

**Proceedings of the 4th
Biennial Research Through
Design Conference
19–22/03/2019**



Wang, P., Cheng, Y., Tsai, W., Liang, R. 2019. 'Flâneur's Phonograph: A flâneur shift in urban exploration'. In: Proceedings of the 4th Biennial Research Through Design Conference, 19-22 March 2019, Delft and Rotterdam, The Netherlands, Article 4, 1-16. DOI: <https://doi.org/10.6084/m9.figshare.7855886.v1>.

**Method&
Critique** *Frictions and Shifts in RTD*



Flâneur's Phonograph: A Flâneur Shift in Urban Exploration

[Author Names]

Po-Hao Wang¹,
Yu-Ting Cheng²,
Wenn-Chieh Tsai³,
Rung-Huei Liang¹

[Institution Names]

¹National Taiwan University
of Science and Technology,
Taipei, Taiwan
m10210118@mail.ntust.edu.tw,
liang@mail.ntust.edu.tw

² Eindhoven University of Tech-
nology, Eindhoven, Netherlands
y.cheng@tue.nl

³ National Taiwan University,
Taipei, Taiwan
joe.wctsai@gmail.com

Abstract:

Two of the often discussed perspectives of experiencing a place are the tourists' lens and the residents'. Noticing the recent rise of atypical tourism, where tourists want to pursue the "live-there" experience, and the rising focus of shifting residents' attention from mundane day-to-day life, we propose the concept of flâneur as an alternative state. With 'research through design' approach, we present our exploration, including (1) gamification for making the sense of place, (2) using situationist-inspired-cards for residents to explore familiar place, and (3) using street photographers' quotations as inspiration for alternative experience of listening to a city. With these explorative findings, we design Flâneur's Phonograph, a sound collecting and experiencing device for soundscape, which aims at invoking the flâneur experience during the exploration, and enabling engaging experience different from the perspective of a tourist or a local resident. It invites the users to open up their auditory senses to the places by providing 3 different monitoring modes and 3 types of microphones. We further analyse the qualitative results from investigating a resident and a tourist with our design, make critical reflection, and constructively understand what the flâneur could be in the new technological contexts.

Keywords: flâneur, urban exploration, soundscape, situationist





Introduction

Exploring a place is always interesting, especially with pervasive mobile devices nowadays. While most tourists often take pictures to keep the impression, 'listening to a city' is relatively rare but probably potential to evoke different psychogeographic experience in addition to visual stimuli. For instances, there are some successful projects focusing on soundscape exploration in urban space (e.g. Sonic City (Gaye, Mazé, Holmquist 2003), Soundwalk (soundwalk.com, 2005), SoundTag (Tsai, et al., 2013), and Interventions (Oleksik, 2008)). However, locative audio systems as well as other traveling guidance applications seldom consider the role whether the user is a resident or a tourist. It is not easy to create a universal system to satisfy both roles since their familiarity to a place is different, and above all, always changing. Instead of creating such a system for all roles, we seek an intermediate role that both roles can transform into with even better explorative experience. Seeing the importance of place-based interaction in the current HCI practice, Churchill (2010) proposes the notion of a French literary character, the *flâneur*. It seems that the *flâneur* plays an ideal role beyond the above two.

The *flâneur* is an urban wander, leisurely walking through streets while interpreting and re-imaging the city (Benjamin, 1973). Beyond stereotypes of the superficiality of tourists and the tediousness of residents, we envision the *flâneur* as a curious, creative, and reflective role. As Churchill cites Susan Sontag's text regarding the street photographer as a 20th-century version of the *flâneur*, she wonders what a 21st-century *flâneur* would be. In addition to the definition above, we intend to reach an understanding of the *flâneur* with designerly ways of knowing. With our research through design, we iterate our design activities and gradually frame research questions as follows:

1. How does gamification help exploring a place and constructing the sense of a place? We wonder if gamification or task-oriented games would encourage both residents and tourists to shift to a mindset like a *flâneur*.
2. Would situationism help defamiliarize everyday mundane things and provoke residents to get out of the box with fresh eyes? If so, how would encounter by chance and random hints encourage participants getting into the state of a *flâneur*?
3. How do *flâneur* tips facilitate creating novel and alternative soundscapes? For example, we might summarize the quotations from *flâneur* masters or photographers and deliver them to the participants while they are exploring.
4. What is the possible artefact that provides necessary and sufficient modes and functions for shifting into the state of the *flâneur*? We want to investigate how residents and tourists appropriate the device to meaningfully interact with the urban environment.


