

Gaming Scenarios: Making Sense of Diverging Developments

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Abstract

This article introduces Huizinga's notion of the Homo Ludens as theoretical framework to gaming approaches in Futures Studies. This understanding of games as social functions, simultaneously representing reality and creating social structures, is then discussed in relation to scenario techniques. Finally, a scenario project from Berlin, Germany is presented as case study, showing how gaming scenarios can engage participants in playfully thinking about and experimenting with futures.

Keywords: Experiential foresight, Card game, Homo Ludens, Gaming, Scenario.

Introduction

Experiential Turn in Futures Studies

What Futures Studies is (or should be) has been discussed along a divide between analytical and creative approaches right from the beginning (see e.g. Masini, 1993; Marien, 2002; Bell, 2003). Futures Studies would be understood either as science or as art, while many considered both approaches as being incompatible (see e.g. de Jouvenel, 1967; Bell 2003). However, in recent years the so-called experiential turn¹ became prominent within Futures Studies. Experiential foresight combines analytical, creative and experimental approaches. It is based mostly on methods and techniques of interactive play (theatre, board games), experimental research (modeling, design), and different forms of immersive visualization (interactive videos, virtual reality) (Daheim, 2015).

The development of experiential foresight can be seen within a context of changing demands on research in general and on Futures Studies in particular: For example, there is a rising emphasis on tangible outcomes as well as a stronger focus on motivation and realization of shared images of the future through stakeholder

engagement (Daheim, 2015). Accordingly, experiential foresight aims at enabling people to intuitively explore different future opportunities by creating tangible outcomes and/ or settings that are used to experiment with futures and developments. Within experiential foresight, science and art are no longer understood as incompatible, but as complementary. This allows discussing Futures Studies from a playful perspective. The words used to describe approaches and/or methodologies in Futures Studies already hint at its playful aspects: Futurists are talking about, to name just a few, game changers and wildcards, about chance, simulation, intuitive logics or, most prominently scenarios (a term derived from theatre). Following Huizinga's conception of playing, as presented in the following sections, an understanding of futures orientated work as playful offers opportunities to experiment with alternative futures.

This paper contributes to this development by offering a theoretical framework for understanding why using games in Futures Studies enables participants to experiment with different futures. From a macro sociological perspective, Huizinga's *Homo Ludens* is discussed as a theoretical framework for experiential foresight. Section three takes this discussion further regarding its possible methodological contributions for scenario techniques and presents a case study from Germany, describing a scenario-project that was understood as playful by design. Finally, the potential of games as socio-epistemes will be discussed.

Theoretical Framing

Homo Ludens

The concept of *Homo Ludens* is mostly based on the work of Johan Huizinga (1872-1945), a Dutch cultural historian. Besides other dominant concepts² in the social sciences, like *Homo Faber* ('The creative man' or 'man as a craftsman'), *Homo Sociologicus* (i.e. man as being conditioned by society in form of norms, values and expectations) and *Homo Oeconomicus* (i.e. man a rational actor), the concept of *Homo Ludens* focuses on the meaning of games and the act of playing for the constitution of culture. Huizinga assumes, that the game is a central and independent factor through which human communities express their interpretation of life and the world surrounding them (Huizinga, 1949³). This is not to be understood as if games and playing are synonymous to culture, but that culture is to some extent playful, performed in the form of games and vice versa that structures of games are at least partly incorporated into social structures.

This chapter will present the central aspects of Huizinga's *Homo Ludens* to discuss the playful aspects of culture and the ways in which games create knowledge. In the following section, we will show how the concept of *Homo Ludens* could be basically transferred into scenario techniques.

