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Introduction

What is ReClaim?

ReClaim is a two-year, EU-funded research project dedicated to the study of Urban Gamification (MSCA-IF-2 017, grant agreement No 793835). The project is led by Dr Mattia Thibault (PI), supervised by Prof. Juho Hamari, and co-supervised by Dr Judith Veenkamp and Dr Gabriele Ferri.

What is ReClaim about?

Nowadays, the idea that cities should not just be smart, but also playful is gaining more and more recognition. In addition to bottom-up, spontaneous activities of playful use of urban spaces (such as parkour, flash-mobs and zombie walks) and to urban games (the most famous being AR location-based mobile game Pokémon Go), pro-social activities such as those organised by Playable City at the Watershed of Bristol try to channel the power of city play and use it to promote more inclusive communities and a sense of city-ownership.

The citizens’ reaction to moments of urban playfulness is often the same: a simple, almost childish, joy at seeing the anonymity of modern cities being invaded by coloured, fun, and light-hearted activities. Urban gamification, then, can be an effective strategy for helping those citizens that feel increasingly powerless and disconnected from their own cities in face of the changes brought by globalisation and by the ICT revolution: cities that play together stay together.

ReClaim studied urban play in the wider frame of gamification, in order to deepen our understanding of how we can use play to affect the urban spaces and on what effects this might have on citizens and their practices. The project has drawn from the knowledge and methodologies of gamification, critical design and pervasive play to build an innovative and usable methodology. The latter has been tested in the analysis of several case studies, with constant dialogue with experts and through empirical testing in several hands-on projects. This has ensured the construction of a framework for the study and implementation of actions of urban gamification.

How did ReClaim go?

ReClaim was articulated in three main Work Packages. In WP1, the Experienced Researcher (ER) has successfully integrated several multidisciplinary perspectives focusing on urban areas (urban semiotics, architecture, urban sociology), on gamification (gamification research, critical design, punk studies) and on their intersection (playable cities, the ludic city, pervasive play) and created a solid theoretical platform for the study of urban gamification.

In WP2, the ER applied the theoretical platform to several real-life scenarios. First, he has analysed several case studies. A secondment period of 3 months in Amsterdam allowed the ER to meet directly with the creators of several activities of urban gamification, such as the group of students behind the Asphyxia data visualisation project (at the Amsterdam University of Applied Sciences) and members of the company PUSH, creators of the MUV app within the Horizon 2020 project “Mobility Urban Values”. Second, the ER has been involved in the design and implementation of several gamified and...
playful activities, in particular: “Rook”, a playful data visualisation device aiming at the dissemination of air quality data (with Artur Cordeiro, in partnership with Waag); “Jurassic Tampere”, a urban toyification activity in which participants would hide hundreds of small toy dinosaurs in the urban spaces for citizens to find and “Etsijä’s Call”, a conference game designed for GamiFIN conference 2020 with Oğuz ‘Oz’ Buruk and Nikoletta Zampeta Legaki. The analysis of the case studies and the design of such playful devices and activities contributed dramatically to reinforcing and sharpening the analytical and design tools created by ReClaim.

Finally, in WP3 the ER has integrated and developed the results of the previous two WPs so as to create a novel and unique framework for urban gamification.

The main scientific achievement of ReClaim, hence, is the construction of a solid, usable, multidisciplinary framework for the study and realisation of activities involving city-play, capable of guiding the analysis and creation of gamified activities aimed at reclaiming public urban spaces.

The framework and the various steps to create it have been disseminated thanks to 19 main deliverables consisting of academic publications, keynote presentations at international conferences and dissemination to the non-academic sectors. Other dissemination activities included conference presentations, interviews to the media, workshops, participation in a museum exhibition and intense activities of social media outreach.

This Report:

ReClaim ran between September 2018 and September 2020. This report offers an overview on its main activities and findings. After an introduction and an overview of the project outreach, the report is structured into five distinct sections. After a Visual Abstract, the first section presents the research outcomes related to the conceptualisation of “urban gamification”, its strategies and applications, and how it can help us rethink gamification altogether. The second section offers a preview on the results of two series of expert interviews (a traditional one and a boardgame-based one) with designers and academics involved in pervasive games, urban play, larp.s, DIY urbanism and similar. The third section presents several studies dedicated to specific case studies or fields of application of urban gamification (tourism, sustainability, memory etc.). The fourth section is dedicated to the practical implementations and designs that were part of the project, notably the urban toyification activity Jurassic Tampere and the playful data visualisation device ROOK. The fifth section, finally, throws a glance at the future of urban spaces and at the role of play within them exploring the concept of transurbanism. The report terminates with some conclusions and a detailed account of the project’s academic outcomes. Two appendices are dedicated to the professional profile of the PI of ReClaim, Mattia Thibault, and to a photo album.
Results

Play can be a valuable instrument to allow citizens reclaim public spaces and negotiate new way of interacting with it, as long as it is not imposed to them. Bottom-up critical forms of urban gamification already exist and will become increasingly important in the future.
ReClaim had an ambitious dissemination plan which included:

- A 3-months secondment in Amsterdam (at Amsterdam University of Applied Sciences and Waag: Technology and Society);
- A month-long Conference Tour in South America;
- 3 Keynote Presentations at international conferences;
- 31 lectures and conference talks (in 4 continents and 14 countries);
- Participation in the organisation of 7 Workshops and Conferences.

Find here the full list of Dissemination Activities of ReClaim.

Spin off

The Track “Playable, Sustainable, Inclusive: The Future of Smart Cities” of the Mindtrek Academic Conference (first edition in 2021) is a spin-off of ReClaim: a space to discuss the role of play in creating the cities of the future!

Countries in which ReClaim was disseminated with conference presentations and lectures.
Basics of Urban Gamification
How playfulness can thwart the semiotics of the city

Play has always had its place in the city. From simple games like “don’t walk on the pavement lines” to AR location-based games such as Pokémon Go, many playful practices use the urban spaces as their playground. Today, however, city-play emerges as a powerful tool capable of promoting senses of ownership, community, and belonging which all may contribute to improving urban life and the well-being of citizens. More importantly, play can give an active role to the citizens in reimagining the environment they live in, therefore helping them exercise their right to the city.

This new role of urban play is strictly connected with the ludification of culture: a trend that has seen the cultural prestige of game steadily increasing. The practical application of the newfound popularity of play is gamification – the attempt to create playful experiences outside the traditional boundaries of play.

Cities, while commonly hosting playful practices, are still “serious” spaces, devoted to the everyday life of the Homo Economicus. Urban play, however, is able to turn our perception of the city spaces upside down, responding to the needs of the Homo Ludens and effectively gamifying the city.

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NB The open access version of some publications could still be embargoed for a few months!
But how should we study urban gamification? Much of the efficacy of urban play activities seems to lie on the way they change the citizens’ perception of the urban space. For this reason, ReClaim adopts a meaning-centred approach based on urban semiotics. This approach looks at play as an interpretative event in which players “resemantise” – that is, reshape the meaning of – the objects and spaces they interact with. At the same time, it conceptualises cities as complex meaning-making machines, created by, but also creator of, culture. From this perspective, urban play can be configured as a way to systematically re-interpret the spaces of the city, affecting the way citizens read, enunciate, and write them.

To test the soundness and fecundity of a meaning-centred approach, several activities of urban gamification have been analysed. Flash-mobs, for example, use playful performances to create a situation of interpretative disorientation: a temporary inability to understand how to read the situation unfolding under our eyes. Park(ing) day, on the other hand, makes use of pretend play to generate critical debate around how public space is created and allocated, and to improve the quality of urban human habitat. In this yearly initiative, participants around the World rent metered municipal parking spaces for a few hours and, instead of parking a car, use the spot to create a small urban park. Not all examples of urban gamification are bottom up, and a number of coordinated projects also exist. Fun theory from Volkswagen implements a more “classic” take on gamification trying to devise ways of influencing people’s behaviour through playful activities. Piano stairs, for example, aims at encouraging people to take the stairs by allowing them to play music while doing it, the World’s deepest bin with its funny sound tries to make throwing away trash fun and the Speed camera lottery encourages safe driving by pairing to fines a prize for those who respect speed limitations. The Playable Cities platform promotes projects that make high use of technology in order to rewrite city experiences, for example recording the shadows of passers-by and projecting them a few minutes late (Shadowing) or allowing citizens to exchange text messages with objects in the streets (Hello Lamp Post).

Urban gamification, however, is not limited to the traditional spaces of the city but can also interest the thick net of digital representations and mapping of urban areas. Digital maps can become playgrounds for “hunters of curiosities” looking for digitisation errors, as it happened in Apple Maps and Google Street View. The latter, despite the attempts to keep the path of the Google Car secret, is often victim of photobombing. People dressed as monsters, puppets arranged to look like living beings, fake murder scenes: citizens put up a real carnival hoping to engrave it indelibly the virtual city. In some of the most notable cases, photobombers may “aim high”, realising extensive works to be taken up by satellite and immortalised in Google Earth. Where on earth is Waldo?, for example, is an installation realised by Melanie Coles in Vancouver that compares the complexity and semiotic noise of satellite maps of Earth with the famous puzzle-books by Martin Handford.

Digital maps of the city can also be transformed into supports to create simple digital games. Street View Zombie Apocalypse, for example, is a simple digital game that, like many others uses the digitised images of Google Street View. In this case, the players can move in first-person along the streets trying to escape poorly drawn zombies. Similarly, many games allow players to participate in some basic racing simulators on a virtual path overlapping the streets of Google Maps. In some rare cases, these games are even able to annoy the companies owning the digital maps. It is the case of Google Shot View, that allowed players to walk around the virtual map armed with a combat rifle. The game was immediately sued and shut down by Google.