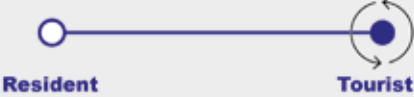

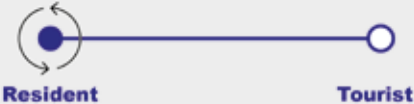

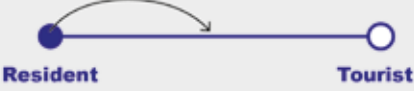
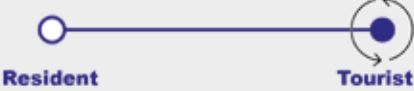



This research is done with the hope that it may provide alternative ways of understanding a different role a user can play when exploring or living within an urban space. Additionally, the audio device, *Flâneur's Phonograph*, may allow us to speculate on what a 21st-century *flâneur* would be. Also, framing and reframing explorative ac-

tivities help us to practically and gradually gain the understanding of the notion of *flâneur*. This would enable us to develop implications for designing *flâneur* experience in urban exploration. However, defining *flâneur* with fixed and precise terms is not our intention. Rather, we seek to constructively build and extend the notion of *flâneur* based on new technological contexts today.

This paper is divided into five major parts. First, Method provides a table describing the design process. Second, three explorations and one design artefact are detailed to address the research questions above. Third, we present research findings in detail, majorly making comparison of the qualitative results from interviewing two typical roles in a city. Fourth, Discussion relates our work to other HCI works about *flâneur*. Finally, Conclusion describes our contribution and reviews the major problems we address.

Method

The path to designing flâneur experience is still ambiguous in the field of urban exploration. Choosing a single way to design our exploration is difficult. Hence, we require a highly fluid research plan (Bardzell and Bardzell, 2015), which implies a set of mixed methods for shifting between different outcomes, enabling participants to guide us in new directions. The method employed to conduct this study involves research through design (Koskinen, et al., 2011) for re-framing and refocusing during each design move (Ylirisku, Halttunen and Nuojua, 2009). Furthermore, “it should be clear that the actual outcomes cannot be fully anticipated or planned.” (Koskinen, et al., 2011) In this study, the outcomes for each design move were not predictable. In each design move, we talked and continually asked, “what if I did this?” Briefly, our ongoing design process could break down into 4 stages. The following paragraphs introduce each design move.

	Enticement	Place	Results	be Fläuner?
01 Riddle City		New Place	Tourist only immerses in the task 	X
02 Situationist Inspired Cards		Familiar Place	Resident only immerses in the memories of the past 	X
03 Sound Recording + Inspired Cards		Familiar Place	Resident becomes curious, and has new discovery to the place 	O
		New Place	Tourist immerse onself in understanding the place, but no connection to personal interests 	X
04 Phonograph		Familiar Place	Both add new understanding to the place & themselves. Both even speculate possible worlds from the place. 	O
		New Place		O

Riddle City - The first exploration trial

Before we started to make any design decision, we thought we should first examine the existing solutions and see what kind of effects they bring to the users in the field.

Riddle City (2015), a series of treasure hunt game, was chosen as the grounding of our study for it perfectly fits in to our research theme. The games take place at highly-attracted tourist sites while the treasures are digitally stored at the place corresponding to a known accurate GPS location. The player's goal is to determine the location where the treasures are stored, by finding clues and solving the riddles provided by the guiding packages included in the game kit.