Gaming culture

Huizinga assumes that games and the act of playing are a fundamental part of culture. In fact, it is the foundation of culture, as every cultural practice like science, arts, law, warfare etc. is routed in the act of playing. In his studies, Huizinga looked at games from an anthropological perspective, asking: Why do people play and what does playing mean to them (Huizinga, 1949)? Others asked that questions before, but - as Huizinga puts it - developed too narrow functionalist answers from a psychological or physiological perspective. Therefore, Huizinga understands games and playing as a social function, not an individual act. Studying and describing different people in different times, Huizinga assumes that games and the act of playing are present in every culture in the form of contest, described in different settings such as fights, philosophical discussions, mystery, court cases, warfare and so on (Huizinga, 1949). Although the word to describe a contest may differ across cultures, Huizinga identified common features defining the act of playing:

First of all, every game is based on the free will to play. Having in mind the discussion about the foundations of a free will, Huizinga here only refers to the point, that there is no need to play, neither physical, moral nor psychological. If there was, this would be a question of addiction to gaming (e.g. gambling). Instead, the purpose of playing a game is first of all playing a game, i.e. experiencing joy and having fun. As Huizinga puts it: „Erst sekundär, dadurch daß es Kulturfunktion wird, treten die Begriffe Müssen, Aufgabe und Pflicht mit ihm in Verbindung“ (Huizinga, 1949, p. 13). [It is only secondary, once it has become a cultural function, that the notions of obligation, task or duty are linked with it.(transl. authors)] Accordingly, a game is not linked to the satisfaction of a life's necessities and basic needs (Huizinga, 1949, p. 13-14).

Furthermore, games are temporally and spatially limited. That is why chance could be a factor in the game, but it is not foundational for the settings of the game. The game then becomes repeatable, because it is not based on arbitrary settings. The game is marked by a clear starting and ending point as well as a more or less marked playing field, which is known at least by every participant of the game (Huizinga, 1949, p.15-16).

Moreover, games are based on a certain order, which defines the rules of engagement but does not determine the outcome. That is why every game oscillates between order and chance or uncertainty creating that specific atmosphere of excitement while playing a game⁴ (Huizinga, 1949, p. 17).

Additionally, every game constitutes a community - at least temporarily - which is based on the shared experience of being in a position exclusive to others and exceptional to common norms (Huizinga, 1949, p.20).

Next to those more formal aspects of a game, it is crucial that a game is neither true nor false; it is a representation of reality (Huizinga, 1949, p.22-23). According to Huizinga, that is why games in form of contests are serious. A playful act cannot be distinguished from a „normal“ act, by claiming that only the latter was serious. For the participants, the game is a realization of something they imagine as if this would be reality (German: “Scheinverwirklichen“). However, being a representation of reality a game is not only put into a certain order to be realized, it is a systematic order itself (Huizinga, 1949, p.17). This generally refers to thoughts developed by social constructivist theories on knowledge or knowledge creation. As Luckmann and Berger (1966) describe in their seminal work, every reality is a social reality, institutionalized through social practice, power and kept alive by the reproduction of symbols. The more the shared reality of the game is practiced and repeated, the more it becomes not only a representation of reality *within* the limits of the game, but represents reality itself as it becomes a social structure. It then functions as the socio-episteme of a specific group or society through which reality is perceived and socially constructed. That is why Huizinga assumes that culture in its beginning is playful.

However, in his final remarks Huizinga seems to deplore the diminishing value of games in modern societies: As the inaccurate separation between play and seriousness is strengthened, games as a form of social critique and a way of development of culture by thinking in alternative realities seem to have lost their value. There seems to be little room left for the play function in the cultural process. Instead usefulness, work and production have become guiding myths, limiting the thought of possible futures (Huizinga, 1949). While agreeing with Huizinga, it seems that the fundamental problems and uncertainties of the so-called post modernity have led to a revival of games as a way to conceive alternative futures. However, this is not to say that games like war-gaming and recently all kinds of simulations do not have a long history in Futures Studies (serious gaming). But in contrast to Huizingas concept of games and the act of playing these seem to be bounded in the same myth of goal-orientation and usefulness and seem to be used more as a tool to test hypothetic futures instead of imagining alternative ones.

Gaming Scenarios

Scenarios as games

One prominent way to think about alternative futures is using scenarios. In general, when using scenarios the future is conceived as contingent, so that at least implicitly different, alternative futures are possible (Bradfield, 2005; Börjeson, 2005; van Notten, 2003). As a systematic approach, scenarios then describe several different future states (images of the future) as well as the paths leading into these specific futures (Kosow, 2008; van der Heijden, 1996). By assuming the future as contingent, alternative futures can be interpreted as options. Scenarios can thus support decision-making processes in a broader sense and help to develop concrete opportunities to act as well as to depict and discuss the possible consequences of actions (Grunwald, 2014; Kosow, 2008). This makes a more normative assessment of futures as relevant as the inclusion of qualitative and quantitative data or participatory approaches.