From ReClaim’s meaning-centred approach, we have seen how the city, a semiotic machine stupendously complex, as well as its digital representations, is increasingly subject of playful resemantisations. Play infiltrates different contexts and spaces, and propose new meanings, new constraints, new strategies and new motivations.

A meaning-centred approach to urban areas can be very useful to conceptualise the types of playful strategies used as well as to describe how they can influence the readings and interpretations of
city spaces. The framework of urban gamification, then, can be an important tool to understand the way in which contemporary cities, and the practices that take place within them, are changing and becoming increasingly ludified.

ReClaim’s framework is meant to be a tool of analysis for researchers and stakeholders interested in understanding the role that gamification is playing in the urban spaces. At the same time, the conceptualisation of urban gamification can also offer some guidelines: play can be a tool for reappropriating urban spaces and for fighting the anonymity of cities brought by the gentrification and partial defuncionalisation of space: understanding how it affects these spaces can inform new strategies for reclaiming them.
A Typology of Urban Gamification

Differentiating and systemising urban gamification activities

Urban gamification can be a wide umbrella term, encompassing different uses of play in cities and in their digital representations. The choices that lie behind the use of strategies of urban gamification may variate and range from the desire of (re)appropriating the territory to marketing techniques and comprehends the use of play for new forms of protest or to encourage new forms of citizenship. What all these forms of urban gamification have in common, however, is the desire to rewrite the city, to reshape it, to engrave oneself in it, to renew it by resorting to the energy and the ability to motivate people that emanates from play.

In order to study and understand better these practices, ReClaim has constructed a typology of urban gamification based on the semiotic properties of the city and of city. The typology draws from categories such as pervasive play, urban games, critical design, gamification, and semiotics to outline some of the meaningful articulations of playful urban interventions.

Five categories have been identified as central nodes for our typology, namely: Authorial quality, Durability, Direction, Dimension and Elements. Authorial Quality distinguishes actions of urban writing from actions of

urban enunciation. In the first case, the subjects have the power to change, in some measure, the urban fabric. Urban enunciation, on the other hand, has to do with the behaviour and movement of the citizens.

Crossing the city, moving through it, assembling in a specific place and dancing in public are all examples of city enunciation. It concerns anthropogenic practices that take place in the city that assume carnivalesque and playful features. Both these kinds of action can be part of a gamified activity, and the same activity can sometimes involve actions of both kinds. Nevertheless, this distinction is relevant for a typology of urban gamification, as it underlines the relationship that the participants will have with the city and their ability to engrave their own presence in it.

**Durability** can be visualised as a spectrum that goes from extremely ephemeral actions, lasting only for a brief moment (the few minutes that it takes having a flash mob) to long lasting actions where some form of permanent city-writing can be involved. While short lived actions can still have a powerful impact on the city, longer lasting ones maintain their physical presence in the urban space longer.

**Direction** does not concern the quality of the action but its organization. It can be either bottom-up or top-down. Top-down urban gamification is generally accepted or promoted by powerful agents and involves citizens as participants in an activity designed to guide their behaviour. Bottom-up urban gamification, on the other hand, springs from citizens and communities themselves in a more or less organic way. It has generally a rather confrontational nature and promotes city-writings and enunciations according to different logics, challenging those of power by breaking the rules and resemantising its texts.

**Dimension** accounts whether the gamified activity acting on the city itself or on its digital maps.

The **Elements**, finally, distinguish with the components of the city are involved: passages (empty spaces that can be crossed or occupied) or obstacles (building and objects that hinder movements but offer surfaces to write upon). This helps us distinguish activities that use the city as a stage, moving in its open spaces, occupying them, resemantising them and the activities that act on the significant surfaces of the city.

<table>
<thead>
<tr>
<th>Category</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorial Quality</td>
<td>Writing and/or enunciating</td>
</tr>
<tr>
<td>Durability</td>
<td>(spectrum) ephemeral to lasting</td>
</tr>
<tr>
<td>Direction</td>
<td>Bottom-up or top-down</td>
</tr>
<tr>
<td>Dimension</td>
<td>Analogue or digital</td>
</tr>
<tr>
<td>Elements</td>
<td>Passage and/or obstacle</td>
</tr>
</tbody>
</table>

Interestingly, different actions of urban gamification often are rooted on one of these categories. For example, **Parkour** is an ephemeral, bottom-up activity of enunciation that takes place on the city spaces and draws much of its symbolic strength from transforming obstacles in passages. **Flash mobs**, on the other hand, are a form of short-lasting enunciation that takes place in the analogue passages of the city. It is a top-down activity (as it requires careful preparation and direction) but it looks like a bottom-up one: the apparent spontaneousness of the performance accounts for its ability to marvel.
ReClaim’s typology can be rather useful to conceptualize and distinguish different actions of urban gamification and to describe how they can influence the readings and interpretations of city spaces. It can be a useful tool both for describing and categorizing different already existing actions and to design new ones.
Exploring a bottom-up, critical approach to urban play

Cities are spaces permeated by constant tension and conflict, as inhabitants define and redefine them, while going about their daily living. Citizens, institutions, governments, and businesses all compete for the possibility of writing the city, of modifying its forms and uses, of engraving themselves in the urban fabric. It is a quiet conflict, petrified in the city buildings and streets, fought in the everyday use of the urban spaces. Playable Cities proposes to ease these struggles by hacking the technology of smart cities and using it to create stronger and healthier communities of citizens. But what if we tried to go one step further? Can playfulness be a way of dealing with these tensions, channelling the struggles of urban living into creative practices instead of merely destructive ones?

To this end, ReClaim imagines a new framework for Critical Playable Cities that adds to the urban and playful components a critical dimension. This framework is built around three elements:

1. DIY Urbanism, a term that indicates the citizens’ actions to reclaim and modify the urban spaces in a bottom up, grassroot way. Actions such as painting unauthorised bike lanes, adding benches and chairs around the city or yarn bombing have all been described as DIY urbanism.

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2. Critical design, which revolves around the idea that, design should challenge the status quo instead of reinforcing it. To do so, it should allow new speculative scenarios and promotes forms of *dépaysement* that induce us to question the ideological nature of our thinking and habits.

3. Urban gamification, consisting of introducing playfulness to urban contexts that are, traditionally, considered “serious”. When hosting playful activities, urban spaces are gamified and systematically change the perceptions, actions and interactions of the citizens involved in the activities with the city.

Drawing from these three elements, Critical Playable Cities consists of a strategy aiming to use the qualities of play (being safe, engaging, intrinsically motivated and involving make-believe) in actions of urban re-appropriation that encourage critical thinking. The resulting actions are to be bottom-up, creative, and playful urban co-productions that challenge the status quo. The key feature of Critical Playable Cities is that its three components – DIY urbanism, critical design and urban gamification – when working in synergy, overcome the issues that they sometimes raise if applied singularly (See feature image).

This concept improves and refines ReClaim’s toolbox to understand and eventually design and implement actions of urban gamification. These actions are able to reappropriate city spaces while avoiding being openly confrontational and hostile to city officials and law enforcement. This does not diminish the social and political relevance of their battle: on the contrary, it makes them useful tools for fighting for the right to the city for two reasons. On the one hand, because they are used to criticise the top-down decisions of the municipalities and to propose bottom-up, grassroots alternative agendas. On the other hand, because their very implementation is already a way of modifying urban life, of reshaping the interactions between citizens and between active players and passers-by.
Tapping into the disruptive potential of play

Mainstream gamification, even when done properly, often faces issues regarding its paternalistic relationship with users, its attempt to control behaviour and the fact that, by making processes easy, fun and natural, it promotes acritical action. ReClaim’s objective to devise a form of urban gamification that empowers citizens instead of controlling them, required a partial rethinking of the concept.

**Punk Gamification is thought to be an alternative take on gamification, based on bottom-up approaches and critical design.** Punk gamification proposes a different ideological approach from mainstream gamification. It is punk because it is opposed to the status quo, it stresses the importance of individual freedom, encompasses diversity, has strong DIY characteristics, and has a bottom-up approach.

Far from being an oxymoron, it could be argued that gamification was *born punk*. The concept emerged in opposition to the widespread ludophobia that saw games as dangerous or detrimental, and it claimed the need to subvert the traditional approaches of education, healthcare etc.

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With time, gamification became a buzzword, too often used in a rhetorical way to describe poorly designed implementations of persuasive technologies.

ReClaim stresses the importance to go back to a punk understanding of gamification, defining the latter as engaging non-game/play contexts with a playful attitude and behaviour in a way that is both bottom-up and critical. This entails:

❖ Stressing the importance of playfulness instead of a rule-centred approach or one designed around “game elements”. In this way it is the experience of the participants, and not the constraints and tracking of their actions that is highlighted.
❖ Reorganising gamification to be grassroots, horizontal, and participatory - avoiding paternalistic top-down power relations.
❖ Creating gamification efforts that, instead of creating a state of irreflective flow, breaks monotony and challenge the status quo.

Urban punk gamification existed ante litteram. A very successful example of punk gamification, for example, are Pride Parades whose strong playful and carnivalesque character, invading contexts that used to be thought as “serious” such as political protests, become a disruptive force that challenges moral conventions and societal norms with an enormous societal impact.
Strategies of Urban Toyification

Goal
This poster explores the role that toys and objectual play can have in the playable city by defining six strategies of urban toyification and illustrating some of its implementations.