The game we choose from the series for our very first exploration is located in Tamsui, for that Tamsui has a rich history tracing back to the 18th century, when the Dutch occupied and colonised it. The history and stories of Tamsui are woven into each mission, and unfold as the players attempt to complete the game. We seek to understand whether via gamification method could aid tourists to better relate themselves to the environment. Seven players were invited to our first exploration alongside with one of our research member to closely observe the situation of the whole game, and every players were requested to draw a psychogeographic map of their experience for later analysis.

Findings

Focusing on completing the tasks

Based on the close examination of the whole game, it appears that along with the progression of the game, players' attention gradually shifted towards solving and completing each tasks, and interactions with the physical environment were as well leaned toward finding clues in order to solve the tasks. While they would read the stories provided in the guiding packages thoroughly, they eventually start skipping the stories and turned their attention to other materials in the game kit for speeding up the process. There were also no sign of players remembering stories carried out in the second half of the game during the interview. Another evidence lies on the psychogeographic maps they've drawn, where parts with more details drawings tend to be related to game clues and sites where riddle solving occurred.

Gamification vs. Free exploration

Although we did not see clear advantage from the game, we did see some positive experiences which were unrelated to the game but occurred outside of the game. One player noted during the interview that he really liked one particular small path they took when walking from one site to the next one. He was overwhelmed by the warm sunset and feel like himself a local person walking on a small route that few tourists would take. It seems that the use of gamification situates participants' mindset at problem-solving rather than being open minded to new ideas, an essential elements of being a flâneur.



Figure 1. One of the guiding package, containing a letter describing parts of the stories of Tamsui, and clues waiting to be solve. The whole game consists of 7 guiding packages in colour sequence, and another gold package contains the last riddle for virtual treasures' location.



Figure 2. Psychogeographic map from one player. Most of the markings on the map are related to the game, namely the game clues and sites where riddle solving occurred.

Home Town Exploration with Situationism Inspired Cards

From previous exploration, it seems that gamification might not be necessary for achieving the state of flâneur. To better understand the other end of the spectrum, we tried to explore from a resident's perspective in Exploration 2.

Situationist International is one of the early groups that tried to liberate citizens from the structure of urban pathway. One of the basic situationist practices is *Dérive*, a technique of rapid passage through varied ambiances, where participants drop their everyday relations and let themselves be drawn by the attractions of the terrain and the encounters they find there (Debord, 1956). *Dérive App* (2011) is a great example of modern *Dérive*.

Inspired by the *Dérive app*'s form, we create a card deck including 18 instruction cards, some of which are translation of cards in *Dérive app*, accompanied with some of our own creation. Three participants were invited to explore their home town with the card deck during Chinese New Year vacation. They all have moved out from their hometown for several years ago in order to pursue education and career. The timing was chosen because we speculate that the familiar places will be slightly estranged, which brings great opportunities for participants to look at their hometown from different perspectives. All three participants were provided with a small notebook for notes, doodles during their exploration.



Findings

With situationist method, we anticipated that participants would start to pay more attention to their surroundings, and form new understanding through the process, but it didn't go as we expected. While the goal of a *derive* is to let participants drop their everyday relations to the urban structure and embrace the unknown, we found that participants are dialogically interact with their memories and trying to complete the task on the instructions cards rather than exploring and making new meaning from their surroundings because they were too familiar with the place. For example, one participant went on looking for an old book store when he met with "Try to find a spiritual place" card instead of exploring for that kind of places. Additionally, we find instruction cards were often skipped when it can't be related to the environment at the moment.

For the next exploration, our focus shifts to ways of facilitating exploring and meaning-making in the field, and improves the effectiveness of the cards.

Figure 3. Situationism Inspired Cards consist of 18 instructions, some of which are translation of cards in *Dérive app*(2011), others are our own creation. The size of the cards are design to be hold in hands easily.

