

Tinka Zorge

When Computers Should Say They're Sorry: Adaptive Versus Unconditional Apologeticness

Affective cues such as apologetic messages are an important tool to influence user experience in crisis situations. For this study we designed an experiment to determine whether a computer teammate that takes responsibility and apologizes no matter who made the mistake is more frustrating for the user than a computer teammate who does this only when the user perceives them at fault for the mistake. We found that the users start out satisfied with the unconditional apologies but become more frustrated with them over the course of the experiment, ending up more satisfied with the teammate that apologizes only when perceived by the user as being the one at fault. The findings of the study may contribute to determining preferred ways of handling crisis situations with or without apologies in the fields of UX and HCI.

Ayla Kolster

Amateurish detectives or expert investigators? Analysing the use of sources by websleuths in online case solving discussions

Websleuths, or cyber detectives, are people that are part of an online community who try to solve crime collectively. Sometimes these people have skills or an expertise that they can use for their online investigation, but most often they are amateurs who spend their free time sleuthing the internet. However, there are mixed opinions about the competence of crowd-sourcing solving crime. Some argue that websleuths, or any other amateurs, should not interfere with the task of law enforcement (LE). Others anticipate that LE could benefit from collaborating with websleuths in order to outsource investigations that involve considerable amounts of manpower and time. But, to understand how allegedly unprofessional websleuths are, we need to examine their investigation method in correlation to police's methods. This research looks at the website Websleuths.com, a forum where people start discussions on cases to try and solve them. We did a content analysis of at least ten discussion threads using a list of police sources taken from the College of Policing's Authorized Professional Practice. We concluded that websleuths use most of the same sources the police uses for investigation, but also refer to different sources since some of the LE's sources will not be available to them. Overall, websleuths methods for investigation based on the sources they use are as similar to the police's methods as they are authorized to be.

Youngji Cho

Transitions of nature: Visual representations of changes in my personal nature resulting in outside influences and interactions

We, humans, are social and cultural animals. It is impossible not to get influenced by the world around us. We shape and impact on each other. Due to moving from South Korea to The Netherlands, I experienced noticeable shifts in mindset in combination with a growth of mental and emotional capacities. Many particular events happened to me in The Netherlands. I reacted to those events in specific ways, resulting in changes of my human nature. I experienced a burn-out for a certain period and became enlightened at another moment. In order to document this, I wrote a series of essays about my personal transitions influenced by cultural differences, environmental change, my art practice, and the graduation project itself. Core aspects of these essays have been translated into graphical visualizations. In order to achieve this, I have developed a visual language system. In this paper, I describe the visualization system, place it in a context, and reflect upon it.

Alexandra Verzier

Sensing virtual space: perceptual interaction between acoustic and visual cues in the exploration of a virtual room

Human perception is fundamentally multimodal: we combine information from different modalities to interpret our surroundings. There exists a solid body of research probing audio-visual interaction in object perception, resulting in a wide range of biases and perceptual illusions due to cross-modal effects. The perception of space generated less research, as it is often regarded as a neutral background or container where events take place. However spaces have different characteristics and are similarly exposed to our subjective distortions. Natural environments or buildings can present an infinite combination of dimensions, shapes and materials that are sensed visually as well as aurally. How a space sounds and how a space looks manifests itself through different perceptual qualities, impacting the experience of the environment and affording certain behaviours from people. However hearing is rarely considered in the perception of space, outside of purely psychoacoustics or noise-control engineering issues. This exploratory research aims at investigating the interaction between the visual and acoustic features of a space and its resulting spatial experience. Virtual Reality was used to enable full flexibility in sonic and visual spatial features combination. A dynamic room was created that people could explore freely firstly through sound-only environment and then audio-visual environment. Throughout the experience the dimensions and materials of the room are changing. The interaction between modalities is investigated through introducing conditions of match or mismatch between the visual and sonic simulation of the space. Impact in terms of objective and qualitative assessment of the space is reported.