Toyification
Toyification is the express attempt to make objects, activities or practices toy-like. Different strategies of toyification emerge from the different elements present in toy-play.

Strategies of toyification

Toying with things that are not meant to be toyed with, that is, to interpret and use them in a fictional and playful way.

Applying toyish aesthetics (bright colours, fluffiness, smoothness...) to objects that will not be approached in a playful way.

Using designed toys (that is objects that are designed, created and marketed with that purpose) as triggers for playfulness in non-play contexts.

Urban areas
We will focus on two possible areas of intervention: Buildings (the most visible and impactful urban elements) & Objects (street furniture, statues, threes etc.)

Strategies of urban toyification

Toying with buildings
(e.g. with forced perspective; the work of photographer Rich McCor with paper silhouettes).

Toying with urban objects
(e.g.: Playing with statues, dressing them, taking pictures in silly or sexual poses with them).

Toyish buildings
(e.g.: Works of architects such as Antoni Gaudí and Freddy Mamani).

Toyish objects
(e.g. The life-sized Unicorn Gundam Statue in Tokyo; yarn bombing - covering objects with knitted yarn).

Cities made of toys
(e.g.: Legoland buildings, replicas of famous monuments like in Las Vegas and Macau).

Toys in the city
(e.g. Anonymouse’s Mouse-themed miniature restaurants in public spaces; toy photography.)

Can you find an example of each urban toyification strategy in the picture? (Solutions below)
Urban gamification for city reappropriations

ReClaim outlines a framework for urban gamification articulated around three main features of urban play:

1. It seems to reinforce the perception of "city ownership": it is an activity that requires immersion and light-hearted engagement and is able to build communities around shared experiences. Play emerges as a powerful tool capable of promoting senses of ownership, community, and belonging which all contribute to improving urban life and the well-being of citizens.

2. It can be a catalyst of positivity, making urban spaces feel more friendly and safe thanks to play’s links with fairness, trust, and sharing.

3. It can (and often does) work also as a political statement. Cities are spaces of semiotic, social and political conflict, with an extreme power imbalance when it comes to the power of writing the city. In the citizens’ fight for the right to the city play appear to be a tool for peaceful but impactful actions in urban areas. The framework of urban gamification aims to operationalise these features of urban play, in order to outline the tools that citizens and communities can use to reappropriate the urban spaces. However, gamification has been accused to be exploitative.

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and even its more ethical and well-crafted approaches and implementations tend to be top-down and paternalistic. ReClaim, therefore, proposes a different approach, based on situationist tactics, critical and participative design, DIY urbanism and pervasive play. This approach is articulated around 3 key points:

1. Play is a powerful tool for meaning making: it allows players to question the “real” meaning of everyday objects and spaces, and to transform them in play elements. When play becomes pervasive and invades the public spaces it is able to gamify them: that is, to change their perceptive frame and context. For this reason, play is a primary strategy for reclaiming urban spaces.

2. The attempt to control or direct excessively the play dynamics of the cities is ethically questionable and risks hindering the potential of play. Citizens have to be the main actors of urban gamification: bottom-up and participative approaches are the ideal solutions to avoid paternalism and ensure that the activities will be meaningful for the communities inhabiting the city.

3. Play has a disruptive force, capable of challenging the status quo and a triggering societal change. Urban gamification has to adopt a critical perspective, allowing for a reflection on the many issues concerning urban spaces and ideologies. In this way, urban gamification becomes a resource for rethinking our cities and the way we live in them.
Expert Interviews
Best practices and hints by urban gamification experts

While the idea of urban gamification is relatively new, a lot of expertise exists in the fields of urban play, pervasive games, larping, DIY urbanism and so on. To tap into this treasure of knowledge, ReClaim makes use of 10 expert interviews with scholars and designers to discuss their projects, approaches, and visions. Among other things, interviewees were asked their top advice for people planning to design some activities of urban gamification. Here is a selection of them, organised according to their level of pertinence.

1 Urban Dimension

1.1 Include the city in itself. Engage meaningfully with the places that will host the experience.

1.2 Think about your own relationship with this space. Walk the city, experience it, live it. Spend some time there, maybe a week or a month. That’s how you get the most valuable ideas.
1.3 When exploring the city, talk to people. Understand what kind of people live in that place. How is the local community? Who are the passers-by? Who might come in contact with your game?

1.4 Don’t explore the city alone, do it with a diverse group of people. Gender, ethnicity, race: they all influence our perception of the spaces. To understand a place, you need to have all these perspectives.

1.6 Be curious in your explorations. Try to find the blind spots, edges, or hidden things of the city.

1.7 Carefully consider the architectural features of the city. There is so much to be gained from understanding the space you are playing. Understand how the city actually works as a space and how does the “placeness” of the city emerge. There is a lot of play opportunity in the architecture of a city.

1.8 Don’t limit yourself to add playful activities or fancy technology with one specific place, but ask yourself why this specific place? What does it have to offer?

2 Design Dimension

2.1 Think about the end goal. What are you trying to accomplish?

2.2 Clearly define your target players. “Citizens” are very diverse, and it's difficult to create something that is fitting everyone.

2.3 Focus on the user. Make the experience as good as possible for them, and always be upfront with them about what that experience is.

2.4 Work with the people. You don’t have to plan everything, be open to the players’ inputs and let them explore.

2.5 Be brave: try out something that you always wanted to play yourself.

2.6 Do not overcomplicate your design. Sometimes something simple and fun, using less technology could even work better.

2.7 Choose technology that helps you accomplish your goal. Do not use VR or AR because they’re trending, see if they really help say something.

2.8 In games that have a wide play area, it is important to design limits so that the players do not “run off” with the game. You should help players direct their imagination towards a common goal. Otherwise, if players will not know what the experience is about, the design will break.

2.9 Ask yourself if the experience does really need to be limited it to just one city? In some games you might not have to limit yourself. Start by asking yourself what it is that you want the players to do, and then decide what kind of an urban game it can be.

2.10 Test. Test the flow of the experience, test with paper prototypes, test early and test often: this is the way to develop something more organic and to avoid big surprises at the end.

3 Social Dimension

3.1 Pervasive games can go on for a long time and be quite demanding for the players. You can either adapt the space and time of your game to the players or engage with the players that are there at the moment. In either case, you’re going to have to understand this situation.

3.2 Don’t encourage people to play with people who have to take things seriously as part of their job. Avoid engaging with police, guards, medical personnel, psychologists on duty, firemen, and all
of those kinds of people that cannot abandon their serious perspective. They may understand that you are playing with them, but they cannot play back.

3.3 Don’t make your game become expensive for the players. In some games they are expected to hang out in bars or similar. This can easily transform the experience in a bad one.

3.4 These experiences can push people to move from their normal behaviour. This can be a powerful design tool, but it is easy to overdo it. Don’t push your players too much.
Beside traditional expert interviews, ReClaim has also made use of creative tools for gaining insight. In particular, a set of expert interviews have been conducted using a boardgame in order to gather perspectives on how a playful city might look like. In particular, the game *Imagine* by Shingo Fujita, Shotaro Nakashima and Hiromi Oikawa (2015) was utilised. This game features 61 transparent cards that can be placed next to one another or superimposed by the players to represent “almost everything in the world” – as claimed by the game. The original game requires players to draw a card that indicates an object or a situation, and then use the transparent cards to make the other players guess it. In the expert interviews, instead, the game was “hijacked” by asking the participants to use the cards to represent a playful city, and then asking them to explain their creation.

In this way, the creativity and range of expression of the interviewees is limited by some semiotic constraints – the limited number of transparent cards and the things that are represented on them. Constraints, in facts, are highly productive and foster creativity in design as well as in art. The use of Imagine cards, therefore, encourages the interviewees to set aside their assumptions and re-elaborate their perspectives.
The interviews have produced nine images of playful cities that differ greatly from one another. These images, then, have been approached through a protocol of semiotic analysis focusing on the spatial organisation represented (the creation of scenes, stories or environments, the use of cards to create 3D or multi-layered elements), on the uses of the images of the cards (single or combined, iconic, or symbolic) and on comparative analyses of the elements represented.

The analysis of these compositions was based on several emergent dimensions identified while studying the results:

- **Disposition** - the semantic relations between the cards according to how they are disposed on the table
- **Elements** - what kind of objects, actors, situations are represented
- **Narratives** - how the cards are used for storytelling
- **Actions** - what kind of basic actions represented
- **Emotions** - what kind of emotions are explicitly depicted

Within the sample (n=8) it was possible to identify four different kinds of dispositions: clusters (4, cards organised in small groups), scenarios (2, depicting a scene), positive vs negative (1, clusters organised in two main groups) and sequence (1, illustrating a set of actions or a game track).

The elements represented in the sample are dozens and can be approached in different ways. Some elements, for example, occurred more frequently. “People” are the most common element (in all compositions). “Bike” and “bike infrastructures” were represented a total of 7 times, “Aliens”, “Rewards” and “Music” where all mentioned 3 times each. It is also possible to create some semantic links between the elements so to form overarching themes such as: “nature” (“trees”, “animals”, “pets”, “water”, “grass”, “beach”), “technology” (“robot”, “tools”, “drone”, “construction machines”), “game design elements” (“rewards”, “time limit”, “bouncing pillows”) or “architecture” (“structures”, “stairs”, “bike infrastructure”, “passages”). Contradictions between elements in different compositions also emerged. One interviewee, for example, indicated “explosions” as part of a playful experience, while another strongly indicated that they should be banned. Two interviewees indicated the absence of cars as part of a playful city, but one other represented one and stated that they can be playful (“especially in tunnels”).