Instruction translation(from left to right, top to down): 1)Follow the tallest building for 7 minutes, 2) Follow an animal until it notices you, 3)Close your eyes, and listen to the environment, 4)Try to find a cat, 5)Note down the view you see right now, 6)Photograph a building through the reflection of another, 7) Search for circle shape things, 8) Find a spiritual space, 9)Walk into the first open store you find and take photo of an unusual thing, 10) Search for a bus, if found head in the opposite direction it is travelling, 11)Compliment the next person you see, 12)Follow a dog-walker, 13) Sit for two minutes, and feel the surrounding, 14)Walk a nearby store and look around, 15)Turn right, 16) Turn left in two blocks.



Figure 4. Street photographer inspired cards.

Sound recording with Street Photographer Inspired Cards

As vision dominates the experience of urban exploration, other senses often lie behind the filtration of our selective consciousness. We believe that having participants explore with auditory sense in the first place could lead to new experiences toward urban exploration. And from previous exploration, we found that in order not to break the flow of exploration, we need more ambiguous guidance for participants, rather than providing instructions that participants might not be able to relate or make sense of, similar to the approach of Ludic Design (Gaver, 2004).

In Exploration 3, we had two main objectives, 1) creating guidance that most participants could make sense of, and 2) experimenting whether we gain benefits from auditory-first approach of exploration. As we were exploring possible methods, the image of street photographers came into our mind for their representation of the 20th-century version of flâneur (Churchill, 2010). We then went on creating guidelines based on street photographers' tips on taking snaps, and transformed the concepts into the field of soundscape recording, ended up with a card deck consisting of 13 cards. Below are several examples:

- Listen carefully and record everything.
- Observe the interaction among people.
- Almost everyone only records the scenes of everyday life. In other words, they basically did not go out of their own world. However, the streets are full of different worlds. The so-called soundscape recording is to record such a different world.
- If you hold too many preconceptions about things, it is easy to miss out important things.
- Challenge yourself to record sounds from different worlds.

Fourteen participants with no preconceptions of flâneur were invited, with 9 students representing the residents and 5 visitors unfamiliar with our campus representing the tourists. Alongside the card deck, participants were sent out to freely explore the soundscape in the campus with the help of a hypercardioid microphone, an earphone and a mobile app capable of live monitoring. We did not regulate their use of the card deck, whether to use the cards with a one-after-one way, or to read them all before exploration, was completely on their decisions. Duration of the exploration was also on their decisions. Average duration took around 45 to 60 minutes. They were asked to draw down a map of the exploration right after the event to serve as materials for the follow-up in-depth interview.

Findings

Alternative explorative form opens up curiosity:

Focusing on auditory experiences, some participants show behaviors different from previous explorations that are visually dominant, such as recording the sound of their footsteps, trying to capture sounds of stepping on different materials, experimenting qualities of the hypercardioid microphone, composing sounds from multiple angle in their minds.

Ambiguity of the guidance helps create a wider interpretative space:

From participants' interview, we learn that the influence of the cards could last throughout the whole exploration session. Most participants regard the tips on the cards as an attitude towards better experience. Even though they weren't fully understanding the concepts of some cards, they still managed to come up with their own understanding during the exploration.

Different familiarity to a place could have great impact toward exploration:

We find that it is easier for students who are more familiar with the campus to let their auditory senses lead the exploration, while visitors showed the tendency of letting their vision take the lead. This pattern is shown in the routes they took, which extend to the edges of the buildings for those familiar with the campus, whereas visitor unfamiliar with the campus mostly stayed on the main path. For most of the visitors, they still explored with a tourist lens so that they did not form new understandings beyond their preconceptions of a school campus.



Figure 5. Participants often experiment sounds elicited from different materials. In this photo, participant was recording sound from caressing the surface of a tree.

