Our Symbiotic Life: An Exploration of Interspecies Relations

"Our Symbiotic Life: An Exploration of Interspecies Relations" Explores the relationship between humans and greenery in a few possible future scenarios and applications through design fiction. Each scenario works to solve or improve a different "wicked problem", global issues that are incredibly complex and may even have no solution as things stand right now. These scenarios are divided through Shared Socioeconomic Pathways (SSPs), "a set of five qualitative descriptions of plausible future changes in demographics, human development, economies, lifestyles, policies, institutions, technologies, environments, and natural resources."(1350)
In this reflection, I will be evaluating each scenario in terms of concept, practicality and plausibility against the SSP they are presented with. This is an interesting exploration as it feels like plants are often overlooked as a medium but they have some incredible potential and beautifully organic by their very nature. As living entities, they add a factor of symbiosis and evolution not possible in interpretations of the future that are based purely on technological advancement. For example, in popular science-fiction and other design fiction worlds there is hardly a plant to be seen- everything trends toward robots, AI and a depressingly dystopian 1984-esque atmosphere of media control and privacy invasion. The radically different vision of the future these scenarios that offer is refreshing to see, despite how far hey require you to suspend your disbelief.

Scenario 1: Harmony

This scenario is the next step for urban gardens, featuring autonomous, communal use, plant and nature powered vehicles. There is a strong focus on collaboration and social equity to address environmental degradation and sustainability issues. These vehicles take a fantasy-like appearance and integrate advanced technological features and they certainly paint a compelling picture but doing even a little bit of research on the potential of plant energy puts this scenario into the realm of fantasy as well. The visuals alone make me wish this could be a real thing, but the first thing I think of when seeing these is the weight to plant habitable surface area ratio required, even disregarding these as commuter vehicles. Add to that how much of a collaborative effort is needed in maintenance and potential vandalism, this would require a tiny, extremely tight-knit and relaxed population. However, this scenario mentions change in urban cityscapes and Fig.7, which demonstrates commuters waiting in a manner that no commuters have ever waited in, ruins the experience for me.

Scenario 2: Invasion

This scenario focuses on a hyper-evolved plant-based universal "enemy" to the continued

prosperity of mankind called the Equinops Cupidus- The greedy thistle. This is a scenario which addresses the growing political unrest across the globe and shares a bit more in common with the usual design fiction tropes. I think there is some value in the idea that plants form a symbiotic relationship with machines. A plant doesn't care for complicated international or interpersonal relationships. Where humans are overly complex and emotional, a plant only has one goal. A single-minded entity with no potential for internal conflict or even intended malice, capable of taking over machines in a technologically dominant era is certainly a terrifying idea to contemplate.

Scenario 3: On Demand

Personally, this one is my favourite scenario. It calls attention to the materialistic, consumerist nature of capitalist Western societies such as the one we live in, and plants have the potential to become incredibly beautiful creations. Plants are already very popular with the younger population as they offer fulfillment with very few responsibilities. If this were to become a real technology as 3D printers have, I think it would definitely take off. With social media culture, a "stick it to the man" attitude and a desire for things that are DIY-able, cheap and sustainable, this idea really resonates with my generation as I see it.

Scenario 4: Bottle Garden

While there is merit in the idea of the "poorer" teenage population, turning to the internet as a way of escapism, I think this expands to people of other demographics depending on their socioeconomic situation. This fixation on teenagers specifically and the way they are described gives me a weird feeling of a caricature, and a disconnect with what actual teenagers are like. It makes it somewhat more difficult to focus on the concepts actually being explored in this scenario. The sense of danger (accidents and gang involvement) also make it seem strange that this wonderous material would be so widely displayed, with one teen pictures having his setup out in the open for everyone to see.

In conclusion, these are very interesting concepts but it also proves how the presentation can make or break a scenario. This manner of design fiction can be a powerful tool to "encourage radical thinking or deep immersion"(Scenario 3) but it is also evident that when not done well, the illusion is irreparably shattered(Scenario 4). This also depends on individual interpretation. While I didn't really feel the connection between the 4 scenarios, being so different from each other, they definitely got me thinking about future possibilities and the roles plants may take regardless. I would say as a goal, to "inspire further research on this topic" was a success.

External references:

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Taste your Emotions: An Exploration of the Relationship between Taste and Emotional Experience for HCI

This reading was a lot more scientific in nature than the previous one and essentially boiled down to having participants rate experiences on a scale of bitterness to sweetness. It was also very dry and used a lot of scientific terms that required a significant amount of outside research to understand. Perhaps I missed the entire point of the study, but from the title alone, I was disappointed when I actually began reading through the paper. The introduction offers a range of possibilities in taste-related research thanks to new food printing technologies offered by companies and developments like nufood. Not to discredit the research done by Gayler, Sas and Kalnikaitė but this felt like more of a taste test of what nufood was capable of, with HCI and taste interaction otherwise, as an afterthought. I was equally as inspired by the possibilities the concept brought about in my mind, as I was disappointed when it failed to meet any and all expectations.

This reading starts off with an anecdote about how the idea of a frustrating website was evoked by cold, bitter coffee, drawing a simile between the displeasing taste and dissatisfying user experience.(1279) The introduction then goes on to showcase approaches and growth in the field of taste-HCI experience. It mentions how the five major taste groups of sweet, salty, bitter, sour and umami are mapped to emotional triggers in the brain, and how this could be used to enhance virtual experiences. This is something I've seen explored in both fictive and nonfictive literature and found extremely interesting. For example, when alcohol aficionados such as the one behind whiskyanalysis.com are able to write entire essays on the history, flavour and depth of a single whiskey. It's fascinating because I can neither understand nor appreciate whiskey the way they do but others can, and I feel like I would like to experience the same thing by the sheer beauty in the descriptions. In comparison, a study limiting many factors of the flavour experience (no visual, mouthfeel or smell factor, just taste) seems bland and not much to do with interaction at all.