The actions represented by the participant were relatively few, and included play actions (“Fighting”, “Finding”, “Biking”, “Winning”, “Biking”, “Imagining”), spatial and movement actions (“Passing through”, “Turning around”) and interactions with technology (“pressing a button”, “Looking from a plane”).

Finally, only few emotions were explicitly represented: love (twice), affection, unhappiness, bewilderment, and playfulness / willingness to play.

While this approach had some limitations (for example regarding the impact of the cards in directing the interviewees representations), it was able to highlight several isotopies in the interviewees’ idea of a playful city (as the importance of bikes or the presence of animals in the urban spaces) as well as a few unique but highly relevant perspectives (as the impact of terrorism on urban play, or the importance to account for uninvolved citizens).
Scenarios & Case Studies
Co-design approaches to use play for enhancing urban sustainability

ReClaim’s secondment in Amsterdam was an ideal moment for applying and testing the framework of urban gamification to some case studies. In particular, the case studies were two playful artifacts created within the Mobility Urban Value (MUV) Project and aiming to make cities more sustainable.

The first artifact in the MUV app, which helps citizens in making sustainable mobility choices by transforming commuting into a gameful experience and rewarding sustainable choices. The second artifact is Asphyxia, a screen-less device simulating the breathing movements of living lungs as a poetic way of communicating air quality and presenting an artefact that is non-solutionist, open to interpretation, aesthetically complex, and playful (see cover image).

Both artifacts position themselves critically within the discourses around smart cities. Smart city technologies are often described as having the potential to address issues of sustainability and efficiency in cities. Continuous monitoring, geo-tracking and ubiquitous computing offer tools for engaging citizens, influencing their behaviour and measuring its impact on the city. These technologies, however, are not neutral: if
handled in a top-down way, give rise to many concerns (e.g. privacy, instrumentalist urban planning etc.). The artifacts by MUV, instead, focus on an alternative, playful approach to urban sustainability, based on playable cities and on different ludic strategies.

After engaging in-depth with the ideation, design, implementation, and deployment of the two artifacts, a short set of “designer interviews” with their creators was conducted. This, together with an artefact critique / semiotic analysis allowed to outline the strategies behind the two different artifacts.

The MUV app is as an almost-textbook example of gamification applied to a societal challenge. In this sense, it is not surprising in itself and follows a series of tried-and-true design principles, from the direct correlation between tasks (e.g. moving) and rewards (e.g. points) to the social leaderboards comparing various players’ performances, to team events pitting city versus city. Indeed, the MUV app faithfully implements most of the “game elements” of traditional approaches to gamification. This type of gamification projects does not necessarily modify how an activity (e.g. movement through a city) is experienced itself but creates a form of artificial value, expressed in points and rewarded with levels and trophies, which has meaning within the app and among its users. Nevertheless, in the interview it clearly emerged that the app’s development team later realised that extrinsic motivation was not sustainable or effective in the long term. Significantly, they reported that, at that stage of development, their aim was to transform the app into a full-fledged game. This can be interpreted as an indirect acknowledgment of the limitations of classic gamification and an attempt at rethinking it in a more experiential and playful way.

Asphyxia, on the other hand, is more complex to analyse, as it resists purely functional approaches and, instead, favours ambiguity and open interpretation. First, it is composed by an apparently incoherent assemblage of different parts that do not “fit” logically. The stem evokes the structure of a lamp, the moving canopy reminds of a living being, and the buzzing sound is clearly mechanical. Furthermore, it is neither ergonomic nor “usable,” as it lacks clear instructions on how to read its behaviours and signals. Finally, it prioritises an aesthetically interesting appearance over an easy-to-use interface. If we read it through the heuristics that are applied to the design of everyday objects, the artifact should be a failure.

Nevertheless, Asphyxia invokes a sense of wonder, the delight of finding something unexpected and of engaging in playful interaction in public spaces. By not “fitting” in specific semantic categories (Is this art? Is this a tool? Does it transmit information?), the artefact is inviting and intriguing. By evoking biological entities such as lungs or jellyfish and applying their traits to street furniture, Asphyxia plays with the magical feeling of seeing an inanimate object suddenly having a life of its own. It resists easy interpretation and, by doing so, prompts the audience to look at it from a different, somewhat unusual/unfamiliar perspective.

In sum, Asphyxia does not elicit interest via game mechanics, extrinsic motivation, points, or the possibility to win, but it does so by being expressly strange, somewhat out-of-place, and difficult to frame. The competition that Asphyxia proposes is not pragmatic, as the device does not actively “play against” users, but cognitive and interpretive, as it challenges its audience to frame it. It is exactly this interpretive challenge that makes Asphyxia ludic and motivating in the same way riddles and puzzles can be, and much more creatively stimulating.

While the MUV app stems from a traditional understanding of gamification (although it is distancing itself from it), Asphyxia is rather close to ReClaim’s understating of urban gamification: it does not attempt to guide the citizen’s actions, but instead it challenges them, asks them to think critically, but at the same time charms them with an eerie and playful appearance.

In sum, three key implications can be teased out from the analysis of these case studies:

1. Focus on the residents of a city and their experiences rather than on external rewards.
2. There are clear benefits in leaving open spaces for interpretation and reappropriation, rather than coercing players to “do the right thing,” which may come across as paternalistic and judgmental.

3. When designing playful and sustainable cities, move beyond the widespread understanding of gamification based on behavioural techniques and simple transposition of game elements to everyday activities. Play should be envisioned, instead, to be emergent from a more balanced relationship between designers and players that takes also into account co-design activities.
Preserving and communicating memory with playful strategies

Urban spaces contain in themselves multiple historical strata that shape the life in the city today, but also its perception by the inhabitants. In every city that are buildings, spaces and artifacts that are devoted to the conservation of the historical elements of the city. This conservation, a strategy of “memory”, however is rarely neutral. Memory is connected to “identity” and “culture”, and reviving memory means rebuilding the boundaries of the cultural identity.

Traditionally, it is the institutions and other bodies of power that determine with narrative of the past should be enshrined in the city. However, sometimes citizens, artists and communities can contest this power, and reclaim the right to participate in the creation of urban strategies of power. Interestingly, these are forms of Guerrilla Memory often make use of playful strategies. Memory, hence, becomes one of the battlefields in which citizens can make use of urban gamification to affirm their right to the city.

Guerrilla memory can be defined as a strategy for transmitting historical memory that is articulated around 3 key features:

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1. They make use of unconventional communication techniques, based for example on artistic invention or on playful approaches.

2. They move the space/time dedicated to the memory from specifically designed places to the environment of everyday life, confronting the citizens in unexpected places and moments.

3. They focus on a humanised description of historical events, far from the celebrative discourses of the institutions.

The features of guerrilla memory were investigated with six short case studies, three dedicated to street arts (the murals dedicated to Giuseppe Prono by comic writer Zerocalcare, the Stolpertein of the German artist, Gunter Demning and the Memorial Bridge situated in Rijeka, Croatia, see cover image) and three to playful implementations (the digital game September 12, the historical re-enactment of a Nazi raid in Venaria and the larp Ultimo Covo dedicated to red terrorism in Italy). A confrontation between the case studies related to the two different strategies allow to emerge the specific features of each of them.

In the cases of playful approaches to urban memory, it becomes clear that the three features of guerrilla memory can be understood through ReClaim’s framework. These forms of guerrilla memory:

1. Make use of play as an unconventional communication technique.
2. Invite everyday life effectively gamifying memory.
3. Propose a critical perspective on historical events.

Urban gamification, hence, seems to extend its value beyond the bottom-up reappropriation of space, to include also strategies through which citizens can exercise their right on the representation of time.
Urban spaces are not solely inhabited (and played in) by their citizens. Travellers, exchanges students, commuters: cities are crossed by a multitude of people for various reasons. One of the most important group, both because of their number and of their socio-economic impact on the city are tourists.

Tourism has become one of the central cultural practices of our time. The year 2018 has set a new record of international tourist arrivals: 1.4 billion, according to the World Tourism Organization (UNWTO). The factors behind these all-time high numbers are many and range from cheap flights to online review and booking systems. If tourism is on the rise – or at least it was until the COVID-19 pandemic, which certainly put a dent in its otherwise continuous growth – so is its role in the global economy. The effects of mass tourism, however, go far beyond its economic impact: it is a highly semiotic practice which strongly influences the meaning and perception of the cities and places involved, both for the tourists and for their inhabitants.

In the context of tourism, gamification has been gaining relevance and importance as a specific strategy of valorisation. While this form of
urban playfulness is rarely critical or bottom-up, it is an important phenomenon whose understanding can be crucial for ReClaim.

For this reason, it is important to engage with the ludic evolution of touristic practices and discourses and outline how innovative forms of digital marketing exploit the ubiquitous intertextuality typical of convergent culture and the playful elements of gamification to valorise touristic destinations.

The basis of this playful tourism is to be investigated at the intersection between the development of experiential tourism (in which tourists mainly look to experience the city) and the ludification of culture (the cultural trend that sees games, toys and play become more and more central in our semiosphere).