Jente Insing

Exploring gesture based interfaces for peripheral interaction design in a smart home environment

In everyday life, we can perform multiple activities simultaneously without consciously paying attention to them. Most interactions with digital interfaces require a person's full focus of attention, even when performing a small task. Since our homes are becoming more digital with smart lighting, multiroom music systems, smart thermostats or automatic roller blinds, controlling them becomes more cumbersome and requires a person's full focus of attention because they often need to be managed through smartphone applications. In this paper, we explored how freehand gesture-based interfaces can be designed so that interaction with multiple smart home devices can take place in the person's periphery of attention. Peripheral Interaction only requires a few mental resources and requires minimal attention by making use of the person's human capabilities so that a person can perform a more mentally demanding activity at the same time. Most studies focussing on controlling home devices focuses on interaction with only one device. This study explored a novel way of interaction through a freehand gesture-based interface to control multiple smart home devices in the periphery. During this study, we compared the performance of this interaction method with a known peripheral task, while performing a mentally demanding task simultaneously, to provide new insights in design for peripheral interaction.

Zhirui Hu

Machine Learning Bias Game

This paper focuses on the concept of how human bias effect on machine learning, analyzes the main reasons for its formation through two practical cases, and the impact of this bias on machine learning algorithms and the impact on practical engineering applications. Then we try to design a game in which we use regional crime rate prediction and the mathematical model of police deployment to combine the biased concepts we studied to show the impact of prejudice in the game and discuss how to eliminate this bias. Through the above work, we can give us a good feeling, let us understand the concept of prejudice more deeply, and reflect on the incompleteness and defects of machine learning algorithms, thereby further improving the robustness, efficiency and reliability of machine learning algorithms.

Laimonas Zakas*Artificial Intelligence implications for VJing*

Advancements in artificial intelligence have seen a rapid increase in recent years and are inevitably affecting various fields, sometimes even sparking discussions regarding it taking over human jobs. For me, coming from a VJ background, naturally, the question arose how AI could be implemented in VJing and how would this implementation affect the role of human VJs. The paper consists of two parts – in the review part, theoretical background is laid out, followed by examples of AI applications currently used in VJing, while for the empirical part, series of interviews were conducted with nine VJs working within different domains about their practice, experience, and expectations regarding the involvement of AI in the field. The qualitative analysis of data reveals certain patterns that could have implications for those developing new VJ applications, as well as researchers and artists working in related domains.

Pelin Su Polatoğlu*Gender and Style Effects in Voice Assistants*

In this research we looked at the effect of the voice assistant's gender and affiliative or assertive style on its likability, perceived intelligence trustworthiness and the perception of its gender in a binary axis. To gather the data, a random sample of 93 adults were recruited online and participants interacted with the four voice assistants through a webpage. The study involved four voice assistants with female or male voices; and with affiliative or assertive style of language. The assistant performed a service task. Although there was no significant effect, the findings expand our understanding of the links between human-voice assistant interaction by elucidating the effects and trends on a critical and contemporary subject.

Suzan Baraka*Music for seals*

Music is sometimes used as enrichment for animals in captivity with the purpose to make the animals more relaxed. It is known that music can have emotional effects on humans, and that some music works relaxing, but it has not been extensively studied for animals. Besides the existence of species-specific music for cats and tamarins, so far scientists have not effectively made music for another species. This study aims at composing species-specific relaxing music for grey seal pups (*Halichoerus grypus*) that are hospitalised in a seal rehabilitation centre in Pieterburen, Groningen. Literature studies and interviews with an experienced seal care team contributed to the collection of parameters that form the basis for musical composition, like heartbeat, breathing and suckling. The seal music is played to the seals and compared with classical (human) music. Behavioural observations are made and breathing rate is measured to derive whether the seals are more or less 'relaxed'.

Monica Preller*From Grice to a corpus crawling device: an attempt to abstract the former by using computational techniques*

Attempts to incorporate the theory by Grice in algorithms have been made since the 1980s. In this thesis, it is aimed to abstract the maxim of relation by Grice (1975). In order to do so, the corpus crawling software for the CGN (Corpus Spoken Dutch) was used. Succeedingly, the words found were used to compile example conversations equal to the Gricean (1975) pair and subject to participant evaluation (n=47). It turned out that there is no significant difference in judgement between the example dialogues built from words found in the corpus and words that were not found in the corpus. Therefore, the hypothesis is refuted.