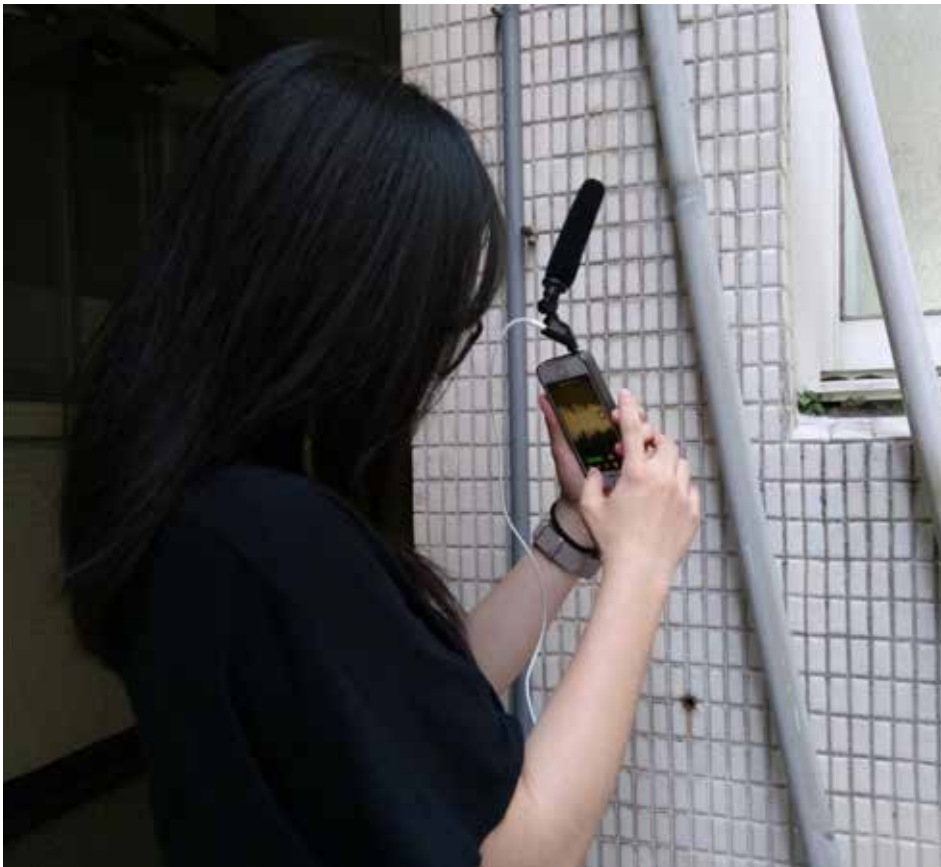


Figure 6. Focusing on auditory experience opens up curiosity. In the photo, participant is recording sound at a different angle which she would have ignored.



Figure 7. Flâneur's Phonograph with 3 types of microphone: 1) Omnidirectional, 2) hypercardioid, 3) contact mic (from left to right)

Flâneur's Phonograph

Flâneur's Phonograph is a sound collecting device with the ability to live monitor the current soundscape. It comes with three monitoring modes: 1) the soundscape at present mixed with recordings prepared by the researchers, 2) the soundscape at present mixed with previous two recordings recorded by the user, and 3) pure soundscape at present. Users can choose among different monitoring modes using the mode switch at the centre, and manipulate the volume ratio between different audio sources using the slider at the bottom of the device. Along with the device, we provide three different types of microphones, omnidirectional, hypercardioid and contact mics. By simply swapping between the three microphones, it helps users to explore the soundscape of the environment at different distances.

Design Limitation

One drawback of the current design is that the computing power is hosted in a laptop. As a result, the device needs to connect to the laptop with a USB cable during user's exploration. A custom designed backpack was made for wearing the laptop on the go, which is essential for free exploration. The goal for next iteration will be shrinking the computation unit to a smaller size that fits within the device itself, so that the device could be more compact and more like a mobile device.



Figure 8. Participant wearing the laptop in the custom made backpack during exploration.

Three Monitoring Modes



Mode 1:
consisting of the soundscape at present and 5~8 recordings prepared by the researchers as below.

- Tide sound
- Dialogue between little sisters
- School bell rings
- Music from religious carnival
- Sound from insects and birds
- Drum from street artist
- Noise made by a boat leave the fort
- Train leaving station



Mode 2:
consisting of the soundscape at present and two previous recordings recorded by the user. Every new recording user made will replace the oldest ones.