In 2011 WTM (World Travel Market) predicted that gamification would become a popular trend for tourism. Since then, the academic interest on gamification and tourism has mostly focused on how gamification could influence consumer behaviour. While the number of studies addressing on gamification in the tourism industry is still limited, a recent literature review underlines positive results in the implementation of gamification in the various phases of travel, claiming that it is capable of informing users, making them more involved and participates in the co-creation of value.

A wider understanding of gamification, however, can allow us to see in this light also a wider set of practices, in which playfulness has become integral part of many touristic activities. We can think, for example at:

- Gamifying Airbnb (Airbnb’s use of gamification to appeal to the market of experiential tourism while being in constant dialogue with traditional marketing channels and operators);
- Dark Tours (practices such as “disaster tourism”, “favela tourism” and “nuclear tourism”);
- Video game tourism (Assassin’s Creed tours, museum games, Tourist Bus Simulator).

This perspective seems to confirm the importance of the relationship between tourism and gamification in current times and to portray it as a larger phenomenon than normally accepted. Both tourism and gamification are guided by the same craving for experiences that seems to characterise the denizens of a liquid world. Both respond to this need with their own strategies of valorisation, resemantising the places and the objects of everyday life, adding to them new layers of meaning in order to make them shiny and memorable. Not surprisingly, then, these two phenomena give rise to many possible synergies, many of which are already been exploited by professionals and companies to promote touristic services and games.

The impact of these practices on the destination cities is still unclear, but it could contribute to the “theme park” effect that tourism often produces: a form of urban gamification that, however, risks alienating the inhabitants from their own city and expels communities from touristic areas. Studying the strategies of playful tourism, therefore, can be important also to understand and limit their negative effects on the urban fabric.
Physical spatiality is not the only aspect of urban space that is interested by gamification. We have seen, in our typology, that a number of activities of urban play happen in the digital maps, extensions and augmentations of cities. From this perspective VR cities are particularly interesting: they are in no way “real” cities, but they are still spaces that can be populated and explored by human beings.

VR technologies, due to their specific interfaces, often afford experiences that could be described as playful. Every representations of urban environments in VR, therefore is, in some measure, a “gamified city”. For this reason, exploring the current state of VR representations of urban spaces can offer valuable insights on the relationships between cities, technologies, and play.

While VR applications represent a wide range of human activities and environments, cities seem to be generally represented in quite simplistic ways. This is surprising if we consider the richness of such spaces (aesthetic, morphological, cultural, narrative etc).

A review of a total of 37 applications, containing a wide array of both games and non-game apps that featured VR representations helped to
systematise and problematise the existing approaches to urban representations in virtual reality. The analysis was focused on the different kinds of urban representations (what aspects of the city they incorporate and what forms of interaction they host) and on the different kinds of users (the ways they are represented and the degrees of the agency that they have).

The first analysis focused on the semiotic attributes of urban representations and in particular on their modelling strategy – that is, the rationale behind what aspects of the city are selected to be represented – and the degrees of interaction – in what measure the represented urban spaces are reactive to the users’ actions.

The sample featured three different modelling strategies, in particular:

❖ The city as a wallpaper: the city is a mere background, and the application is not interested in the complexity of the urban spaces.

❖ The city as a system: represent the city as a net of relations, values and resources.

❖ The city as a culture: use the representation of the city to refer to something else: shared cultural values, heritage, new possible social spaces and so on.

The different degrees of interaction were also grouped around three polarities:

❖ Interacting in the city: it is possible to move within the city and to look around, but not to interact with the city itself.

❖ Interacting with the city: the city responds to the users’ actions allowing complex paths on its buildings or providing new information about its elements when engaged.

❖ Acting on the city. The city is created, modified, or reshaped by the users.

Finally, different (re)presentations of users were also categorised based on three gradating binaries of their characteristics.

1. The user is either an agent (either having influence in and on the world) or an observer (not);

2. The interaction between the user and the city can be mediated by either embodied or disembodied presentations (depending on whether the user/character is presented at all in the VR world);

3. The representation is either diegetic or extradiegetic (in other words whether it is congruent with the VR environment or not).

Five categories of representations emerged when coding the collected VR application’s user representations using the lens of the suggested binaries: Witness, God, Character, Spatial Manipulator, and Storified Manipulator.

When combining the findings on urban and user representations, clear patterns and trends emerged, as summarised in the table below.

The table outlines some clear correlations between the types of avatar implemented and how cities are represented. In most cases (seven out of nine), each specific representation corresponds to only one type of avatar used in all the titles; in the other cases, the avatars implemented are similar to each other nonetheless. Other trends involved include the fact that applications that offer the most elaborate experiences tend to give more importance to the representation of the subject and that non-game titles make use of disembodied agents, while all the games, with the exception of the Simulation ones, use embodied agents.
Overall, the scoping of the current situation on urban representations in VR indicates a quite shallow use of the technology and of the semiotic potentials of the objects represented. The vast majority of urban representations in VR scoped seem to follow some unwritten patterns in design oriented towards economy: they often attempt to simply convey the “idea” of a VR representation, through the minimum viable product, without engaging with the potential of the medium.

One of the most prominent examples of this trend is in tourism-related apps: they have the ambition to offer a complex representation of cultural heritage (city as culture) but then they all rely on the simplest forms of interaction (interacting in the city) and relegate the users in the role of witnesses. Users, then, are only able to survey their surroundings, moving through a space that is deserted and still. Such cases point out also to further implications on the broader issue of the relation of heritage and “visitors” and on the “musealisation” of urban heritage and its possible consequences.
Applications & Devices
Urban play and data visualization

The development of some playful devices and activities had a cardinal role in testing and strengthening ReClaim’s framework. Rook is playful data visualisation device aiming at the dissemination of air quality data, developed in 2019 as part of ReClaim by Mattia Thibault and Artur Cordeiro, in partnership with Waag (full credits here).

The Rook unit accesses the database of the Hollandse Luchten project, retrieves precise and up to date information on air quality in Nord-Holland, and displays it in an interactive way using lights and mist. The eerie and mysterious effect of the coloured mist has a playful and enticing effect on its users, but Rook, at the same time, spreads awareness on one of the key sustainability issues of the region.

The Rook unit is meant to be positioned in open public spaces, both inside (in museums, fab labs etc.) and outside. People should be able to interact freely with the machine so to explore its working and the data it conveys. After its creation, the Rook unit has been displayed on several occasions:

❖ 30 November 2019 – Rook was part of the celebrations 25th Anniversary of De Waag.

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Watch the video of ROOK construction here!

Rook is an open project; you can find its instructions guide and Arduino code available on GitHub!
22 December 2019 – Rook has been moved to the Brak museum, in Ijnmuiden.

Brak will continue hosting Rook in the future. Brak is a place where researchers, scientists, policymakers, students look for solutions for the environmental challenges. It is a science centre working on climate change, organising experiments, and discussing with the community. It organises many public activities, has a citizen science research programme and work with schools on educational activities related to the protection of the environment.

The Rook unit is a 54 x 54 x 72 cm (length x dept h x height) machine. When activated, the mist-maker inside the unit, by means of ultrasonic vibration, produces mist from clean water that will be expelled on top of the unit and coloured with the help of RGB light, producing a haunting effect. The colours of the mist represent the air quality registered by one of the Hollandse Luchten sensor kit. Rook is connected to WiFi and its code allows it to retrieve the hourly data of Particulate Matter 2.5 micrometers (PM25) using the Hollandse Luchten API.

The colours are coded accordingly with the system used in Hollandse Luchten mappings, using a wide spectrum ranging from green (a low concentration of PM2.5) to yellow (a medium level), to red (indicating a high level). The color exhibited in Rook is equivalent to the color displayed in the Hollandse Luchten map platform.

Rook has three different buttons. When activated they will show the hourly average, minimum and maximum levels of PM 2.5 from a specified sensor kit.

The users can experience the changes in air quality by pressing the different buttons and seeing the colours of the smoke change. However, Rook’s mist is not only for show: being perfectly safe, players can touch it, play with it, smell it, blow it away, getting their face covered with it and so on. In other words, Rook allows a playful interaction with the mist.

At the same time, however, the mist often acquires rather menacing nuances of red, indicating a high level of pollution. The interaction, therefore, remains playful but becomes also worrying. This dissonance – represented also in the name of the project “rook” being a chess piece in English and meaning “smoke” in Dutch – is how Rook aims to be effective.

Rook’s main objective is to offer a way of visualizing, in public spaces, air quality using data from the database of Hollandse Luchten, while proposing a collective and playful experience.

While designing this project two main principles guided our decisions. First, we wanted to avoid a top-down approach in which we propose “our” solution to the users: instead, we decided to find a way of communicating the data without framing them as a problem nor offering any specific solution. Second, although we are aware that design is never neutral, we still struggled to make the data visualisation device as transparent as possible.

Our design rationale was based on an exploration of the metaphoric potential of using air as a medium to illustrate data about air itself. We aimed at making air and air quality “visible”, creating a machine that would “reveal” its invisible properties.

At the same time, we wanted to design in a critical and playful way, according to the principles of critical playable cities (Hassan & Thibault 2019). In this way we wanted to tap in the ability of playfulness to raise interest and spark creativity and use it to offer an opportunity to the users to think critically about the environmental conditions in which they live.
Rook is a research-through-design project as well. The main research questions investigated are:

1. The possibilities to find a balance between smart and playful city.
2. The ways of integrating smart citizen initiatives with media architecture.
3. Researching the potentials of toyification in data visualisation.
Toyification in the (miniaturised) urban landscape

ReClaim explores different ways of using playfulness and games to promote city reappropriations. Jurassic Tampere (JT) was instrumental to this exploration. As there is currently little to no work on the role that toys and objectual play can have in urban spaces, JT investigates the potential strategies of urban toyification.