However, there are several scenario techniques differing in their analytical approach as well as in their expected outcome. For instance, scenarios can be understood as a learning approach questioning existing mental models. This approach is based more on intuitive logics, i.e. it uses mostly qualitative, creative, and participatory techniques (Kosow 2008; Schwartz, 1998; van Notten, 2003). In contrast, more formalized approaches, i.e. using rather quantitative, analytical, and data-based techniques, are focused on the results to be developed and ask for the probability of occurrence (Börjeson, 2005; Bradfield, 2005; van Notten 2003). Furthermore, scenario techniques differ in whether they explore concrete opportunities for action or describe possible futures as exploratory scenarios as well as whether the developed scenarios are evaluated explicitly (e.g. according to desirability) (van Notten, 2003).

In addition to these features, we assume that scenarios in general are played in the sense described in II.2. On the one hand, there are fundamental similarities between games or the act of playing as described by Huizinga and the different scenario techniques concerning the formal aspects. Obviously, scenarios are based on the free will of those participating in the scenario process. But what is more, at least those scenarios based on more intuitive logics are performed in scenario workshops, which try to link research with joy and fun to motivate the participants to engage. Furthermore, as scenarios are generally concerned with the future, they are not linked to the immediate satisfaction of the present life's necessities and basic needs (although they might take thoughts about how those could be fulfilled into consideration). And as a systematic approach, scenario processes are of course temporally and spatially limited. However these features are not exclusive for scenarios only, as they could be found in several (scientific) methods. More remarkably is the use of a certain order to define the engagement of the participants. Just like every game, scenario processes generally have certain methodological rules, which define what should be done, by whom and when. But what is more, these rules do not explicitly limit the content of the outcome (i.e., what should be thought about the future), but allow creativity in engaging with uncertainties about future developments and its fundamental aspects. As such, the rules of scenario approaches oscillate as much between order and uncertainty as do the rules of games. This creates unexpected and exciting results, which is generally agreed upon to be an important feature of scenarios to be perceived (Glenn, 2013; Kosow, 2008). Finally, as scenarios try to engage stakeholders either in the whole development of scenarios (e.g. through participative approaches) or temporally (e.g. experts), they create a specific scenario community, at least temporally.

This last feature - a scenario community - on the other hand leads to similarities in the non-formal aspects of games and scenarios. As described above, a game is a realization of something the participants imagine as if this would be reality. The same can be said for scenario approaches: the participants of the scenario process must at least temporarily assume, that the developed futures could become reality. Just like games, then the developed scenarios do not only rely on a certain

order in the form of methodological rules, they represent a certain systematic order of a future state itself. Hence, just like games, participants of scenario processes act as if, i.e. they assume alternative possible “would be realities” (German: Scheinverwirklichung) of the future. Moreover, as scenarios are concerned with exploring contingency and opportunities, they ask what if something happens, occurs or not etc. Developing and discussing the “would be realities” of possible futures, participants as well as addressees of the scenario process reflect on their opportunities to act. As this way of thinking alternative futures is practiced and finally incorporated, the „would be realities“ of the future become a shared reality to be created or prevented. So scenarios could develop social structures, i.e. shared representations of reality. Finally, as the similarities between games as described by Huizinga and scenario approaches are remarkable, one could assume that scenarios are games or at least playful.

In the following, we will present our scenario work with children and teenagers concerning futures of Neukölln, a district of Berlin, Germany, showing how this playful understanding could be used as part of experiential foresight.

The project: Berlin-Neukölln 2116

The project presented here was part of the activities surrounding the 100th anniversary of the Franz Körner Park, a park and social hot spot within one of the most volatile districts in Berlin (Germany): Berlin-Neukölln. This area had been a center of urban industrialization at the beginning of the 20th century and became prominent as a hotspot of migration mostly from Turkey in the 1950s and 1960s. Today, Berlin-Neukölln is a place where diverging developments of postmodern urban areas collide: Blue and White Collar workers, so-called social hotspots and gentrification, fast changing landscapes and traditional views, crime and (re)discovery of public spaces and so on.

