Figure 1. Scenes of the short films of SFUture[1]

SFUture - Envisioning a Sustainable University Campus in 2065

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Author Keywords

Design Fiction, Speculative Design, Sustainability.

Abstract

This work describes a design fiction project on envisioning a sustainable university campus in the future. The fictional vision called *SFUture* was carried out through a series of five short films aiming to unlock people's imagination, encourage reflection, and inspire action towards a more sustainable reality at SFU (Simon Fraser University). We discuss our rationale and strategies of using design fiction as a method as well as how we shared the project.

Introduction and Related Work

Issues at the scale of sustainability typically engage a variety of stakeholders who have different visions and understandings of potential solutions. Rallying those people, gaining a common goal and keeping optimism towards future solutions can be challenging. Design fiction can serve as a tool to address those challenges by providing a common vision and by offering an opportunity to critically reflect and discuss possible futures with regards to an issue like sustainability. The use of diegetic prototypes – artifacts that embody and represent values of a new world – helps to envision and support a fictional reality. HCI research has shown growing interest in this area [5,6,10,11] and more broadly in related themes such as speculative design and critical design [3,1,7]. The use of design fictions is of interest to interaction designers because it provides a provocative way to think critically about an issue. It also leads to the creation and exploration of a concrete vision that demonstrates a detailed future. In addition, the outcome of design fictions can be used to mediate discussions between various stakeholders and encourage them to reflect on specific issues.

Noteworthy examples of design fictions are the works by Dunne and Raby [4], who created objects as a design fiction, or Julian Bleeker [2], who produced a short dystopian movie about the exponential evolution of technology. Those projects show the various possible outcomes and formats of design fictions, however there is a lack of documentation and discussion about the

Figure 2. a) A snapshot of a brainstorming session for our fictional future, b) film set

2016 Social porches implemented

2016 Sustain 2025 plan developed

2020 First mini farm experiment, external farmer and volunteers

2025 Sustain 2040 plan developed

2028 Farming starts.

2025-28 Internet blackout, countries fought over the power of the Internet

2033 Campus currency SPAKS introduced

2035 The departments of spirit opened

2040s "Connected Curriculum" developed

2047 Tuition can now be paid with Spaks

2048 The dept. of Repurposing & Repair is created by the schools of engineering, design, and environment

2054 The dept. of landfill archeology evolves out of the repurposing dept.

Figure 3. Selection of fictional milestones in our timeline.

design process and design rationales behind the final artifacts.

By envisioning what sustainability at Simon Fraser University (SFU) could look like in the near and far future, our design fiction project *SFUture* aims to spark imagination and discussions, encourage reflection, and inspire action towards a sustainable reality. Moreover, by holding a utopian perspective on sustainability on campus, the project aimed at revealing a provocative but positive view on sustainability. This was an efficient strategy in a context where sustainability is often discussed in terms of disasters and challenges to overcome. This work contributes an example of an executed design fiction project with a discussion of its underlying rationale, its strategic elements as well as its communication strategy.

The Vision of SFUture 2065[2]

In 2065, the main campus of SFU is *self-sustaining*. It includes smart and resourceful rainwater collection, eco-friendly and energy-creating buildings, and land dedicated to farming. These elements contribute to the experiential learning environment. At a *market place* located in the center of the campus, goods are traded, friendships are created, and questions and answers are found. *Spaks, the SFU currency* is used on campus to buy and pay everything including tuition and it can be earned through *volunteering* as part of the campus. Every student has a certain amount of campus work hours as part of the university agreement, which guarantees a minimum income and ensures equality on campus, regardless of socio-economic status. By wearing the *SFUid bracelet*, people on campus collect and spend Spaks, automatically sign into classes when entering classrooms, interact with all screens on campus, and connect with others. The SFUid is also a

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² See [8] and [9] for more details on the vision.

storage device that can monitor people's physical and mental activities, and offer recommendations to a better campus experience.

A revolutionary plan has changed the teaching philosophy at SFU in the last years, since the 2040's. In their first year, students learn about various topics of study and work on projects and on the farm before choosing a study program in their second year. Students form strong bonds through the introductory weekend seminar, including many workshops and exercises to get to know each other and the campus. Before starting at SFU, every new student gets a *welcome box* (fig.5a) containing items such as their SFUid, *seeds*, a *planting chart*, a pair of the *unscissors*, a *social tag*, and an object to repurpose.

In 2065, several facilities and departments have been established including the *repurposing department*, the *landfill archeology department* and the *multipurpose library*. Since 2035, with the opening of the repurposing department and its collaboration with the *onsite landfill*, SFU has focused on repurposing old artifacts to create new products on campus. While disassembling ancient objects at the *repurposing table*, students can learn about how things were made and reflect on the manufacturing process to provide longevity to things. The very definition of the library has changed, and what was once filled with books now offers almost anything from tools and technology to academic supplies and food preparation equipment.

Sustainability isn't just about the environment, and SFU strives to ensure that education extends beyond the classroom to include an active and vibrant social life. The campus feels inhabited, alive, and people spend time at the many *student lounges*, the market place, and small food stands next to the farms. SFU's *social porch* is the main gathering spot, where students hang out between and after classes to play music with the

Figure 4. A map of our fictional future campus, a tool for better spatial imagination.