The term toyification describes the idea of reinforcing an entity (an object, an interface, a human being...) with toyish elements so that it acquires a toyish appearance, form, or function. Urban toyification, then, is about using toys to modify the way its citizens perceive, interpret, and interact with the public spaces.

In particular, Jurassic Tampere was based on the idea that positioning small toys in the city makes the whole environment look different: looking closely at them triggers a change of perspective in regard of scale. The objects and spaces around the little dinosaurs appear immense: a small patch of moss looks like a bush, a bolt becomes a stage, a puddle looks like a lake and so on and so forth. All the little toys scattered around the city, then, become occasions for entertainment and for wonder as well as invitations to look at the city, at its details and character.

PUBLICATIONS:

Watch Jurassic Tampere’s Egg-keepers in action here!
Jurassic Tampere took place in December 2019. During the activity, a group of nine participants – the *Egg-keepers* – walked around the city centre of Tampere (Finland) for three hours, positioning in the public spaces 420 small rubber dinosaurs, taking pictures of the toys, and observing the reactions of passers-by. Recording the reactions of the citizens would have raised ethical issues and confronting them directly could have been intimidating, so they limited themselves to observe them from afar. The fact that most of the toys were collected by citizens by the next day, however, seems to suggest that the small dinosaurs were found and adopted rather quickly.

After the activity, the *Egg-keepers* were asked to fill a short open survey. Its results suggest that the activity was quite successful: all respondents mentioned that Jurassic Tampere effectively influenced their way of perceiving the city spaces: they started to notice minor details and gaps in the city, to observe people’s abandoned things, to pay attention to the colours of the city and to all the ongoing activities that are part of the urban diversity and dynamism. However, all respondents reported that the effects of Jurassic Tampere on their perception could not last more than a few weeks. Several participants also suggested that the activity could benefit from more structure, and maybe could be made part of a game or a flash mob. Many respondents felt the desire to connect in more direct ways with the people that collected the toys. Jurassic Tampere, then, was an encouraging experiment and more activities of urban toyification will be explored in the future.
Playable Futures
A fictional abstract on underwater children’s communities

ReClaim mapped and tested several forms of urban gamification, both from the present and the recent past. But what about the future? The growing success of speculative design indicated that it could be an interesting way to explore the possible futures of urban play!

The following speculative abstract comes from the distant year of 2077 where the disastrous consequences of climate change have induced humans to adopt new technologies to survive. Despite their tragic origin, these technologies also open up new playful affordances that people are fast exploiting. In particular, this abstract outlines the situation of a future Amsterdam, where children are able to breath underwater and create new playful situations deep in the city canals!

Deep Learning: Child Development and Underwater Play Activities in Amsterdam

Mattia Thibault, KITE – Karelian Institute for Transhuman Education (formerly Tampere University, Finland)

Water-breathing technologies are today endemic in many coastal areas as well as in several Sunken Nations (such as Maldives and Tuvalu). Due

![Graph showing average time spent underwater according to age](image)

<table>
<thead>
<tr>
<th>Age (yr)</th>
<th>0-3</th>
<th>4-6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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<td>Hours/d</td>
<td>0.5</td>
<td>1.0</td>
<td>1.5</td>
<td>2.0</td>
<td>2.5</td>
<td>3.0</td>
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<td>4.0</td>
</tr>
</tbody>
</table>

Favourite underwater activities:

- Meeting friends/other children: 93%
- Dancing/acrobatics: 86%
- Swimming around: 81%
- Exploring the city: 72%
- Diving/jumping in the water: 49%
- Races/sports: 42%
- Treasure hunting/retrieving objects: 31%
- Pranks to non-amphibious swimmers: 23%
- Graffiti/Aquatic art: 17%
- Water-biking: 8%

![Open Access Link](image)
to the impossibility of installing water-breathing implants in adults, in 2065 the Dutch government declared that all new-borns in the Netherlands should undergo the procedure. This paper aims at analysing the impact of this legislation, notably the creation of a new generation of citizens using the city’s canals as unsupervised playgrounds and spaces to explore. The paper will showcase the results of a survey dedicated to the new uses of public spaces made by the amphibian youth (50 participants, see Figure), and building on Hoorn’s studies on the positive effects of underwater play [1], argue for the inclusion of semi-structured underwater activities, or “deep learning” in Dutch schools’ curricula, underlining their potential benefits for the students in regard of their health, development, sociability and learning outcomes.
A playful and democratic future for smart cities

Ordos City, in Inner Mongolia, is often regarded as a cautionary tale against top-down management of urban development: established in the 2000s as a coal mining boomtown adopting a highly centralised urban approach to land, this approach failed to meet the needs of the inhabitants. The city, since, has been described as a ghost town, has undergone severe economic challenges and constitutes an ecological vulnerability for the entire region.

Since industrialization, cities are generally shaped according to free market logics and by the top-down action of governments. These two strategies might compete or collaborate, but together they are able to influence almost the totality of urban interventions.

These strategies go beyond the material design of urban space and encompass the networks of technologies surrounding urban life. These technologies are sometimes explicitly designed to track closely every move of their citizens: while this is true for many social networks or Smart City implementations, its most intrusive example is probably the Chinese Social Credit System: an ecosystem of initiatives that are being implemented in the People’s Republic of China collectively aiming at fine-grained social control.

PUBLICATIONS:
Thibault M., Buruk O., Hassan L., and J. Hamari (2020)  
Anagenesis A Framework for Gameful, Playful and Democratic Future Smart Cities  
In Organizational gamification: Theories and practices of ludified work in late modernity, Routledge. pp. 201-229.

Open Access Link
Anagenesis is an experimental utopia, a city that escapes these logics and use playfulness to empower citizens and involve them in city-making. This future city expands ReClaim’s framework, to go beyond the reappropriation of space an imagine a new way of democratising urban government through play.

Anagenesis is a continuously self-regenerating city, where every citizen participates, in a democratic and creative way, in shaping the urban areas where they live. It is a human-centred city, capable of containing and representing the diversity of post-modern cultures and societies. Digital technologies, here, are not used as tools of control, but allow the Anagenesians to be in continuous dialogue with the city, feeding it data, opinions and ideas, moving through its virtual augmentations, playing with it and with its appearance, gaining ownership and authorship over the public spaces.

Glimpses of Anagenesis can be caught, today, in many discourses around bottom-up city-making, in situationist actions and in technologies and applications that allow us to interact in novel and unexpected ways with the urban environment. The ingredients for creating Anagenesis all seem to be available. What is needed is to combine them in the right way. To do so, it is necessary to combine and build on several existing areas – eGovernment, DIY urbanism, location-based games and other urban play activities – creating synergies among them and addressing their weaknesses.

The first step to build Anagenesis is to move from the simple idea of citizen engagement to a more ambitious gamified empowerment. This will ensure the citizens’ rights to the city combining the potentials of e-participation, DIY urbanism, playable cities, and location-based and AR games in the Augmented City.

To map the possible space for a new way of combining play and urban government, it can be useful to map the different existing approaches to urban play. A possible way to do it is by outlining two axes. One goes from the use or exploitation of urban spaces to practise of city-making. The second goes from unregulated and free activities (anarchy in government and paidia in play) to formal structures and institutionalisation (hierarchy in government and ludus in play). These two axes delineate four different polarities that describe cities as mazes, playgrounds, playblocks and sandboxes:

- **Cities are used as playgrounds** in activities close to city exploitation and paidia. They are spaces dedicated to free-play. Citizens do not contribute to the existing state of the city but play around it.
- **Cities are used as mazes** in playful explorations whose boundaries are strictly drawn. Location-based games such as Pokémon Go use cities as mazes.
- **Cities are used as sandboxes** when they are highly malleable space for free play. These activities reshape the urban fabric, although in an unstructured way.
- **Cities are used as a set of playblocks** when citizens are allowed to give inputs through a wide array of applications, but the borders are still defined by decision-makers.

Anagenesis is placed on the side of city-making, equidistantly from ludus/hierarchy and paidia/anarchy. While both modes of bottom-up and top-down city-making have their benefits and detriments, be it in the domain of play or organizing, they do not constitute a holistically sustainable overall approach to gameful urban governance when practiced in exclusion of the other.

Anagenesis, hence, is governed through a blend of urban play, augmented city technologies and e-participation, and its citizens are active participants in shaping the city. Anagenesis is a city that affords flexible ways to produce space to its inhabitants. It encompasses voluntary organizational structures powered by gamified applications, and it is augmented by customizable and interactive digital play spaces. What sets apart Anagenesis from other cities is the continuous creation of meaningful spaces where citizens can self-organize and interact with the city in novel ways, thanks to new technologies and the gamified design structures. Self-organisation is a key aspect of the city:
according to the principles of bazaar organization, the primary role of the city’s government is to facilitate the creation of spaces for creative interaction, self-representation and free collaborative reorganizations of the city. Every Anagenesian is a decision-maker, and the city officials work to facilitate city-making by forming appropriate environments, creating motivational applications and ensuring open information channels through deeply embedded city/citizen technologies and gamified applications. Bazaar organisation and the continuous presence of forms of play balanced between ludus and paidia ensures the balance between top-down and bottom-up approaches to urban government.