Within the project, pupils of adjacent schools discovered the past, present and future(s) of the Franz Körner Park as well as the surrounding living area, ranging from its establishment in 1916 until its possible developments in 2116. Two groups (children of 9-11 years and teenagers of 14-16 years), had the task to develop scenarios for Berlin-Neukölln, describing the life of children or teenagers respectively of their age in the year 2116.

The relevance to engage children and adolescents to elaborate on possible developments is obvious: even if they do not experience the year 2116 despite medical-technological progress, they will literally-speaking spend a substantial part of their lifetime in the future, whether in Berlin-Neukölln or elsewhere. Therefore, the project tried to:

- A. Facilitate Futures Thinking to enable participants to think about developments which mostly seem to be unalterable through their actions and;
- B. To experience and experiment with futures as the participants make sense of their worlds, experiencing contradictions and inconsistencies.

The early engagement with the development of opportunities and the reflection on the own potential to act can be seen as an important contribution to educate the competences of tomorrow’s decision-makers to actively shape a common future (“Gestaltungskompetenz”) (for further details see Dannenberg 2016). Consequently, the project presented here used an exploratory approach to futures, while allowing the participants to evaluate the different futures and developments according to desirability. The core of the project was its participatory approach, as the pupils were creating scenarios themselves, triggering discussions about their own possibilities for actions. Therefore, the project focused on the scenario process: the active discussion of and engagement in thinking about futures of Berlin-Neukölln and own futures respectively was at the center of the project, not the single scenarios created. Consequently, the common creation of images of futures with the discussions and decisions necessary in groups were especially important. To engage the participants

and trigger discussion, we designed a card game facilitating the creation of different scenarios. Once the participants of the first group (children) had invented different futures, they were engaging in these futures through building models and enactment. In a second phase, the teenagers of the second group were working on those futures created, discussing neglected perspectives and backcasting those futures to the present.

The card game

Scenario building often starts with an analysis of the present, defining key factors influencing the considered system. Different plausible developments of those factors then form the basis of different scenarios. Still, the assumed plausible developments contain diverse assumptions and beliefs on what might be plausible. Working with provocative developments thus is an opportunity to make underlying assumptions more explicit. The purpose of the game is therefore to offer such provocative developments, triggering discussion and, based on that, to promote the creation of another development. As stated above, a participatory scenario approach can be understood as a game. Building on that, we decided to further facilitate the scenario process using gaming and creative elements. Consequently, we used a card game allowing to play with provocative future developments.

The card game itself functions as starting point for building scenarios: The game consists of 10 categories, similar to key factors, and 3 to 4 different developments per category. The 10 categories used represent a broad range of influences while still being processable, especially regarding the groups of children and teenagers we designed for. We derived the categories from a STEEP analysis: Within the social field, we focused on family and friend structures, learning, work and leisure time as well as religion; in the technological area on transportation; on shopping and production in terms of economy; on housing as well as health regarding ecology and in the political field we focused on the global political system and regulations on local scale.

To create developments in each category, we started off by researching existing trends and developments. We then used different semiotic and discourse analytic approaches to deconstruct their key figures, figuring out underlying assumptions, and used these findings to reframe provocative developments, for example by replacing, exaggerating or contradicting assumptions and key terms. Thus, we created three to four developments per category, which, similar to wild cards, were possible, but strongly provocative.⁵ For example, regarding transportation we presented a virtual future where transportation is limited to data streams; a future with fully automatized individual transportation and one where transport is based on human muscle power.

Each card of the game presents one development with a title, drawing and a short explanation. Next to those cards with ready-made developments, each category includes a joker, i.e. an empty card leaving blank space to draw and describe a development created by the participants themselves.

Playing the game, each round the participants are given all different development-cards including the joker of one category. Their task is to decide for one development – and, this decision has to be a) within a group consensus and b) based on argumentation. Therefore, they have to discuss the different developments, figuring out why and why not, in which circumstances or context the different cards might be plausible, what they like and dislike about them and so on. Each round, the participants thus have the opportunity to decide for one ready-made development or for choosing the joker and creating another development according to their thoughts.