Mode 3:
Pure soundscape at present.

Findings

The study includes two participants, A and B. The participant A represents a local resident to revisit the local via the device, whereas the participant B is a tourist to explore a new tourist site with the device. Due to different familiarity to a place, A and B showed different preferences for our artefact.

The tool to reshape the familiar form into an estranged form

Participant A pursued additional information stimuli for the exploration, because A is too familiar with the place to easily feel bored with. The mode 2, A's favorite, enabled A to dismantling and reassembling the place from a familiar form into an estranged form. Especially, the soundscape shaped by contact microphone and hypercardioid microphone provided A with privilege vision, seeing the normal into fascination. Participant A described that, the contact microphone shaped a heterogeneous soundscape of 'things' mumblings', because A heard the sounds by touching everyday things; whereas, the hypercardioid microphone only capture sounds from a specific direction, so it shaped a 'cue from the place' for A to explore those unnoticeable corners.

The tool to follow the space and crowd with viscosity spontaneously

In contrast, participant B pursued an information filter for the exploration, because B was a tourist in a site teeming with too much tourist information. The hyper-cardioid microphone is the only microphone B likes. This microphone can direct B's focus to move through the space and the crowd with a viscosity. B also enjoyed the switch between mode 1 and 3 mostly. The mode 1 creates a serendipity between the actual sound and fictional sound from the artefact. When passing by a crowded and local food market, B heard the device playing the sound of 'suona'. B was touched and imagined herself walking into a movie scene of 'A City of Sadness', which is a movie highly related to the place, by an Asian director, Hou Hsiao-Hsien. When switching





< ^ Figure 9a,9b. Participant A(right) & B(left) both tried the contact microphone, but due to different familiarity to the places, they showed different preferences for the contact microphone. A(right) enjoys the heterogeneous soundscape the contact microphone provides, while B(left) considers sounds it provides disconnected from the environment.

to the mode 3, B also enjoyed the pure everyday sounds from the direct cue of actual place without any additional fictional stimulus.

A & B dislike the omnidirectional microphone

The omnidirectional microphone created nothing-special soundscape for both participants. A thought that the soundscape by the omnidirectional microphone is as normal as usual, without providing any special or additional auditory stimuli. On the other hand, B mentioned the microphone have captured too many sounds, and B was at a loss in such overwhelming information. Although A and B both dislike the omnidirectional microphone, the reasons are different. One thinks the information is too less, whereas another thinks it provides too much information.

Overall, our artefact successfully created the flâneur experience for participants. It echoes Dörk, etc. (2011)'s three qualities, the 'curious explorer', 'critical spectator', and 'creative mind'. By providing the flâneur perspective other than residents and tourists, we also found that (1) no matter which roles they began with, they all became the flâneur experiencing unique, special, unduplicated stories with the place. (2) The way to become a flâneur can be very different, due to different background and interests. (3) Participants' different familiarity to a place can change their preferences to choose the information input, which can also be on the contrary.

Discussion

Besides corresponding our participants into the flâneur's three qualities from (Dörk, etc., 2011), our study focus more on the design artefact itself. Therefore, the following paragraphs present (1) the characteristics of what our artefact have created, (2) a possible approach to designing urban exploration, and (3) our reflection on the reframing approaches to building Flâneur's Phonograph.

Characteristics of Flâneur's Phonograph

Invisibility & Ambiguity spark curiosity

Our artefact creates invisible and ambiguous auditory stimuli to participants. Comparing to the visual exploration, the auditory stimuli provide less specific and clear information than the visual does. For example, the sound can be hidden somewhere, but only be perceived. In the exploration, both participants described "I can hear something from that way" (A&B) but with an unclear position and distance. These types of perceivable but invisible, predictable but ambiguous information spark participants' curiosity to explore the place, to find out the answer (Dörk, Carpendale and Williamson, 2011).