Two scenarios can help to visualise better this city. The first is CityMorph a democratised digital twin of the city, where each citizen can create and modify their own instance of the virtual city. This multitude of possible virtual cities can be shared, merged, and used to plan changes in the real Anagenesis. The second scenario is Urbanemotion, a project that makes use of body sensor technologies to shape the emotional map of the city through a collaborative social game.

Anagenesis, exemplified in the two scenarios, aims at addressing the limitations of current approaches to playful interventions in the city spaces. To avoid both the most anarchic effects and top-down approaches of gamified e-participation, it makes large use of augmented city technologies, which are already being used by games and various initiatives, to produce creative and playful spaces for citizen-urban interventions.
Urban futures between transhumanism and smart cities

What will the cities of the future look like? This question is often at the heart of urban studies, especially those dealing with smart cities, government, or sustainability. Transhumanists ask a different question: What will the human beings of the future look like? Or in other words, how will the integration of technologies with the human body and cognition change them and maybe transform them into something more? Transurbanism is based on the realisation that we cannot answer one of these questions without the other. Citizens and cities make each other. Citizens shape the urban environment around them, they build and destroy, try to engrave their identities, ideas, and beliefs in the urban fabric. Cities, on the other end, are matrices that shape their inhabitants, they make them “urban”, “polite” and “civilised” (all words from Greek and Latin roots for “city”). We cannot, therefore, imagine a future city without also imagining its future citizens and vice versa. Transurbanism allows ReClaim to explore how transhuman inhabitants interact with an augmented built environment and imagines the role that playfulness will have in the cities of the future.

Transurbanism is based on speculative urban design, and approach that

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serves two main purposes: it enables to think about the future, and it is an opportunity to critique current practice. The “pretend” nature of design fiction and speculative design, additionally, allows to engage in dark design. This term indicates the creation of dystopian projects that work as cautionary tales: inventing scary and dysfunctional futures can help us question our decisions today and may prompt us in trying to avoid them tomorrow.

To support its activity of speculative urban design, transurbanism is based on a simple framework articulated around six dimensions. Three are dedicated to smart cities:

- Design Layer
- Management Layer
- Social Layer

Three are dedicated to the types of enhanced abilities of transhuman citizens, namely:

- Physical Abilities
- Cognitive Abilities
- Emotional Abilities

Crossing these six-dimension creates a grid of critical points for transurban cities, highlighting their challenges and opportunities.

Three pastiche scenarios, inspired by Italo Calvino’s invisible cities, were grounded in three intersections of the grid. Each scenario describes a utopian and a dystopian version of a future transurban city.

Interaction between Smart Cities and Transhuman Citizens (Opp: opportunities, Cha: Challenges)

<table>
<thead>
<tr>
<th>Design</th>
<th>Opp</th>
<th>Physical</th>
<th>Cognitive</th>
<th>Emotional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Radical design availabilities due to the extended vertical and horizontal movement abilities of citizens</td>
<td>Very-well informed and immediate participation of citizens to the design of the city.</td>
<td>Being able to design places that can induce particular emotions due to the advanced emotion tracking techniques and technologies.</td>
</tr>
<tr>
<td>Cha</td>
<td></td>
<td>Creation of new urban design paradigms that will satisfy the enhanced physical needs of transhumans.</td>
<td>Designing stimulating cities that can satisfy the cognitive capabilities and needs of transhuman citizens.</td>
<td>Increased variety of emotional experiences that should be pleased by a wide portfolio of newly emerged city-scape designs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Individual-level well-being applications due to the continuous health monitoring and autonomous steady treatment systems embedded into the body of citizens.</td>
<td>Immediate and rich knowledge created by citizens about the facilities of the city (infrastructure, governance) which will be communicated instantaneously and used by the governing body. Capability of tracking the state of the city through the internet of citizens with accurate and ample amount of knowledge.</td>
<td>Real time emotional maps that will allow managers to direct their efforts and test the results of their actions regarding safety, tourism and the psychological well-being of the citizens.</td>
</tr>
<tr>
<td>Cha</td>
<td></td>
<td>Management of extremely diverse (and potentially massive) populations in relatively small areas due to the extended lifespan of transhuman citizens.</td>
<td>Responsibility of providing security for the cognitive systems of transhuman citizens. Need for regulations for limiting the access to information, thoughts and information processing of citizens and the protection of thought-data which is not made publicly accessible.</td>
<td>Ethical issues regarding the emotional monitoring of their citizens. Need for the rules that will prevent emotional maps to be used to foster gentrification of certain areas or to make certain demographics feel unwelcome. Regulations for access to maps by 3rd parties.</td>
</tr>
</tbody>
</table>
Physical extensions and modifications can contribute to create a post-gender and post-race society, where a whole new spectrum of identities can be expressed and experienced. The increased cognitive abilities and connection to available information and to knowledgeable citizens that will allow transhuman citizens to have opportunities of equal education. Formation of n well-educated citizens through access to knowledge that will affect cities’ economies in the positive way. Emotional tracking that will help improve the mental health of the whole society, allowing NGOs and professionals to act efficiently when is needed and to see the impact of their work on the community.

Designing inclusive city parts that will be accessible to differently abled transhuman citizens due to their choices of different physical augmentations. If being disabled will not be an issue anymore, being abled in different levels will create complex accessibility issues. Additionally, if the accessibility to implants will be dependent on personal income, wealthier citizens will hold a privileged position in accessing city spaces. Hindrance of social connection between communities and citizens due to the connected minds, virtual simulations and individual efficiency. Danger of cities being envelopes that encase individual parts rather than communities that may harm the collective identity. Consideration of discrimination for individual groups of urban areas due to emotional tracking capabilities. This might cause further fragmentation of the city spaces while having a negative impact on the mental health of fragile individuals that will be subjected to additional pressure for the social consequences for their feelings.

The first city is Zemrude, a city where emotional mapping is an everyday reality, imagined at the intersection between emotional augmentations and the urban management level. In Utopian Zemrude NGOs organise “emotional requalification programs”: they intervene in neighbourhoods where the emotional mean favour negative emotional states and try to impact positively the mental health of the inhabitants. In Dystopian Zemrude, a form of emotional gentrification is pushing struggling people out of the central regions of the city – and sometimes out of their jobs. Economic and emotional depression overlap more then ever, and people have to monitor their own emotions attentively if they don’t want them to have a devastating impact on their social life.

The second city, Phyllis, is inhabited by citizens with physical augmentations, capable of moving seamlessly on different surfaces without the need of vehicle. This affects profoundly the design of the city. Utopian Phyllis is a city where the old car infrastructure has been replaces by parks and wilderness: citizens are in continuous contact with nature and the levels of pollution are low. Dystopian Phyllis, instead, is an anthill city: all the spaces of transportation have fall victim to the estate market and citizens have to crawl in a claustrophobic rhizome of constructions.

The third city, Euphemia, is characterised by an internet of Citizens, where its social layer is deeply affected by the cognitive augmentations of its citizens: all able to engrave their ideas and memories in the urban spaces. In Utopian Euphemia, the IoT is used for forms of participative governance, but also to connect communities with the city spaces, and citizens between themselves. In Dystopian Euphemia, the IoT is used mainly for touristic purposes, and the inhabitants of the city are overwhelmed by the hyper-stimulating neighbourhoods and the flamboyant, baroque accumulation of content.

The transurban framework and the three scenarios have clearly also implications for the present, and they aim to allow smart city stakeholders and urban designers to envision and engage with the transhuman technologies of tomorrow so to help them using these technologies to shape smart, sustainable, humane, and constructively playful cities.
Conclusions and Future Work

Plying in the city, with the city, for the city

On the basis of this research, urban play is indeed a central factor in many forms of urban place-making and a tool that citizens and communities can use to create stronger relationships with their cities.

The ReClaim approach highlighted the importance to go beyond the logistical, organisational, and architectural dimensions of the built environment and include the meaning-making and interpretative processes that take place in it. ReClaim’s typology, on the one hand, expands what we consider as part of the city by including the digital prosthesis that surround it and are equally susceptible to be gamified. On the other hand, it suggests new angles to look at urban play and at how it influences the meaning of cities. The critical and punk approach emerges the importance making of play as an instrument for participatory and bottom-up urbanism, where the citizens are the main actors.

The expert interviews put forward the importance of our individual experiences, curiosity, and relationship with the city. They warn against lazy “one fits all” approaches and suggest to always ground the design in the actual space that will host play. They urge to put the users at the centre of the design process and to work with them. To keep their best interest at heart, but also to remember that the city is full of non-players that also need consideration. Their images of playful cities highlight the importance of both nature and of technology, suggesting a balanced approach to urban spaces.

The case studies touched several topics. One investigated the role that playful approaches can have in creating sustainable solutions for urban life (sometimes through unorthodox forms of play). Another underlined how play can be a tool not only to reclaim present urban spaces, but also to negotiate the memory engraved within them. The study of different forms of playful tourism emerges the variety of actors involved in urban gamification, including travellers and companies, who use play as tool for motivation and valorisation. A last one, dedicated to cities in virtual reality, shows some promising lanes to imagine deeper and richer VR cities.

ReClaim also produced an artifact, ROOK, to experiment with citizens sensing and non-intrusive data visualisation, based on the encounter between media architecture and urban gamification. The playful action Jurassic Tampere, moreover, was a low-tech experiment with toyification to play with the multiplicity of meanings of the urban spaces.

