
RESEARCH

01/10/2019



Narrative game - In 2061, what do young people prefer: physical mobility or virtual mobility?

Finished research

Begin: 01 January 2016

End: 01 March 2020

What importance would young people give to physical and virtual mobilities in the organization of their activities across the territory, in a future where resources, especially energy, were constrained? To answer this question Æ Coop, a collective comprised of an architect, an artist, a physicist-philosopher and a designer, developed a serious game set in 2061 in Néo Zelbru.

Research participants

ELSA MAURY

NORBERT TRUXA

NICOLAS PRIGNOT

PAULINE LEFEBVRE

Contact : [Anne Fuzier](#)

While physical and virtual mobilities are positively valued, the project for Ecological perspectives on future mobile lives questions the sustainability of our current practices. The ecological and energy costs of information and communication technologies (ICTs)

and travel, despite being considerable, are largely hidden. This scientific and artistic research project assumes as a starting point that, in the future, the required resources for the production of ICTs and travel will either be exhausted, or that the energy and ecological costs associated with their use will be too great to sustain the intensity of current habits.

Younger generations have built practices and lifestyles in which travel and ICTs play a central role and are highly valued. How do they project themselves into a future in which strong energy constraints would impact **mobility** practices and virtual exchanges? In this constrained world, what place would they want to give to their physical movements and virtual mobility?

To answer this question, the Æ Coop team developed an original survey method. All team members studied in the SPEAP master's degree (Sciences Po - Experimentation in Arts and Politics) created by Bruno Latour. Their goal is to experiment with new ways of approaching research topics, combining art and science.

First, they identified the affective and functional qualities that underpin the attachment to ICTs. The emphasis was on two concepts.

The first is that of the "saver," in terms of time and energy. Through a historical analysis of new practices that raised hopes of reducing the material and ecological costs of previous practices by way of substitution, the team questioned the idea that virtual mobility would provide an alternative to physical mobility.

By surveying Belgian people who intensively practice role-playing in various forms (board games, life-size games, video games and LAN parties), the team was able to address a second and crucial aspect of virtual mobilities: their ability to create a "bubble," to envelop the user in an intimate environment while deploying a whole other universe. Virtual mobilities have thus been compared with how role-playing gamers create their own "bubbles."

The second phase of the project was to develop a game, called 2061, in order investigate the research topic and explore the travel aspirations of young people and the trade-offs they make between physical and virtual mobilities. The authors chose to produce a narrative game¹, as opposed to a simulation game which is often limited to pre-existing choices; narrative games allow stories to be produced through a method that offers great freedom to imagine various situations, all the while offering a framing and possibilities that stimulate the players' imagination.

The game: a constrained universe

It is 2061 in Néo Zelbru, a metropolis of about 35 kilometers by 40 kilometers, with a river running from northwest to southwest. Following a flood caused by torrential rains in the 2020s, a swamp of about ten square kilometers formed in the heart of the metropolis. To the north, forest covers about a quarter of the agglomeration, thanks to a reforestation program imposed by the International Organization for the Planet's Renewal. But once fossil fuels started to run out, firewood poaching became common. To the east is the food zone, which supplies the metropolis via mass agriculture using manual labor, as the energy needed for machinery has become too expensive.

Néo Zelbru is highly segregated, divided into seven residential districts with various social profiles. The southwest bank of the river is mostly working-class. To the east are the climate refugee camps, which stretch for about 15 kilometers to the south. Nearer the center, the Tati district is made up of narrow streets and high-rise buildings where poor households are crammed in very small dwellings. It borders the industrial zone to the west, where many industries relocated to be close to the city due to high transport costs; cheap European labor is employed there and some of the workers live there. Little Shanghai, a wealthy and connected enclave in the city's southwestern suburbs, is home to wealthy households that withstood the exodus to city centers in the 2030s.

On the other riverbank, Voltaire, a historic hotspot for transgender communities, is a popular area with excellent 8G coverage. At the heart of this area is the Green Tower that dominates the skyline with its 72 stories; it is completely autonomous thanks to solar panels, wind turbines and soilless cultivation areas. Twenty kilometers north-west, the Commune district is home to residents who refuse excessive technology and rely on handicrafts and local cultures to achieve self-sufficiency. Finally, in the heart of the Forest are a few settlements of radical ecologists, converts to a new religion that calls for a return to earth. Refusing any contact with technology, they live in complete autonomy.