Having played ten rounds and chosen/ created one development per category, the game ends with a set of developments similar to a raw scenario. On the one hand, the cards thus give a frame in which scenarios are derived, but on the other hand, this frame allows discussion of assumptions and beliefs not restricted to the regarded development and triggers the creation of other developments.

During our project, we used the card game as a starting point to create one scenario per group

and continued working with those futures. It could be also interesting to replay the game to derive different scenarios and thus play with different futures.

A scenario-based gaming approach: 2 Workshops

The first workshop within the project was with children aged 9 to 11. This workshop, integrated in their school as a week-long school project, aimed at experiencing different futures.

We started off by dividing the children into three teams (blue, yellow and orange), who then would play the card game simultaneously. Within their discussions about which development per category to choose or to create, the children were referring to what they considered possible as well as to what they found to be preferable and chose or created cards accordingly. At the end, each group had a different raw scenario based on ten cards including all categories.

The children were then asked to check their future world based on those development-cards regarding inconsistencies and contradictions. If such were found, the aim was to discuss to find explanations making those possible. Once the groups found their future to be consistent, they created a poster using the chosen and self-made cards as well as some short phrases to summarize their future.

These posters were the starting point for the following work with the three futures as well as the framework the groups used continuously to check back during their work on their futures. Having created still abstract futures with the game, the next phase of the workshop aimed at making those futures more specific and especially more tangible.

The first step for each group to specify the imagined futures was to invent a pair of twins, aged 11, that would live in that future. Thus, the children thought of names, clothing, likes and dislikes, hobbies and the like – always referring back to their imagined future. They were drawing the twins and designing their clothes using a collage-technique.

A next step led the children to specify the living context of their twins by building 3D models of their future neighbourhood using a wide range of materials. This way, the children not only had to combine different implications from their assumed developments, but also had a first experience of these implications, having to deal with contradictions or oppositions that popped up and finding ways around them. For example, they had to combine their chosen mode of transport, the type of housing or health ideal and different kinds of regulations in the same area.

The last phase of the project went one step further, from tangible models of imagined futures to their enactment. The children were walking in their twins shoes, diving into different typical situations within their future. First, the children chose and described three situations they wanted to enact (e.g. a ride in an ultra-fast-transport-bubble, 3D printing robot dolphins or being served by a facility-robot). Then, they built the props and costumes necessary to portrait those situations. They then put on the twin-costumes and enacted the future situation in front of a camera. Finally, we combined those pictures with photos of the models and cards, so that they turned out to be images of those three futures. Those images were complemented by short stories and, together with models and props, were part of an exhibition.

Once the children had developed their three futures within the first workshop, we followed up with another school workshop. This time, we took those three futures to teenagers aged between 14 and 16. This project was integrated as one of the school's extra courses, taking place once a week for two hours for 9 weeks.

As the three futures created by the children were the foundation of this workshop, we, again, divided the teenagers into three groups, each receiving one future-poster. As with the children, we started by playing the card game. But this time, the aim was not to create another future but to get into the developments that had formed the given futures. Thus, the teenagers played the game to get used to futures thinking. They were discussing the different developments according to their

assumed probability and preferability. The teenagers were relating to their knowledge from different subjects such as politics, history or biology as well as to their understanding of news and daily social life.

The first step to dive into the children's futures was a discussion of the posters. The teenagers were discussing aspects they found interesting or contradictions they saw. Based on these thoughts, the three groups wrote a time-travel story of a visitor of their future 2116. These stories deepened the understanding of those futures, as the teenagers were immersing in those worlds.

Those stories were the starting point for a next step: the teenagers were asked to change their perspective on this future. As the children displayed their futures as mostly bright and preferable but the teenagers already saw negative implications, they could easily find a neglected perspective - the view from a person living in that future but not being on the portrayed winner side (Gaisbauer, 2014). Once again, they were asked to tell a story about their future, this time from the neglected perspective. Additionally, we asked them to choose a medium for their storytelling. One group chose a comic, another produced an audio drama and the third worked with photo-story based on a LEGO-model.

