover the world in which we live, yet which we are prone to forget." [2] Using design to present urban smellscapes is a relatively new discipline; my approach takes a phenomenological perspective of re-exploring through an alternate sensory modality.

2 THEORY

A common preconception is that the city of Amsterdam in the Netherlands will smell primarily of cannabis. According to the participants in my study, cannabis has a strong smell, equal in perceived intensity to asparagus, cleaning products, bacon and the dentists' surgery, but it only featured in a couple of neighbourhoods and was therefore not included in the resulting smellmap.

Instead, Spring 2013 in Amsterdam revealed an abundance of the warm, sugary, powdery sweetness of waffles. Oriental spices emanated from Asian and Surinamese restaurants and supermarkets, pickled herring from the herring stands and markets – a link to one of the city's key historical industries. Old books were detected in basement doorways and laundry aromas drifted up into the streets from Amsterdam's many house-hotels. The smell of sun, flowers and new leaves indicated the welcome arrival of a late spring as a light chocolate powder drifted across the city in small smell clouds

2.1 Visualisation research and art practice

The number of perceptible odours in the urban "smellscape" [3] is vast; recent research suggests that humans have the capacity to detect up to 1 trillion smells [4], but to date there are limited maps of this potentially vast and largely subjective dataset. Using humans as sensors is a method of affective cartography that aggregates personal insight leading to interpretation of place thereby making the map affective; "…it is about the acceptance of subjective as worthy and useful data. Considering both place and people is necessary for a full depiction of affective cartography" [5]. I translate user-generated subjective urban olfactory information into a smellscape experience through the design of visuals, the design of smells, and combining these elements in an exhibition space.

Olfactory art practice in Smellmap: Amsterdam interprets the urban smellscape with 11 individual city smells synthetically-created by a specialist fragrance company International Flavors & Fragrances (IFF) and one combination fragrance created using only the original identified 11 scents. My visualisation of the phenomena attributes a symbology to the original invisible dataset and manipulates the symbols, as if moved by the wind across the map, to propose potential smell combinations; this results in a visual interpretation of how smells may drift and mingle across the city

2.2 Purpose of artwork

Smellmap experiences aim to convey an altered sensory perspective for the audience, not as replica smellscapes, but instead to develop a call to action to re-experience the city in an altered manner, reorienting the senses so that temporarily the olfactory becomes active and visualisation becomes passive. By deliberately altering the weighting on the active modality of input variables used for "sensing and perceiving" [6], my intent is to alter the resulting processing (conceptualization and symbolisation), and thus challenge the preconceptions and our individual understanding of place.

Through olfaction a number of authors [4], [7], [8], [9] suggest we can gain new knowledge about human interaction with the environment, understand and mediate space and territory, and

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interpret what it means to us on an individual level.

"Smellmapping can be used in conjunction with smellwalking as an effective means of investigating human perception of smells in an environment, both recording and communicating the smells that can be detected in an area, and in accessing the meaning that people attach to these." [10]

This is a public art project that advocates for urban smellscape communication at a time when olfactory technologies, masking and advertising threaten to alter the smellscape and influence our behaviour without the general public having a vocabulary and critical voice to negotiate or affect its change.

3 METHODOLOGY

During a series of smellwalks, local participants identify distinct aromas emanating from the city environment. These are recorded (Fig. 1) under the headings of location, description, expectation, intensity, personal association and hedonic scale. I analyse this subjective data and, along with relevant fragments of conversations that arise during the walks, and select a set of smells to convey the distinctive smellscape of the city at that moment in time. I generate symbols for the smells, which are then manipulated by hand, interpreting the impact of the wind on the trajectory and displacement of the smells. Map marginal notes are added to narrate the city's smelly stories including non-visualised smell data.

Figure 2: Smellmap: Amsterdam. Hand-written subjective data capture.

3.1 Smell research and smell selection

Smellwalking with 44 local residents over 4 days in April 2013 resulted in the collection of 650 smell perceptions from which I selected 11 urban smells to represent Amsterdam; 1 distinctive background smell, 7 episodic occurrences and 3 unexpected curiosities.

3.2 Smell colour and smell descriptors

Smell colour was inspired by the city's visual landscape, recalled through photographs of the city's infrastructure, architectural detailing and materials, flora and sky: Cool, pale blue; beige-pink; rich yellow; tulip-red; warm brown; lime green; deep turquoise; deep purple-brown; pale beige; orange; yellow-sage green. Smell descriptors are taken verbatim from the smell walkers' original hand-written notes.

3.3 The city

To identify the city and orient the viewer of the map I selected the canal structure as a familiar planimetric representation of

Amsterdam. Depicted as a low value, low key background, it acts as a locative base for the smell data on the map.

3.4 Smell sources, range and movement

Smells emanate from sources, I plot these origins on the map, where they are indicative not absolute, since urban smell sources alter, emerge and fade over time. Concentric circles indicate the smell range based on a combination of perceived smell intensity and the physical size of the smell source. Smell ranges drift in the wind forming distorted contours. Movement is based on the prevailing north- and south-westerly winds encountered during the 4 days of the smellwalks.

3.5 Smell creation

Creating the smells required a shared vocabulary and understanding of the smells in question. I specified the scents as the perfumers at IFF worked to select and generate synthetic fragrances from their vast databanks of smell molecules. Occasionally they reinforced the experience using Headspace technology (a dome-shaped collection device for capturing odour molecules in the air to enable them to be analysed and synthetically reproduced at a later time) to generate a best-fit for concept (Laundry was a case in point). A constant exchange of perceptions, meetings, samples and testing over a six-month period ensured matching of fragrance to smell concept. The perfumers worked independently to create a blended fragrance of the city

4 CONCLUSION

This paper presents a methodology for the research and design of how urban smellscapes may be represented, recorded and visualised for current use and as a form of olfactory cultural sensory record-keeping. Smellmap: Amsterdam exhibition opened at Mediamatic in Amsterdam in April 2014 and is now on private display in IFF Headquarters.

As a lived-in experience, a constantly shifting set of odours translates into an experience of infinite possibility, a proposition, a virtual dérive of a city through its smells. The final work, by its notable absences, poses the question as to whether a smellscape can ever be fully known, and simultaneously challenges the ontological security of the map. The suggested and propositional aspects of the map are intended to evoke a personal response to place. Smellmapping as an art form may simplify and reveal complexity by using one modality in a traditional cartographic sense; attracting the audience through visualisation before generating complexity through the introduction of smells themselves.

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