The entire virtual world is controlled by O, a high-tech company headquartered in O'City, west of the city center; the latest news and novelties are displayed in the streets in augmented reality. All digital transactions take place ten kilometers away in the Angola district, packed with server towers operating day and night.

In 2061, moving from one area of the metropolis to another is difficult, given the depletion of oil resources. Some affluent neighborhoods have the infrastructure for electric vehicles, but most of Néo Zelbru is not equipped. The RER allows people to cross the central districts; there are also shared bikes, or, in the Commune district, rickshaws. Players who want to leave Néo Zelbru can try to get to Madrid, 1400 km away, if they find an adequate means of transport.

How the game unfolds

How the game unfolds

Immersed in this universe, the players begin by inventing their own characters, aged between 10 and 20 years old, defining their original social environment, their aspirations, their appetite for virtual technologies or for physical objects. For example, Julia, 15, comes from the Tati district; her parents would like her to have a career in O'City, but she doesn't like virtual school or the idea of having a boss! Outspoken, she often finds herself in conflictual situations. Physical sports are very important to her, so she has a rather material profile. On the other hand, 16-year-old Rodolphe is a young geek passionate about high-tech agriculture techniques: hydro-thermal regulation of greenhouses, genetic improvement of seeds but also of humans to regulate their nutritional needs. Convinced by progress, he gets around Néo-Zelbru on a solar-powered lawn-tractor. Once the characters are established, a Great Event launches the plot and guides the evolution of the characters in the city of Néo Zelbru: it can be a large power outage, a problem on the transport network or even an influx of climate refugees. Faced with this event, the players each try in turn to carry out their character's goals. However, the ecological and energy crisis has profoundly changed the way people live and move, and all actions, whether material or virtual, have a chance to fail: a phone call can run into a network problem; a trip from one end of the metropolis to the other can be compromised by the inability to travel by car, etc. Players decide what action they want to take and then pick pawns that determine the success or failure of their action; they then adapt their story according to the outcome.

AE Coop's analysis

People struggle to project themselves in a constrained universe

The game was run around fifteen times with young people of various ages and levels of education, in the regions of Brussels, Paris and Lyon. The games were then analyzed by the AE Coop team. The players struggle to project themselves into a constrained future; they did not perceive the impact of energy constraints on daily life and most of the time imagined a city where travel would still be simple. Sometimes players even chose not to consider travel throughout the city as an action that was subject to a level of difficulty. In cases where a trip was played as an action and failed, the players explained it by failures in the city's infrastructure or misadventures. For long-distance travel, they understood the difficulties better: traveling to Madrid was considered to take too long or to be impossible. While players didn't travel less in the game than in real life today, they did abandon oil-based mobilities and preferred to use soft modes; motorized means are mostly electric and reserved for the richest. They anticipated the effect of social inequalities in accessing mobility.

The virtual occupied a central place in the players' stories; disruptions caused by virtual malfunctions (bugs in transportation management software or online services) or by hacking (identities, data) were considered important. However, the means of communication remained strongly similar to those of today and it was rare for players to imagine really different virtualization modes. Connected tools and modes of transport were usually those that already exist (phones, computers, tablets, electric cars, hoverboards). Some players, however, proposed innovations: a 3D-printed power supply, a hologram implant, connected lenses, priority lanes for energy-recovering hoverboards, etc.

Many games raised the issue of dependence on technology, for instance through the consequences of their failure: elevators no longer recognize their users, porticoes at district borders no longer allow inhabitants to pass, etc. In such cases, a virtual malfunction hinders actual physical **movement**.

Between the physical and virtual worlds

Playing the game shows different ways of arbitrating between physical mobility and virtual exchanges. In one of the stories, players formed a band without ever physically meeting; virtual space becomes a space for socialization where characters form relationships. Sometimes players prefer to be together physically rather than being connected. They also show a strong attachment to material objects (paper books, antiques, etc.).