Then the teenagers backcasted the development of their futures. The starting point was their story of 2116 from the neglected perspective. We used three steps: 2086, 2056 and 2026. The teenagers created a timeline, writing down major events, developments and connections, thus visualizing a possible development into their future. Having played the card game at the beginning, the teenagers also built on their discussions about the possibility and contemporary developments into the direction of one of the different cards. To round it up, the teenagers transformed snap shots of 2086 and 2056 from their timelines into short stories, again in their chosen format.

The results of the course were presented at a festivity celebrating the 100th anniversary of the Franz Körner Park. That is why, for the last time frame, the teenagers developed interactions that allowed the visitors to fill out linking developments. The three different futures were displayed together in one pavilion. The visitors would enter in 2116 with a picture of the children's future from the first project along with the time-travel short story from the teenagers. They would then encounter the neglected perspective and follow each future back towards the present along the stories of 2116, 2086 and 2056. When reaching 2026, the visitors received a handout with some guiding question and were asked to fill the link to the present. These notes were collected at one board, being illustrated simultaneously.

Alternative Scenarios for Berlin-Neukölln 2116

As we worked with three groups in both of the projects, the children and teenagers respectively created three different scenarios for Berlin-Neukölln in 2116: a blue, an orange and a yellow future (named after the teams). In the following, we will present the three scenarios, each combining the future developed by the children with the neglected perspective and the backcasting created by the teenagers. While the children considered their created futures positive and desirable, the teenagers took a different stance. Especially through considering neglected perspectives, they highlighted the more negative and undesirable aspects within those futures and especially within the possible developments to those futures. Through their combined work, seemingly inconsistent developments are brought together and become plausible, creating futures that simultaneously contain different perspectives on each of those developments.

A. The blue future:

Following years of political tension, a severe economic crisis tears the European Union apart. Hit by the economic disaster caused by the loss of the Euro and worsened by austerity measures, Berlin's society is heavily divided. Millions of people starve or die from diseases, while few build

giant skyscrapers to escape pollution and misery on the ground. The latter communities enjoy their beautiful rooftop gardens together with their family and friends, pursuing their hobbies or, in case of minors, go to school or learn in virtual worldwide interest groups. They are rarely sick or unhealthy, as computer-doctors quickly find the right cure – or even preventions. Moreover, as religion is no longer a reason for fights, the community shares a peaceful living. To stay safe, public spaces, especially on the ground, are fully under surveillance by automatized drones. The literal upper class does no longer get in contact with the harsh and dirty life down on the streets, as online shopping, 3D printing and drone delivery as well as a multitude of virtual leisure activities and online elections allow them to stay home. Over the years, there is barely life left on the streets. But still, it is only when cleaning robots just cleared the streets between the skyscrapers from all the trash falling down, that some children leave their amazing rooftop gardens to do some inline skating on the roads.

B. The orange future:

Similar to a range of countries worldwide, Germany has (again) turned into a dictatorship. The assassination of a Chinese ambassador in Berlin triggers a third world war. As with the invention of the human 4.0 program every wound or disease can be healed through artificial transplants, the people demand peace instead of ever-ongoing fighting and healing. To ensure world peace, a world government deciding on basic laws is installed and national borders are abandoned. Locally, people govern themselves by democratically established rules. But although world peace is maintained, social inequality rises continuously. As a production based on 3D printing has led to shortage in raw materials, the world-government thus starts a program where poor people receive basic service for the production of raw materials. The social divergence also shapes Berlin: Berlin's districts are strictly divided according to wealth. The city center is inhabited by the super-rich with luxury homes surrounded by pools and fountains, where robot dolphins play. They spend their days with a job making them happy or, for the children, learning in small groups consisting of students with same affinities. Leisure time is spent mostly virtual. The upper middle class, hosting also most tourist sights, surrounds this exclusive area. This area, too, is full of little canals and gardens – though manually powered barges inhabit their waters instead of robot dolphins. Sports and exercise are of huge social importance, thus most motorized transportation is abandoned and streets are divided into lanes for sporty and lazy people. Still, every now and then, children also use a 3D ice cream printer. People with small or no income working to produce raw materials for basic social service live at the outskirts of Berlin. Access to areas of higher income level is restricted, but as soon as a person reaches – or loses - the required wealth, he or she has to move accordingly.