Openness & Unexpectedness stimulate imagination and serendipity

Beside invisibility, the sound remains openness for participants to use their 'creative mind' (Dörk, Carpendale and Williamson, 2011) to shape an imaginative soundscape. Additionally, auditory stimuli can easily create unexpectedness beyond their understanding or prediction. Such unexpectedness makes them be surprised and even walk into the moment of serendipity. For example, A was surprised with the sound from contact microphone, which reshapes his understanding to the place; whereas B was unexpectedly touched by the combination of the actual sound with the sound from the artefact, and thus led her to walk into the movie scene.

In-situ Focusing provokes reflection and critique

Our three types of microphones also provided different information lens to the participants. Participants can reduce or add sounds in the exploration. With such tools, like a focusing adjustment, participants can focus and amplify their own interests towards the place. Participants become a 'critical spectator' (Dörk, et al., 2011) to reflect or criticize the sound they have heard. For example, when B heard the talking between international tourists in the local temple, B argued that the nowadays tourists invade the local culture with the conflict between old and new. A, instead, reflected his past memory with the sound attached to the place.

Possible Approach for Urban Exploration Towards Flâneur

The distinction between being a resident and a tourist is the different level of familiarity to a place. We found that it implies different approaches to being a flâneur.

'Plus (+)' auditory stimuli for Resident

A resident has already been familiar with the place, and easily sees everything as background. To encourage a resident to be a flâneur, we found that adding more information into the urban exploration can be a plausible approach, which can be called 'the Plus stimuli'. For example, the contact microphone in the final exploration, provided additional stimuli for participant A. With such an approach of 'the Plus' by adding emerging information, A, the resident,

defamiliarized the place into an estranged world, reshaping the place and the new auditory into a new meaningful form.

'Minus (-)' auditory stimuli for Tourist

A tourist is unfamiliar with the place, and opens her perception to receive new information. Being situated in emerging unfamiliar information, participant B in the final exploration felt depressed and lost. When using contact microphone, B felt annoyed by additional stimuli and described it as 'meaningless'. Instead, B preferred less stimuli for the tourist's exploration. We called the approach as 'the minus stimuli', which can filter abundant information for a tourist to create a thematic exploration, and gradually encourage the tourist to be engaged in the place.

Whether to apply the Plus or the Minus to shift into the flâneur state depends on the time-variant familiarity to a place. The amount of information should be flexible, allowing participants to receive a proper level of stimulation. For example, when a tourist becomes too familiar with the place, the stimuli can be changed from the minus to the plus, and vice versa does the resident. Hence, the stimuli should be balanced to keep participants under the state of continually being slightly stimulated.

Reflection on designing the stimuli for Flâneur

In our four phases, we have explored different stimuli, such as task game, visual cards, and sounds. Compared with the visual, we found that the auditory stimuli are more flexible and accessible to elicit participants' flâneur experience. The sound remains somewhat ambiguous, which can be easily mixed with multiple sound tracks to create the soundscape

by participants themselves. However, to provide the visual stimuli juxtaposed with the landscape with technology is complicated, such as AR or VR, because people have the tendency of ‘seeing is believing’.

Conclusion

Through the design explorations and the field study of the Flâneur’s Phonograph, we reframed a flâneur as an alternative state in the felt experience space beyond a tourist and a resident. The flâneur experience is curious, creative, and reflective. The three explorations helped us gain more profound insights into the research questions. First, we understand that task-oriented gamification might not be necessary for tourists’ free exploration to construct a sense of place because they might be in a problem-solving rather than a creative thinking mindset during gameplay. On the other hand, residents following non-deterministic visual instructions might be engaged in dialogues with their memories rather than explore and make new meaning from their surroundings. Third, auditory form, ambiguous guidance, and familiarity with a place could have a significant impact on the exploration. Finally, the field study revealed an engaging psychogeographic experience, the flâneur experience. For residents, the tool can reshape the perceived auditory stimuli into an estranged form. For tourists, it is a tool that can follow the space and crowd with viscosity spontaneously. To conclude, the contributions of this paper are as follows: 1) shedding light on the characteristics of flâneur experience, 2) proposing a possible approach for urban exploration towards flâneur, 3) presenting a design example, the Flâneur’s Phonograph, playing as an auditory mediator for exploring soundscape. Future work on exploring possibilities of designing auditory stimuli in urban experiences is required.