Finally, the research work dedicated to “submerged play” in a future Amsterdam, the fictional city of Anagenesis and Transurbanism suggest that understanding urban play is indeed capital for imagining the future of urban life altogether.

New lines of research

ReClaim, in its attempt to acknowledge the multiplicity of facets of urban gamification, has reached out in many directions. Some of these are promising new lines of research.

One line of research is to reflect on how the organisation of space itself can be gamified. Future research should investigate how different kind of spaces (public and private, outdoors and indoors, small or large) can encourage playful attitudes and promote creativity, curiosity, and inclusivity. Such an analysis would allow a new understanding of how certain spaces can make us feel more playful and what "ludic spatial strategies" can support this effect. Research should investigate, for example, what
can we learn from locations that are created to host play (theme parks, casinos, stadia) that could be applied also to other spaces.

A second line of research is that of analysing the possible relations, intersections, and synergies of the playable cites paradigm with other fundamental aspects of future smart cities, such as sustainability and inclusivity (spatial, ecologic, economic, and social). Research should wonder whether play can support urban sustainability and inclusivity, or maybe harm it. Understanding the best ways to cater for the different needs that arise in cities (individual, communal, environmental) in regard of these dimensions will be a central challenge in urbanism in the short and medium term.

Finally, as it is impossible to predict the future of urban spaces, it is important to be imaginative and critical when we look at the possible evolutions of urban spaces. Speculative design and design fiction seem to offer valuable tools to create a sort of “speculative urbanism” that, without claiming to forecast the future, can highlight some of the contradictions, risks and opportunities that could arise in the cities of tomorrow. Whatever they might be, playfulness is likely to have a major role in them and even be part of their intrinsic constituents.
Publications


**Awards**

2020 “**Best Poster Award**” at GamiFIN 2020 with the poster Strategies for Urban Toyification.

2019 “**Best Presentation Award**” at GamiFIN 2019 with the paper Punk Gamification.

**Courses Taught**

2020-2021 (Second semester, first period, 5 ects) “**HTI600 Gamification: A Walkthrough of How Games Are Shaping Our Lives**”, Tampere University (Finland).


**Chairing and conference organisation**

2021 (January 5-8th) Track Chair (with Lobna Hassan, Juho Hamari and J. T. Harviainen) of the track “Engaging Governance” of the 54th Annual Hawaii International Conference on System Sciences (HICSS 2021), Kauai, Hawaii.

2020 (November 3-6th) Member of the Programme Committee of the International Conference on Interactive Digital Storytelling (Interactive Narrative Impact and Applications Track), Bournemouth, UK.

2020 (September 24th – November 5th) Member of the Programme Committee of the Gamification and Serious Games Symposium 2020, online.

2020 (June 2-6th) Member of the Programme Committee of the DiGRA 2020 conference (Serious Games and Education track & PhD consortium), Tampere, Finland.

2020 (April 1-3rd) Conference Chair and member of the Program Committee of GamiFIN 2020, Levi, Finland.

2020 (January 29-30th) Associated Chair for Academic Mindtrek 2020, Tampere, Finland.

2020 (January 7-10th) Track Chair (with Juho Hamari and Lobna Hassan) of the track “Gamification” at the 53rd Annual Hawaii International Conference on System Sciences (HICSS 2020), Maui, Hawaii.

**Conferences & lectures**

**Keynotes:**


2019 (September 25-25th) “Urban Toyification” Keynote lecture at the I Colóquio de Pesquisas em” I Colóquio de Pesquisas em Semiótica Visual e Multimodalidade (CPSM), João Pessoa, Brazil.

2019 (July 5th) “ReClaim – critical design and punk gamification in the urban environment” Keynote lecture Gamification & Serious Game Symposium — GSGS’19, Neuchatel, Switzerland.

**Conferences and Lectures:**

2020 (November 13th) “Cinema, gioco, intertestualità” (with Gianmarco Giuliana), lecture in the Course “Cinema e comunicazione audiovisiva” by Bruno Surace, University of Turin, Italy.

2020 (November 10th) “Gioco e Spazialità” at the Symposium CIRCe Linee di Ricerca sulla Comunicazione; online.

2020 (October 31st) “La Città in Gioco -. Riappropriarsi e Rigenerare gli spazi urbani”, Starurday Morning Live, Collegio Einaudi, Turin, Italy.
2020 (October 29th) “Jurassic Tampere & Urban Toyification” at the Gamification and Serious Games Symposium GSGS20, online conference.

2020 (October 8th) “From Critical Design to Critical Semiotics”, in the advanced graduate seminar批判性符号学：从符号到意识形态 (Critical Semiotics: From Sign to Ideology) by Prof Massimo Leone, Shanghai University.


2020 (April) Imagine a playful city Board game based expert interviews”, Board Game Studies Colloquium XXIII, Paris, France [Cancelled due to the COVID 19 pandemic]

2020 (June 2nd ) “ROOK Urban Play and Data Visualization”, with Artur Vasconcelos Cordeiro and Martijn de Waal at DiGRA 2020, Tampere, Finland [Cancelled due to the COVID 19 pandemic]

2020 (April 24th) Digital ekphrasis & augmented faces in the transurban with Oğuz “Oz” Buruk, Deep Facets, Meetings on Meaning 2019-2020, Turin University, Italy.


2020 (January 28th) Read by the City: Digital Transurbanism and Facial Recognition, with Oğuz “Oz” Buruk, at the “Transhuman Visages Artificial Faces in Arts, Science, and Society” international conference, Warsaw, Poland.

2019 (September 27th-October 2nd) “Patrimonio cultural en las ciudades de los videojuegos: nuevas formas de turismo y viejos estereotipos en la serie Assassin’s Creed” Istituto Cultural Italo Brasileiro – ICIB, São Paulo, Brazil.

2019 (September 28th) “Mídia Arquitetura e Gamificação Urbana”, with Rodrigo Felicissmo at the Centro de Pesquisa e Formação SESC, São Paulo, Brazil.

2019 (September 14th) “Thinking with objects. A semiotic approach to critical and speculative design” XIV World Congress of Semiotics, Buenos Aires, Argentina.


2019 (September 5th) “Ciudades ficticias” at the XI Congreso Internacional Chileno de Semiótica, Santiago, Chile.

2019 (September 4th) “El derecho (de escribir) la ciudad” at the XI Congreso Internacional Chileno de Semiótica, Santiago, Chile.

2019 (June 17th) “Was it worth it? Experiences on the proposal writing process by a successful MSCA-IF Fellow” Tampere University’s Marie Sklodowska Curie Action Individual Fellowship Master Class.

2019 (May 7-10th) “Urban Boardgames: from representation to urban planning” Board Games Studies Colloquium, Bologna, Italy.

2019 (April 15-16th) “Critical Urban Play” with Lobna Hassan, at Urban Play, the 15th Game Research Lab Spring Seminar, Tampere University, Finland.


2019 (March 21st) “Unweaving the urban fabric, perspectives on semiotics of the city” Invited lecture at Palacky University Olomouc, Czech Republic.
2019 (February 08th) “Around gamification: play, playfulness and the ludicisation of culture” Invited lecture given at Jonna Koivisto and Juho Hamari’s course Gamification: A Walkthrough of How Games Are Shaping Our Lives (TIE-40306), Tampere University, Finland.

2019 (February 1st) Organizer (with Dale Leorke) of a workshop dedicated to urban play for the Journalism Course project by Elina Paasonen in collaboration with public broadcaster Yli and the Aamuletti newspaper.

2019 (January 31st) “Urban gamification: the playful reinterpretation of city spaces” Invited lecture given at the seminar Experiential approaches in documenting and mapping the urban, Helsinki University, Finland.

2019 (January 30th) “Game apologists and the dark side of play” Lecture given at the seminar Complication play, Centre of Excellence in Game Culture Studies, Jyväskylä, Finland.


2018 (November 12th) “A semiotic approach to urban gamification” Lecture given in the weekly seminars of Prof. Eero Tarasti, Helsinki University, Finland.


Mattia Thibault is a Postdoctoral Researcher at Tampere University. He is a member of the Gamification Group and Affiliated Senior Researcher at the Centre of Excellence in Game Culture Studies. His research projects “LudoSpace” (CoE GAMECULT) and “ReClaim” (EU MSCA-IF 793835) focus on urban gamification and the relationship between play and the built environment. In 2017 he earned a PhD in Semiotics and Media at Turin University, where he subsequently worked as research fellow in 2018. Thibault has been visiting researcher at Tartu University (Estonia), The Strong Museum of Play (Rochester, NY, US), Helsinki University (Finland), Amsterdam University of Applied Sciences (Nederland) and Waag (Nederland).

He has written a book (Ludosemiotica, 2020, Aracne) and is writing another.

He is passionate about play, memes, toys, and little rubber dinosaurs. No, he does not plan to grow up.
Appendix B

Photo Album
Special thanks to:

My supervisors: Juho, Judith and Gabriele.

My co-authors: Oz, Mila, Seda, Artur, Martijn, Antonio, Lobna and Elsa.


The members of Tampere’s Gamification Group and of Turin’s CIRCe.

The anonymous interviewees, and reviewers.

And the many, many friends and colleagues around the World that have contributed to this project in innumerable ways.
Congratulations, you got to the last page! I have a little game for you...

In this document there are 15 rubber dinosaurs (Those still in the egg do not count). Can you find them all?

Once you do, addition the numbers of each page with at least one dinosaur and paste the result at the end of the following link for a surprise...