Figure 5. A selection of objects and details of the fiction we focused on. a) the welcome box, b) the nogfobber, c) firbing, a sport in the SFUture.

famous *nogfobber* (fig.5b), a musical instrument that was developed at the repurposing table. The *social tags*, worn visibly on the chest, help engage in discussions by sharing one's name and a topic they are interested in talking about. In their spare time, students engage in activities like f*irbing* (fig.5c), the most popular played sport at SFU or *clubs* like the *AFA (alien friendship alliance)*, *RFF (robot for farming)* and the *3D scanning and printing club*.

Rationale

The main goal of our project was to engage in creating and sharing a utopian future vision of a sustainable university campus. After meeting with the Director of the SFU Sustainability Office, we were struck by the dark perspective on the current sustainable challenges at SFU. Current administrators do not always understand the broad context of sustainability – beyond environmental sustainability – and often loose track of potential solutions by focusing too much on roadblocks and administrative tasks. We chose to take a utopian perspective in our design fiction to specifically address this challenge and used major objectives from SFU's Strategic Sustainability Plan to guide our process.

In the vision, we do not bring to light the potential privacy threats, the top-down imposed way of life that includes farming and living on campus, or the lack of healthy competition and critique on campus. By ignoring the potential contradictory aspects of a future world, we purposefully show only its positive side to create imaginative material that can inspire people and push them to action.

Strategic Elements

From our process of creating a specific vision of the future, we identified four strategic elements – *artifacts, timeline, map, and characters* – that allowed us to focus on specific events or things to orient more detailed and developed aspects of the fiction. The

specificity of these elements was what brought the overall vision to life with sharpness and surprise.

Many of the ideas were developed in several brainstorming sessions (fig.2a) that were guided by SFU's sustainability strategies. Ideas involved new activities often supported by newly invented tools and objects, such as the *nogfobber* (fig.5b) or the *SFUid*. Sketching and designing those *diegetic prototypes* allowed us to focus and generate more details about activities providing more realism and support to the fiction. Some of these objects were prototyped and fabricated to be included in the films to support the scenes depicting the new activities.

While preparing our film scripts, we built a timeline (fig.3) to help organize our various ideas and create a consistent narrative. It was a precise way of listing important milestones that happened in the time between 2015-2065 and a useful tool to refer to when discussing aspects of the vision and writing scripts. Similarly, a map of the campus (fig.4) was sketched to spatially position some of the ideas we had, particularly about new departments, farming land and other physical developments. This map helped connect ideas with the current physical area and provided a tool to engage in spatial thinking.

The creation of characters was a useful tool for thinking about the implications the transformation we proposed in the fiction would have on people's values and actions. For the documentary-like short films we created five main characters (fig.6) that talked about their experiences at SFU set in 2065.

Going Public and Reactions

An important point in the creation of the design fiction was to communicate the vision to the university community through an appropriate project outcome. The project team often discussed the potential outcome but decided to make this decision later in the process in

VALERA - PRESIDENT OF SFU
President Valera (42) is married and has two kids. He was born in 2025, a time when major changes happened. He studied responsible economics and revolution management.

EDWARD GESTURE - PROFESSOR OF BIOMIMICRY
Professor Gesture (68) studied product design which made him frustrated about the consumption cycle and over-usage of materials and resources. During the Internet blackout, he changed his focus to environmental design and design inspired by nature.

SIMONE SANDERS - NEW STUDENT AT SFU

AMBER PLUMERIA - ALUMNI OF SFU

JOSEPHINE LIME - 3RD YEAR STUDENT AT SFU

Figure 6. The cast of the SFUture videos with selective details on two characters (see also figure 1a and 1b)

Disclaimer: this YouTube channel was not set up by Simon Fraser University. It is a fictional channel created by students for a class on sustainability at SFU.

Figure 7. a) Screenshot of the youtube channel for SFUture, b) disclaimer in short films

order to have the final vision inform the format. Choosing to make short documentary-like films was a deliberate choice and it was encouraged by the fact that videos are easily accessible online, capture attention through rich media content, and can easily be presented in public events.

The short films documented and narrated the look and feel of the envisioned sustainable campus future of SFU in five topics: the university's philosophy, the curriculum, as well as the environmental, economic, and social aspects of sustainability on campus. Scripts including text for the actors as well as locational and situational settings were prepared for the shooting (fig.2b). The films were posted on a Youtube channel [9] that appeared to be hosted by SFU to celebrate its 100th anniversary in 2065 (fig.7a). Through not overly stylized aestetics, the films convincingly seemed to be promotional university videos. Additionally a project website [8] was created with explicit details of the project, its goals and the vision.

Using video to communicate our vision proved to be successful when the project group was invited to present *SFUture* at a University Administrators' meeting. Faculty and staff, including the current president and vice-presidents, were shaken and seduced by the novelty, creativity, vitality and depth of our fictional short documentaries. The SFU Office for Public Affairs and Media Relations was made aware of our false SFU 2065 Youtube channel and as soon as the day after it went live online we were asked to change the font (we had used the official SFU font) and to add a disclaimer (fig.7b). Adding veridical elements in future visions and grounding the future in current symbols and tools (such as Youtube) can catalyze reactions and blur limits between what is invented and

what is real, leading to more reflection on current and future practices surrounding tackled issues.

Discussion and Concluding Statements
Through the making process of this design fiction, we realized the importance of the underlying values – rationale – we attributed to the project. In our case, the goal was to support future sustainable initiatives at SFU and a utopic vision of how a sustainable campus could look like was used as a motivator to the SFU community including students, staff and administrators. This documented example can inform future discussions and making processes of design fiction projects.

Acknowledgements

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