Finally, physical mobility is often favored because it allows for social mobility. Leaving one's original neighborhood, which can sometimes be considered oppressive, was often a major character goal; it allowed them to become emancipated, meet other people, change their social background (becoming rich, eco-radical, etc.).

MoHo's analysis

Following AE Coop's analysis, the Mobile Lives Forum asked a social science research agency, Mobil'homme (MoHo), to analyze 2061's potential as a data collection device for qualitative research and its ability to answer the research question. The analysis confirms that the games allow researchers to collect many elements for answering the question, in a freer and direct context than that of semi-structured interviews. During interviews, several factors can lead respondents to control their attitude or speech: domination effects related to their social position or that of the investigator, intimidation related to the interview situation, a willingness to present themselves in a good light... These biases can be partly avoided with the game as it allows players to act and express themselves more spontaneously and free from each other's gaze, since their actions are attributed to their character and not directly to them. Nevertheless, this same advantage introduces a bias in

the data collection, since the actions of the characters, completely free, do not necessarily correspond to the players' actual aspirations. Another drawback of this method is that it requires a lot of time to play the game and to discuss it afterwards.

However, the analysis of the games played confirmed the team's analyses and provided several findings:

1st finding: Physical mobility is a means of social mobility, allowing players to get out of their home environment, meet other people, change their social status, etc. This is also the case, to a lesser extent, for virtual mobility.

2nd finding: Players make trade-offs between physical mobility and virtual exchanges based on the situation and their preferences. In some cases, physical and virtual mobility are interchangeable: players can choose to move instead of communicating remotely when the network is unreliable, broken or being monitored; conversely, remote exchanges occasionally replace travel, when travel is difficult.

3rd finding: However, players often prefer to move physically for several reasons: important collective actions require coordination and trusting relationships, which are more difficult in virtual relationships, that are more artificial and therefore less reliable. This mistrust of virtual exchanges is reinforced by their technical unreliability and the fear of being monitored. Finally, the players' preference for physical displacement can also be explained by their resistance to the virtualization of exchanges and experiences: they don't want virtual friends, virtual concerts or augmented reality trips to replace real world, in-person experiences and encounters.

4th finding: It's worth noting that in general, faced with the constraints of 2061, players don't travel less than they do in real life today, but they do so differently, by resorting especially to soft modes, or by imagining motor vehicles running on renewable energy. However, not all young people properly integrated the energy constraints of the game's setting. Some showed little regard for these constraints, meaning they didn't really take them into account in their actions.

To go further (available in French only)

Synthesis

Final report

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

More

Movement

Movement is the crossing of space by people, objects, capital, ideas and other information. It is either oriented, and therefore occurs between an origin and one or more destinations, or it is more akin to the idea of simply wandering, with no real origin or destination.

More

Keywords : [Art](#), [Virtual Mobilities](#), [lifestyles](#), [Forecast](#), [Collective representations](#)

Disciplines : [Humanities](#), [Prospective studies](#), [Art](#), [litterature and design](#)

Transport mode(s) : [All modes of transport](#)

¹ <mailto:anne.fuzier@sncf.fr>

² <http://owncloud.forumviesmobiles.org/index.php/s/A3XDSAcSI0jteXI>

³ <http://owncloud.forumviesmobiles.org/index.php/s/N30rQ8UKbSEnGu4>

⁴ <https://en.forumviesmobiles.org/marks/mobility-450>

⁵ <https://en.forumviesmobiles.org/marks/movement-460>

⁶ <https://en.forumviesmobiles.org/mots-cles/art>

⁷ <https://en.forumviesmobiles.org/mots-cles/virtual-mobilities>

⁸ <https://en.forumviesmobiles.org/mots-cles/lifestyles>

⁹ <https://en.forumviesmobiles.org/mots-cles/forecast>

¹⁰ <https://en.forumviesmobiles.org/mots-cles/representations>

¹¹ <https://en.forumviesmobiles.org/disciplines/sciences-humaines>

¹² <https://en.forumviesmobiles.org/disciplines/prospective>

¹³ <https://en.forumviesmobiles.org/disciplines/art-litterature-et-design>

¹⁴ <https://en.forumviesmobiles.org/modes-transport/tous-modes-transport>