C. The yellow future

After decades of increasing tensions, gender-conflicts led to a war between men and women. After decades of fighting, including nuclear weapons and millions of dead, a peace conference finally ends the war. The new world peace lasts: everyone is constantly healthy, people stick together, freely speak their minds and still believe in their own religions. But the peace is fragile, as gender equality remains unsolved and tensions simmer. Within the extended families living together, women have the task to supervise cleaning robots while men pursue a job they like. During the war, Berlin was enclosed by a dome to protect the city from bombings. Now, the dome is re-used as a shelter from the unstable climate outside, regulating the weather in Berlin, for example with colorful, artificial rain. Within the dome, conveyors pervade the huge skyscrapers dominating the city. Electrified and fully autonomous transport capsules dash along the conveyors, driving people automatically to the locations they want. People live in a fusion of virtual and analogue reality: They shop online, paying with data from a personal account; virtual reality glasses are used for learning; and sensor-suits allow to interact with virtual environments and different robots.

Conclusion

The contributions of this article are manifold. Firstly, as experiential foresight seems to become an important approach in Futures Studies, we tried to offer a first theoretical underpinning for it by introducing the concept of *Homo Ludens*. In essence, the concept of *Homo Ludens* assumes that every culture is at least in the beginning playful. Through the repeated act of playing games people then reflect on and (re-)construct their reality by forming social structures or socio-epistemes.

Secondly, we showed how this theoretical concept is linked to the most prominent method used in Futures Studies: scenarios. We assumed that scenarios can be seen as games through which participants reflect and construct alternative futures. Just like in games, the participants of a scenario approach act as if the different alternative futures would become reality. But in addition to games, they further ask 'what if' to deduce opportunities for action to create or prevent certain developments. Both - games and scenarios - construct social structures or social epistemes which from a social constructivist point of view frame the way (future) reality is perceived.

Thirdly, we presented a specific project where we tested this theoretical and methodological approach. By using a card game we engaged children and teenagers in thinking about alternative futures for their home district in the year 2116 by integrating mostly divergent developments. The game triggered discussions about assumptions and beliefs, making explicit why (or why not) specific developments seemed to be plausible or preferable to the participants. Ending up with a raw scenario based on different cards, the necessary discussions to 'explain away' seemingly inconsistent developments further enabled participants to think themselves into other plausibilities, i.e. their created futures. The following creative work – from developing protagonists of those futures to building models to enacting situations within those futures during the first workshop to writing time travel stories and building/drawing/staging neglected future perspectives and their backcasting during the second workshop series – further deepened the experience of the invented futures. During this process, further contradictions or inconsistencies emerged and were explained or solved, different explanations were tested and participants experimented with how different futures could feel like – sometimes changing their views on plausibility or desirability.

Within our project, we stressed the playful aspects to facilitate futures thinking, allowing participants to feel free to experiment with different futures and developments. Understanding scenarios as games - whether building on more creative or more analytical approaches - can support the participants experience of their competences of shaping futures and dealing with developments: Scenarios as games allow to play with alternatives and thus can form socio-epistemes that support futures thinking.

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Endnotes

1. For instance see the Special Issue in Futures on „Experience Futures“, edited by Dr. Kerstin Cuhls and Cornelia Daheim http://ac.els-cdn.com/S0016328716302683/1-s2.0-S0016328716302683-main.pdf?_tid=df2567e8-781c-11e7-ae7d-0000aacb35d&acdnat=1501745286_cd7d0a46b7a3d54a4aa4c2cca834fd9d
2. Of course there are several other concepts to be mentioned, e.g. Homo Ecologicus or Emotional Man. However, all of these concepts try to explain (and in some sense anticipate) the behaviour and social actions of actors.
3. We will refer to the original German source as written by J. Huizinga and provide English Translation whenever quoting directly from the text.
4. Furthermore games seem to oscilate between high skill/low luck (e.g. chess) to high luck/low skill (e.g. using a dice)
5. For more information about the underlying methodological concept, please see proceedings of conference „Futures of a complex World“, Turku June 2017 <https://futuresconference2017.files.wordpress.com/2017/06/fischer.pdf>

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