References

- Bardzell, S., Bardzell, J., Forlizzi, J., Zimmerman, J., & Antanitis, J. (2012, June). Critical design and critical theory: the challenge of designing for provocation. In: *Proceedings of the Designing Interactive Systems Conference* (pp. 288-297). ACM.
- Bardzell, J., & Bardzell, S. (2015). *Humanistic HCI*. Morgan & Claypool Publishers.
- Bell, G., Blythe, M., & Sengers, P. (2005). Making by making strange: Defamiliarization and the design of domestic technologies. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 12(2), 149-173.
- Benjamin, W. (1973) Charles Baudelaire: A lyric poet in the era of high capitalism, chapter The Paris of the Second Empire in Baudelaire:II, *The Flaneur*, pp 35-66. NLB
- Churchill, E.F. 2010. Today's flâneur: from HCI to place-based interaction and human-place interaction. *Interactions* 17, 4 (July 2010), 62-66.
- Dérive app (2011), *Dérive app*, [online] Available at: <http://deriveapp.com/s/v2/> [Accessed 22 Jan. 2017]
- Dörk, M., Carpendale, S., & Williamson, C. (2011, May). The information flaneur: A fresh look at information seeking. In: *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 1215-1224). ACM.
- Dunne, A., & Raby, F. (2001). *Design noir: The secret life of electronic objects*. Springer Science & Business Media.
- Gaver, W. W., Bowers, J., Boucher, A., Gellerson, H., Pennington, S., Schmidt, A., ... & Walker, B. (2004, April). The drift table: designing for ludic engagement. In: *CHI'04 extended abstracts on Human factors in computing systems* (pp. 885-900). ACM.
- Gaver, W. W., Bowers, J., Boehner, K., Boucher, A., Cameron, D. W., Hauenstein, M., ... & Pennington, S. (2013, April). Indoor weather stations: investigating a ludic approach to environmental HCI through batch prototyping. In: *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 3451-3460). ACM.
- Gaye, L., Mazé, R., & Holmquist, L. E. (2003, May). Sonic city: the urban environment as a musical interface. In: *Proceedings of the 2003 conference on New interfaces for musical expression* (pp. 109-115). National University of Singapore.
- Gluck, M. (2003). The flaneur and the aesthetic: Appropriation of urban culture in mid-19th-century paris. *Theory, Culture & Society*, 20(5), 53-80.
- Jenks, C. (1995). Watching Your Step: The history and practice of the flâneur. In: *Visual Culture* (London: Routledge, 1995), 142-160.
- Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., & Wensveen, S. (2011). *Design research through practice: From the lab, field, and showroom*. Elsevier.
- Oleksik, G., Frohlich, D., Brown, L. M., & Sellen, A. (2008, April). Sonic interventions: understanding and extending the domestic soundscape. In: *Proceedings of the SIGCHI conference on Human Factors in computing systems* (pp. 1419-1428). ACM.
- Salu Ylirisku, Virttu Halttunen and Johanna Nuojua. 2009. Framing design in the third paradigm. In: *Proceedings of the SIGCHI Conference on Human*.
- Schafer, R.M. (1993). *The Soundscape*, Destiny Books.
- Soundwalk (2005), *Soundwalk.com*. [online] Available at : <http://old.soundwalk.com> [Accessed 28 Sep. 2018].
- Tsai, W. C., Hsiao, J. C. Y., Lee, H. C., Huang, C. H., Hu, J. C., Liang, R. H., & Hsu, J. Y. J. (2013). Designing a reminiscence aid in personal soundscape. In: *Proceedings of International Association of Societies of Design Research (IASDR)*, pp. 5151-5161.