The study specifically asked participants to rate things by associate a flavour on the scale of very bitter to very sweet against a sports game, product ratings, and two flight booking websites, one that was well designed and one that was not. The two non-digital interactions(Block A) were done blind, as in the participants did not know the full range of flavours beforehand, while for the UI-based interactions, they had the knowledge of previous tastings. While I think there was some interesting potential when participants did not know the full range of flavours, once they knew, it was essentially just rating the UI design on a one to five scale of approval. Beyond

proving the point that people associate “sweetness” with positive feelings and “bitterness” with negative ones, this study does not prove much. Results were also fairly inconclusive unless it was at the extremes of all the scenarios and wasn’t very consistent. Even the comments on page 1284 and 1285 were more about the experience of eating the 3d printed food, than anything related to HCI.

The part I found most interesting was on page 1285, where participants were asked to propose their own tastes when compared to scenarios.

Example foods being “hot, buttery toast” [favorite food suggested for a 5- star product rating, P16] or “Carrots because I hate carrots” [least favorite for a big defeat, P10]. In addition, participants identified foods relevant for that specific scenario, or what we called flavors: “I am always relating post game beers [to] watching football.”

Just reading the scenarios participants were asked to rate, I had a few instant food associations of my own. For example, buffalo wings I instantly associate with sports games even though I am not a sports fan through the idea of “game food” being sold to us. It also notes how certain flavours can take us back to nostalgic or notable moments in life, the same way smells can. I think the paper does raise many interesting ideas and applications for taste in HCI, it just fails to live up to what it is describing. “The key new insight in this direction is the value of mouth as a novel space for bodily interactions.”(1286) It is definitely an underexplored medium of interaction for the limitations surrounding it, and the 3D food printer, if commercialized could provide a way radically change this aspect of emotional immersion.

External references:

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Listening Cups

Listening Cups takes clips of ambient sound data from environments the creators are familiar with. While sound is a popular medium, ambient sound in IoT devices is an uncommonly explored form of data, especially when so much data is being collected of all sorts of different aspects within a space. In a time where data leaks are happening anywhere, and you never know what your Google Home or Alexa could be recording from you, I think there is something to be said for the idea of taking your information back from these companies. Most people favour the convenience these devices offer over considering what is happening to your data and privacy. However, as they become more and more common, learning to work with them and use the data collected to your own advantage may just be another way to adapt to the age of technology we live in.

I really like the idea of importing data from one medium into another since the results are often surprising and fascinating to observe. I have a friend who creates art in this manner, for example, importing image data into a text editor and changing parameters there. The outcome is always unpredictable and creates some really cool “glitch”-type effects when viewed again as an image. She has also taken poetry and used the parameters to create geometric 3d printed sculptures. Like the cups, you can see that it’s got a random look to it but the form is too deliberate to be total nonsense data. It’s always interesting to see how people tackle the creative challenge involved in taking one medium and trying to convert it into another. Desjardins and Tihanyi accomplished this by correlating sound volumes to a set of points on each cup, and delaying the printer over certain coordinates an amount of time matching the sound information to create the characteristic bumps. In the cups displayed on page 154, the cup that displays the data as a left and right tells an especially strong story compared to the top and bottom ones where the difference isn’t quite as evident, being that it’s distributed all around the cup and not on one visible face. But that is an experience in itself as holding the cup and physically feeling the differences could be a more effective way of interpreting the same data. Just like that, data that affected one sense has changed to become tangible in three.

All the variations created through experimentation are interesting in their own way, but having bigger bumps definitely offers a more telling experience. A cool addition to these cups could be a way of converting the sound data back into sound, perhaps through a scanning app installed on a phone and then the viewer has the option of viewing the work in many different forms. Then the Listening Cups come full circle from the technology-based start, into an analog material form then back into technology. I love this work for the interactivity and utility while still

being a unique art piece. It captures the essence of a place and it can be made to be really personal. For example, Desjardins and Tihanyi took sound clips from places they frequented, their studio, home and city. If they ever left, this project would be a tangible reminder of where they were and what they accomplished there. I think it's also a nice sentiment that they are using the cups while being in the place they were created for. Looking at the cups, wondering what happened at that time on that day to cause a certain bump to appear. Even if the sound isn't the exact same, the essence of the place remains the same.

As a blend of time, as mentioned on 149, it juxtaposes the ancient art of ceramics next to the fairly recent creation of 3D printers, and the even newer technology of ceramic-specific 3D printers. Ceramics are an uncertain craft with a lot a variable factors in the environment and skill level of the artisan, with a 3D printer making certain things is definitely more available to the general populace now.

As the owner of a 3D printer, I have only used it for utilitarian reasons up until now because I felt like that was the role of a printer. Facilitate the creation of things that would be difficult or inconvenient to otherwise acquire or use it as a means to realize art pieces created through other programs. This piece opened my eyes to the idea that G-code itself could be used as an artistic medium, or to edit the code directly and see what comes of it. The malleability of this code explored on page 158 also provides an interesting narrative for how some data might be, or not be, displayed.

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